Economic benefits of long-distance mobility

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Introduction

With the accession of 10 new Member States to the European Union in May 2004, the issue of geographical and labour market mobility within Europe has risen to the top of the EU policy agenda. The most important reasons for this are that integration of national labour markets is regarded as one of the cornerstones of the overall European integration process; because of the considerable migratory inflows to the EU Member States from 'outside'; and lastly, because of the persistent phenomenon of regional imbalances in a number of EU countries.

The European Commission designated the year 2006 as 'European Year of Workers' Mobility'. The initiative aimed to inform EU citizens about the following issues: the benefits and the costs of both geographical mobility and job or labour market mobility; the realities of working in another country or changing job or career; and the rights and entitlements of migrant workers. The initiative also aimed to promote the exchange of good practice between public authorities and institutions, the social partners and the private sector, and to promote further examination of the scale and nature of geographical and job mobility within the Union.

In order to get a better view on the complex phenomenon of mobility in Europe, the European Commission carried out a Eurobarometer survey on geographical and labour market mobility in September 2005 (EB 64.1). The European Foundation for the Improvement of Living and Working Conditions analysed the findings of the survey and published different aspects in a series of six publications. The first is an overview report by Vandenbrande et al (2006), which presents a descriptive analysis of the data collected and examines four key areas of research: EU policy, geographical mobility, job mobility and restricted mobility. Five in-depth reports deal with a specific aspect of mobility. The present report focuses on the effects of long-distance mobility on national economies and on individuals. Other reports deal with occupational mobility, international and regional migration intentions, voluntary and forced job mobility and the effects of mobility on job satisfaction. All the reports are available on the Foundation website at **http://www.eurofound.europa.eu/areas/populationandsociety/migration.htm**

The focus of the present analysis is broadly economic, and specifically labour-market oriented, due to a combination of the following factors: the widespread perception of the integration of national labour markets as a driving economic force for the European economy as a whole; and the factual evidence for a strong role of 'job-related' motivations in determining (at least subjectively) long-distance mobility in the Eurobarometer dataset.

The introduction provides a basic structural framework for the analysis of the economic outcomes of long-distance mobility. It briefly examines geographical mobility motivations in the Eurobarometer dataset. and provides a short description of the characteristics of the same Eurobarometer dataset. Chapter 1 presents an analysis of the macroeconomic effects of long-distance mobility, while Chapters 2 and 3 look at the effects of long-distance mobility from a microeconomic point of view. Some concluding remarks are provided in Chapter 4.

Some literature findings

The relationship between intra-country mobility and labour market performance has been intensively studied since the late 1960s (Lianos, 1970). More recently, analysts have come to perceive the integration of EU labour markets as one of the major issues facing Europe in the coming decades (Jones and Verdun, 2005).

According to the early socioeconomic models, internal mobility should have balanced regional disparities in the labour market, thus fostering efficiency in the allocation of workers and reducing differences. Specifically, many authors focused on the role of unemployment, and of disparities in regional unemployment, in favouring workers' geographical mobility (Pissarides and Wadsworth, 1989). However, much of the more recent empirical evidence emphasises the role of other economic and social variables in determining attitudes towards mobility (Huber, 2004; Dohmen, 2000). Moreover, some authors showed that a more favourable active labour market policy or unemployment subsidies could

influence individuals' mobility behaviours (Hamalainen, 2002), while others focused on the role played by employment legislation in fostering or hampering workers' mobility (Devillanova, 2004). To summarise some results of previous literature on this topic, we can state that:

- while being unemployed raises the probability of migration, households living in regions with higher unemployment rates are not more likely to move than households living in low unemployment rate areas. Migration rates decrease with higher overall unemployment rates (Pissarides and Wadsworth, 1989);

- when migration is 'skill-biased', it can aggravate labour market imbalances between receiving and sending regions (Devillanova, 2004);

- differences in inter-regional migration rates between countries are mainly explained by employment protection, international migration, share of owner-occupied housing and the average region size of a country (Huber, 2004).

Similar consideration can be made when shifting to a microeconomic perspective.

Early literature focused on unemployment as the main source of mobility. In fact, being unemployed reduces the opportunity costs linked with staying. Recently, many additional factors have been taken into account, such as the number of members per household who are currently employed, social conditions, housing, employment perspectives and psychological attitudes. Many studies, however, focused on what determines mobility rather than on its effects.

Where geographical mobility is directly related to employment reasons, the job mobility theory can be considered a valuable tool for this field of investigation. We can identify three main theoretical models of job mobility: job search theory, human capital approach and job matching theory.

Roughly speaking, according to the job search theory (Burdett, 1978), if labour productivity remains stable throughout a single job experience, only wage increases are associated with job mobility. On the other hand, the human capital approach (on-the-job-training approach; Mincer, 1988) emphasises the role of specific skills in explaining workers' productivity – given the fact that specific human capital increases with job tenure, wages increase over time only within the same job. The job matching theory (Jovanovic, 1979) introduces incomplete information into this framework. Consequently, information disclosure and human capital gains interact, hence the 'quality' of the job match and the outside option only become clear over time. While in the human capital approach stability is a necessary condition to increase wages, both job search and job matching theories predict increasing wages with mobility.

Though many authors have devoted attention both to the determinants of geographical mobility and to its predicted effects, very little can be found concerning the actual outcomes of mobility behaviours. At macro (and cross-national) level, some authors have tried to assess the impact of geographical mobility in balancing labour market disparities, e.g. regional and national unemployment differentials. Puhani (2001) derives migratory flexibility from unemployment and GDP and concludes that European geographical mobility is not in itself sufficient to counterbalance labour market (and monetary) disparities between European countries. In other words, migration is not responsive enough to the different levels and dynamics of unemployment between European countries. At intra-national level, other authors were only able to ascertain different mobility patterns among Western economies, demonstrating that the US is far more mobile than European countries, and that among the latter, Germany shows higher rates of internal geographical mobility. To our knowledge, very few studies have been carried out on mobility outcomes, mainly due to the lack of adequate datasets. Moreover, statistical surveys of the labour market often fail to track individuals' residence changes, thus under-representing the mobile population tier.

Long-distance mobility and labour market issues in the Eurobarometer dataset

It is worth reporting the main motivations behind long-distance mobility, and its peculiarities, as compared to short(er)-distance mobility. On the whole, while short-distance mobility is mainly explained by private, or family-related, reasons, long-distance mobility is strongly related to the job.

Table 1 examines responses to questions related to reasons for mobility. From the analysis of the data (see the next paragraph for a description of the dataset), it appears that people move within regions mainly because of a change in marital status or because of residence relocation. Short-distance mobility can also be connected to reduced commuting times. On the other hand, long(er)-distance mobility is strongly connected with job-related motivations. The largest share of job-related mobile individuals can be found across regions (47.4%). Mobility outside the EU is mainly driven by job reasons, with a large share of individuals who move due to 'other' reasons (probably for educational purposes). The same applies for mobility within the EU, which is in turn characterised by a fairly high share of individuals who move for family-related reasons.

Table 1: *Reasons for moving according to mobility patterns (% of respondents)*

	Short-distance mobility		Long-distance mobility		
	Within city/town	Within region	Across regions	Within EU	Outside EU
Family-related motivations	52.4	48.6	40.2	42.3	33.3
Job-related motivations	7.0	18.0	47.4	38.4	43.8
Household-related motivations	48.2	46.4	21.7	15.0	18.6
Other motivations	8.6	10.1	13.9	25.4	22.1
Dk	0.6	0.4	1.0	1.6	1.9
(N)	**(6480)**	**(4835)**	**(3760)**	**(827)**	**(654)**

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey Dataset 2005.*

It is worth stressing (Table 2) that a small number of individuals chose to move because of *difficulties in finding a job*. In most cases, they maintained their job but changed workplaces or moved after reaching an agreement with the new employer. This should be kept in mind when analysing the results of the following sections, as the outcome of this type of geographical mobility is plausibly associated with a 'safe bet' on future employment opportunities.

Table 2: *Job-related motivations for geographical mobility (% of respondents)*

	Short-distance mobility		Long-distance mobility		
	Within city/town	Within region	Across regions	Within EU	Outside EU
New job or job transfer	2.6	10.6	37.0	31.9	32.9
Redundancy or to look for a job	0.5	1.2	3.2	4.7	4.7
To be closer to work/easier to commute	3.2	5.8	6.4	3.3	3.8
Your retirement	1.0	1.2	3.0	0.9	3.5

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey Dataset 2005.*

If we analyse long-distance mobility by gender, we find that for men, job/career is by far the main motivation underlying long-distance mobility (Table 3), while for women, family reasons and partner decisions are predominant. As the Eurobarometer mobility data covers a long period of time, it reflects the male breadwinner model that has prevailed – and in some cases still prevails – in many European countries.

Table 3: *Reasons for moving according to long-distance mobility patterns by gender (% of respondents)*

	Across Regions		Within EU		Outside EU	
	Male	Female	Male	Female	Male	Female
Family-related motivations	27.6	50.6	31.5	51.5	24.9	42.0
Job-related motivations	61.2	36.1	48.7	29.8	50.0	37.6
Household-related motivations	20.6	22.6	12.9	16.8	22.2	14.8
Other motivations	13.3	14.5	25.7	25.1	22.3	21.9

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey Dataset 2005.*

Thus far, the general description of Eurobarometer geographical mobility data confirms a labour market approach to long-distance mobility.

A short description of the Eurobarometer dataset

In this paper, we have used mobility data drawn from Eurobarometer 64.1, which was carried out between September and October 2005. The survey covers all residents of EU Member States aged 15 years and over and its sample dimension amounts to 24,642 respondents. For the purpose of our analysis, the variables have been properly weighted in order to correct for countries' sample size, not proportionally to population, and to produce consistent estimates for all Member States.

During the face-to-face interviews, individuals were asked to respond to a set of questions related to mobility attitudes and behaviour. In particular, information was collected on mobility that occurred to individuals after leaving their parents' home according to distance (within town, within region, within country, within EU, outside EU), and according to motivation (family, job, housing, other). Irrespective of being 'movers' or 'stayers', individuals were also asked to express an opinion on mobility (in terms of effects on individuals and of social welfare) and to describe their mobility intentions. The dataset also provides a set of variables concerning present and past occupational status and socio-demographic standard indicators. In order to carry out a macro-analysis between countries (see next section), we merged aggregated mobility indicators, derived from Eurobarometer 64.1, with main labour market indicators, provided by Eurostat.

When addressing mobility, some methodological aspects should be taken into account before going into the details of our analysis. Given the absence of detailed geo-coded data, the risk of 'misclassification error' is very high (Yankow, 2002). In fact, it could well be the case that under some circumstances, a cross-boundary move is by far shorter than a within-boundary move, irrespective of which boundary is being considered. Moreover, the local entities (regions, counties, municipalities, etc.) most people are aware of are not the same as Eurostat NUTS (Nomenclature of Territorial Units for Statistics). From Table 4, it is clear that for a few of the smaller countries,[1] we find mobility data across regions from Eurobarometer, but NUTS-2 regional disaggregation is not applicable to these countries. For the smallest of this group,[2] even NUTS-3 'county-level' disaggregation is inapplicable.

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[1] Cyprus, Denmark, Estonia, Ireland, Lithuania, Luxembourg, Latria, Malta and Slovenia.

[2] Cyprus, Luxembourg, Slovenia and Malta.

It is also worth mentioning that the share of 'non-EU' immigrants in the Eurobarometer sample is macroscopically lower than the actual figures (only 197 cases out of nearly 25,000 from a population of at least 15 years of age, i.e. less than 1%). Another fundamental issue is the lack of any information regarding the date mobility events occurred. Given the fact that we measure mobility outcomes through a broad set of status quo variables (related to professional status, job satisfaction, etc.), the more distant the time of movement, the more 'jammed' is the causal nexus which links outcomes and mobility.[3]

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[3]   As a matter of fact, very little information has been collected regarding life cycle events of individuals. More specifically, in question QA4, individuals were asked to indicate the year they settled in the current place of residence; in question QA5, how old they were when they moved from the parental home; in question QA24, the year they started their first job; in question QA30, the year they left their previous employer; and in question QA35, the year they joined their current employer.

1 Macro-analysis of long-distance mobility

As mentioned above, the Eurobarometer offers very little information on the timeframe of geographical mobility. Moreover, only information on present residents in EU countries was available, which is relevant when testing macro relationships where we do not have the 'implicit support' of micro data. For example, if individuals who have been geographically mobile show, on average, a higher propensity for being employed (as is actually the case), we could logically assume a cause-effect link between mobility (in the past) and job tenure (now). Even if an individual has come back home, it is still possible to argue that mobility has increased his or her labour market appeal. Given the fact that at macro level we have very different 'samples' at the two ends of the relationship (Eurobarometer on one hand and Labour Forces Survey or national accounts on the other), the relationships between geographical mobility patterns and labour market indicators are more complex to investigate.

This seems particularly relevant when 'pull' and 'push' factors may co-exist in the relation(s) between two variables. For instance, it is possible to argue that a high level of past long-distance mobility in a country has lessened the regional differences in unemployment and employment rates (and now these levels are relatively low). In addition, it is possible to argue that past and present regional disparities have fostered long-distance mobility flows over time.

The co-existence of 'pull' and 'push' factors may either offset effective relationships between variables or amplify those relationships if the correlations have the same sign (positive or negative). In contrast, this problem appears to be almost irrelevant for the micro analysis. This is due to the fact that we are not generally investigating micro data inside the realm of systemic interaction, and that if we were, we could easily split the population into sub-groups to separate the relationships.

However, given the fact that the data show statistically significant associations of (mostly) *past* mobility choices with the *present* labour market indicator levels, the emphasis seems to be on long-distance mobility as a *factor positively affecting* the performance of national economies more than as a *result* of good economic performance. Also, the data register a significantly *negative* relationship between long-distance mobility and regional imbalances in employments rates. This seems to support the role of mobility as a 'factor' more than an 'effect'.

Let us briefly explain the nexus between 'past' and 'present' in labour market indicators. The actual professional position of an individual (bar the obvious demographic and accidentals changes) mainly reflects past jobs and educational achievements that are also related to long-distance mobility. Extending individual job research 'beyond borders' substantially increases the options to maximise the returns and/or increases the value of personal human capital, which is consistent with some of the literature findings mentioned above. It is plausible to postulate that long-distance mobility can foster a country's labour market performance and, more generally, wealth.

Better jobs for individuals (better paid, more stable, more productive), a higher human capital and a better match between jobs and individual skills are likely to be the effects of a more geographically mobile labour market. Hence, we can assume a positive relation between long-distance mobility indicators (in this case, the independent variables) and labour market performance indicators (the dependent variables). A relationship of this kind can also be assumed for long-term real growth of GDP or per capita levels of GDP. The rationale is that mobility can positively affect the factors promoting long-term economic growth. A country may also benefit from mobility across countries – it can attract useful skills from abroad by hiring foreign nationals, while returning expatriates can bring back valuable knowledge. Nor can we dismiss the notion that a 'tight' labour market, creating the conditions for more rewarding job opportunities, can also contribute to boosting long-distance mobility flows.

In evaluating the causal links between long-distance mobility and macro indicators, we have relied on the following assumptions:

- present labour market indicator values (especially 'structural' ones) also reflect past choices of individuals;

- we can establish statistic relationships between Eurobarometer survey and structural macro indicators;

- mobility indicator values from the Eurobarometer sample are more *ordinal* (i.e. higher/lower) than *cardinal* (i.e. with algebraic properties), mainly because the meaning of mobility across regions is likely to vary greatly among countries for administrative and geographical reasons; hence, we have opted for a non-parametric test: Spearman's rho.[4]

The Spearman test of rank correlation[5] can help to verify the existence of a significant relationship between labour market performance and long-distance mobility. The expected sign of the rho coefficient is plus (direct correlation) for correlation between long-distance mobility and employment rates, and minus (inverse correlation) for correlation between long-distance mobility and unemployment rates. We predict an inverse relationship of long-distance mobility with regional employment/unemployment rates dispersion, thus also assigning to the former a role in reducing regional imbalances. Finally, we expect the existence of a positive correlation for GDP growth and for present GDP per capita levels.[6] Table 4 provides a sample of the kind of relationship we have tested.

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[4] See Note 5.

[5] Spearman's rho (r) test of rank correlation is a non-parametric test for the correlation of two sets of data (X, Y) which are not from a bivariate normal distribution. It ranks the observations for each variable, determines the differences in ranks and calculates the Spearman coefficient of rank correlation (rs), which varies from −1 to +1. This test is the non-parametric equivalent of the parametric Pearsonian correlation, with rs equivalent to r.

[6] The most recent Eurostat statistical data available are relative to 2005, i.e. the same year as our Eurobarometer survey.

Table 4: *EU countries ranked by mobility level across regions (% of Eurobarometer respondents) and employment (% rate) age 15–64 in 2005*

Country	Mobility across regions	Country	Employment rate 2005
Sweden	38.0	Denmark	75.9
Finland	33.0	Netherlands	73.2
Denmark	31.4	Sweden	72.5
France	27.6	United Kingdom	71.7
Estonia	23.8	Austria	68.6
Latvia	23.7	Cyprus	68.5
Netherlands	22.3	Finland	68.4
United Kingdom	21.8	Ireland	67.6
Germany	17.2	Portugal	67.5
Cyprus	16.3	Slovenia	66.0
Luxembourg	16.1	Germany	65.4
Greece	15.4	Czech Republic	64.8
Ireland	15.1	Estonia	64.4
Belgium	12.8	Luxembourg	63.6
Hungary	10.4	Spain	63.3
Slovenia	9.8	Latvia	63.3
Austria	9.1	France	63.1
Spain	9.1	Lithuania	62.6
Czech Republic	8.6	Belgium	61.1
Portugal	8.2	Greece	60.1
Italy	8.1	Slovakia	57.7
Lithuania	7.8	Italy	57.6
Poland	7.2	Hungary	56.9
Malta	6.4	Malta	53.9
Slovakia	5.8	Poland	52.8

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey Dataset 2005 and Eurostat* (http://epp.eurostat.ec.europa.eu/portal/).

Given the small numbers in the sample, we chose to aggregate mobility within EU and outside the EU as mobility across countries. The differences between these two mobility patterns are obvious, but the situation in the field does not entirely reflect the potential of the 1968 Regulation 1612 on '*freedom of movement for workers within the Community*'.

Table 5: *Mobility patterns (% of respondents), employment and long-term unemployment rates (2005)*
Rank correlations between mobility variables and macro indicators (see Table 4)
rs values and probability value P (one-tail) for the Spearman rho test

Mobility patterns		Employment rate 2005		Long-term unemployment rate 2005	
		rs values	P	**r**s values	P
Long distance	Across countries	**0.646**	**0.0%**	−0.664	0.0%
	Across regions	**0.616**	**0.1%**	−0.448	1.3%
Short distance	Within region	0.279	8.8%	−0.198	17.1%
	Within city/town	0.042	42.1%	0.057	60.8%

Positive (negative) rs values indicate a (direct) inverse rank correlation. Correlation is expected to be positive for employment rates and negative for unemployment rates.

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey Dataset 2005 and Eurostat* (**http://epp.eurostat.ec.europa.eu/portal/**).

Note that the short-distance mobility (within city and within region) estimates in Table 5 do not show any statically significant results, and the shorter the distance, the lower the test's rs value. For the long-distance mobility patterns, the statistical significance of the direct correlation with employment and unemployment rates is noticeably strong. The lack of a statistically significant relationship for short-distance mobility patterns possibly reflects the secondary role of job-related motivations for these kinds of mobility.

Also, a direct significant rank correlation with long-distance mobility (both across regions and across countries) is observed for GDP per capita levels. No significant correlation for GDP real long-term growth (total and per capita) can be found, and the signs are even negative (see Table 6).

Table 6: *Mobility patterns (% of respondents), GDP real long-term growth (absolute and per capita) and GDP per capita level*
Rank correlations between mobility variables and macro indicators
rs values and probability value P (one-tail) for the Spearman rho test

Mobility patterns		GDP per capita level in €, 2005		GDP average compound real growth rates, 1996–2005		GDP per capita average compound real growth rates, 1996–2005	
		rs values	P	**r**s values	P	rs values	P
Long distance	Across countries	0.772	0.0%	−0.110	69.7%	−0.291	91.6%
	Across regions	0.521	0.4%	−0.083	65.2%	−0.133	73.3%
Short distance	Within region	−0.239	87.6%	−0.303	92.5%	−0.277	90.5%
	Within city/town	−0.101	68.5%	−0.136	73.7%	−0.129	72.7%

Positive (negative) rs values indicate a (direct) inverse rank correlation. Correlations are expected to be positive.

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey Dataset 2005 and Eurostat* (**http://epp.eurostat.ec.europa.eu/portal/**).

Focusing solely on mobility across regions, we have tested several labour market regional dispersion indicators (regional employment rates dispersion at NUTS-2, regional unemployment rates at NUTS-2 and NUTS-3) (see Table 7). The time series, now available on the Eurostat website, are not very long for these variables (1999–2004). Given the possible co-

presence of 'push' and 'pull' factors mentioned above, we have calculated the rank correlation for the first and the last year available in the series.

As can be seen in Table 7, the test's results are not particularly revealing, except for the fact that the correlations' sign in five out of six cases is negative, and that the statistical significance is better with the 2004 dispersion rates than with the 1999 ones. Because the correlation is negative, we can assume that past mobility flows have helped overcome the regional labour market imbalances. Because the correlation improves over time, we can conjecture that the 'pull' factor (regional disparities as a factor promoting long-distance mobility) progressively loses ground to the 'push' factor (long-distance mobility as a factor reducing regional imbalances).

Table 7: *Mobility across regions (% of respondents), employment regional rates dispersion (at NUTS-2 level) and unemployment regional rates dispersion (at NUTS-2 and NUTS-3 level), 1999 and 2004*
Rank correlations between mobility variables and macro indicators
rs values and probability value P (one-tail) for the Spearman rho test

Year	Regional employment rates dispersion – NUTS-2		Regional unemployment rates dispersion – NUTS-2		Regional unemployment rates dispersion – NUTS-3 (*)	
	rs values	P	rs values	P	rs values	P
2004(*)	–0.388	6.9%	–0.276	15.0%	–0.271	11.7%
1999(*)	–0.229	19.6%	0.018	52.4%	–0.019	46.9%

Positive (negative) rs values indicate a (direct) inverse rank correlation. Correlations are expected to be negative.
(*) For Germany 2001 and 2003; for Belgium 2003.
Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey Dataset 2005 and Eurostat* (**http://epp.eurostat.ec.europa.eu/portal/**).

Focusing on long-distance mobility patterns (across countries and across regions), we have replicated the exercises in Table 5, Table 6 and Table 7 for the more promising rank correlation test results, focusing exclusively on those persons who moved for job-related reasons between regions and countries. The results are reported in Table 8. The use of job-related long-distance mobility figures uniformly improves the correlations' significance, thus strengthening the hypothesis of a macro link between long-distance mobility and economic performance. Combining mobility across regions and across countries, the probability P that there is no (inverse) correlation between long-distance mobility and regional employment rates dispersion falls under the 5% threshold. However, we can read the results the other way round as well – long-distance mobility not related to the job doesn't add much in term of the coefficients' values; in fact, this component of long-distance mobility appears to dilute the macro relationship between mobility and economic performance indicators.

Table 8: *Job-related long-distance mobility (across countries, across regions and total), employment and long-term unemployment rates (2005), GDP per capita (2005) and regional employment rates dispersion (2004)*
Rank correlations between mobility variables and macro indicators
rs values and probability value P (one-tail) for the Spearman rho test

Mobility patterns	Employment rate 2005 (%)		Long-term unemployment rate 2005 (%)		GDP per capita level in €, 2005		Regional employment rates dispersion – NUTS-2, 2004	
	rs values	P	rs values	P	rs values	P	rs values	P
Across countries	0.681	0.0%	0.717	0.0%	0.806	0.0%		
Across regions	0.653	0.0%	0.497	0.6%	0.611	0.1%	-0.341	9.8%
Total long distance	0.676	0.0%	-0.566	0.2%	0.743	0.0%	-0.430	4.9%

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey Dataset 2005 and Eurostat* (**http://epp.eurostat.ec.europa.eu/portal/**).

To better investigate the latter point, we have treated the 'not job-related' component of long-distance mobility as a residual[7] and replicated the exercise conducted in Table 8 in Table 9. The results reported are very similar to those reported in Table 8, albeit less statistically convincing.

Table 9: *Not job-related long-distance mobility (across countries, across regions and total), employment and long-term unemployment rates 2005, GDP per capita 2005 and regional employment rates dispersion 2004*
Rank correlations between mobility variables and macro indicators
rs values and probability value P (one-tail) for the Spearman rho test

Mobility patterns	Employment rate 2005 (%)		Long-term unemployment rate 2005 (%)		GDP per capita level in €, 2005		Dispersion of regional employment rates – NUTS-2, 2004	
	rs values	P	rs values	P	rs values	P	rs values	P
Across countries	0.671	0.0%	-0.638	0.0%	0.697	0.0%		
Across regions	0.521	0.4%	-0.398	2.5%	0.397	2.5%	-0.441	4.5%
Total long distance	0.681	0.0%	-0.565	0.2%	0.568	0.2%	-0.399	6.4%

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey Dataset 2005 and Eurostat* (**http://epp.eurostat.ec.europa.eu/portal/**).

If it is possible to draw some tentative conclusions from this macro exercise:

▪ mobility across regions and across countries (within and outside the EU combined) are surprisingly similar when related to macro indicators;

▪ the more a country demonstrates long-distance mobility, the higher its employment rate and the lower its unemployment rate;

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[7] That is the share of overall long-distance movers minus the share of job-related long-distance movers as a percentage of the population aged 15–64 years, thus avoiding double counting (individuals may give multiple answers to mobility motivations).

- the more a country demonstrates long-distance mobility, the richer its citizens;

- albeit in a less convincing manner, long-distance mobility also seems able to decrease regional labour market imbalances, at least in respect to *employment* rates;

- the presence of a two-sided relationship between long-distance mobility on the one hand and the *dispersion* of regional *unemployment* rates on the other probably hides the link between the two variables;

- job-related long-distance mobility may represent the 'core component' of the relationship between mobility and macroeconomic performance, but the other components of long-distance mobility also show more or less the same associations with the macro indicators.

As a comprehensive, albeit very tentative, conclusion, it could be said that a long-distance mobility 'friendly' environment is the underlying factor linking relative high proportions of movers in the population and the good shape of economic indicators. Thus, we can hazard the existence of an at least partially indirect relationship between long-distance mobility and macroeconomic performances, both linked to an independent variable combining various institutional and economic structural country-specific factors.

Mobility across regions and its outcomes in a micro perspective

2

This section assesses individual outcomes of long-distance mobility across regions. Please note that long-distance movers across countries are excluded from our analysis at this stage. To carry out the analysis, we refer to a typical experimental design, dividing sample population into a 'treated' and a 'control' group. For our purposes, the treatment group consists of long-distance movers across regions *(movers* from here on), while the control group *(stayers)* encompasses individuals who during their life have never changed residence (with the exception of leaving the parental home) and individuals who moved within the borders of their region of origin (short-distance mobility). The more similar the characteristics of these two groups (i.e. a 'common support' exists for movers and stayers), the more reliable the results of the comparison. For the sake of homogeneity among groups, we decided to exclude people aged 15–24, who still study and have never left the parental home, from the analysis.

In the Eurobarometer 64.1 dataset, we find 19,618 stayers and 3,760 movers (see Table 10). As expected, movers are, on average, older than stayers (the likelihood of having had a mobility event increases with age); likewise, the empirical evidence and socioeconomic models are consistent in portraying the movers group as characterised by a larger share of higher-educated individuals (38.1% of them stopped education at over 20 years of age). If we further subdivide the movers' group according to motivations, the job-related subset is found to be characterised by a larger proportion of men and by a larger proportion of high-skilled individuals. Hence, we can identify 'gender-biased mobility': men move mainly because of job-related reasons, while women presumably move in order to follow their partner, confirming the prevalence of the male breadwinner household model.

Table 10: *Stayers and movers according to gender, age, educational attainment and civil status*

		Stayers	Movers across regions		
			Total	Job- related	Not job- related
Gender	Male	47.0	45.2	58.4	33.4
	Female	53.0	54.8	41.6	66.6
Age	15–24	9.6	4.9	3.6	6.1
	25–34	17.1	15.9	16.9	14.9
	35–44	20.7	21.2	21.1	21.2
	45–54	17.8	18.8	19.6	18.1
	55–64	13.7	16.4	16.6	16.3
	65+	21.0	22.8	22.1	23.4
Educational attainment	Low education	28.8	20.0	16.6	23.1
	Medium education	47.1	41.9	40.8	42.9
	High education	24.2	38.1	42.5	34.0
	N=	**19,618**	**3,760**	**1,783**	**1,977**

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey Dataset 2005.*

One of the main consequences of the gap in human capital between the two groups is that the movers show better labour market indicators. Indeed, the employment rate for those aged 15–64 is one point higher than that of the stayers, while the unemployment rate is two points lower (see Table 11). When considering only job-related movers, the gap widens noticeably – the employment rate reaches 72.7% and the unemployment rate falls to 8.3%.[8] Also, higher skills are related to better jobs: one out of three employed movers is a manager; while over 40% of employed stayers are manual workers.

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[8] 95% estimates confidence intervals show that both employment and unemployment rate differences are significant.

The figures in Table 11 allow us to introduce a clear-cut distinction between movers. If we look at the labour market performance of individuals who moved because of family, household or private reasons, it is clear that their employment rate is lower by far than both job-related movers and stayers, while their unemployment rate reaches 15.1%.

Table 11: *Stayers and movers according to professional status (people aged 15–64)*

	Stayers		Movers					
			Total		Job-related		Not job-related	
	All	Employed	All	Employed	All	Employed	All	Employed
Self-employed	10.3	16.3	10.0	15.5	11.3	15.6	8.7	15.4
Managers	11.4	18.0	19.6	30.5	25.0	34.3	14.7	25.9
Other white collar	14.6	23.1	13.5	21.0	11.8	16.2	15.1	26.6
Manual workers	27.1	42.7	21.3	33.1	24.7	33.9	18.3	32.2
Working in the home	11.4		10.6		4.9		15.9	
Unemployed	10.0		8.4		6.6		10.1	
Retired	10.8		12.2		13.5		11.1	
Students	4.5		4.3		2.2		6.2	
Employment rate	63.4		64.4		72.7		56.8	
95% Confidence Interval	(62.7 – 64.2)		(62.7 – 66.2)		(70.4 – 75.1)		(54.3 – 59.3)	
Unemployment rate	13.6		11.6		8.4		15.1	
95% Confidence Interval	(13.2 – 14.0)		(10.6 – 12.5)		(7.0 – 9.6)		(13.6 – 16.4)	

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey. Dataset 2005.*

Long-distance geographical mobility has a positive correlation with job mobility. In fact, movers tend to change employer more frequently than stayers. Table 12 shows that 23.3% of the latter never changed employer during their lives, while 22.4% of movers changed employer more than six times. Surprisingly, no significant difference is found when comparing job-related movers with the whole population of movers.

Table 12: *Stayers and movers by number of employers (%)*

	Stayers	Movers across regions	
		Total	Job-related
None	23.3	13.1	14.6
1	12.7	10.1	8.8
2	16.4	13.2	14.6
3	17.1	17.9	18.4
4	9.7	12.5	12.8
5	7.4	10.8	10.4
More than 5	13.4	22.4	20.4
Total	**100.0**	**100.0**	**100.0**

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey dataset 2005.*

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If, according to the socioeconomic models, job mobility should be accompanied by rewarding wage gains, it should also be taken into account that periods of unemployment are more frequent among movers (Table 13).

Table 13: *Stayers and movers by number of periods of unemployment (%)*

	Stayers	Movers across regions	
		Total	Job-related
None	66.4	62.3	62.3
1	19.9	20.5	20.8
2	7.3	8.0	8.0
3	3.0	2.3	4.2
4	1.2	1.9	1.8
5	0.9	1.5	1.5
More than 5	1.3	1.5	1.4
Total	**100.0**	**100.0**	**100.0**

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey dataset 2005.*

The data described in the previous tables do not answer the main question of this section. Some indication emerges that, on the whole, movers are better off (in terms of employment rates, unemployment rates and occupation) than stayers, but is this due to the fact that they moved or due to their higher skills? In order to analyse all the concurrent factors, we must introduce a more complex set of variables/matrix. Multivariate analysis seems an appropriate tool for answering two different questions:

- Is there common support for an evaluation design? In other words, can we compare movers and stayers according to a common set of characteristics, or are the two groups too different?

- If a common support for the analysis exists, do stayers and movers differ significantly, *ceteris paribus*, in terms of labour market outcomes?

The multivariate Logit model can address both questions. The Logit model is a simple regression model in which the dependent variable is a binary variable. Logit models are commonly used to determine the likelihood of an event given a set of characteristics, having observed a sample of the population. For example, given age, education, sex, and place of residence of an individual, the model can assess the probability of that individual being employed. Observing the output of the logistic regression model, it is also possible to measure the impact of single characteristics on the overall probability of success. Statistical significance of the model itself, and of single factors, can help us in determining the consistency of the comparison, while the sign and dimensions of the coefficients will help us assess the role of mobility in labour market outcomes.

First of all, we have to define a target variable able to seize labour market outcomes. Occupational status provides a good initial indicator. We tested two different specifications of the Logit model: one in which the dependent variable is a dichotomous indicator that assumes value 1 if the individual is employed and value 0 otherwise,[9] and a second one in

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[9] In order to carry out the Logit model and the subsequent analysis, we limited our attention to persons aged 15–64, both employed and unemployed, with previous job experiences.

which the dependent variable assumes value 0 only if the individual is unemployed. However, given the fact that participation rates among groups are different, the first specification could suffer from a selection bias.[10] Nonetheless, coefficients are highly significant in both models, thus confirming the reliability of our comparison.

Table 14: *Logit estimates on employment status, people aged 15–64*

	(A)	(B)
Constant	0.595 **	0.784 **
Female	–0.819 **	–0.311 **
15–24	**	**
25–34	0.703 **	0.708 **
35–44	1.265 **	1.249 **
45–54	0.91 **	0.93 **
55–64	0.502 **	1.076 **
Living with partner	**	**
Unmarried, living alone	–0.31 **	–0.768 **
Other	–0.441 **	–0.778 **
Low education	**	**
Medium education	0.591 **	0.399 **
High education	1.093 **	0.865 **
Stayers		
Movers	–0.235 **	–0.297 *
Job-related movers	0.802 **	0.51 **

(**) Significant at p=.05; (*) Significant at p=.1.

Dep. Var.: Model (A): Working/Not working; Model (B): Employed/Unemployed.

Other factors included: Country.

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey Dataset 2005.*

First of all, it is important to describe the explanatory variable we used. In addition to the socio-demographic indicators (sex, age, marital status, education) that can influence employment status, country dummies have been entered. This addition is important because it helps to limit potential distortions due to the different employment rate levels among countries, especially where a correlation exists between employment rates and mobility rates. Entering country dummies means that comparisons between movers and stayers are carried out within every single country.[11] With reference to mobility, two different dummies were used: the first one indicates whether individuals are stayers or movers, while the second identifies job-related movers. Before analysing regression results, we will briefly summarise the meaning of the beta coefficients portrayed in Table 14.

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[10] A 'selection bias effect' takes place when only more skilled individuals participate to the labour market. A typical example of selection bias occurs when comparing male and female wages, the latter having a lower propensity to participate than males.

[11] In other words, one could argue that the employment rate of movers is higher because the share of movers is higher in countries characterised by a high level of employment rates. By entering country dummies, one can take into account and neutralise positive correlation among mobility and employment rates.

In the case of a binary explanatory variable (e.g. stayers-movers), the coefficient of one of the two arguments (e.g. stayers) is set to zero, while the sign and the magnitude of the other one indicates the effect of a given characteristic on the dependent variable. From Table 14, column A, it appears that being a mover exerts a negative impact on employment compared to being a stayer (the minus sign determines the negative correlation). For a multi-categorical variable, a reference category is defined (e.g. people aged 15–24) and all the other coefficients must be interpreted as the impact of being, say, aged 25–34 on the probability of being employed with respect to the effect of being aged 15–24 on the same probability.

Let's consider the results of the Logit model. In its first specification, the Logit model suggests the coexistence of two different effects: on the one hand, long-distance mobility across regions penalises individuals in terms of chances of being employed (movers dummy sign is negative), while on the other hand, when mobility is directly linked to job motivations, employability of individuals increases (the dummy sign for job-related movers is positive[12]). These results are consistent with the descriptives set out in Table 11. Concerning the negative effect of long-distance mobility across regions, many causes could be cited. One of the main aspects to underline is the fact that when an individual moves, he/she lost the contact with the social network which favours finding a job. In fact, many empirical surveys confirm that parental and informal relationships remain the main channel through which people enter (or re-enter) the labour market.

The causal (and positive) nexus between job-related mobility and labour market performance, which is emphasised in the first specification of the Logit model, holds true only on the condition that the activity rates of job-related movers and of stayers are identical. For this reason, we performed the second model, which better represents individual outcomes. In fact, the comparison has been carried out only among the active population. It is worth noting that in this second specification, the dummy coefficient of job-related movers sensibly decreases, thus demonstrating the existence of the selection bias effect in the first specification.

Even this latter model, however, may be biased by 'endogenous' factors. It could be the case that, depending on some *unobservable* characteristic that affects individual behaviour (e.g. household income), the job-search effort among job-related movers and stayers is different. Besides, even accepting the results of the second specification, many questions are as yet unanswered. Firstly, we should verify whether movers' jobs are indeed better jobs (in terms of wage, type of contract, etc.) and secondly, no conclusion can be drawn concerning individual welfare unless we assume that employment is the only argument of the individual utility function. In order to deal with the first aspect, even if only partially, we used a specific question of the Eurobarometer survey on the current type of employment contract.

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[12] The job-related dummy assumes value 0 if individuals are stayers or not job-related movers and value 1 if individuals are job-related movers.

Table 15: *Employed movers and stayers according to professional status*

Type of contract	Stayers	Movers across regions		
		Total	Job- related	Not job- related
Permanent	**69.8**	**71.8**	**73.3**	**70.0**
Std. Err.	0.005	0.010	0.014	0.016
95% Confidential Interval Lower Bound	68.9	69.8	70.6	66.9
95% Confidential Interval Upper Bound	70.7	73.8	76.1	73.0
Fixed term	**11.6**	**11.1**	**9.3**	**13.4**
Std. Err.	0.003	0.007	0.009	0.012
95% Confidential Interval Lower Bound	11.0	9.7	7.5	11.1
95% Confidential Interval Upper Bound	12.3	12.6	11.1	15.7
Temporary employment agency	**1.7**	**1.6**	**1.2**	**2.2**
Std. Err.	0.001	0.003	0.003	0.005
95% Confidential Interval Lower Bound	1.5	1.1	0.5	1.2
95% Confidential Interval Upper Bound	2.0	2.2	1.8	3.2
Apprenticeship or other training scheme	**1.6**	**0.8**	**1.3**	**0.2**
Std. Err.	0.001	0.002	0.004	0.002
95% Confidential Interval Lower Bound	1.3	0.4	0.6	-0.1
95% Confidential Interval Upper Bound	1.8	1.2	2.0	0.5
Other	**15.3**	**14.6**	**15.0**	**14.2**
Std. Err.	0.004	0.008	0.011	0.012
95% Confidential Interval Lower Bound	14.6	13.0	12.8	11.9
95% Confidential Interval Upper Bound	16.0	16.2	17.2	16.6

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey dataset 2005.*

As shown in Table 15, on average, the share of permanent workers is higher among long-distance movers across regions than among stayers (71.8% vs. 69.8%). This share increases among job-related movers (73.3%). The statistics reported in Table 15 show that no clear distinction can be made between not job-related movers and stayers regarding their professional status, bar the small apprenticeship share. However, the permanent contract share for job-related movers is significantly higher than the one for stayers, as shown by the confidence intervals (the job-related movers' permanent contract share estimated lower bound coincides with to the stayers' estimated upper bound), and the fixed-term share for job-related movers is significantly lower than the one for stayers (the job-related movers' fixed term contract share estimated higher bound coincides with the stayers' estimated lower bound).

Many composition effects may be cited to explain the differences between movers and stayers. In order to carry out a consistent comparison, however, it is more convenient to consider all the factors that may affect these statistics contemporaneously. We therefore implemented a third Logit model, in which the dependent variable is a dummy that assumes value 1 if the worker has a permanent contract and value 0 otherwise. Since in this model all individuals considered are employed, in addition to the socio-demographic variables (sex, age, education, marital status), we included other controls such as occupation (ISCO), activity sector (NACE), potential experience[13] and tenure.

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[13] Potential experience has been calculated on the basis of a specific question of the Eurobarometer survey (QA24).

Table 16: *Logit estimates on having a permanent job*

Dep. Var.: Having a permanent contract	Beta coeff.	Sig.
Female	–0.113	**
15–24		**
25–34	0.487	**
35–44	0.707	**
45–54	0.474	**
55–64	0.248	*
Living with partner		**
Unmarried, living alone	–0.34	**
Other	–0.149	**
Low education		**
Medium education	0.172	**
High education	–0.101	
Potential experience	0.089	
Movers	–0.275	**
Job-related movers	0.314	**
Constant	–1.139	**

(**) Significant at p=.05; (*) Significant at p=.1.

Other factors included country, ISCO and NACE (current or previous occupation).

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey dataset 2005.*

Logit results shown in Table 16 reflect previous findings. Ceteris paribus, mobility across regions per se exerts a negative impact on the type of employment contract, while the likelihood of having a permanent contract is higher among job-related movers.

We can sum up the results obtained by the previous models by arguing that long-distance mobility across regions seems to penalise individuals in terms of labour market outcomes, while job-related mobility is positively correlated with the probability of being employed and with the probability of finding a job. A similar effect is also exerted on having a permanent contract for movers.

A broader issue still remains unexplored: how do individuals perceive their quality of work? A rough measure of individual well-being may be provided by job satisfaction. In the Eurobarometer 64.1 Survey, individuals were asked about their level of satisfaction in current and previous jobs in relation to a set of items: salary, type of contract, working hours, commuting time, career prospects, job content, relationship with colleagues, training opportunities, health and safety conditions, working and private life balancing.

In the following part of this chapter, we put this information to use by using current job satisfaction data for the employed and previous job satisfaction data for the unemployed and inactive. Given the ordinal rank of the 10 satisfaction variables (they range from 1 to 4, indicating total satisfaction and total dissatisfaction, respectively), some transformations were necessary to adapt them to our uses. Firstly, we recoded the original variables into binary variables, reflecting satisfaction or dissatisfaction with respect to a single topic. In Table 17, descriptives of such transformed variables for movers and stayers are depicted.[14]

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[14] Descriptives are calculated for employed people aged 15–64.

Table 17: *Percentages of movers and stayers across regions fairly or totally satisfied with…*

	Stayers	Movers across regions		
		Total	Job- related	Not job- related
Salary	**72.6**	**74.6**	**77.6**	**71.6**
Std. Err.	0.006	0.012	0.017	0.018
95% Confidential Interval Lower Bound	71.5	72.1	74.3	68.0
95% Confidential Interval Upper Bound	73.8	77.1	80.9	75.2
Type of contract	**83.5**	**85.5**	**85.9**	**85.0**
Std. Err.	0.005	0.010	0.014	0.015
95% Confidential Interval Lower Bound	82.5	83.5	83.1	82.2
95% Confidential Interval Upper Bound	84.4	87.4	88.6	87.9
Working hours	**79.6**	**79.5**	**77.0**	**82.1**
Std. Err.	0.005	0.012	0.017	0.016
95% Confidential Interval Lower Bound	78.5	77.2	73.6	79.0
95% Confidential Interval Upper Bound	80.7	81.8	80.3	85.1
Commuting time	**82.6**	**82.1**	**82.2**	**82.0**
Std. Err.	0.005	0.011	0.015	0.016
95% Confidential Interval Lower Bound	81.6	80.0	79.2	79.0
95% Confidential Interval Upper Bound	83.6	84.3	85.3	85.1
Career prospects	**66.3**	**64.4**	**62.1**	**66.7**
Std. Err.	0.006	0.014	0.020	0.019
95% Confidential Interval Lower Bound	65.0	61.7	58.2	62.9
95% Confidential Interval Upper Bound	67.5	67.1	65.9	70.5
Job content	**87.9**	**88.6**	**88.5**	**88.7**
Std. Err.	0.004	0.009	0.013	0.013
95% Confidential Interval Lower Bound	87.0	86.8	86.0	86.2
95% Confidential Interval Upper Bound	88.7	90.4	91.1	91.3
Colleagues	**91.3**	**89.8**	**88.2**	**91.5**
Std. Err.	0.004	0.009	0.013	0.011
95% Confidential Interval Lower Bound	90.6	88.1	85.6	89.2
95% Confidential Interval Upper Bound	92.1	91.5	90.7	93.7
Training opportunities	**70.0**	**71.7**	**72.5**	**70.8**
Std. Err.	0.006	0.013	0.018	0.019
95% Confidential Interval Lower Bound	68.8	69.1	69.0	67.2
95% Confidential Interval Upper Bound	71.2	74.2	76.1	74.4
Private and working life balancing	**81.2**	**80.1**	**79.8**	**80.4**
Std. Err.	0.005	0.011	0.016	0.016
95% Confidential Interval Lower Bound	80.2	77.8	76.6	77.2
95% Confidential Interval Upper Bound	82.2	82.3	83.0	83.6
Health and safety conditions	**88.4**	**87.1**	**86.6**	**87.6**
Std. Err.	0.004	0.010	0.014	0.013
95% Confidential Interval Lower Bound	87.6	85.2	83.9	85.0
95% Confidential Interval Upper Bound	89.3	89.0	89.3	90.3

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey Dataset 2005.*

Broadly speaking, for most of the indicators, no significant difference emerges in the comparison of the satisfaction level between and stayers and movers as a whole. Movers are (subjectively) slightly better off in salary, type of contract, content of job and training opportunities, while stayers do better in terms of working hours, commuting time, career prospects, relationships with colleagues, private and working life balancing and health and safety conditions. Some puzzling evidence is provided by the comparison of the movers' subsets: on average, job-related movers are more satisfied with their work arrangements (salary, type of contract, job contents, training opportunities), while the non job-related movers, on average, express satisfaction with other aspects (such as career prospects, commuting time, relationships with colleagues and private and working life balancing).

In order to take all dimensions into consideration together, we constructed a simple indicator of overall professional life satisfaction. Using z to indicate the sum of the values assumed by the 10 variables attaining to each satisfaction dimension, a standardised indicator H can be written as:

$$H = \frac{z - 10}{40 - 10}$$

where H equals 0 when individuals are totally satisfied and 1 when they're totally dissatisfied with working life. For the sake of simplicity, we transform H into S in order to have an indicator that increases with overall satisfaction:

$$S = 1 - H$$

In Table 18, movers' and stayers' average values of S are shown according to socio-demographic and job characteristics. Total average satisfaction is almost identical for all groups and very few factors seem to discriminate between stayers and movers. Some valuable hints emerge only when entering job-related movers into the comparison. One point to highlight is that female levels of satisfaction increase significantly only if movement is related to family, household or private reasons. The same does not apply to men, who are generally more satisfied with both their professional and their private lives. This seems to support the hypothesis that in the majority of cases, women follow the males in accordance to a male breadwinner model, which was (and sill is) widespread among European countries.

Table 18: *Average S values according to mobility pattern (people aged 15–64)*

		Stayers		Movers across regions					
				Total		Job- related		Not job- related	
		Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.
Gender	Male	0.669	0.002	0.681	0.005	0.686	0.006	0.672	0.008
	Female	0.669	0.002	0.676	0.005	0.662	0.008	0.686	0.007
Age	15–24	0.643	0.005	0.617	0.018	0.611	0.027	0.624	0.022
	25–34	0.663	0.003	0.686	0.008	0.694	0.010	0.676	0.012
	35–44	0.677	0.003	0.673	0.006	0.656	0.009	0.690	0.008
	45–54	0.663	0.003	0.676	0.007	0.692	0.009	0.658	0.010
	55–64	0.703	0.005	0.704	0.010	0.681	0.014	0.728	0.014
Professional status	Self-employed	0.699	0.004	0.699	0.009	0.692	0.013	0.707	0.013
	Managers	0.715	0.003	0.727	0.006	0.717	0.007	0.742	0.009
	Other white collar	0.677	0.003	0.679	0.008	0.668	0.013	0.688	0.009
	Manual workers	0.658	0.002	0.662	0.007	0.659	0.009	0.666	0.010
	Unemployed	0.593	0.006	0.576	0.012	0.577	0.021	0.576	0.015

Table 18: *Average S values according to mobility pattern (people aged 15–64) (cont'd)*

		Stayers		Movers across regions					
				Total		Job- related		Not job- related	
		Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.
Occupation	Professional	0.705	0.003	0.724	0.005	0.721	0.007	0.727	0.007
	Clerks	0.675	0.003	0.657	0.007	0.657	0.009	0.656	0.010
	Skilled workers	0.647	0.005	0.633	0.010	0.620	0.014	0.648	0.014
	Elementary occupations	0.612	0.005	0.637	0.016	0.638	0.032	0.636	0.018
	Armed forces and others	0.682	0.005	0.656	0.012	0.664	0.015	0.641	0.018
Type of contract	Permanent contact	0.692	0.002	0.696	0.004	0.685	0.006	0.711	0.006
	Fixed-term contract	0.628	0.005	0.667	0.010	0.672	0.014	0.663	0.015
	TWA contract	0.624	0.012	0.643	0.024	0.629	0.033	0.653	0.033
	Apprenticeship	0.665	0.015	0.813	0.040	0.847	0.033	0.544	0.110
	Other	0.673	0.004	0.677	0.010	0.686	0.013	0.665	0.014
Total		**0.669**	**0.002**	**0.679**	**0.004**	**0.676**	**0.005**	**0.681**	**0.005**

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey Dataset 2005.*

Following the paper of Fasang, Geerdes, Schoman and Siarov (*Job satisfaction and labour market mobility. Analytic report*, July 2006, part of the same Mobility in Europe project as this report), we also tried to cope with different dimensions of satisfaction. We therefore constructed three different indicators: one for satisfaction with work arrangement (salary, type of contract and working hours) – W; one for satisfaction with quality of position (career prospects, job content and training opportunities) – Q; and one for satisfaction with balancing private and working life (working hours, commuting time, job content, relationships with colleagues, work-life balance) – C. Using S, W, Q and C as dependent variables, a simple OLS model has been tested (Table 18).

Besides the mobility dummy, the explanatory variables are sex, age, education, potential experience, marital status, professional status, occupation and economic activity sector (in current or previous job) and country. The results of this regression are shown in Table 19. Except when considering working and private life satisfaction combined, mobility across regions has no statistically significant impact on individual satisfaction (all coefficients are not statistically different from zero). Moreover, when it appears to have a statistically significant impact, the outcome is negative.

Table 19: *OLS estimates of job satisfaction*

		Overall satisfaction		Work arrangement satisfaction		Quality of position satisfaction		Working and private life satisfaction combined	
		B		B		B		B	
Constant		0.746	**	0.665	**	0.796	**	0.752	**
Mobility	**Movers**	−0.006		−0.009		−0.004		−0.006	
	Job–related movers	−0.005		−0.003		−0.003		−0.007	*
Potential experience		0.002	**	0.002		0.002	**	0.001	
Gender	Male								
	Female	−0.006	*	−0.006		−0.005		−0.003	
Age	15–24								
	25–34	0.011	*	0.021	**	0.012	*	0.007	
	35–44	0.005		0.027		0		0.004	
	45–54	−0.002		0.01	**	−0.001		−0.001	
	55–64	0.021	**	0.031	**	0.026	**	0.024	**
Education	Low education								
	Medium education	0.004		0.001		0.011	*	0.002	
	High education	0.001		−0.003		0.007		0.001	
Marital status	Living with partner								
	Unmarried, living alone	−0.005		−0.022		0.004		−0.001	
	Other	−0.015	**	−0.024		−0.008		−0.013	
Professional status	Self-employed								
	Managers	−0.025	**	0.02	**	−0.059	**	−0.026	**
	Other white collar	−0.039	**	0.009	*	−0.081	**	−0.035	**
	Manual workers	−0.046	**	−0.011		−0.071	**	−0.041	**
	Unemployed	−0.114	**	−0.055	**	−0.143	**	−0.114	**

(**) Significant at p=.05; (*) Significant at p=.1.

Other factors included country, ISCO and NACE (current or previous occupation).

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey.*

We can therefore sum up our analysis of job-related mobility across regions as follows:

- even if labour market indicators suggest that movers across regions are better off than stayers, when using multivariate techniques, it emerges that mobility across regions *per se* reduces the employment chances of individuals;

- in contrast, *job-related* mobility across regions has a positive impact on the employability of individuals. Employment rates of movers are far higher than those of stayers; unemployment rates are lower and multivariate analysis confirms the evidence. This argument may be mitigated by some inherent bias by which movers are more motivated in looking for a job;

- mobility across regions does not seem to affect the *type* of job individuals find, even when mobility is directly linked to job motivations. Notwithstanding the higher share of permanent workers among movers, multivariate analysis suggests that many factors other than mobility affect this data (age, education, experience, etc.). Movers are prone to change employer more frequently than stayers, but this results in more frequent spells of unemployment;

- when using ordinary least square models to compare the satisfaction of movers and stayers with respect to several dimensions (salary, type of contract, working hours, commuting time, career prospects, job content, relationship with colleagues, training opportunities, working and private life balance, health and safety conditions), no significant difference is found (if any is found, the mobility across regions impact is negative).

On the latter point, we miss the crucial issue regarding job-related long-distance mobility: the 'what if' factor. According to standard socioeconomic theory, an individual decides to move only if the (expected) benefits overcome (expected) costs associated with it. It is then plausible to assume that individuals choose to move because they faced (or expected to face) a lower-than-average overall satisfaction.

Impact of mobility across countries

<div style="text-align: right; font-size: 2em; font-style: italic;">3</div>

Long-distance mobility across countries can be divided into two main groups: mobility that occurs within EU boundaries and outside EU boundaries. Among movers within the EU, we can identify individuals who have returned, or not, to their birthplace. The former amounts to 53.7% of the sample of movers outside the EU, while the latter represents 24.9%. The remaining 21.4% were born outside the EU and most likely moved to an EU country with their parents or when they left the parental home.

Among countries outside the EU, we can distinguish among EU citizens who returned within European boundaries (70.5%) and immigrants born outside the EU boundaries (29.5%).[15] One would expect that while immigrants from third countries move to EU countries in search of better social and economic conditions, movers outside the EU would do so in order to increase their human capital endowment through job or study experiences. As Table 20 shows, immigrants linked mobility events to job-related reasons less frequently than most EU citizens, especially those who have since returned to their mother country or moved across or outside the EU because of job transfers. In spite of this fact, employment rates are fairly uniform between the identified groups, being higher among non-EU immigrants and lower among movers across the EU who were born abroad. It is worth noting that in this last group there is a higher share of young people, suggesting that they are probably students or still living with parents (and following them in movements inside the EU).

Table 20: *Movers across countries according to individual characteristics*

		Across EU *returned home*	Across EU *still abroad*	Across EU *immigrants*	Outside EU *returned home*	Outside EU *immigrants*
Gender	Male	46.0	43.2	48.4	51.4	48.2
	Female	54.0	56.8	51.6	48.6	51.8
Age	15–24	4.5	6.0	7.9	1.4	0.0
	25–34	19.7	24.6	24.4	18.3	17.8
	35–44	26.2	20.5	25.7	15.9	23.7
	45–54	12.7	18.3	19.2	18.9	29.5
	55–64	17.6	11.2	7.1	19.7	10.9
	65+	19.3	19.4	15.7	25.8	18.1
Educational attainment	Low education	29.2	26.6	15.2	16.2	19.5
	Medium education	31.8	37.5	32.6	37.4	51.6
	High education	39.0	36.0	52.3	46.4	28.9
Professional status	Self-employed	9.9	9.3	1.3	14.0	7.7
	Managers	16.5	11.4	18.4	20.6	5.0
	Other white collar	11.1	12.6	6.7	10.5	13.4
	Manual workers	12.3	21.1	21.7	10.3	29.9
	Employed	**49.8**	**54.4**	**48.1**	**55.4**	**56.1**
	Unemployed	**8.3**	**5.9**	**11.9**	**4.2**	**7.2**
	Unemployment rate	14.3	9.8	19.8	7.0	11.3
	Working in the home	10.3	22.6	14.4	6.9	13.3
	Retired	27.3	15.2	18.6	30.2	19.9
	Students	4.3	1.9	7.0	3.4	3.9
	Out of labour force	**41.8**	**39.6**	**40.0**	**40.4**	**36.7**
Job-related mobility		**47.0**	**33.1**	**23.2**	**48.9**	**31.9**
N		**444**	**206**	**177**	**461**	**193**

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey dataset 2005.*

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[15] As non-EU nationals amounts to less than 6% of movers across countries, (90 (un)weighted cases), we used birthplace in order to create a convenient and sufficiently large subset for the analysis.

When comparing the characteristics of movers across countries with the less mobile groups (Table 21), some interesting peculiarities emerge. As expected, in the identified groups, the female share tends to decrease the longer the distance of mobility. Equally, while it is very rare to find young people among movers outside the EU, movers within the EU are instead characterised by a considerable quota of young people, who presumably move because of study or short job experiences. On the whole, movers across countries are very highly skilled, with the share of higher-educated people being close to 45% of the total. Some noticeable distinctions are found when occupational and professional status are taken into account – while among movers outside the EU employment rates are well above 70%, the share of the employed population is lower by far among movers within the EU. By the same token, the unemployment rates of those aged 15–64 are lowest among movers outside the EU and the highest among movers within the EU.

Table 21: *Movers across countries according to individual characteristics compared to other groups (% of people aged 15–64)*

		Stayers	Across regions	Within EU	Outside EU
Gender	Male	50.3	46.4	49.8	54.3
	Female	49.7	53.6	50.2	45.7
Age	15–24	12.6	6.4	6.9	1.3
	25–34	21.9	20.5	26.9	23.8
	35–44	26.1	27.4	30.3	23.8
	45–54	22.5	24.3	19.0	28.8
	55–64	17.0	21.3	16.9	22.3
Educational attainment	Low education	20.8	13.6	19.0	10.6
	Medium education	52.8	44.8	36.1	44.8
	High education	26.3	41.6	44.9	44.6
Professional status	Self-employed	10.2	10.0	9.5	14.7
	Managers	10.7	19.7	18.8	20.5
	Other white collar	14.7	13.5	12.9	14.8
	Manual workers	27.6	21.3	20.3	21.0
	Working in the home	11.5	10.6	13.0	7.1
	Unemployed	10.1	8.4	10.4	6.6
	Retired	10.8	12.2	10.0	10.8
	Students	4.4	4.3	5.2	4.4
Employment rate		63.2	64.4	61.4	71.1
Unemployment rate		13.7	11.6	14.5	8.5

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey dataset 2005.*

A further distinction can be made among movers across countries depending on whether or not they moved because of job-related motivations. In the first case, labour market outcomes of individuals increase: the employment rate of movers within the EU rises to 71.8% (Table 22) and the unemployment rate falls to 10.7%. A similar pattern can be observed among movers outside the EU: the employment rate is 73.5% among job-related movers and 69.0% among not job-related movers, while the unemployment rate of the latter is 2.3 points higher than the former.

Table 22: *Occupational status, employment and unemployment rate of movers across countries according to motivations (% of people aged 15–64)*

	Long-distance movers within the EU		Long-distance movers outside the EU	
Current occupation	Not job related	Job related	Not job related	Job related
Self-employed	7.9	12.0	15.9	13.4
Managers	13.1	27.4	18.1	23.3
Other white collar	18.0	5.2	16.9	12.3
Manual workers	15.7	27.1	18.0	24.5
Working in the home	17.3	6.4	8.3	5.6
Unemployed	11.6	8.6	7.3	5.8
Retired	10.6	9.1	10.3	11.4
Students	5.9	4.2	5.0	3.7
Total	**100**	**100**	**100**	**100**
Employment rate	**54.6**	**71.8**	**69.0**	**73.5**
95% Confidence Interval	(49.7 – 59.5)	(66.3 – 77.2)	(63.5 – 74.5)	(67.7 – 79.2)
Unemployment rate	**17.6**	**10.7**	**9.6**	**7.3**
95% Confidence Interval	(14.6 – 19.9)	(7.3 – 13.4)	(6.2 – 12.3)	(3.9 – 10.0)

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey dataset 2005.*

Given this premise, one would expect that a multivariate analysis of the labour market outcomes would result in a highly differentiated impact of long-distance mobility across countries on the likelihood of being employed, according to whether this occurs within or outside EU boundaries and according to motivations.

Yet many composition effects may be at work. The different composition of the groups according to age and the high share of educated people among movers both suggest that a strong selection effect may affect the overall statistics on employment rates. In order to take all factors into account together, we designed a new multivariate Logit model. The dependent variable is a dummy which assumes value 1 when individuals are employed and 0 otherwise. Among the predictors, we included sex, age, educational attainment, marital status, potential experience, occupation and activity sector (in current or previous job). A dummy for each country has been entered. The results of four different specifications are shown in Table 23. Firstly, we tested our model separately on movers within the EU (columns A and B) and movers outside the EU (columns C and D). Secondly, in both cases we introduced two different dummies: one for general mobility (stayers and shorter-distance movers vs. long-distance movers within/outside the EU) and one for job-related mobility only (long-distance job-related movers within/outside the EU vs. all the others).

Table 23: *Logit estimates** on employment status for mobility within and outside the EU (Dependent variable: Being employed)*

Dep. Var.: Being employed	Within EU				Outside EU			
	(A)		**(B)**		**(C)**		**(D)**	
Constant	2.537		1.49	*	2.539	**	19.894	
Potential experience	−0.03		−0.144	*	−0.03	*	−0.104	
Female	−0.828	**	−0.792	*	−0.826	*		
15–24								
25–34	−0.017		−0.074		−0.039		−19.012	
35–44	0.212	*	0.355		0.191	**	−18.621	
45–54	−0.272	**	0.836		−0.293	*	−18.665	
55–64	−1.749	*	−0.436		−1.772	**	−19.601	
Low education								
Medium education	0.314	*	0.545	*	0.315	*	−0.043	
High education	0.651	**	1.275	*	0.635	**		
Mobility	−0.423	**			0.257	*	0.494	
Job-related mobility			0.692	*			0.314	

(**) Significant at p=.05.; (*) Significant at p=0.1.

Other factors included country, ISCO and NACE (current or previous occupation), marital status.

Source: *Calculations elaborated by the authors on the basis of Eurobarometer Survey dataset 2005.*

Analysing the results of the Logit model, it appears that mobility across countries has a very different impact on the likelihood of being employed depending on whether individuals moved within or outside EU boundaries. When considering mobility within the EU per se, it does not appear to increase (and in fact may decrease) chances of being employed compared to all other groups (outside EU excluded) – see mobility coefficient in column A. Yet when directly explained by job motivations, mobility within the EU exerts a positive and tangible impact on the selected dependent variable, as shown by the job-related mobility coefficient in column B. Movers outside the EU are instead more likely to be employed with respect to the control group (which consists of all other mobility groups), irrespective of having moved because of job motivations – column C. Since the sample of job-related movers outside the EU is very small, when explicitly entering the job-related dummy, the model's estimates are not reliable.

Conclusions

In this report, we have analysed the effects of two different kinds of long-distance mobility: mobility across regions, which occurs within national boundaries, and mobility across countries, which occurs beyond national borders and can be further distinguished as mobility within and outside the EU. Aside from the methodological caveats that need to be made relative to the actual extent of movement, long-distance mobility is generally considered to be an indicator of economic performance and a crucial factor in enhancing overall human capital. From a socio-political point of view, mobility across countries is one of the cornerstones of European integration, and the European Commission itself has often underlined the importance of mobility across European countries in enhancing European social cohesion. From an economic point of view, moreover, mobility represents one of the balancing factors of the disparities among the European labour and goods market. In spite of this, European countries are generally characterised by low mobility rates, especially when comparison is made with the US economy.

In addition, there is a general lack of reliable sources on data on mobility across countries. To overcome this problem, we analysed the effects of different types of mobility patterns using the Eurobarometer 64.1 Survey, which was carried out in 2005 in all European countries, and is one of the few datasets which has collected reliable information on this subject.

In order to assess the impact of mobility on European citizens, we used two different lenses: the macro one, which allows comparison of the mobility rates of countries and their economic performances, and the micro one, in which, assuming a *homo economicus* rationale, mobility is put in context with individual outcomes both in the labour market and in the broader perception of individual satisfaction.

When focusing on the macro level, long-distance mobility, especially when job related, is associated with better labour market performances, particularly with respect to employment rates, unemployment rates and also with per capita GDP levels. Also, we have found a relation with lower regional disparities. Interestingly, a similar pattern of macro relationships affects mobility across regions and countries. A comprehensive, albeit very tentative, conclusion could be that an environment that is 'friendly' to long-distance mobility is the underlying factor linking relatively high proportions of movers in the population and the good shape of economic indicators. Thus we can hazard the existence of an (at least partially) *indirect* relationship between long-distance mobility and macroeconomic performances, both linked to an independent variable combining various institutional and economic structural country-specific factors.

When analysing the micro level, though, a more complex scenario emerges. At first glance, long-distance mobility is associated with better labour market outcomes. Indeed, the employment rate of movers aged 15–64 is one percentage point higher than that of the stayers, while their unemployment rate is two points lower. Moreover, focusing on work arrangements, it emerges that the movers' share of permanent contracts is two percentage points higher. However, the differences between stayers and movers are not significant at 95% confidence intervals. Instead, the differences between job-related movers and stayers are significant most of the time, with job-related movers on the winning side with an employment rate nine points higher and an unemployment rate five points lower than stayers. Also, the share of permanent contracts is noticeably higher (73.3 vs. 69.8) for job-related movers compared to stayers.

Therefore, descriptive statistics depict a rewarding scenario only for job-related mobility. With regard to this kind of mobility, it is essential to note that in most of the cases, individuals moved under 'certainty conditions'. Looking at the responses to the Eurobarometer survey, in fact, the percentage of 'job-seeking movers' is very low, while the majority of job-related movers answered that they moved because of a 'new job or a job transfer'. This fact can obviously influence the results of the analysis, especially when the date of the move is not too far removed in time.

Besides, more subtle factors may be at work, namely, selection and endogeneity biases. The former implies that participation rates and labour market attachment may be higher among movers, thus influencing the main indicators used in the analysis, while the latter implies that some observable and unobservable characteristics may be correlated with labour market outcomes and bias the observed results of the analysis. In particular, one could argue that individuals are movers because they are better off than stayers in terms of some particular skill.[16] At the same time, some movers relocated only because his/her partner found a better job elsewhere, thus leaving a favourable position in his/her residence place.

Selection and endogeneity biases can be mitigated using a typical framework of experimental design,[17] where a 'treatment' (in our case, mobility) is assigned and a treatment and a control group are identified. In particular, selection biases can be dealt with by accurately choosing the control group, while endogeneity biases may be addressed by using the appropriate statistical technique.

Using the statistical techniques for treating the different composition of groups according to variables other than mobility (age, gender, education, country, etc.), the positive impact of mobility across regions lessens perceptibly, especially when a broader concept of individual satisfaction is taken into account. In this paper, we have used several specifications of Logit regression to show that long-distance mobility across regions exerts a negative impact both on employability and on the likelihood of having a permanent job, while it has no significant correlation with (perceived) well-being.

Yet if we eliminate job-related movers across regions from the rest of the sample, the outcomes, consistent with job mobility economic theories, once again turn out to be rewarding – at least regarding the probability of being employed and having a permanent contract. Both descriptive and multivariate regressions show that job-related movers are more successful in finding a (better) job. Concerning life satisfaction and well-being, by analysing the descriptive results, some weak evidence emerges for movers being better off in terms of salary, type of contract, content of job and training opportunities; while stayers feel better in terms of working hours, commuting time, career prospects, relationships with colleagues and private and working life balancing. Yet when carrying out Logit regressions, no significant correlation between job-related mobility and satisfaction can be drawn.

Similar conclusions may be drawn for movers within the EU, which are, on average, characterised by poor labour market indicators, but by considerably better performance when job-related motivations lie behind their mobility choices. In contrast, the entire population of movers outside the EU is characterised by remarkable levels of labour market indicators, but this performance can be mostly explained by a strong skill-biased selection.

If statistics are adjusted for effects of the different composition of the sub-groups of mobility, and if long-distance mobility is cleared of job-related long-distance mobility, then the negative relationship observed at micro level between long-distance mobility and labour market achievements may be explained by poor social networks (in the locus of arrival, but we cannot exclude this being true also for the point of origin) and/or some idiosyncratic 'ascriptive' endowments. Hence, a lower than average valorisation of personal assets can derive from a mix of these two factors.

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[16] Imagine the case of a multinational firm facing the decision to appoint a director in a foreign office. When deciding among two candidates, one will be chosen. He/she will become a mover because of a selection process that rewards the more skilled candidate.

[17] The experimental design is typical of studies aiming at assessing the effect of a medical treatment on a specific disease.

The costs of long-distance mobility *per se* appear to be relevant in terms of underperformances. Thus, if individuals follow an economically rational behaviour, based on their own experiences and of others, they are aware that the rewards of long-distance mobility can be modest and that the balance between the costs of long-distance mobility and its benefits is not clearly in favour of the latter. Yet if a good 'across-the-border' job opportunity arises, the long-distance mobility choice can be beneficial in economic terms. Otherwise, the individual can pay a significant price for long-distance mobility in order to attain his or her priorities.

Although the results of the micro-analysis mitigate those of the macro one, they nonetheless remain basically coherent. Firstly, the rough results of long-distance mobility at micro level (employment and unemployment rates) are positive for individuals, and in a statistically significant way. Secondly, the micro testing evidence also indicates that long-distance mobility happens at a cost.

References

Burdett, K., 'A theory of employee job search and quit rates', *American Economic Review*, Vol. 68, 1987, pp. 212–20.

Carlsen, F. and Johansen, K., 'Subjective measures of employment opportunities and interregional migration', *Labour*, Vol. 18, No. 4, 2004, pp. 563–89.

Devillanova, C., 'Interregional migration and labor market imbalances', *Journal of Population Economics*, Vol. 17, 2004, pp. 229–47.

Dohmen, T.J., 'Housing, mobility and unemployment', *IZA Discussion Paper* n. 210, 2000.

Hamalainen, K., 'Unemployment, selective employment measures and inter-regional mobility of labour', *Papers in Regional Sciences*, Vol. 81, 2002, pp. 423–41.

Huber, P., 'Interregional mobility in Europe: a note on the cross-country evidence', *Applied Economic Letters*, Vol. 11, 2004, pp. 619–24.

Jones, E. and Verdun, A., 'The political economy of European integration', Oxford, Routledge, 2005.

Jovanovic, B., 'Job matching and the theory of turnover', *Journal of Political Economy*, Vol. 87, 1979, pp. 972–90.

Lianos, T.P., 'Interregional allocation of labour: a measure of economic efficiency', *The Annals of Regional Sciences*, Vol. 4, No. 1, 1970, pp. 93–104.

Mincer, J., 'Job training, wage growth, and labour turnover', Working Paper no. 2690, Cambridge, MA,: National Bureau of Economic Research, 1988.

Pissarides, C.A. and Wadsworth, J., 'Unemployment and the inter-regional mobility of labour', *The Economic Journal*, Vol. 99, 1989, pp. 739–55.

Puhani, P.A., 'Labour mobility: an adjustment mechanism in Euroland? Empirical evidence for Western Germany, France and Italy', *German Economic Review*, Vol. 2, No. 2, 2001, pp. 127–40.

Vandenbrande, T. (ed.), Coppin, L., Ester, P., Fasang, A., Fouarge, D., Geerdes, S., Schömann, K., and van der Hallen, P., European Foundation for the Improvement of Living and Working Conditions, *Mobility in Europe. Analysis of the 2005 Eurobarometer survey on geographical and labour market mobility*, Luxembourg, Office for Official Publications of the European Communities, 2006.

Yankow, J.J., 'Does distance matter? A comparison of boundary and distance-based measures of internal migration', *Journal of Economic and Social Measurement*, Vol. 28, 2003, pp. 161–75.