



Discussion Papers in Economics

GO WEST? ASSESSING THE WILLINGNESS TO MOVE
FROM CENTRAL
AND EASTERN EUROPEAN COUNTRIES

By

Stephen Drinkwater
(University of Surrey)

DP 05/03

Department of Economics
University of Surrey
Guildford
Surrey GU2 7XH, UK
Telephone +44 (0)1483 689380
Facsimile +44 (0)1483 689548
Web www.econ.surrey.ac.uk

Go West? Assessing the willingness to move from Central and Eastern European Countries

Stephen Drinkwater

Department of Economics

University of Surrey, UK

May 2003

Abstract

This paper uses cross national survey data to examine the willingness to move of residents from several Central and Eastern European Countries (CEECs). This is of particular relevance given that some of these countries will be part of the forthcoming enlargement of the EU, and hence individuals from these countries will eventually be allowed to move freely between member states. Whereas most previous studies have used aggregate data to forecast flows from the East following enlargement, the emphasis in this paper is on the reasons why individuals may not want to move and it is argued that these factors may outweigh the possible high rewards in the West for many individuals. It is found that although individuals in some of the CEECs display a relatively high willingness to move, overall, the willingness to move country is lower in the CEECs than it is in the EU. Furthermore, the availability of microdata enables the characteristics of those individuals who are most willing to move to be established and the evidence suggests that the most qualified individuals have the highest willingness to move.

Keywords: Migration, EU enlargement, Labour immobility

JEL-Codes: F22, J61, P23.

Funding from the European Commission's Framework 5 Programme is acknowledged as part of a project analysing the impact of migration on growth and employment in the context of EU enlargement. The International Social Survey Programme was provided through the Data Archive at the University of Essex. Helpful comments have been received from participants at the 2002 European Association of Labour Economists Annual Conference in Paris and at seminars at the Universities of Leicester and Sussex, Paul Levine, Emanuela Lotti, Joe Pearlman, Richard Pierse, Marc Suhrcke, Rob Witt and, in particular, Ken Clark. Errors are the responsibility of the author.

1. Introduction

One of the fundamental principles of the European Union (EU) is the free movement of workers across the borders of its member states. The impending accession of ten new entrants in 2004 is therefore expected to have significant implications for the movement of labour within the enlarged EU and hence on domestic labour markets. However, the process of enlargement has been by no means smooth, with some member states reluctant to increase the size of the EU as well as some objections from candidate countries over the terms of accession. One of the most contentious issues has been the prospect of increased migration from the acceding Central and Eastern European Countries (CEECs).¹ Germany and Austria, the countries most likely to be affected by the potential influx of migrants from the CEECs, have requested a seven year delay before East European workers are allowed to work in the EU, a view that the European Commission appears to be sympathetic with. Such a 'transitional period' would be similar to the arrangements that Spain and Portugal faced when entering the EU in 1985.

Given that differences in *per capita* GDP are commonly thought to be a key determinant of the size and direction of migration flows, one would expect there to be significant movements from the relatively poor CEECs to current member states. Many of the studies that forecast potential migration flows following enlargement use GDP differences as a key explanatory variable and typically use the previous enlargements as a benchmark with which to base their projections on. Layard *et al.* (1992) predicted that at least 3 per cent of the Eastern population would migrate in the

¹ Sinn (2002) discusses some of the possible adverse consequences of enlargement, focusing particularly on migration, on the welfare systems of current EU member states.

15 years following a possible enlargement. Bauer and Zimmermann (1999) forecast that migration flows would be slightly smaller. In general, they expect that long-run emigration rates will be in the order of 2-3 per cent of the population of the sending country, depending on the assumptions that are made. Boeri and Brücker (2000) forecast the inflow of migrants from ten CEECs to Germany and the rest of the EU up to 2030. Their model predicts that the stock of residents from the CEEC-10 to the EU-15 will increase from under 1 million in 1998 to almost 4 million by 2030. Fertig (2001) models aggregate migration flows to Germany using pooled cross section-time series data on 17 sending countries from 1960-1994. The estimated long run coefficients are then used to forecast expected migration flows to Germany from ten CEECs and it is again found that enlargement will lead to only moderate increases in German immigration.

Fertig and Schmidt (2000) criticise the approach of predicting future migration flows by fitting *ad hoc* specifications to historical data and extrapolating from these estimates since it is assumed that the behavioural relationships are stable over time.² Instead they emphasise the role of demographics in the migration process since demographics can be predicted fairly accurately. They predict fairly small inflows into Germany and Austria from the CEECs if these countries were to share the same emigration behaviour as previous labour exporting countries in the post-war period. Borjas (1999) also suggests that post-enlargement migration flows from the CEECs to the existing EU are likely to be relatively small. The explanation he gives for this is that income differentials between the two blocs are relatively small when compared to

² Sinn (2002) provides several explanations why migration flows following the accession of the CEECs are expected to be different to those that occurred when Spain and Portugal were admitted.

the differences that exist between the countries from which migrants typically move to the US and the US itself. He also notes that migration may be restricted by the cultural differences that exist between European countries and because of the increased amounts of capital, goods and services that should flow to the acceding countries following enlargement, which should create a greater convergence of economies. Therefore in this paper, the reasons why individuals in general, and from the CEECs in particular, may be relatively immobile are explored.

Borjas (1999) further notes that it would be useful to establish which type of individuals are most likely to migrate from the candidate countries, particularly in terms of their skill composition. The reason for this is because the skill content of migrants can have important consequences for both the sending and receiving countries i.e. brain drain/gain considerations. Given that this information cannot be known until enlargement has actually taken place it is therefore important to ascertain the likely skill composition of migrants from the CEECs. This paper attempts to fill this void by estimating econometric models that identify the characteristics of individuals, with an emphasis on their skill levels, with the highest willingness to move (WTM). Therefore, the main purpose of this paper is to complement the aggregate estimates of the East-West migration flows by providing an indication of the characteristics of individuals who are most likely to migrate, which previous studies have been unable to do.

2. Who is likely to move and why?

There is very little microeconomic evidence concerning the characteristics of international migrants, especially in comparison to the number of studies that have

been undertaken on internal migration.³ Most of the studies that do exist tend to focus on the movement from developing to developed countries.

As mentioned previously, the skill composition of immigrants is of prime importance. However, it is not always found that years of schooling or other measures of skills have a positive influence on the probability of international migration.⁴ Some of these findings can be explained by various country specific factors e.g. apartheid in South Africa which reduced the returns to skilled black migrants and because the market for Mexican migrants is typically of a low skilled nature (in the US), which means that migration is not such an attractive option for highly skilled individuals.⁵ Funkhauser (1992) finds that individuals from El Salvador with 6 or less years of education were the least likely to migrate abroad but individuals with 7-9 or 10-12 years of education were significantly more likely to emigrate than those with 13 or more years of education. Given the lack of information on the characteristics of international migrants, it is therefore useful to provide a more formal framework of analysis within which to examine the characteristics of the most likely migrants from the CEECs before embarking on the empirical analysis.

The decision to migrate is often represented within a human capital framework since mobility can be viewed as an investment decision, in which costs are borne in the initial period(s) and returns accrue over time. The costs of migration were explicitly

³ Lalonde and Topel (1997) even comment “we are not aware of any work that directly estimates the determinants of international migration decisions” (p. 807). See Greenwood (1997) for a recent review of internal migration in developed countries.

⁴ See Bauer and Zimmermann (1998) for a review of the characteristics of international migrants.

⁵ See Lucas (1985) for an analysis of the movement of the Batswana to South Africa and Stark and Taylor (1991) for a study of Mexicans in the US.

incorporated into the potential migrant's decision in a model initially developed by Sjaastad (1962):

$$V_{EW}(t) = \int_{t_0}^T e^{-\rho t} (W_W(t) - W_E(t) - P_{EW}(t)) dt - C_{EW}(t_0) , \quad (1)$$

where V_{EW} is the present value of the net benefit of moving from East to West. The W 's are the expected income levels in the two blocs and ρ the subjective rate of time preference or discount rate. The costs of migrating from East to West are split into pecuniary costs (C_{EW}) and non-pecuniary costs (P_{EW}). C_{EW} consist of the direct costs of migration, e.g. moving possessions to a new location, whilst P_{EW} are often referred to as the indirect or psychic costs of migration since they involve the costs that are associated with moving away from friends, family and familiar surroundings. Time (t) runs from the current period (t_0) to the period that migrants stop working in the West (T) - this could be retirement or a shorter period of residence. It is assumed here that C_{EW} are only incurred in the initial period but P_{EW} can persist (but probably decay) over time. Evidence of the latter is provided by Vanderkamp (1971) who suggests that one of the main reasons for return migration is that the psychic costs were higher than initially expected. In this framework the individual will migrate if $V_{EW} > 0$ and if more than one possible destination offers a positive net benefit then they will choose the location that offers the highest net benefits.⁶

Following Herzog and Schlottmann (1983), the basic human capital specification shown in (1) can be amended to include search costs:

⁶ Lam (2002) incorporates political factors into an economic model that is used to analyse the migration decision of individuals living in Hong Kong.

$$V_{EW}(t) = \int_{t_0}^T e^{-\rho t} (W_W(t) - W_E(t) - P_{EW}(t)) dt - C_{EW}(t_0) - S_W(t_0), \quad (2)$$

where S_W are the search costs of associated with finding a job match in the West and are assumed, for simplification, to be incurred only in period t_0 . S_W include the costs of establishing where job opportunities exist and then evaluating how good they are. Herzog and Schlottmann (1983) hypothesise that the costs of migration should fall for subsequent moves, although their empirical estimates suggest that the ‘information effect’ is likely to have only a minimal influence on the extent of remigration in the US.

The human capital model has been used to explain the selective nature of the migration process. Firstly, migrants tend to be young since they should enjoy the greatest potential returns from the human capital investment because they have a longer period over which they can accrue the benefits and pay back the pecuniary costs. One might also expect P_{EW} to be lower for young people since they are likely to have looser ties with their communities because more is invested in friends and family during the process of ageing (Schwartz, 1973).

As noted earlier, education (and skill level) should also be an important determinant of migration. There are a number of reasons for this. Educated individuals should be faced with a greater range of job opportunities and the returns to education are expected to be higher if they currently reside in a low wage country. In particular, Borjas (1987) argues that immigrants are often positively selected with respect to their skills since they will enjoy a higher return to their human capital investments in countries where there is a more unequal distribution of earnings. However, Borjas

(1999) reports that there are only relatively small differences in the rates of return to skills between the EU and the CEECs, suggesting that the skill composition of migrants would mainly be determined by the costs of migration. Given that skilled workers are more likely to have the resources to finance such a move, this implies that migrants are likely to be of the higher skilled variety. Furthermore, since qualified individuals are likely to have studied away from home e.g. at a school or university outside their locality, they may have already severed some of their ties - thereby reducing P_{EW} and making them more prepared to migrate. S_w should also be lower for educated workers because they are typically more adept at whittling down the range of possible options and evaluating which ones are best.

All types of costs should increase with distance. C_{EW} will almost certainly be higher the further the move is and acquiring information is also more costly the further away the employment opportunities are. Long distance migration also tends to increase P_{EW} because migrants are further away from their friends and family. For example, Grant and Vanderkamp (1976) found that Canadian inter-regional migrants required additional income greatly in excess of the pecuniary marginal cost of migrating in order to induce them to migrate an additional mile. This also explains why individuals often engage in long distance commuting rather than bearing the full costs of migration. There is also evidence to suggest that the adverse effects of distance on migration are diminished for educated individuals (Schwartz, 1973).

In addition to the physical distance of a move, cultural and language differences between countries are also important but migration networks should help overcome these problems as well as reducing the costs of migration (Carrington *et al.*, 1996).

For example, one would expect S_w to decrease with the number of compatriots in the West because existing migrants can send information on the labour and housing markets to potential migrants in the East. P_{EW} should also be lower if there is a large stock of migrants in the destination region as the costs of adapting to a new environment are likely to be reduced. Bauer *et al.* (2000) provide some empirical evidence in support of this idea. Carrington *et al.* (1996) also give some specific examples of how a migrant community in the destination region can lower the financial costs of a move for potential migrants.

There are other reasons to believe why individuals are likely to be relatively immobile. Gordon and Molho (1995) build on the psychic costs argument and focus on the duration dependence of staying in a particular location. Similarly, Fischer *et al.* (2000) stress that the accumulated work and leisure oriented insider advantages of a particular location can make an individual immobile. Whereas the option theory of migration (Burda, 1995) is based on the idea that individuals may not migrate immediately in response to observed wage differentials because of uncertainty over future wage levels and this may inhibit migration. O'Connell (1997) extends this analysis to show how uncertainty surrounding the evolution of future conditions in both the origin and destination regions may deter migration and how it is optimal for the potential migrant to postpone migration until some or all of the uncertainty can be removed. These arguments may be particularly relevant to the EU following enlargement.

3. Data

The data used in this paper are taken from the International Social Survey Programme (ISSP) for 1995. This is an annual cross national survey that collects information on attitudes towards a particular issue. In 1995, a range of questions was included on national identity, including some on attitudes towards migration and immigration.⁷ The dataset also contains details of some of the personal characteristics of the respondents. As well as surveying the attitudes of individuals from Western countries, the ISSP is carried out in several CEECs. Of these, Hungary, Slovenia, Poland, the Czech Republic, Latvia and Slovakia are due to be in the first round of enlargement in 2004. Bulgaria is also in the dataset but will not enter the EU during the first wave of enlargement. The ISSP is also conducted in Russia and East Germany.

Of particular relevance to this paper are the questions which ask respondents how willing they are to move country to improve their working or living conditions, how close they feel to their country and how important they think it is to stay in their own country for all of their life.⁸ Table 1 summarises this information for each of the 23 countries which participated in the 1995 ISSP. The countries are ranked according to their average WTM country and the data relates to the answers given by respondents aged between 16 and 55.⁹

⁷ The 1995 ISSP has been used by Bauer and Zimmermann (2000) and Bauer *et al.* (2001) to examine the attitudes of natives towards immigrants and immigration.

⁸ The exact wording of these questions can be found in the Data Appendix. As well as being asked their WTM country and closeness to their country, respondents were also asked the same questions with respect to the neighbourhood, town, region and continent in which they currently reside.

⁹ 55 was chosen as the upper age limit because it is expected that individuals older than this are far less likely to move for job related reasons. Böheim and Taylor (2002) also constrain their analysis of actual migration decisions to individuals aged between 16 and 55.

It can be seen from Table 1 that there are some clear differences in the responses given by individuals from each of the CEECs. Hungary, Czech Republic, Latvia, Russia and Slovenia all have a relatively low average WTM, whereas only Sweden has a higher WTM than Bulgaria. The table also shows the percentage of respondents reporting that they were very willing to move country. This figure was less than 5 per cent in Hungary, Slovenia and Latvia, compared to an average of 8.81 per cent for the whole sample. Bulgaria had the second highest percentage of respondents reporting that they were very willing to move country and Poland and Slovakia were amongst ten countries where this percentage was in excess of 10 per cent. The findings for countries such as Hungary are in line with opinion poll results reported in Borjas (1999), in which only 3-4 per cent of Hungarians said that they would like to work abroad and 1-2 per cent to emigrate. However, these findings are somewhat in contrast to the results of surveys carried out by the International Organisation for Migration in 1998, reported in Bauer and Zimmermann (1999), in which individuals from 11 CEECs were interviewed regarding their migration intentions. In common with the ISSP, the responses were found to vary by country, however, around 50 per cent of respondents in some of the CEECs expected to migrate for short term work but a far lower percentage planned to migrate for longer periods or permanently.

Respondents from all of the CEECs thought that it was relatively important to stay in their home country for all of their life since the CEECs were ranked between 4th and 13th out of the 23 countries in terms of how important staying was to them. Roughly 40 per cent of respondents in each CEEC reported that it was very important to spend their entire life in their country. Respondents from the CEECs also felt closer to their country than most of their international counterparts. This particularly applied to

Hungarians and Bulgarians since over 65 per cent of respondents in these two countries felt very close to their country, the highest percentages of all countries in the sample.

Correlation coefficients confirm the expected relationships between these three variables. The correlation between WTM and closeness to country is -0.242, between WTM and the importance of living in their country it is -0.193 and a coefficient of 0.188 is obtained between the importance of living in their country and closeness to country. All coefficients are significant at the 1 per cent level. However, there appears to be some seemingly anomalous findings if the results are analysed at the country level. For example, Philipinos are relatively willing to move country and report a fairly low attachment to their country but believe that it is very important to stay in their own country for all of their life. In terms of the CEECs, a relatively high percentage of Bulgarians reported that they were willing to move but a large proportion of respondents also thought that it was important to live in their country for all their life and felt that they were very close to their country. Given that the Philippines and Bulgaria have the lowest *per capita* GDP levels of all countries in the 1995 ISSP, these statistics suggest that the economic benefits of migration far outweigh the costs of moving for residents of some countries.

4. Modelling the willingness to move

From the questions analysed in the previous section, the WTM question is the most appropriate to examine the characteristics of the most likely migrants from the CEECs. Ideally an even more direct question regarding an individual's migration intentions would be preferable but this question should provide a relatively good

approximation of an individual's attitude towards migration. Furthermore, several previous studies have modelled an individual's WTM or their migration intentions, including Hughes and McCormick (1985) and Gordon and Molho (1995) for the Great Britain, Burda (1993) and Burda *et al.* (1998) for Germany, Ahn *et al.* (1999) for Spain and Faini *et al.* (1997) for Italy. However, all of these studies focus on the willingness/intention of individuals to move within a particular country rather than across national boundaries.

The questions analysed in the previous studies are also slightly different to those analysed in here. Ahn *et al.* (1999) also examine the willingness to move but restrict their analysis to only unemployed respondents from the Spanish Labour Force Survey, who were asked to give 'yes/no' answer to whether they were willing to move for work. Quite a large proportion of their sample also gave a 'don't know' response to the question. Similarly, Faini *et al.* (1997) analyse responses to questions in the Italian Labour Force Survey on whether the unemployed were willing to take a job only in their own town, in a neighbouring town or anywhere. These questions are therefore not unlike those in the ISSP but the data analysed in this study are obtained from a more general question in the sense that the individual is asked to express their WTM to improve working or living conditions rather than a direct question (eliciting a 'yes' or 'no' response) on whether they are willing to move to find work. Both Hughes and McCormick (1985) and Molho and Gordon (1995) use the General Household Survey to model migration intentions. In each of the studies, responses to a question which asked whether "any member of the household is seriously thinking of moving from (their) present address" were analysed, the former for 1973 and 1974 and the latter for 1983. Burda (1993) and Burda *et al.* (1998) use the 1991 German

Socio-Economic Panel, which contains a question that asks respondents whether they could imagine themselves moving from East Germany to the western part of Germany or to West Berlin. The modelling strategy of each study involves estimating equations with a binary dependent variable.

One study that does analyse the intention to move country is Papapanagos and Sanfey (2001). The authors use an Eurobarometer survey from 1992 which asks a question on how likely it is that the individual will move to Western Europe. Their analysis also indicates considerable variation in the intention to emigrate from a larger set of CEECs. In particular, they find that emigration intentions are highest in Albania and Moldova and perform an in-depth analysis of movement intentions from the former. In common with the data reported in Table 1, they find that the intentions to move from the CEECs is relatively low, with around 80 per cent of respondents reporting that they would definitely not emigrate.

The translation of intentions and attitudes towards movement into actual movements could be viewed as problematic, especially as the question used in this study specifies no time period over which the individual is willing to move or where they would like to move to. Burda *et al.* (1998) note some of the problems associated with modelling intentions data (Manski, 1990) but argue that intentions should be viewed as a monotonic function of the underlying variables that drive the motivation to migrate.

Furthermore, there is also evidence from studies of internal migration to suggest that those who view migration favourably are much more likely to move. Gordon and Molho (1995) report evidence from a 1980 British survey of actual and potential

migrants that at least 90 per cent of the potential migrants actually moved within five years, of whom around a half moved within a year. They also note that Census data reveal that the number of actual movers is compatible with the number of potential migrants achieving their move. Using longitudinal data from the British Household Panel Survey, Böheim and Taylor (2002) find that the actual propensity for moving was around three times higher for respondents who had expressed a preference for moving than those who did not express a preference for moving in the previous wave. There is also evidence from Kule *et al.* (2002) that the answers to these type of questions is relatively stable over time. They report the results of a survey undertaken in Albania in 1998 which asked respondents the same question that was used by Papapanagos and Sanfey (2001) and it is found that the intention to migrate is not that different between the two years, despite the large amount of emigration that took place during the intervening period.¹⁰

Given that respondents are presented with a scale that requires them to state which of the categories best describes their WTM, the observed dependent variable is categorical and ordered. Therefore an ordered probit model is estimated. The observed categorical dependent variable is related to an individual's underlying WTM as follows:

$$y_i^* = x_i' \beta + \varepsilon_i, \quad \varepsilon_i \sim N(0, \sigma^2) \quad (3)$$

where y_i^* is an unobserved variable indicating an individual's WTM.¹¹ The explanatory variables consist of a set of individual characteristics and are represented

¹⁰ Respondents were less likely to report that they would definitely emigrate but they were also less likely to report that they would definitely not emigrate.

¹¹ See Verbeek (2000) pp. 192-4 for a discussion of the application of the ordered probit model to willingness to pay data.

by x_i' and its associated vector of coefficients by β . The latent dependent variable is related to individual's underlying WTM as follows:

$$y_i = 1 \text{ if } y_i^* \leq \mu_1$$

$$y_i = 2 \text{ if } \mu_1 < y_i^* \leq \mu_2$$

$$y_i = 3 \text{ if } \mu_2 < y_i^* \leq \mu_3$$

$$y_i = 4 \text{ if } \mu_3 < y_i^* \leq \mu_4$$

$$y_i = 5 \text{ if } \mu_4 < y_i^*$$

where the μ 's are unknown parameters that are to be estimated with β .

In addition to the standard controls that are usually included in a migration equation, the empirical specifications that are estimated here include some variables particular to the ISSP.¹² These variables also enable us to gain an indication of some of the influences discussed in Section 2. The number of years spent in the respondent's current town is added to capture duration dependence, which should provide a proxy for the psychic costs of migration. The ISSP also contains information on whether the respondent lived in a different area during their childhood and the length of time they have lived abroad. As well as capturing the importance of social networks in their local areas, these variables may also give some indication of likely search costs since it is expected that those individuals who have previously migrated face lower search costs. Finally, the ISSP asks questions on which languages the individual speaks.¹³

¹² The means of the explanatory variables included in the various estimated models are reported in Table A1.

¹³ The two questions that are asked on language are "What language(s) do you speak at home" and "What languages do you speak well".

These questions are then used to construct a dummy variable that indicates whether the individual speaks languages other than the mother tongue of the country where they currently reside. Not only is this a human capital variables but this information important for capturing language barriers to migration. When the WTM from the CEECs alone is estimated, dummy variables are constructed to indicate whether the individual speaks either English, German or both since most migrants from the East are expected to migrate to Germany or Austria and English is the language of business in most countries. A dummy is again added for those respondents who speak another language.

In a second specification, controls which capture macroeconomic differences between countries are added to the individual characteristics, which implies that (3) becomes:

$$y_{ij}^* = x_{ij}'\beta + z_j'\delta + \varepsilon_{ij}, \quad \varepsilon_{ij} \sim N(0, \sigma^2) \quad (4)$$

where z_j' consists of aggregate level variables which are invariant for respondents from the same country (j), together with its associated vector of coefficients, δ . In order to capture the importance of relative income differences between countries, GDP *per capita* and unemployment rates are added for each country.¹⁴ This model also includes three regional dummy variables (EU, CEECs and Rest of World) rather than the full set of country dummies because of their collinearity with the macro economic variables, which are entered on a country basis. For the estimation of the WTM from the CEECs only, another aggregate level variable that intends to capture the effect of migration networks is added.¹⁵ Two separate specifications of (4) are

¹⁴ See the Data Appendix for details of these variables.

¹⁵ Bauer and Zimmermann (1999) report that Germany and Austria are the most likely destinations for migrants from the CEECs and Germany has by far the highest number of immigrants from the CEECs

estimated. In the first, the aggregate variables are entered in levels/percentages and in the second they are entered in logs.¹⁶ Since aggregate variables have been included, conventional standard errors are no longer appropriate because the residuals are not independent and the standard errors are likely to be biased downwards (Moulton, 1986, 1990). Therefore t-statistics that correct for the common component in the residuals are also reported.

It may be argued, however, that those individuals who stated that they were very willing to move will be ones who actually migrate. Another advantage of identifying individuals who reported themselves to be very willing to move is that marginal effects can be computed, which makes interpretation of the coefficients more straightforward. Therefore, in addition to the standard coefficients that are obtained from the ordered probit model, marginal effects for the very willing to move abroad category are also reported for each of the explanatory variables.

5. Results

Table 2 reports the results of estimating (3) for the entire sample of respondents. The coefficients associated with the socio-economic characteristics generally have the expected signs and are reassuringly similar to estimates obtained from empirical studies of actual movers. For example, males, young and single persons are most willing to move. Well qualified individuals have the highest WTM and educational

amongst current EU member states. Therefore the measure of networks used here relates to previous immigration to Germany.

¹⁶ In order to obtain coefficients that can be more easily interpreted from the levels/percentages model, the GDP *per capita* figures were divided by 1000, the unemployment rates were divided by 10 and the network variable expresses the number of immigrants from each of the CEECs residing in Germany as a percentage of the population in each of the CEECs.

differences are highly significant.¹⁷ Those individuals who are able to speak another language are also significantly more willing to move.

There is evidence of duration dependence since there is a negative and significant coefficient attached to the variable signifying the number of years spent in the area. It is also found that individuals who have spent any time living abroad have a significantly higher WTM but somewhat surprisingly, there are negative and significant coefficients attached to the variables which indicate whether the respondent spent their childhood outside the area that they currently live.

Even after controlling for these characteristics, the rankings of the countries in terms of their WTM do not differ greatly from the raw figures reported in Table 1. It is noticeable that considerable variation remains amongst the CEECs with respect to their residents' WTM. However, only Bulgarians are significantly more willing to move than their British counterparts (the default category), whereas the opposite applies to individuals from the Czech Republic, Hungary, Slovenia, Russia and Latvia.

Additional specifications were estimated in an attempt to shed more light on the WTM differences. However, not every question in the survey was asked in all countries so these results are not reported in Table 2. Additional dummy variables were included for whether the respondent was an immigrant or minority, the type of area the respondent lived in and the number of children in the household. The results suggest that immigrants/minorities are not significantly more willing to emigrate but

¹⁷ For details of the derivation of the qualification variable, see Table A2.

rural dwellers and those from larger households are significantly less willing to move. Unfortunately, information on individual and household income could not be obtained for all countries. Furthermore, in those countries in which the income questions were asked the responses were coded into bands. This means that we cannot conduct an accurate test of whether liquidity constraints are likely to be important in determining an individual's WTM for the entire sample but we can test this hypothesis for each country which has income information. When the household income variable is included in an ordered probit model that is estimated separately for each country, it only has a significant effect at the 5 per cent level in three out of the 15 countries which have income information.¹⁸

Models without the language dummy were also estimated for males and females separately and these results are reported in Table A3 in the Appendix.¹⁹ The estimated coefficients are very similar in the models for males and females, even the coefficients attached to the country dummies. A few gender differences worth noting is that unemployed males display a significantly higher WTM than employed males but there is a small negative coefficient on the unemployed dummy for females. Spending childhood outside the area has a much more significant negative effect for females than it does for males.

Table 2 also reports the marginal effects for individuals who reported themselves to be very willing to move abroad.²⁰ The signs attached to the explanatory variables are

¹⁸ In terms of the CEECs, there is only income information available for Poland, Russia and Bulgaria and the household income variable is not significant in any of these countries.

¹⁹ The language dummy was excluded to maintain sample sizes because there was some non-response to these questions.

²⁰ Estimates from a binary probit, in which the dependent variable takes the value of 1 if the individual is very willing to move abroad and 0 otherwise, are qualitatively similar to those reported in Table 2.

the same as those reported in Table 2 and the t-statistics are also very similar. For example, the marginal effect estimates suggest that Bulgarians are 5 percentage points more likely and Russians and Latvians 5 percentage points less likely to report themselves to be very willing to move compared to Britons. Those who are able to speak another language are 2.4 percentage points more likely to be very willing to move compared to monolinguals.

The results on the aggregate variables are reported in Table 3. It can be seen from the table that the coefficient attached to the *GDP per capita* variable is negative and significant, which suggests that individuals living in relatively poor countries are more willing to move country after holding personal characteristics constant. The table also indicates that the unemployment rate in the respondent's country of residence has a positive effect on their WTM, implying that individuals from high unemployment countries are more prepared to emigrate. The positive coefficients attached to the EU and Rest of the World dummies also suggest that residents of the CEECs are less willing to move country compared to their counterparts from other countries. As expected, adjusting the standard errors for clustering reduces the significance levels. For example, the unemployment rate no longer exerts a significant influence in the levels/percentages specification and *GDP per capita* is not significant at the 5 per cent level in the log specification.²¹

The marginal effects reported in the table imply that a \$1000 increase in a country's *per capita* GDP reduces the probability that an individual residing in that country is

²¹ The coefficients attached to the individual characteristics and their significance levels are not affected greatly as a result of the inclusion of the aggregate level variables or the application of the Moulton correction for the standard errors.

very willing to migrate by 0.002 and a one percentage point increase in the country's unemployment rate increases this probability by 0.002. Furthermore, living in the EU or the Rest of the World raises the probability that an individual reports themselves to be very willing to move to another country by between three and four percentage points.

In order to examine the WTM amongst the CEECs in more detail, ordered probit models are also estimated for the CEEC-6: the six countries in the 1995 ISSP that are expected to be part of the first round of enlargement. Two specifications of (3) are estimated, the first of which includes qualification dummies, as before, whilst in the second these are replaced by a continuous years of education variable.²²

The ordered probit estimates displayed in Table 4 are very similar to those reported for the whole sample in Table 2, but there are some differences worth noting. The qualification dummies still have the expected signs but have much lower t-statistics, with some of the dummies losing their significance in Model 1. There are also interesting results with respect to the language variables. Those individuals who can speak German, English or both languages are far more willing to move than people who do not have this ability, whereas proficiency in any other language does not make the individual significantly more willing to move. In Model 2, the number of years of education variable is positive and highly significant, although the other explanatory variables are not affected to any great degree.

²² The years of education question was not asked in all countries so was not included in the models that were estimated for the entire sample.

The marginal effects for individuals from the CEEC-6 who reported that they were very willing to move country can also be found in the table. Again these results are similar to those presented in Table 2 but the significance levels are typically much lower, mainly because of the reduced sample size. Using the estimates from Model 2, it can be seen that although education has a positive and highly significant effect on an individual's WTM, an extra year of education increases the probability that the individual is very willing to move abroad by less than one percentage point.²³ Therefore the conclusions from the ordered probits regarding the skill content of potential migrants are not so convincing when analysed from the perspective of the individuals who reported that they were very willing to move from the CEECs. However, ability in English and German is again found to be important, with German and English speakers in the CEEC-6 being over 3 percentage points more likely to be very willing to leave their country.

Again there are very few differences in the estimates for males and females from the CEEC-6, as reported in Table A3. The significance levels of the educational dummies are typically higher for both males and females than the combined estimates reported in Table 4, indicating that those who are able to speak other languages tend to be more qualified since the language controls are excluded when the models are estimated separately. Interestingly for the CEEC-6, it is unemployed females who are significantly more willing to move and married males are not significantly different from their single counterparts.

²³ In a binary probit to estimate whether an individual is very willing to move country, the coefficients attached to the years of education variable and the qualification dummies were insignificant.

Table 5 reports that GDP *per capita* again exerts a negative and significant influence when it is entered as a level, indicating that those individuals living in low income CEECs are more willing to move. However, when the standard errors are corrected for clustering, this effect is no longer significant and in the log specification, the coefficient on the GDP variable becomes positive. The results suggest that there is a positive relationship between an individual's WTM and the unemployment rate in their country but this finding is not statistically significant in the levels/percentages specification. The coefficient attached to the network variable is positive and generally significant, indicating that individuals with a higher percentage of compatriots resident in Germany are more willing to migrate. Furthermore, the presence of ethnic networks appears to be fairly important since the marginal effect estimates imply that a one percentage point increase in the percentage of compatriots in Germany raises the probability that an individual is very willing to move country by two percentage points.

6. Conclusion

The addition of 10 countries to the EU in 2004 will be a momentous event in European history. However, one of the major concerns surrounding this expansion has been its migration implications. In this paper, micro data has been used to examine the WTM of individuals from the CEECs, focusing particularly on the characteristics of those displaying the highest WTM. In common with a number of existing (mainly aggregate level) studies, it has been argued that there is unlikely to be a massive influx of immigrants once the new entrants are admitted to the EU. It has been found that although some diversity exists, respondents from Central and Eastern Europe do not appear to have an overwhelming desire to move from their own countries. In fact,

residents of the CEECs appear to be less willing to move country than individuals from current EU member states. Several reasons for labour immobility were suggested, some of which could be tested empirically. It is found that psychic costs, as measured by duration dependence and the individual's previous migration experience, are likely to be important in influencing future migration.

However, the question that is analysed in the study is unlikely to provide a 'perfect' indication of actual East-West movements. There are a number of reasons for this such as changes in attitudes towards migration over time. Therefore, the main contribution of the paper is that it identifies the characteristics of those individuals from the CEECs who are most willing to move. The results appear robust since they are in accordance with what the human capital model would predict, including that individuals with higher level qualifications are more willing to move. It is also found that those who are able to speak foreign languages, especially English and German, are most willing to move. Therefore these findings suggest that the effects of EU enlargement on domestic labour markets should not be viewed with too much pessimism by policymakers, as suggested by Borjas (1999). Furthermore, since well qualified individuals appear to be the most willing to move, this implies that migration flows from the East should be able to bring about positive growth effects for Western European economies.

References

- Ahn, N., De la Rica, S. and Ugidos, A. (1999), "Willingness to move for work and unemployment duration in Spain", *Economica*, **66**, 335-57.
- Bauer, T., Epstein, G. and Gang, I. N. (2000), "What are migration networks?", IZA Discussion Paper No. 200.
- Bauer, T., Loftsram, M. and Zimmermann, K. (2001), "Immigration policy, assimilation of immigrants and natives' sentiments towards immigrants: Evidence from 12 OECD-countries", *Swedish Economic Policy Review*, **7**, 11-53.
- Bauer, T. and Zimmermann, K. (1998), "Causes of international migration" in C. Gorter, P. Nijkamp and J. Poot (eds), Crossing Borders: Regional and Urban Perspectives on International Migration, Ashgate, Aldershot.
- Bauer, T. and Zimmermann, K. (1999), Assessment of Possible Migration Pressure and its Labor Market Impact Following EU Enlargement to Central and Eastern Europe, IZA Research Report No. 3.
- Bauer, T. and Zimmermann, K. (2000), "Immigration policy in integrated national economies", IZA Discussion Paper No. 170.
- Boeri, T. and Brücker, H. (2000), The Impact of Eastern Enlargement on Employment and Wages in the EU Member States, Report to European Commission.
- Böheim, R. and Taylor, M. (2002), "Tied down or room to move? Investigating the relationships between housing tenure, employment status and residential mobility in Britain", *Scottish Journal of Political Economy*, **49**, 369-92.
- Borjas, G. J. (1987), "Self selection and the earnings of immigrants", *American Economic Review*, **77**, 531-53.
- Borjas, G. J. (1999), "Economic research on the determinants of immigration: Lessons for the European Union", World Bank Technical Paper No. 438.
- Burda, M. C. (1993), "The determinants of East-West German migration: Some first results", *European Economic Review*, **37**, 452-61.
- Burda, M. C. (1995), "Migration and the option value of waiting", *Economic and Social Review*, **27**, 1-19.
- Burda, M. C., Härdle, W., Muller, M. and Werwatz, A. (1998), "Semiparametric analysis of German East-West migration intentions: Facts and theory", *Journal of Applied Econometrics*, **13**, 525-41.
- Carrington, W. J., Detragiache, E. and Vishwanath, T. (1996), "Migration with endogenous moving costs", *American Economic Review*, **86**, 909-29.

Faini, R., Galli, G., Gennari, P. and Rossi, F. (1997), "An empirical puzzle: Falling migration and growing unemployment differentials among Italian regions", *European Economic Review*, **41**, 571-9.

Fertig, M. (2001), "The economic impact of EU-enlargement: Assessing the migration potential", *Empirical Economics*, **26**, 707-20.

Fertig, M. and Schmidt, C. (2000), "Aggregate-level migration studies as a tool for forecasting future migration streams", IZA Discussion Paper No. 183.

Fischer, P. A., Holm, E., Malmberg, G. and Straubhaar, T. (2000), "Why do people stay? Insider advantages and immobility", HWWA Discussion Paper No. 112.

Funkhauser, E. (1992), "Mass emigration, remittances and economic adjustment: The case of El Salvador in the 1980s", in G. Borjas and R. Freeman (eds), Migration and the Workforce: Economic Consequences for the United States, University of Chicago Press, Chicago, IL.

Gordon, I. R. and Molho, I. (1995), "Duration dependence in migration behaviour: Cumulative inertia versus stochastic change", *Environment and Planning A*, **27**, 1961-75.

Greenwood, M. J. (1997), "Internal migration in developed countries", in M. R. Rosenzweig and O. Stark (eds), Handbook of Population and Family Economics, Volume 1B, Elsevir, Amsterdam.

Grant, K. E. and Vanderkamp, J. (1976), The Economic Causes and Effects of Migration 1961-71, Economic Council of Canada, Ottawa.

Herzog, H. W. and Schlottmann, A. M. (1983), "Migrant information, job search and the remigration decision", *Southern Economic Journal*, **9**, 43-56.

Hughes, G. A. and McCormick, B. (1985), "Migration intentions in the UK: Which households want to migrate and which succeed?", *Economic Journal*, **95**, 113-23.

Kule, D., Mançellari, A. Papapanagos, H., Qirici, S. and Sanfey, P. (2002), "The causes and consequences of Albanian emigration during transition: Evidence from microdata", *International Migration Review*, **36**, 229-39.

Lalonde, R. J. and Topel, R. H. (1997), "Economic impact of international migration and the economic performance of migrants", in M. R. Rosenzweig and O. Stark (eds), Handbook of Population and Family Economics, Volume 1B, Elsevir, Amsterdam.

Lam, K. C. (2002), "Interaction between economic and political factors in the migration decision", *Journal of Comparative Economics*, **30**, 488-504.

Layard, R. Blanchard, O., Dornbusch, R. and Krugman, P. (1992), East-West Migration: The Alternatives, MIT Press, Cambridge MA.

- Lucas, R. E. B. (1985), "Migration amongst the Batswana", *Economic Journal*, **95**, 358-82.
- Manski, C. (1990), "The use of intentions data to predict behavior: A best case analysis", *Journal of the American Statistical Association*, **85**, 934-40.
- Moulton, B. R. (1986), "Random group effects and the precision of regression estimates", *Journal of Econometrics*, **32**, 385-97.
- Moulton, B. R. (1990), "An illustration of a pitfall in estimating the effects of aggregate variables on micro units", *Review of Economics and Statistics*, **72**, 334-8.
- O'Connell, P. G. J. (1997), "Migration under uncertainty: 'Try your luck' or 'wait and see'", *Journal of Regional Science*, **37**, 331-47.
- Papapanagos, H. and Sanfey, P. (2001), "Intentions to emigrate in transition countries: The case of Albania", *Journal of Population Economics*, **14**, 491-504.
- Schwartz, A. (1973), "Interpreting the effect of distance on migration", *Journal of Political Economy*, **81**, 1153-69.
- Sinn, H. W. (2002), "EU enlargement and the future of the welfare state", *Scottish Journal of Political Economy*, **49**, 104-15.
- Sjaastad, L. (1962), "The costs and returns of human migration", *Journal of Political Economy*, **70**, 80-93.
- Stark, O. and Taylor, J. E. (1991), "Migration incentives, migration types: The role of relative deprivation", *Economic Journal*, **101**, 1163-78.
- Vanderkamp, J. (1971), "Migration flows and their determinants", *Journal of Political Economy*, **79**, 1012-31.
- Verbeek, M. (2000), A Guide to Modern Econometrics, Wiley, Chichester.

TABLE 1
Descriptive Statistics by Country

	WTM		Important to stay		Close to country	
	Average	% Very	Average	% Very	Average	% Very
Sweden	2.71	15.37	2.72	23.77	3.11	31.34
Bulgaria	2.70	14.22	3.16	43.25	3.54	65.94
Philippines	2.68	10.29	3.48	58.71	2.86	22.82
Canada	2.56	12.60	2.54	20.31	2.93	31.06
New Zealand	2.51	8.06	2.96	31.68	3.48	55.73
Netherlands	2.50	9.76	2.66	17.40	3.07	23.34
Great Britain	2.47	11.81	3.01	35.29	2.70	15.98
West Germany	2.41	9.72	2.68	21.66	2.87	17.50
Slovakia	2.38	10.79	3.03	36.46	3.24	38.77
Norway	2.36	7.07	2.92	28.22	3.41	48.60
Poland	2.35	10.74	3.11	34.08	3.42	51.03
Spain	2.34	11.31	3.05	29.47	3.22	38.41
Italy	2.16	11.33	3.18	38.76	3.24	41.09
United States	2.07	7.68	3.01	38.25	3.03	29.38
Ireland	2.03	10.23	3.21	44.73	3.38	48.30
Slovenia	1.99	4.62	3.09	39.42	3.38	47.73
Latvia	1.92	4.04	3.13	38.41	3.21	39.31
East Germany	1.89	5.25	2.84	28.11	2.95	22.53
Czech Republic	1.84	5.14	3.13	41.47	3.33	43.98
Russia	1.84	4.91	3.14	41.09	3.12	38.54
Austria	1.77	6.11	3.10	42.03	3.40	52.01
Hungary	1.75	3.84	3.11	43.14	3.69	74.85
Japan	1.72	2.27	2.80	26.18	3.48	54.85

Notes:

1. Average is the mean response given to the three questions in each country.
2. % Very is the percentage of individuals in each country who gave the response “Very” to the relevant question.

TABLE 2**Ordered Probit Estimates of the Willingness to Move: All Countries**

	Coefficient	t-statistic	Marginal Effect	t-statistic
Female	-0.122	7.26	-0.016	7.17
Aged 16-25	0.384	10.71	0.059	9.11
Aged 26-35	0.207	7.35	0.029	6.84
Aged 36-45	0.093	3.71	0.012	3.61
Married	-0.161	8.25	-0.022	7.93
Unemployed	0.058	1.70	0.008	1.64
Inactive	0.020	0.95	0.003	0.94
Incomplete primary	-0.416	6.14	-0.040	8.76
Primary completed	-0.406	12.29	-0.043	15.13
Incomplete secondary	-0.303	10.22	-0.035	11.58
Secondary completed	-0.207	8.02	-0.026	8.34
Semi-higher	-0.055	1.78	-0.007	1.84
Speaks another language	0.179	8.87	0.024	8.63
Spent childhood in another town	-0.115	4.15	-0.014	4.32
Spent childhood in a different region	-0.081	2.68	-0.010	2.79
Spent childhood in another country	-0.158	2.54	-0.018	2.85
Number of years spent in current town	-0.008	8.04	-0.001	7.94
Lived abroad for less than 1 year	0.364	10.64	0.060	8.65
Lived abroad for 1-4 years	0.438	11.88	0.075	9.36
Lived abroad for 5 years or more	0.497	10.13	0.088	7.86
West Germany	0.016	0.26	0.002	0.26
East Germany	-0.372	4.73	-0.037	6.41
United States	-0.476	8.01	-0.045	11.25
Austria	-0.520	7.73	-0.047	11.58
Hungary	-0.494	7.49	-0.045	10.92
Italy	-0.165	2.58	-0.019	2.90
Ireland	-0.437	6.52	-0.041	9.16
Netherlands	-0.025	0.47	-0.003	0.47
Norway	-0.256	4.64	-0.028	5.50
Sweden	0.069	1.15	0.009	1.10
Czech Republic	-0.499	7.90	-0.046	11.46
Slovenia	-0.432	7.13	-0.041	9.76
Poland	0.096	1.65	0.013	1.56
Bulgaria	0.296	4.85	0.047	4.09
Russia	-0.548	9.10	-0.049	13.40
New Zealand	-0.122	2.01	-0.015	2.19
Canada	-0.117	2.10	-0.014	2.26

TABLE 2 (Continued)				
Philippines	0.054	0.91	0.007	0.88
Japan	-0.583	9.59	-0.050	14.63
Spain	-0.056	0.88	-0.007	0.92
Latvia	-0.657	9.49	-0.053	15.83
Slovakia	-0.056	0.95	-0.007	0.99
N	18571			

Notes:

1. The reference individual is an unmarried working male, living in Britain who has completed university, does not speak another language, spent their childhood in the town they currently reside and has never lived abroad.
2. For details of how the educational qualifications are defined for selected countries, see Table A2. The small number of respondents who had no education or were still at school were omitted from the regressions.
3. t-statistics are calculated using heteroscedastic consistent standard errors.

TABLE 3

Ordered Probit Estimates of Aggregate and Regional Variables: All countries

	Coefficient	Unadjusted t-statistic	Adjusted t-statistic	Marginal Effect	Unadjusted t-statistic	Adjusted t-statistic
<i>Aggregate variables entered in levels/percentages</i>						
GDP per capita/1000	-0.015	7.83	3.11	-0.002	7.79	2.99
Unemployment rate/10	0.132	5.48	1.03	0.018	5.44	1.01
EU	0.317	10.78	2.66	0.046	10.02	2.65
Rest of World	0.263	8.66	3.28	0.039	7.98	3.32
<i>Aggregate variables entered in logs</i>						
GDP per capita	-0.115	5.23	1.79	-0.016	5.22	1.73
Unemployment rate	0.221	9.20	2.20	0.030	9.05	2.11
EU	0.258	9.38	2.51	0.037	8.84	2.51
Rest of World	0.224	8.25	3.26	0.033	7.70	3.36

Notes:

1. See notes to Table 2.
2. Adjusted t-statistics have standard errors which have been corrected for clustering, whilst the standard errors used to calculate the unadjusted t-statistics are only heteroscedastic consistent.
3. The regional dummies are constructed as follows. The CEECs, which is the reference category, consists of Bulgaria, the Czech Republic, Hungary, Latvia, Poland, Russia, Slovenia and Slovakia. The European Union countries are Austria, Germany, Great Britain, Ireland, Italy, The Netherlands, Spain and Sweden. The Rest of the World contains Canada, Japan, New Zealand, Norway, the Philippines and the United States.

TABLE 4

Ordered Probit Estimates of the Willingness to Move: CEEC-6

	Model 1				Model 2			
	Coef.	t-stat.	M. E.	t-stat.	Coef.	t-stat.	M. E.	Coef.
Female	-0.214	5.80	-0.023	6.01	-0.234	6.72	-0.025	6.40
Aged 16-25	0.482	5.80	0.065	4.69	0.496	5.92	0.067	4.67
Aged 26-35	0.257	3.99	0.031	3.59	0.270	4.18	0.031	3.75
Aged 36-45	0.123	2.29	0.014	2.18	0.124	2.30	0.014	2.20
Married	-0.149	3.59	-0.014	2.97	-0.144	3.44	-0.014	3.25
Unemployed	0.126	2.12	0.015	1.95	0.128	2.14	0.015	1.97
Inactive	0.036	0.75	0.004	0.74	0.025	0.49	0.003	0.48
Incomplete primary	-0.341	1.87	-0.028	2.56	–	–	–	–
Primary completed	-0.192	2.72	-0.018	3.04	–	–	–	–
Incomplete secondary	-0.076	1.25	-0.008	1.28	–	–	–	–
Secondary completed	-0.086	1.53	-0.009	1.56	–	–	–	–
Semi-higher	-0.048	0.65	-0.005	0.67	–	–	–	–
Years of Education	–	–	–	–	0.024	3.42	0.003	3.40
Speaks English and German	0.324	3.92	0.044	3.20	0.265	2.91	0.034	2.44
Speaks English	0.276	4.37	0.035	3.70	0.259	3.86	0.032	3.28
Speaks German	0.250	4.18	0.032	3.61	0.219	3.57	0.026	3.13
Speaks another language	0.036	0.69	0.004	0.68	0.034	0.65	0.004	0.64
Spent childhood in another town	-0.125	1.96	-0.013	2.07	-0.107	1.65	-0.011	1.73
Spent childhood in a different region	-0.198	2.76	-0.019	3.19	-0.201	2.88	-0.019	3.21
Spent childhood in another country	0.124	0.93	0.015	0.85	0.116	0.87	0.013	0.80
No. of years spent in current town	-0.007	2.90	-0.001	2.89	-0.007	2.71	-0.001	2.70
Lived abroad for <1 year	0.301	3.93	0.041	3.24	0.285	3.55	0.037	2.95
Lived abroad for 1-4 years	0.117	1.14	0.013	1.28	0.141	1.36	0.016	1.23
Lived abroad for 5 years or more	0.273	2.47	0.036	2.08	0.280	2.52	0.036	2.11
Hungary	-0.612	9.98	-0.047	11.91	-0.627	10.27	-0.046	11.96
Czech Republic	-0.605	10.15	-0.048	11.93	-0.662	10.75	-0.049	12.41
Slovenia	-0.534	8.45	-0.044	9.99	-0.502	7.80	-0.039	9.27
Slovakia	-0.176	3.11	-0.018	3.32	-0.202	3.60	-0.019	3.89
Latvia	-0.583	7.75	-0.044	9.94	-0.586	7.94	-0.043	9.97
N	4628				4421			

Note:

The reference individual for Models 1 and 2 is the same as that stated in Note 1 in Table 2, apart from the individual lives in Poland.

TABLE 5

Ordered Probit Estimates of Aggregate Variables: CEEC-6

	Coefficient	Unadjusted t-statistic	Adjusted t-statistic	Marginal Effect	Unadjusted t-statistic	Adjusted t-statistic
<i>Aggregate variables entered in levels/percentages</i>						
GDP per capita/1000	-0.058	3.12	1.43	-0.007	3.07	1.36
Unemployment rate/10	0.002	0.02	0.01	0.000	0.02	0.01
Migration network	0.182	2.41	0.57	0.021	2.40	0.57
<i>Aggregate variables entered in logs</i>						
GDP per capita	0.240	2.02	0.59	0.027	2.02	0.58
Unemployment rate	0.468	6.01	2.07	0.052	5.91	1.84
Migration network	0.089	5.89	2.15	0.010	5.71	2.17

Notes:

1. See Notes to Table 4.
2. Adjusted t-statistics have standard errors which have been corrected for clustering, whilst the standard errors used to calculate the unadjusted t-statistics are only heteroscedastic consistent.
3. Estimates are reported for Model 1. The results for Model 2 are very similar.

Data Appendix:

The three questions used in Table 1 are:

- If you could improve your work or living conditions, how willing or unwilling would you be to move outside your country?
 1. Very willing (recoded as 5)
 2. Fairly willing (recoded as 4)
 3. Neither willing nor unwilling (coded as 3)
 4. Fairly unwilling (recoded as 2)
 5. Very unwilling (recoded as 1)

- How important do you think it is to have lived in your own country for most of one's life?
 1. Very important (recoded as 4)
 2. Fairly important (recoded as 3)
 3. Not very important (recoded as 2)
 4. Not important at all (recoded as 1)

- How close do you feel to your country?
 1. Very close (recoded as 4)
 2. Close (recoded as 3)
 3. Not very close (recoded as 2)
 4. Not close at all (recoded as 1)

For each of the questions, respondents who reported that they didn't know or couldn't choose between the alternatives as well as those who didn't answer were excluded from the calculations.

Aggregate Variables

GDP *per capita* are Purchasing Power Parity figures in current international dollars. This variable, the unemployment rates and population estimates were obtained from the World Bank's World Development Indicators database. The German GDP *per capita* and unemployment rate were applied to both East and West Germany and UK figures were used for Great Britain. Estimates for the number of immigrants from each of the CEECs who were resident in Germany in 1995 were obtained from the Migration Information Source Global Data Center (<http://www.migrationinformation.org/GlobalData/>).

TABLE A1

Means of Explanatory Variables

	All countries	CEEC-6	
		Model 1	Model 2
Female	0.522	0.527	0.527
Aged 16-25	0.202	0.219	0.187
Aged 26-35	0.276	0.263	0.272
Aged 36-45	0.290	0.288	0.301
Married	0.621	0.649	0.676
Unemployed	0.074	0.096	0.100
Inactive	0.236	0.184	0.152
Incomplete primary	0.021	0.012	–
Primary completed	0.149	0.140	–
Incomplete secondary	0.212	0.291	–
Secondary completed	0.349	0.347	–
Semi-higher	0.130	0.090	–
Years of education	–	–	12.052
Speaks another language	0.461	0.239	0.248
Speaks English and German	–	0.041	0.032
Speaks English	–	0.107	0.094
Speaks German	–	0.113	0.110
Spent childhood in another town	0.247	0.223	0.230
Spent childhood in a different region	0.170	0.156	0.162
Spent childhood in another country	0.040	0.033	0.034
Number of years spent in current town	21.987 (14.340)	25.430 (13.021)	25.743 (13.166)
Lived abroad for less than 1 year	0.058	0.042	0.040
Lived abroad for 1-4 years	0.054	0.030	0.031
Lived abroad for 5 years or more	0.062	0.044	0.046
West Germany	0.038	–	–
East Germany	0.018	–	–
United States	0.050	–	–
Austria	0.035	–	–
Hungary	0.036	0.140	0.147
Italy	0.044	–	–
Ireland	0.036	–	–
Netherlands	0.078	–	–
Norway	0.057	–	–
Sweden	0.045	–	–
Czech Republic	0.042	0.168	0.159
Slovenia	0.040	0.159	0.149
Poland	0.049	0.197	0.206
Bulgaria	0.035	–	–
Russia	0.054	–	–
New Zealand	0.036	–	–
Canada	0.059	–	–
Philippines	0.051	–	–
Japan	0.040	–	–
Spain	0.042	–	–
Latvia	0.030	0.120	0.126
Slovakia	0.054	0.216	0.214
GDP per capita	16463 (7446)	9392 (2773)	9279 (2757)
Unemployment rate	9.5 (4.535)	11.0 (4.457)	11.1 (4.435)
Migration network	–	0.49 (0.272)	0.49 (0.271)
N	18571	4628	4421

Note:

Standard deviations are in parentheses for the continuous variables.

TABLE A2**Educational qualifications definitions for selected countries**

ISSP category	Germany	Great Britain	United States	Poland	Hungary
Incomplete primary			Incomplete primary	Incomplete elementary	Incomplete primary
Primary completed	'Volks- Hauptschule'	No secondary qualification	Less than high school	Complete elementary	Primary (8 years) completed
Incomplete secondary	Middle school, Polytechnic (completed 10.class)	CSE	Incomplete secondary	Incomplete secondary + basic vocational	Vocational, incompl. sec.
Secondary completed	Abitur, 'Fachhochschulreife'	A-level, O-Level	High school	Secondary general + secondary vocational	Secondary completed
Semi-higher	'Fachhochschule' completed	Higher education below degree, foreign	Junior college, Bachelor	Incomplete higher	College
University completed	University	Degree	Graduate	Completed higher, university	University completed

TABLE A3

**Ordered Probit Estimates of the Willingness to Move for Males and Females:
All Countries and CEEC-6**

	All countries		CEEC-6	
	Males	Females	Males	Females
Aged 16-25	0.468 (8.87)	0.337 (6.86)	0.726 (6.07)	0.361 (3.19)
Aged 26-35	0.303 (7.49)	0.136 (3.45)	0.409 (4.47)	0.170 (1.90)
Aged 36-45	0.124 (3.43)	0.073 (2.10)	0.174 (2.27)	0.107 (1.42)
Married	-0.169 (5.71)	-0.161 (6.06)	-0.067 (1.02)	-0.213 (3.98)
Unemployed	0.111 (2.38)	-0.016 (0.31)	0.064 (0.77)	0.170 (2.01)
Inactive	0.051 (1.37)	-0.008 (0.30)	-0.010 (0.14)	0.112 (1.81)
Incomplete primary	-0.553 (5.63)	-0.379 (4.11)	-0.745 (2.92)	-0.314 (1.30)
Primary completed	-0.516 (11.40)	-0.385 (8.18)	-0.319 (3.16)	-0.279 (2.99)
Incomplete secondary	-0.394 (9.80)	-0.304 (7.00)	-0.169 (2.07)	-0.224 (2.62)
Secondary completed	-0.287 (7.97)	-0.169 (4.54)	-0.169 (2.08)	-0.134 (1.80)
Semi-higher	-0.143 (3.20)	-0.002 (0.04)	-0.170 (1.51)	-0.007 (0.07)
Spent childhood in another town	-0.022 (0.54)	-0.210 (5.58)	-0.048 (0.51)	-0.232 (2.72)
Spent childhood in a different region	-0.035 (0.80)	-0.143 (3.44)	-0.052 (0.52)	-0.347 (3.66)
Spent childhood in another country	-0.115 (1.31)	-0.160 (1.78)	0.183 (0.89)	-0.029 (0.17)
Number of years spent in current town	-0.007 (4.48)	-0.011 (7.29)	-0.004 (1.19)	-0.011 (3.29)
Lived abroad for less than 1 year	0.368 (7.96)	0.426 (8.47)	0.349 (3.24)	0.347 (3.14)
Lived abroad for 1-4 years	0.431 (8.64)	0.491 (8.97)	0.181 (1.57)	0.150 (0.73)
Lived abroad for 5 years or more	0.485 (7.12)	0.552 (7.80)	0.287 (1.77)	0.308 (2.03)
West Germany	0.026 (0.30)	0.164 (1.96)	–	–
East Germany	-0.366 (3.40)	-0.352 (3.03)	–	–
United States	-0.553 (6.18)	-0.421 (5.40)	–	–
Austria	-0.449 (4.57)	-0.465 (5.04)	–	–
Hungary	-0.439 (4.45)	-0.503 (5.75)	-0.554 (6.41)	-0.577 (6.79)
Italy	-0.194 (2.10)	-0.100 (1.15)	–	–
Ireland	-0.483 (5.01)	-0.360 (3.92)	–	–
Netherlands	0.090 (1.15)	0.086 (1.26)	–	–
Norway	-0.217 (2.68)	-0.095 (1.31)	–	–
Sweden	0.123 (1.41)	0.188 (2.39)	–	–
Czech Republic	-0.399 (4.36)	-0.513 (5.99)	-0.536 (6.70)	-0.551 (6.71)
Slovenia	-0.339 (3.87)	-0.301 (3.80)	-0.426 (5.36)	-0.365 (4.73)
Poland	0.119 (1.39)	0.065 (0.83)	0	0
Bulgaria	0.354 (3.93)	0.318 (3.93)	–	–
Russia	-0.587 (6.84)	-0.501 (6.04)	–	–
New Zealand	-0.124 (1.41)	-0.123 (1.49)	–	–
Canada	-0.095 (1.15)	-0.072 (0.98)	–	–
Philippines	0.140 (1.64)	0.198 (2.55)	–	–
Japan	-0.740 (7.71)	-0.491 (6.32)	–	–
Spain	-0.062 (0.67)	0.058 (0.67)	–	–
Latvia	-0.484 (4.63)	-0.550 (6.22)	-0.522 (5.24)	-0.580 (6.43)
Slovakia	0.014 (0.17)	0.035 (0.45)	-0.160 (2.21)	-0.042 (0.56)
N	8925	9746	2200	2450

Notes:

1. See notes to Tables 2 and 4.
2. Table reports coefficients and t-statistics in parentheses.
3. Sample sizes are slightly larger than in Table 2 because of non-response to the language questions, which are excluded from the specifications reported in this table.