Migration creation and diversion in the EU: Are CEECs immigrants crowding-out the rest?

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Abstract

This paper applies the concept of trade creation and diversion to immigration into the EU-15 in the 1980s and 1990s. In particular, the 1990s process of East-West integration, culminating in the May 2004 enlargement, could potentially create immigration from the new member countries and at the same time divert migration from non-EU countries. In this context, the question this paper tries to answer is fundamentally whether the extension of the EU Single Market to the new member countries has the potential to crowd-out non-EU immigrants. The analysis is carried out using trend analysis, Truman shares, and panel data gravity models. The results are quite robust to a range of regression methods, model specifications, dependent variables, and time periods. They broadly support the migration creation hypothesis, but the evidence on the migration diversion hypothesis is mixed. There is evidence of some diversion away from other non-member European countries, such as ex-USSR and ex-Yugoslavia countries, in favour of the new Central and Eastern European members. However, the evidence of diversion away from non-European countries is much weaker, if at all existent. The high impact of a common language, when compared to distance or even a common border, may help preserving migration channels from outside Europe. Within Europe, shorter distances and common borders become more relevant.

Keywords: gravity model, migration creation and diversion, EU enlargement
JEL: F15, F16, F22, J61

1 Introduction

The 1990s have seen a process of East-West integration in Europe that culminated in the 2004 enlargement. The real wages in the new member countries are on average five times lower than in Greece, Portugal and Spain, and ten times lower than in the wealthiest EU countries. These high wage differentials created anticipation for large flows of East-West migration and most of the EU-15 countries decided not to apply the Single Market requirement of free movement of labour for up to seven years after the enlargement. When these restrictions come to an end, the new member countries may find themselves in a privileged position with respect to outsiders. Given the free supply of workers from the new member states, the old EU members may decide to reduce the quotas of non-EU migrants. Hence the process of East-West integration could create immigration from the new member countries and at the same time divert migration from non-EU countries.

The concept of trade creation and diversion is by no means new in the trade integration literature (see, among others, Viner (1950), Verdoorn and Meyer-zu-Schlochtern (1964), Balassa (1967), Clavaux (1969), Kreinin (1969), Truman (1969), Sellekaerts (1973), Balassa (1974), Dayal and Dayal (1977)). However, this concept has not been – to the best of the author's knowledge – applied to migration. This paper is borrowing the concepts of creation and diversion and using them to investigate whether the extension of the EU Single Market to the new member countries would crowd-out non-EU immigrants. The Eurostat migration database used in the paper covers virtually all countries in the world over a period ranging from 1980 to 2000 and thus allows a comprehensive analysis of creation and diversion effects in immigration into the EU-15.

The paper's findings broadly support the migration creation hypothesis, but the evidence on the migration diversion hypothesis is mixed. There is evidence of some diversion away from other non-member European countries, such as ex-USSR and ex-Yugoslavia countries, in favour of the new Central and Eastern European members. However, the evidence of diversion away from non-European countries is much weaker, if at all existent. The high impact of a common language, when compared to distance or even a common border, may help preserving migration channels from outside Europe. Within Europe,

shorter distances and common borders become more relevant. The results are quite robust to a range of regression methods, model specifications, dependent variables, and time periods.

The paper is organised as follows. A preliminary analysis of trends is presented in Section 2. Section 3 uses Truman shares to determine whether there has been any substitution of Central and Eastern European migrants for the rest of the world. Section 4 uses a gravity model to investigate the determinants of bilateral immigration into the EU-15 during the 1980s and 1990s, and whether other world regions have shown stronger or weaker specific factors with respect to the CEECs. Section 5 performs robustness checks with respect to changes over time as East-West integration proceeded, different measures of origin (citizenship versus country of previous residence and country of birth), and whether immigrants are workers or non-workers. Section 6 concludes.

2 Data Features and Migration Trends

The migration data used in the paper comes from Eurostat's NewCronos Database and covers up to 4680 countries in a period that spans from 1981 to 2000, including both immigration flows and stocks. Table 1 describes all the variables available in the database. The information provided is very rich, although it is difficult to find a true panel for pairs of EU-15 and non-EU-15 countries. In this paper, only national data is used, which excludes codes (4) and (7). Among the data used in this paper, codes (1) and (2) represent immigration flows by country of previous residence and citizenship respectively, code (3) represents the stock of foreign workers by citizenship, codes (5) and (6) both represent the stock of foreign population by citizenship, and finally code (8) represents the stock of foreign population by country of birth. These distinctions allow the testing of robustness of results with respect to particular characteristics of migration, such as the temporary residence in an intermediate country that is not the country of birth, the change in citizenship that may accompany residence abroad, or the introduction of foreign residents that are not part of the workforce via family reunion or asylum-seeking.

Table 1: Migration Data included in Theme 3 (Population and Social Conditions), Eurostat's NewCronos Database			
Code	***Description***	***Countries***	***Time period***
(1) immiprv	Immigration by sex and country of previous residence	1319	1985-1999
(2) immictz	Immigration by sex and citizenship	3096	1985-1999
(3) wpctzage	Workers by citizenship, broad age group and sex	747	1981-1997
(4) wpctzreh	Non-national workers by citizenship and region	2353	1981-1996
(5) mpopctz	Population by sex and citizenship	2785	1985-2000
(6) mpopage	Population by age group, citizenship and sex	2660	1985-2000
(7) mpopreg	Population by citizenship and region	4680	1985-2000
(8) mpopcbt	Population by country of birth	597	1998-2000

Figure 1 represents immigration flows into each EU-15 country as a share of its population in the period 1985-99. Germany was the country receiving the highest relative inflow of migrants, with a peak of 1.5% of Germany's population in 1992, and stabilising at around 1% thereafter. Austria received a relative inflow at the same level as Germany in the 1996-99 period. It is not possible to say what the situation would have been before 1996 due to lack of Austrian data prior to that year. The countries and time periods involved seem to hint at some impact of the East-West migration.

Figure 1: Immigration flows as a share of the recipient country's population (code (2))

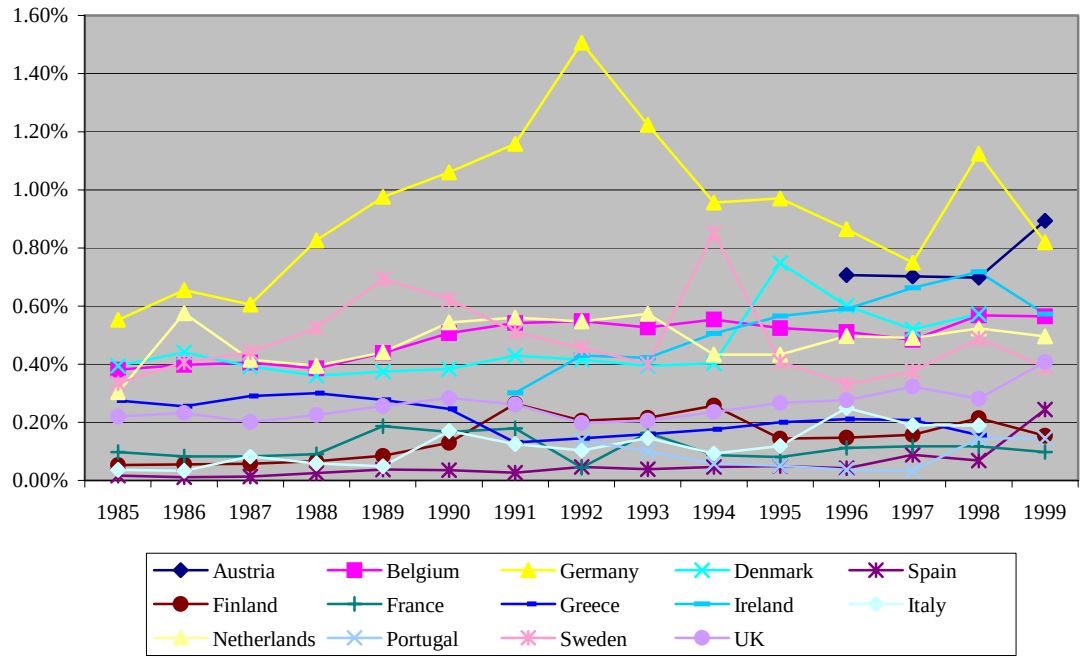


Figure 2 represents foreign workers in each EU-15 country as a share of its population in the period 1981-97. No data is available for Germany and only one year exists for Austria – in 1997, foreign workers accounted for 4.25% of Austria's population. Belgian data for the 1980s indicates a stable value around 2%, with the UK and Sweden having about 1.5% foreign workers among their population. In general, the

stocks are quite stable, especially when compared with the volatility of the flows, which seems to indicate that at least some immigration is temporary and constant inflows do not contribute to comensurate increases in the stocks.

Figure 2: Foreign workers as a share of the recipient country's population (code (3))

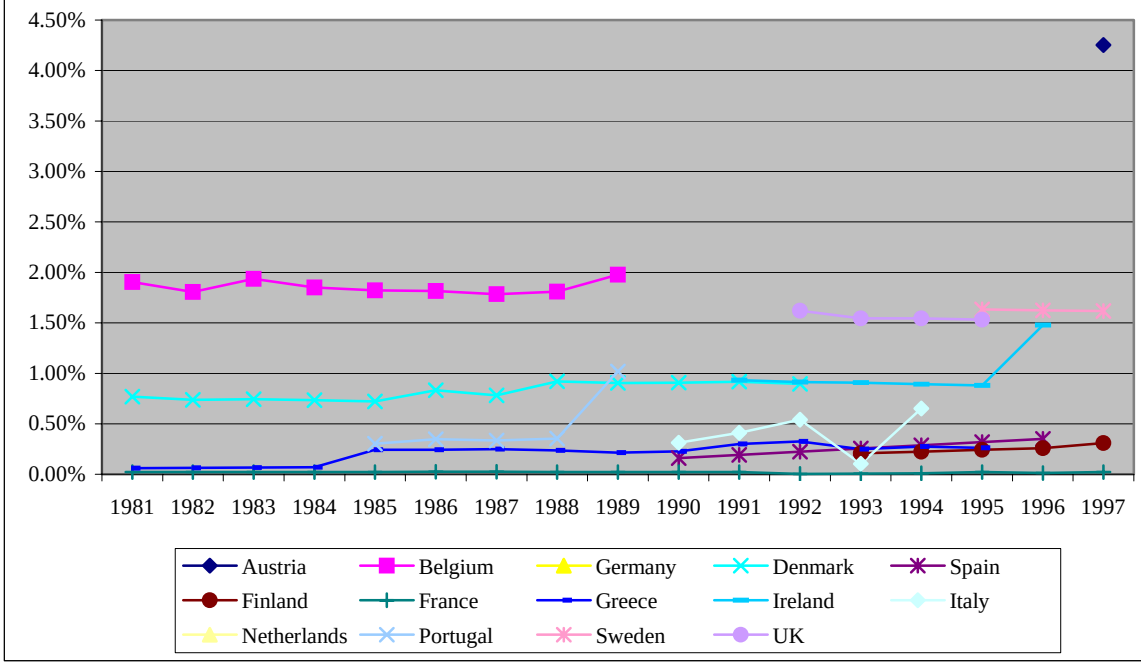


Figure 3: Foreign citizens as a share of the recipient country's population (code (6))

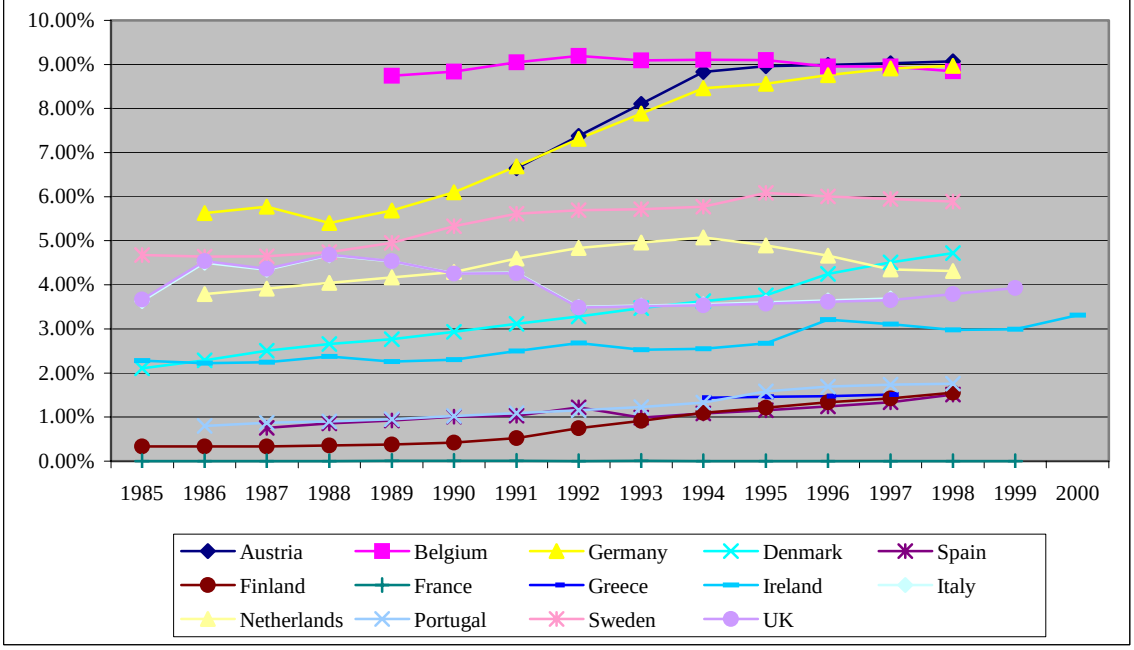
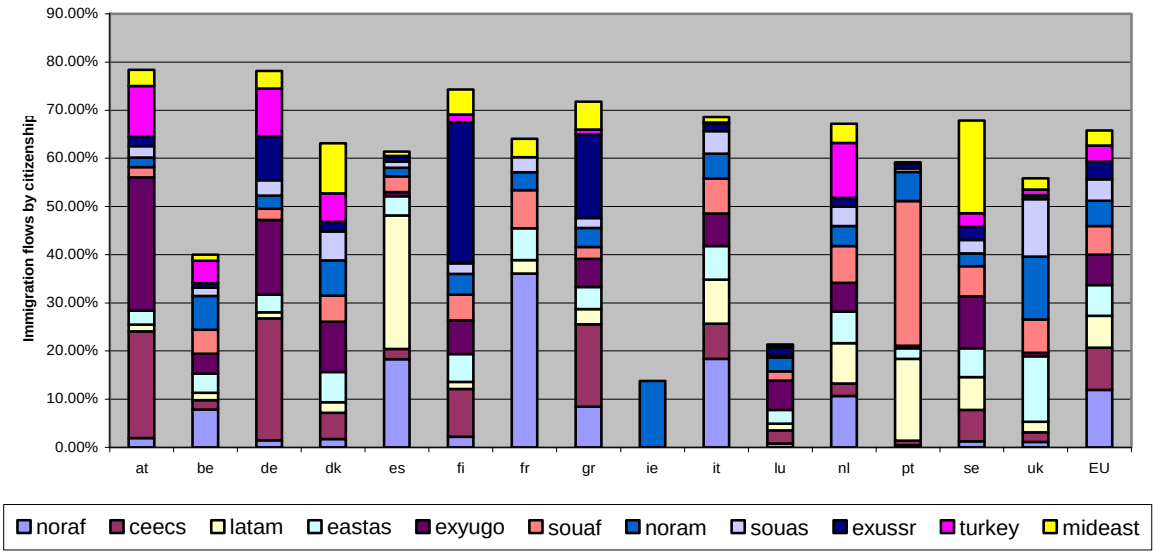


Figure 3 represents foreign citizens in each EU-15 country as a share of its population in the period 1985-2000. It reinforces the view that Germany, together with Austria and Belgium, have the highest percentages of foreign citizens (around 9% each in 1998). Between 1988 and 1994 there was a sharp increase in the stock of foreigners in Germany and Austria, again hinting that immigration into these countries may be associated with the changes in Eastern Europe. On the contrary, Belgium seems to have a static foreign population, possibly resident since before the fall of the Berlin Wall. A deeper investigation requires the disaggregation of the data by country of origin of the immigrants. As the Eurostat provides flows from virtually all countries in the world, a meaningful analysis also requires grouping all the countries for which data is available in world regions. These are described in Table 2 and will be used throughout the paper.

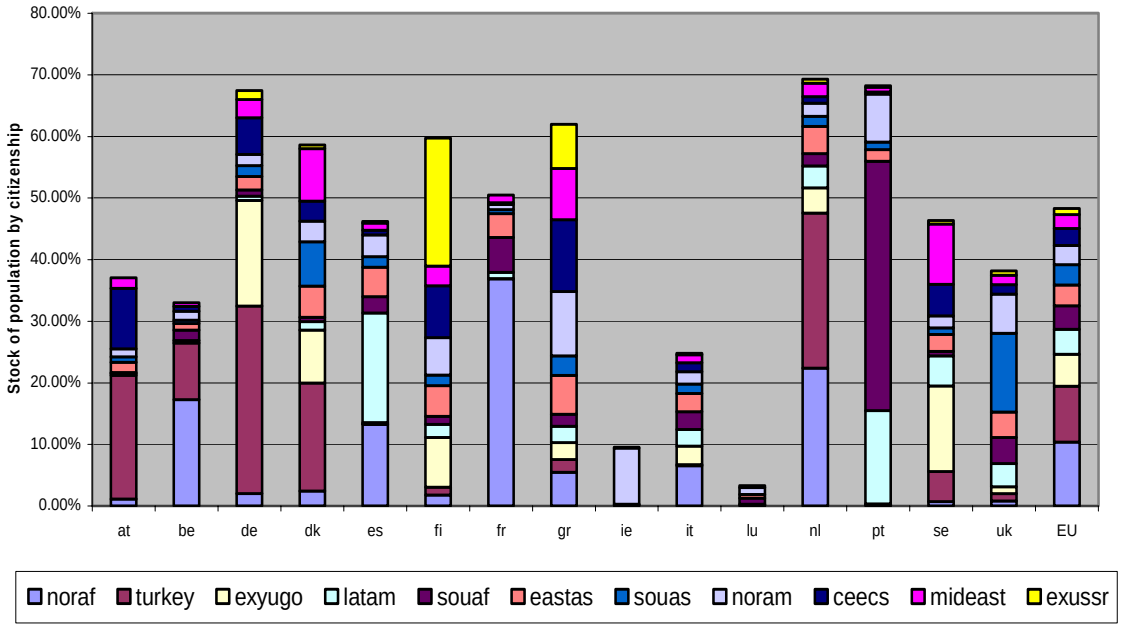
Table 2: Origin Countries grouped by World Regions

World Regions	***Countries***
CEECS (Central and Eastern European Countries)	Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland , Romania , Slovenia , Slovak Republic
TURKEY	Turkey
ALBANIA	Albania
EXYUGO (Former Yugoslavia)	Bosnia and Herzegovina, Croatia, FYROM, Serbia and Montenegro
EXUSSR (Former Soviet Union)	Armenia, Azerbaijan, Belarus, Georgia, Moldova, Russian Federation, Ukraine, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan
TINY	Andorra, Cyprus, Faroe Islands, Gibraltar, Malta, Monaco, San Marino
EASTAF (East Africa)	Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, Uganda, Tanzania
NORAF (North Africa)	Algeria, Egypt, Libya, Morocco, Tunisia
CENAF (Central Africa)	Cameroon, Central African Republic, Chad, Democratic Republic of the Congo, Congo, Gabon, Equatorial Guinea, Sao Tome and Principe, Zaire
SOUAF (South Africa)	Angola, Botswana, Comoros, Lesotho, Madagascar, Mauritius, Malawi, Mayotte, Mozambique, Namibia, Seychelles, St. Helena, Swaziland, South Africa, Zambia, Zimbabwe
WESTAF (West Africa)	Burkina Faso, Benin, Côte d'Ivoire, Cape Verde, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Sudan, Togo, Western Sahara
NORAM (North America)	Bermuda, Canada, Greenland, St. Pierre and Miquelon, United States Minor Outlying Islands, United States
CENAM (Central America)	Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, British Virgin islands, Cayman Islands, Costa Rica, Cuba, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Haiti, Honduras, Jamaica, Mexico, Montserrat, Netherland Antilles, Nicaragua, Panama, Puerto Rico, Saint Lucia, Saint Vincent and the Grenadines, St. Kitts and Nevis, Trinidad and Tobago, Turks and Caicos Islands, Virgin Islands of the United States
SOUAM (South America)	Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Falkland Islands, Guyana, Paraguay, Peru, South Georgia and the South Sandwichs Islands, Suriname, Uruguay, Venezuela
EASTAS (East Asia)	China (excluding Hong Kong), Hong Kong, Japan, Taiwan
SEASTAS (Southeast Asia)	Brunei Darussalam, Cambodia, East Timor, Indonesia, Korea (North), Korea (South), Lao, Macau, Malaysia, Mongolia, Myanmar, Philippines, Singapore, Thailand, Vietnam
SOUAS (South Asia)	Afghanistan, Bangladesh, Bhutan, British Indian Ocean Territory, India, Maldives, Nepal, Pakistan, Sri Lanka
MIDEAST (Middle East)	Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian Authority, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, Yemen
OCE (Oceania)	Antarctica, Australia, American Samoa, Bouvet Island, Christmas Islands, Cocos Islands, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, French southern territories, Guam, Heard and McDonald Islands, Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Norfolk Island, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna Islands, Western Samoa

Share of world regions in total number of foreigners (1981-2000)



Share of world regions in total number of foreigners (1981-2000)



Figures 4 and 5 represent the share of those regions for which data is available in immigration flows and stock of foreign citizens respectively. The patterns differ across the EU-15 countries. The inflow of CEECS nationals was most important in Austria and Germany, and also in Greece. It is in these countries that the share of CEECS in the stock of foreign nationals is higher. The inflow of North African nationals was more important in France, Spain, Italy, the Netherlands and Belgium. In these countries, North African immigrants form the largest group of foreign nationals. The Latin Americans have a large share

in Spain and Portugal. In the latter country, the largest group of foreign nationals is that of immigrants from Sub-Saharan Africa. Asians have a higher share in the UK. Sweden has received a high share of immigrants from the Middle East and Former Yugoslavia. All in all, the allocation of immigrants during the 1980s and 1990s has differed quite substantially across the EU-15. It is not clear – apart from perhaps Germany and Austria – whether the CEECS have dominated or whether other groups have kept their relative importance. Hence the question remains: have CEECS immigrants crowded-out others?

3 Truman Shares

The simple analysis of trends cannot provide an answer. Take the example of trade flows. As Truman (1972), p. 272-73, has highlighted, *"The examination of changes in import shares alone cannot discriminate between trade creation and diversion... If the increase in the partners' share of imports reflects replacement of higher cost domestic production, then one has evidence of trade creation. If it were the result of the displacement of lower cost imports from non-member countries, then it was due to trade diversion."* The solution Truman proposed is the use of shares of *"expenditure on apparent consumption"*, defined as GDP minus exports (E) plus imports (I) from partners and non-members plus tariff revenues (T) on imports from non-members. In this context, the shares of the various member and non-member countries *j* in a country *i* in year *t* are the ratio of the relevant imports plus tariff revenues to *"expenditure on apparent consumption"*:

$$S_{ijt} = \frac{I_{ijt}}{GDP_{it} - E_{it} + I_{it} + T_{it}} \qquad (1)$$

The Truman shares essentially provide a relative comparison. In the context of this paper, it is not enough to say whether the flow of CEECS immigrants has increased or decreased. The changes may have happened because the EU-15 has become respectively more open or more closed to immigration overall, and not because there is positive or negative discrimination of CEECS immigrants. Only after controlling for internal conditions of the recipient countries a conclusion regarding migration creation or diversion can be reached. The share of an origin country *j* in the immigration flows into a country *i* in a year *t* can be written as the ratio of the number of immigrants (M) to the population of the recipient country:

$$S_{ijt} = \frac{M_{ijt}}{POP_{it}} \qquad (2)$$

Migration creation or diversion is indicated by the change in shares. An increase in the share of the CEECS alone can represent migration creation if it happens at the expense of intra-EU-15 migration, in which case the shares of other non-EU countries should not be affected; but if those shares decrease, there is an argument for migration diversion in favour of the CEECS. The rate of change in the CEECS shares for flows and stocks in 1986-2000 and three sub-periods (1986-90, 1991-95, and 1996-2000) are shown in Table 3.

Table 3: Change in the Share of CEECS (%)				
a) Immigration flows by citizenship (code (2))				
	1986-2000	***1986-1990***	***1991-1995***	***1996-2000***
Austria	***-7.59***			***-7.59***
Belgium	13.36	12.65	15.21	11.93
Germany	1.86	14.96	***-9.08***	***-0.84***
Denmark	7.33	4.05	***-7.99***	53.85
Spain	10.87		***-6.68***	24.02
Finland	13.76	13.64	28.75	***-4.84***
France				
Greece	9.76	20.03	***-1.70***	12.76
Ireland				
Italy	67.14			67.14
Luxembourg	***-0.31***		***-14.74***	3.29
Netherlands	9.45	24.79	0.14	1.92
Portugal	1.37		***-9.20***	9.29
Sweden	1.20	2.68	1.51	***-1.03***
United Kingdom	24.26	***-5.08***	46.00	33.76
EU	17.03	4.71	4.89	19.64
b) Stock of population by citizenship (code (6))				
	1986-2000	***1986-1990***	***1991-1995***	***1996-2000***
Austria			13.72	2.24
Belgium	8.33	***-0.38***	6.28	***-2.39***
Germany	7.13	15.33	2.09	***-2.30***
Denmark	6.81	17.01	53.69	15.58
Spain	29.67	3.75	36.14	***-0.91***
Finland	14.36	1.75	22.01	0.61
France	5.64	***-6.72***	***-5.56***	***-1.32***
Greece	***-2.73***			
Ireland			22.65	20.07
Italy	21.91			
Luxembourg			23.22	8.13
Netherlands	13.69	5.96	15.09	5.21
Portugal	13.39	29.42	0.97	***-0.95***
Sweden	0.31	0.40	***-0.81***	3.97
United Kingdom	***-0.32***	***-3.26***		
EU	10.36	3.51	5.88	***-0.11***

To start with, the evidence in favour of migration creation is mixed. Interestingly, the CEECS lost share in EU-15 countries such as Austria, Germany, France, and in 1996-2000 the share of CEECS citizens in the stock of foreigners decreased in the EU as a whole. This might indicate either general reduction of

immigration into the EU-15 or discrimination against CEECS citizens, and not in favour, as might have been thought. The shares of the other groups of immigrants provide the distinction. If these also decreased, then the EU-15 became more averse to immigration. But if other world regions gained share, then there was diversion from the CEECS to those groups (or vice-versa). Table 4 shows the results of a two-sided sign test and a Wilcoxon signed-rank test. The first simply classifies changes as negative and positive, whilst the second additionally ranks them according to magnitude.

Table 4: P-values for inequality of signs between the change in the shares of flows and stocks of immigrants from the CEECS and other world regions in the EU-15 (Ho: same sign)

Two-sided sign test

	a) Immigration flows by citizenship (code (2))				***b) Stock of population by citizenship (code (6))***			
	1986-2000	***1986-1990***	***1991-1995***	***1996-2000***	***1986-2000***	***1986-1990***	***1991-1995***	***1996-2000***
turkey	0.1460	***0.0703***	1.0000	0.1460	0.1460	1.0000	0.1094	0.7539
albania	***0.0020***	1.0000	0.2891	0.1094	0.2266	0.2500	0.2187	0.2891
exyugo	0.2266	1.0000	***0.0039***	0.5488	0.1094	1.0000	0.1250	0.7266
latam	***0.0923***	0.7266	0.3438	1.0000	0.2266	1.0000	1.0000	1.0000
eastas	***0.0923***	1.0000	0.2266	0.5811	0.2266	0.7266	0.2891	0.7266
souaf	***0.0002***	0.7266	***0.0117***	0.5811	***0.0117***	***0.0703***	***0.0078***	***0.0703***
exussr	***0.0654***	1.0000	***0.0703***	1.0000	0.1094	1.0000	0.2187	***0.0078***
tiny	***0.1094***	0.6250	0.7266	***0.0215***	***0.0215***	1.0000	0.3750	0.1250
noraf	0.2668	0.7266	0.5488	1.0000	0.5488	0.7266	1.0000	1.0000
noram	***0.0225***	***0.0703***	1.0000	0.5811	0.2266	0.2891	0.1797	0.1797
souas	***0.0923***	0.2891	0.7539	0.2668	0.5488	1.0000	0.2891	0.2891
mideast	1.0000	0.7266	0.7539	0.5811	0.5488	1.0000	0.7266	0.7266
oce	0.5811	0.7266	1.0000	1.0000	0.2266	0.7266	0.2891	0.2891

Wilcoxon signed-rank test

	a) Immigration flows by citizenship (code (2))				***b) Stock of population by citizenship (code (6))***			
	1986-2000	***1986-1990***	***1991-1995***	***1996-2000***	***1986-2000***	***1986-1990***	***1991-1995***	***1996-2000***
turkey	0.1361	0.1235	0.5337	***0.0150***	0.1579	0.6784	***0.0926***	0.5076
albania	***0.0051***	0.2850	***0.0929***	***0.0218***	***0.0505***	0.1088	***0.0747***	***0.0929***
exyugo	***0.0912***	0.3173	***0.0077***	0.2860	***0.0218***	0.3173	***0.0910***	***0.0929***
latam	0.1159	0.3270	***0.0469***	0.5067	0.2132	0.6744	0.4838	0.4838
eastas	***0.0107***	0.6744	0.1307	0.4631	0.1095	0.1614	***0.0499***	0.6744
souaf	***0.0015***	***0.0929***	***0.0128***	0.1159	***0.0058***	***0.0357***	***0.0117***	0.1235
exussr	***0.1095***		***0.0499***	1.0000	***0.0166***		***0.0747***	***0.0117***
tiny	0.3329	0.1441	0.3270	***0.0218***	***0.0593***	0.7150	0.5002	0.1763
noraf	***0.0546***	0.6744	0.5337	0.3824	0.2860	0.1614	1.0000	0.4838
noram	***0.0058***	***0.0251***	0.7897	***0.0392***	***0.0262***	***0.0499***	***0.0663***	0.1097
souas	***0.0869***	***0.0929***	0.6465	0.2787	0.1095	0.4838	0.2076	0.3270
mideast	0.8613	0.8886	0.8785	0.7532	0.4236	0.5754	0.4008	0.4838
oce	0.2213	0.2076	0.7989	0.5525	***0.0164***	0.2076	***0.0499***	0.2626

When the P-values in Table 4 are smaller than 0.1, the sign of the change in shares significantly differs between the CEECS and other world regions, and two situations must be distinguished. For the EU as a whole, the share of CEECS in inflows of immigrants always increased, but their share in the stocks of foreign citizens has decreased in 1996-2000. Hence, a first situation is migration creation for the CEECS and diversion away from other world regions. A second situation is migration erosion for the CEECS and migration creation for other world regions. If the P-values in Table 4 are higher than 0.1, the sign of the change in shares does not significantly differ between the CEECS and other world regions, and there is either overall migration creation or overall migration erosion.

On the whole, Table 4 shows that in several cases the signs of changes in shares of sub-Saharan Africa, Turkey, Ex-USSR and Ex-Yugoslavia Republics, Tiny European countries, Albania, North America, and Oceania, significantly differ from those of the CEECS. There is also some (but weaker) evidence of a negative correlation for Asia, Latin America, and North Africa. Only the change in shares of the Middle East is never negatively linked to the change in shares of the CEECS. This is probably due to the fact that immigration from the Middle East is more linked to asylum than to economic migration. To know more about why the change in shares of other world regions is positively or negatively related to the change in shares of the CEECS, it would be necessary to study the characteristics of the migrants. This is left to another paper. However the share analysis can also be improved upon by looking at characteristics of origin and recipient countries that may influence migration flows in general. The next section presents a gravity model approach to isolating the effects of such characteristics and distinguishing these from specific trends of each world region.

4 Gravity models

Two alternative gravity equations will be used in this section. The first equation is built around three main hypotheses. The first main hypothesis constitutes the very essence of gravity models: bilateral flows, in this case migration flows, are directly related to the size of the two countries concerned, and inversely related to the physical distance between them (DIST). Country size is proxied by either GDP or population (POP). The second main hypothesis is that migration flows are a function of country wealth, as measured by GDP per capita (GDPPC). Migration flows should decrease with the origin country's GDP per capita and increase with the recipient country's GDP per capita. The third main hypothesis is that migration flows are a function of unemployment rates (UR). Migration flows should increase with the origin country's unemployment rate and decrease with the recipient country's unemployment rate.

Finally, the length of common borders (BORDER), and dummies for common language (LANG) and world regions (REGION) are included. Common borders are usually porous, and thus are expected to have a positive impact on migration flows. Common languages can also proxy for a common culture and/or former colonial ties that act as an incentive to migration. The dummies for the world regions

described in Section 2 control for region-specific preferences that cannot be explained by the other factors. A negative sign would mean that the CEECs are the preferred region, or that the rest of the world is less preferred. In Section 5, these dummies are interacted with time dummies for four time periods (1981-85, 1986-90, 1991-95, 1996-2000), as preferences may have changed over time. The benchmark specification of the gravity model to be estimated for migration flows from country *j* to country *i* in year *t* takes the form:

$$M_{ijt} = \alpha + GDP_{it}\beta_1 + GDP_{jt}\beta_2 + GDPPC_{it}\beta_3 + GDPPC_{jt}\beta_4 + UR_{it}\beta_5 + UR_{jt}\beta_6 + \\ + DIST_{ij}\beta_7 + BORDER_{ij}\beta_8 + LANG_{ij}\beta_9 + REGION_j\beta_{10} + u_{ijt} \quad (3)$$

Equation (3) is modified by replacing the GDP (or population), the GDP per capita and the unemployment rate of each country with the absolute value of the difference between them, respectively DGDP (or DPOP), DGDPPC, and DUR. This is intended to control for the fact that migration flows may depend more on the relative position of countries than on their absolute position. Although there is no a priori as to how migration would change with differences in size, it can be expected that differences in income and in unemployment rates would increase migration. The modified equation is as follows:

$$M_{ijt} = \alpha + DGDP_{ijt}\beta_1 + DGDPPC_{ijt}\beta_2 + DUR_{ijt}\beta_3 + DIST_{ij}\beta_4 + \\ + BORDER_{ij}\beta_5 + LANG_{ij}\beta_6 + REGION_j\beta_7 + u_{ijt} \quad (4)$$

Data for distances and borders was taken from the CEPII website (www.cepii.fr) and www.nationmaster.com respectively. Distance data is measured in km between the partner countries' economic centres. These correspond to the capital city except for Germany (Hamburg is the city used). Countries are considered to share a common border when they share a land border and its length is given in kms. Data for population (given in thousands) and for GDP (given in billions USD at 1995 prices and exchange rates) was taken from the web version of IMF's International Financial Statistics at www.imf.org. Migration data comes from the Eurostat NewCronos Database and the various measures of migration flows and stocks available were described in Table 1.

Table 5: Immigration by citizenship (code (2))												
	(1)	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*
gdpi	0.746***	0.842***	0.837***									
	(0.040)	(0.006)	(0.033)									
gdpj	0.638***	0.629***	0.664***									
	(0.041)	(0.009)	(0.029)									
dgdp							0.061*	0.021**	0.039			
							(0.032)	(0.009)	(0.031)			
popi				0.887***	1.013***	0.989***						
				(0.035)	(0.008)	(0.032)						
popj				0.652***	0.606***	0.658***						
				(0.036)	(0.008)	(0.021)						
dpop										-0.104**	-0.076***	-0.090***
										(0.049)	(0.009)	(0.023)
gdppci	-0.630***	-0.276***	-0.180	0.162***	0.610***	0.668***						
	(0.057)	(0.016)	(0.112)	(0.043)	(0.020)	(0.109)						
gdppcj	-0.602***	-0.629***	-0.663***	0.032***	-0.002	0.001						
	(0.042)	(0.010)	(0.032)	(0.007)	(0.003)	(0.005)						
dgdppc							-0.127***	-0.059***	-0.094**	-0.066***	-0.046***	-0.054***
							(0.032)	(0.010)	(0.037)	(0.007)	(0.002)	(0.010)
uri	-0.295***	-0.425***	-0.469***	-0.338***	-0.490***	-0.579***						
	(0.032)	(0.014)	(0.079)	(0.032)	(0.018)	(0.078)						
urj	0.195***	0.353***	0.377***	0.208***	0.354***	0.377***						
	(0.025)	(0.009)	(0.034)	(0.025)	(0.011)	(0.032)						
dur							-0.115***	-0.257***	-0.338***	-0.116***	-0.277***	-0.342***
							(0.023)	(0.013)	(0.053)	(0.023)	(0.012)	(0.053)
lang	2.103***	1.852***	2.377***	2.123***	1.948***	2.328***	2.255***	2.296***	2.871***	2.348***	2.318***	2.836***
	(0.262)	(0.073)	(0.198)	(0.230)	(0.059)	(0.140)	(0.330)	(0.098)	(0.223)	(0.328)	(0.087)	(0.207)
dist	-1.196***	-1.218***	-1.165***	-1.198***	-1.236***	-1.152***	-0.869***	-0.820***	-0.878***	-0.868***	-0.792***	-0.892***
	(0.153)	(0.039)	(0.136)	(0.135)	(0.038)	(0.126)	(0.193)	(0.051)	(0.158)	(0.193)	(0.039)	(0.159)
border	0.168**	0.268***	0.355***	0.151**	0.207***	0.302***	0.253**	0.325***	0.339***	0.249**	0.320***	0.313***
	(0.086)	(0.020)	(0.037)	(0.076)	(0.016)	(0.046)	(0.108)	(0.029)	(0.044)	(0.108)	(0.032)	(0.055)
turkey	1.034**	1.600***	1.747***	0.973**	1.673***	1.724***	2.239***	2.700***	3.008***	2.129***	2.708***	2.978***
	(0.442)	(0.108)	(0.205)	(0.389)	(0.141)	(0.222)	(0.554)	(0.189)	(0.246)	(0.550)	(0.186)	(0.224)
exyugo	0.544*	0.121	0.196	0.557*	0.076	0.249**	0.038	-0.301***	-0.309**	0.111	-0.243*	-0.233
	(0.328)	(0.100)	(0.121)	(0.290)	(0.081)	(0.113)	(0.413)	(0.094)	(0.141)	(0.412)	(0.125)	(0.143)
exussr	-0.082	-0.235***	-0.230	-0.078	-0.248***	-0.215	0.168	-0.138	-0.038	0.145	-0.067	-0.032
	(0.246)	(0.060)	(0.215)	(0.217)	(0.064)	(0.181)	(0.309)	(0.093)	(0.221)	(0.308)	(0.080)	(0.226)
tiny	-0.116	-0.156***	0.319	-0.071	-0.196***	0.305	-2.117***	-2.365***	-1.922***	-1.780***	-2.107***	-1.656***
	(0.353)	(0.045)	(0.195)	(0.312)	(0.040)	(0.208)	(0.432)	(0.083)	(0.268)	(0.433)	(0.088)	(0.251)
eastaf	1.029**	1.825***	1.816***	1.104**	1.792***	1.832***	1.924***	1.808***	2.026***	1.804***	1.927***	2.005***
	(0.509)	(0.127)	(0.273)	(0.449)	(0.150)	(0.266)	(0.635)	(0.223)	(0.341)	(0.630)	(0.199)	(0.341)
noraf	0.354	0.452***	0.619***	0.350	0.475***	0.637***	1.217***	0.914***	1.446***	1.117***	0.877***	1.386***
	(0.258)	(0.030)	(0.166)	(0.227)	(0.033)	(0.146)	(0.323)	(0.100)	(0.179)	(0.320)	(0.095)	(0.189)
souaf	0.966**	1.052***	1.032***	0.921**	1.117***	1.003***	0.208	0.323**	0.585**	0.195	0.250**	0.603**
	(0.416)	(0.100)	(0.246)	(0.367)	(0.104)	(0.257)	(0.522)	(0.133)	(0.295)	(0.521)	(0.104)	(0.286)
noram	1.477***	2.012***	1.737***	1.504***	2.125***	1.719***	2.284***	2.183***	1.902***	2.424***	2.260***	2.242***
	(0.411)	(0.091)	(0.252)	(0.362)	(0.101)	(0.274)	(0.507)	(0.143)	(0.338)	(0.505)	(0.105)	(0.333)
cenam	0.533	0.481***	0.521**	0.527*	0.453***	0.473**	-0.402	-0.553***	-0.517	-0.315	-0.466***	-0.427
	(0.356)	(0.086)	(0.262)	(0.314)	(0.091)	(0.237)	(0.447)	(0.122)	(0.332)	(0.447)	(0.097)	(0.318)
souam	1.345***	1.383***	1.169***	1.345***	1.291***	1.208***	1.296***	1.177***	1.237***	1.261***	1.086***	1.225***
	(0.368)	(0.082)	(0.287)	(0.324)	(0.096)	(0.277)	(0.465)	(0.131)	(0.386)	(0.463)	(0.107)	(0.394)
eastas	1.060**	1.473***	1.431***	1.141***	1.647***	1.488***	2.319***	2.411***	2.210***	2.429***	2.534***	2.443***
	(0.432)	(0.087)	(0.237)	(0.381)	(0.091)	(0.241)	(0.527)	(0.152)	(0.438)	(0.530)	(0.133)	(0.434)
souas	0.773**	0.984***	0.668***	0.755**	1.010***	0.746***	2.207***	2.178***	1.755***	2.146***	2.127***	1.687***
	(0.368)	(0.085)	(0.228)	(0.324)	(0.087)	(0.223)	(0.455)	(0.121)	(0.282)	(0.449)	(0.105)	(0.291)
seastas	0.858**	1.091***	1.092***	0.833**	1.153***	1.037***	1.225***	1.131***	1.176***	1.143**	1.176***	1.218***
	(0.377)	(0.088)	(0.269)	(0.332)	(0.098)	(0.280)	(0.474)	(0.132)	(0.295)	(0.471)	(0.100)	(0.282)
mideast	0.724*	1.036***	1.280***	0.811**	1.132***	1.332***	-0.299	-0.508***	-0.343	-0.125	-0.132	-0.092
	(0.379)	(0.079)	(0.221)	(0.335)	(0.079)	(0.195)	(0.475)	(0.153)	(0.274)	(0.474)	(0.141)	(0.212)
oce	2.676***	2.955***	2.776***	2.704***	2.829***	2.855***	1.805***	1.690***	1.687***	1.804***	1.551***	1.639***
	(0.514)	(0.126)	(0.372)	(0.453)	(0.115)	(0.332)	(0.649)	(0.178)	(0.452)	(0.647)	(0.159)	(0.439)
Constant	-10.295***	-15.767***	-17.732***	-13.253***	-18.394***	-20.199***	11.076***	10.780***	11.147***	11.270***	10.747***	11.405***
	(1.439)	(0.414)	(1.735)	(1.284)	(0.423)	(1.729)	(1.390)	(0.349)	(1.097)	(1.389)	(0.260)	(1.136)
Observations	7538	7496	7538	7538	7496	7538	7538	7496	7538	7538	7496	7538
R-squared			0.8001			0.8045			0.7053			0.7136
Chi-squared	7881.98***	262571.56***	44448.65***	1865.65***	1313675***	9974.16***	461.37***	10235.01***	68302.49***	463.59***	19575.24***	13867.06***
NOTE: Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. (1) Random effects with common AR(1); (2) FGLS with heterogeneous panels and panel-specific AR(1); (3) PCSEs with panel-specific AR(1). CEECS is the excluded dummy.												

The benchmark regression results are provided in Tables 5 and 6 for flows and stocks respectively. These results are robust to various model specifications and regression methods. Whether GDP or population are used as measures of size, both flows and stocks of migrants increase with the size of origin and recipient countries. However, whilst GDP per capita has a negative effect on immigration in the GDP model, it has a positive impact in the population model. This result is different from what would be expected – higher income in the origin country would reduce immigration, but higher income in the recipient country would increase immigration. The role of GDP versus population as measures of size is not very clear. It could

also be the case that the country of citizenship is not the best indicator of the origins of immigrants, hence explaining why the income of the country of citizenship does not behave as expected.

When country differences in GDP, population, and GDP per capita are used instead of their absolute values, differences in GDP per capita have a negative impact on bilateral immigration flows. It would be expected that immigration would respond positively to differences in income. More puzzling, differences in GDP have a positive impact on immigration flows, but differences in population have a negative impact. For immigration stocks, size differences are not very significant. Also this result could mean that the country of citizenship is not a very accurate indicator of the origin of the migrants.

In addition to income motives, the prospect of finding a job abroad relative to the same prospect back home is a determinant of migration flows. A higher unemployment rate in the recipient country reduces immigration and a higher unemployment rate in the origin country increases emigration. However, when bilateral differences in unemployment rates are used instead of their absolute values, their impact on migration is negative.

Distance deters migration as would be expected, hence countries like the CEECS, and some North African countries, geographically closer to the EU-15, may have a distance advantage. Migration is higher between pairs of countries sharing a border and a common language. In the sample used, only CEECS and TINY share borders with the EU-15 and thus these countries would have an immigration advantage because they happen to share a common border with the EU-15. Former colonies in Africa, America, Asia and Oceania share a (official) language with some EU-15 countries and thus these countries' immigration advantage comes from speaking the same language. In addition, a common language is the only variable that has a coefficient higher than 2, or even higher than 3. All other variables have coefficients smaller than unity. All in all, this may help explaining why there is no solid evidence of diversion of immigration from other parts of the world in favour of the CEECS. However, the official language variable used here is a crude measure. If there were data available on languages spoken as foreign languages, perhaps the CEECS would show a stronger position.

When looking at the dummies for world regions, only the ex-USSR countries show negative country-specific factors with respect to the CEECS. This finding is in accordance to the share analysis of Section 3 and also reflects the importance of other world regions in the EU-15, as found in Section 2.

Table 6: Population by citizenship (code (6))												
	(1)	***(2)***	***(3)***	***(1)***	***(2)***	***(3)***	***(1)***	***(2)***	***(3)***	***(1)***	***(2)***	***(3)***
gdpi	0.922***	1.037***	1.040***									
	(0.062)	(0.011)	(0.040)									
gdpj	0.617***	0.624***	0.688***									
	(0.048)	(0.008)	(0.029)									
dgdp							0.047	-0.059***	0.016			
							(0.035)	(0.009)	(0.046)			
popi				1.136***	0.989***	1.234***						
				(0.052)	(0.011)	(0.031)						
popj				0.664***	0.486***	0.725***						
				(0.042)	(0.009)	(0.028)						
dpop										0.091	-0.081***	-0.249***
										(0.063)	(0.014)	(0.047)
gdppci	-0.215***	-0.138***	-0.611***	0.658***	0.617***	0.755***						
	(0.081)	(0.020)	(0.097)	(0.046)	(0.018)	(0.106)						
gdppcj	-0.547***	-0.599***	-0.668***	0.069***	0.031***	0.029***						
	(0.049)	(0.009)	(0.031)	(0.007)	(0.003)	(0.007)						
dgdppc							-0.191***	-0.027***	-0.093**	-0.144***	-0.082***	-0.066***
							(0.036)	(0.010)	(0.037)	(0.008)	(0.003)	(0.016)
uri	0.049*	0.010	-0.108***	0.026	-0.062***	-0.132***						
	(0.026)	(0.010)	(0.040)	(0.026)	(0.011)	(0.032)						
urj	0.240***	0.217***	0.415***	0.249***	0.208***	0.355***						
	(0.021)	(0.010)	(0.036)	(0.021)	(0.010)	(0.028)						
dur							-0.138***	-0.163***	-0.348***	-0.138***	-0.164***	-0.349***
							(0.019)	(0.008)	(0.067)	(0.019)	(0.009)	(0.035)
lang	2.466***	2.731***	2.766***	2.424***	2.564***	2.593***	2.883***	3.581***	3.238***	2.910***	3.403***	3.314***
	(0.299)	(0.077)	(0.203)	(0.261)	(0.075)	(0.117)	(0.375)	(0.062)	(0.222)	(0.372)	(0.069)	(0.225)
dist	-1.107***	-0.957***	-1.190***	-1.096***	-2.372***	-0.960***	-0.949***	-0.858***	-0.797***	-0.937***	-0.907***	-0.877***
	(0.181)	(0.044)	(0.124)	(0.159)	(0.032)	(0.112)	(0.230)	(0.065)	(0.187)	(0.230)	(0.065)	(0.176)
border	0.150	-0.004	-0.048	0.114	-0.146***	0.196***	0.210	0.235***	0.061	0.206	0.265***	0.101*
	(0.100)	(0.046)	(0.079)	(0.089)	(0.042)	(0.068)	(0.128)	(0.059)	(0.082)	(0.128)	(0.056)	(0.061)
turkey	2.491***	4.110***	3.170***	2.411***	5.647***	3.223***	2.928***	3.742***	1.324*	2.805***	4.324***	1.954*
	(0.466)	(0.142)	(0.441)	(0.410)	(0.152)	(0.407)	(0.588)	(0.325)	(0.761)	(0.583)	(0.283)	(1.064)
exyugo	0.415	0.692***	0.899***	0.473	0.088	0.800***	-0.006	0.114	0.582	0.001	-0.038	0.674
	(0.419)	(0.082)	(0.217)	(0.369)	(0.133)	(0.284)	(0.534)	(0.148)	(0.495)	(0.532)	(0.151)	(0.464)
exussr	-0.762***	-1.142***	-1.125***	-0.778***	0.158*	-1.163***	-0.437	-0.667***	-0.768*	-0.473	-0.687***	-0.800***
	(0.296)	(0.086)	(0.156)	(0.261)	(0.090)	(0.170)	(0.377)	(0.109)	(0.403)	(0.376)	(0.113)	(0.266)
tiny	0.611	1.103***	1.226***	0.743**	1.663***	1.310***	-1.245**	-0.372***	-0.818**	-1.327**	-0.426***	-0.234
	(0.421)	(0.054)	(0.179)	(0.371)	(0.053)	(0.190)	(0.520)	(0.101)	(0.378)	(0.530)	(0.112)	(0.252)
eastaf	1.931***	2.015***	2.391***	1.952***	5.296***	2.376***	3.126***	2.530***	2.799***	3.033***	2.728***	2.793***
	(0.604)	(0.171)	(0.359)	(0.533)	(0.212)	(0.384)	(0.765)	(0.246)	(0.614)	(0.761)	(0.242)	(0.518)
noraf	1.282***	1.225***	1.485***	1.236***	2.852***	1.625***	1.909***	2.147***	2.199***	1.881***	2.092***	2.054***
	(0.288)	(0.064)	(0.311)	(0.254)	(0.080)	(0.363)	(0.365)	(0.086)	(0.430)	(0.362)	(0.086)	(0.359)
souaf	1.333***	1.762***	2.054***	1.228***	5.099***	1.892***	0.829	0.178	0.766	0.763	0.416**	0.915*
	(0.482)	(0.122)	(0.314)	(0.425)	(0.125)	(0.348)	(0.613)	(0.161)	(0.550)	(0.613)	(0.171)	(0.474)
noram	2.012***	2.647***	2.310***	1.947***	6.298***	2.303***	2.504***	3.105***	2.770***	2.472***	3.078***	2.881***
	(0.462)	(0.092)	(0.348)	(0.406)	(0.077)	(0.396)	(0.575)	(0.137)	(0.357)	(0.575)	(0.139)	(0.401)
cenam	0.845**	1.068***	1.445***	0.843**	4.728***	1.322***	0.222	0.653***	0.223	0.174	0.699***	0.495
	(0.419)	(0.101)	(0.260)	(0.368)	(0.087)	(0.277)	(0.531)	(0.142)	(0.393)	(0.532)	(0.140)	(0.425)
souam	1.715***	1.800***	1.966***	1.691***	6.145***	1.864***	2.092***	2.214***	1.964***	2.020***	2.266***	2.039***
	(0.430)	(0.107)	(0.280)	(0.379)	(0.089)	(0.287)	(0.550)	(0.133)	(0.316)	(0.549)	(0.136)	(0.438)
eastas	1.278***	1.658***	1.865***	1.272***	6.106***	1.918***	2.545***	3.030***	2.812***	2.327***	3.318***	3.690***
	(0.492)	(0.107)	(0.285)	(0.434)	(0.090)	(0.313)	(0.606)	(0.162)	(0.637)	(0.616)	(0.167)	(0.473)
souas	1.436***	1.532***	1.591***	1.297***	5.275***	1.627***	3.000***	3.069***	3.058***	2.772***	3.263***	3.301***
	(0.423)	(0.101)	(0.233)	(0.372)	(0.085)	(0.264)	(0.529)	(0.124)	(0.430)	(0.525)	(0.125)	(0.379)
seastas	1.116**	1.439***	1.630***	0.984**	5.925***	1.619***	1.701***	1.502***	1.678***	1.590***	1.631***	1.781***
	(0.439)	(0.113)	(0.289)	(0.387)	(0.090)	(0.298)	(0.560)	(0.142)	(0.323)	(0.556)	(0.142)	(0.426)
mideast	1.194***	2.030***	2.343***	1.349***	2.910***	2.308***	0.406	0.901***	0.753***	0.390	0.310***	0.696**
	(0.436)	(0.081)	(0.191)	(0.384)	(0.064)	(0.187)	(0.554)	(0.123)	(0.212)	(0.554)	(0.113)	(0.305)
oce	2.713***	3.157***	3.182***	2.705***	8.323***	3.263***	2.123***	2.351***	1.770***	2.109***	2.415***	1.936***
	(0.596)	(0.131)	(0.342)	(0.524)	(0.118)	(0.367)	(0.761)	(0.187)	(0.423)	(0.759)	(0.188)	(0.535)
Constant	-18.671***	-23.710***	-18.420***	-22.659***	0.000	-20.661***	13.879***	12.327***	12.444***	13.704***	12.825***	13.347***
	(1.779)	(0.386)	(1.576)	(1.575)	(0.000)	(1.616)	(1.668)	(0.471)	(1.426)	(1.670)	(0.473)	(1.231)
Observations	5523	5447	5523	5523	5447	5523	5523	5447	5523	5523	5447	5523
R-squared			0.9443			0.9385			0.8853			0.8902
Chi-squared	1836.86***	76491.42***	5426.05***	2322.90***	5.07e+11***	3504.28***	719.65***	12463.04***	344.86***	723.01***	2671.90***	1267.61***
NOTE: Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. (1) Random effects with common AR(1); (2) FGLS with heterogeneous panels and panel-specific AR(1); (3) PCSEs with panel-specific AR(1). CEECS is the excluded dummy.												

5 Robustness of Regression Results

The benchmark results of Section 4 seem to suggest that there are no a priori reasons to suppose that the CEECS would be a preferred origin of EU-15 immigrants and could crowd-out other world regions. This section tests the robustness of those results for different time periods, different migration paths (country of citizenship differs from country of previous residence or from country of birth), and different types of migrants (workers and non-workers).

5.1 Sub-periods

The world region dummies in Tables 5 and 6 have been estimated for 1981-2000. This is a rather long period that saw many changes around the world and in Europe in particular. Hence the results may be sensitive to the use of different sub-periods. As immigration flows are very volatile, it is useful to distinguish five-year periods: 1981-85, 1986-90, 1991-95, and 1996-2000. There is little (if any) data for the first period, but for the other three the world region dummies behave in a robust way for both flows (Table 7) and stocks (Table 8) of migrants.

In 1986-90, Southern Africa, Central America and Southeast Asia were less preferred with respect to the CEECS. In the 1990s, there is some mixed evidence on Southeast Asia, South America, and the Middle East, but the Southern Africa and Central America dummies are persistently negative. Data for former USSR countries became available also in the 1990s, revealing that these countries had the highest disadvantage with respect to the CEECS. The TINY European countries were also at a disadvantage. Hence the results seem to indicate that the opening of the EU-15 borders to CEECS had a stronger potential diversion effect on other European countries that were not part of the CEECS group, rather than on non-European countries. For Central America and Southern Africa, the highest significant coefficient value is -1.849 and -1.023 respectively, whilst the former USSR and the TINY countries have reached a significant coefficient value of -2.182 and -2.662 respectively.

Table 7: Immigration by citizenship (code (2))												
	gdp			*pop*			*dgdp*			*dpop*		
	(1)	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*
						1986-90						
turkey	0.209	0.775***	0.993***	0.219	0.565***	0.850***	0.315	1.408***	1.664***	0.328	1.457***	1.740***
	(0.197)	(0.113)	(0.221)	(0.195)	(0.115)	(0.213)	(0.204)	(0.170)	(0.347)	(0.204)	(0.174)	(0.360)
tiny	-0.022	-0.013	0.117	-0.025	0.040	0.182	-0.373*	-1.700***	-1.737***	-0.362*	-1.772***	-1.792***
	(0.195)	(0.120)	(0.149)	(0.193)	(0.117)	(0.155)	(0.203)	(0.149)	(0.321)	(0.202)	(0.151)	(0.313)
eastaf	0.074	0.621***	0.680***	0.095	0.666***	0.687**	0.195	0.860***	1.101***	0.204	0.921***	1.180***
	(0.200)	(0.128)	(0.263)	(0.198)	(0.139)	(0.291)	(0.205)	(0.157)	(0.366)	(0.205)	(0.159)	(0.366)
noraf	0.070	0.033	0.104	0.059	-0.014	0.018	0.227**	0.248***	0.445**	0.229**	0.254***	0.445**
	(0.096)	(0.044)	(0.135)	(0.095)	(0.045)	(0.136)	(0.098)	(0.048)	(0.202)	(0.098)	(0.047)	(0.203)
souaf	-0.096	-0.103	-0.344**	-0.125	-0.126*	-0.335**	-0.179	-0.452***	-0.692***	-0.182	-0.449***	-0.664***
	(0.144)	(0.080)	(0.142)	(0.142)	(0.075)	(0.139)	(0.149)	(0.085)	(0.174)	(0.149)	(0.082)	(0.170)
noram	0.043	0.320***	0.324**	0.060	0.241***	0.285*	0.151	0.636***	0.762***	0.147	0.596***	0.700***
	(0.127)	(0.055)	(0.157)	(0.126)	(0.055)	(0.154)	(0.130)	(0.074)	(0.243)	(0.130)	(0.068)	(0.232)
cenam	-0.006	-0.494***	-0.447***	-0.046	-0.493***	-0.440***	-0.112	-0.989***	-1.103***	-0.123	-1.085***	-1.179***
	(0.095)	(0.053)	(0.139)	(0.093)	(0.051)	(0.143)	(0.098)	(0.062)	(0.179)	(0.097)	(0.062)	(0.184)
souam	0.080	-0.008	-0.009	0.089	0.055*	0.037	0.059	0.020	0.091	0.057	0.040	0.085
	(0.072)	(0.031)	(0.130)	(0.072)	(0.031)	(0.130)	(0.074)	(0.033)	(0.138)	(0.074)	(0.032)	(0.135)
eastas	0.172	0.002	0.058	0.159	0.045	0.086	0.444***	0.868***	0.943***	0.468***	1.000***	1.166***
	(0.143)	(0.043)	(0.123)	(0.141)	(0.049)	(0.123)	(0.147)	(0.080)	(0.310)	(0.147)	(0.088)	(0.320)
souas	-0.054	-0.107**	-0.240*	-0.070	-0.173***	-0.295**	0.169	0.664***	0.582**	0.202*	0.732***	0.699***
	(0.106)	(0.049)	(0.129)	(0.105)	(0.054)	(0.138)	(0.109)	(0.069)	(0.238)	(0.108)	(0.071)	(0.257)
seastas	-0.017	-0.179***	-0.258**	-0.056	-0.155***	-0.266**	0.122	-0.037	-0.049	0.129	-0.016	-0.059
	(0.095)	(0.043)	(0.113)	(0.094)	(0.045)	(0.112)	(0.098)	(0.040)	(0.108)	(0.098)	(0.040)	(0.106)
mideast	-0.138	0.364***	0.815***	-0.089	0.382***	0.854***	-0.304	-0.232**	-0.623***	-0.310	-0.213*	-0.633***
	(0.183)	(0.098)	(0.280)	(0.180)	(0.109)	(0.301)	(0.190)	(0.113)	(0.180)	(0.190)	(0.111)	(0.165)
oce	0.194	0.988***	0.882***	0.238*	0.993***	0.916***	0.067	0.132**	0.099	0.053	0.073	0.017
	(0.138)	(0.090)	(0.282)	(0.137)	(0.091)	(0.279)	(0.142)	(0.064)	(0.143)	(0.142)	(0.063)	(0.140)
						1991-95						
turkey	0.181	0.937***	1.117***	0.173	0.721***	0.994***	0.265	1.727***	1.951***	0.289	1.814***	2.082***
	(0.226)	(0.123)	(0.253)	(0.221)	(0.132)	(0.254)	(0.235)	(0.187)	(0.382)	(0.235)	(0.191)	(0.389)
exyugo	0.328	-0.099	-0.080	0.328	0.005	0.054	-0.196	-0.369***	-0.651***	-0.232	-0.468***	-0.715***
	(0.328)	(0.135)	(0.168)	(0.295)	(0.113)	(0.152)	(0.401)	(0.126)	(0.229)	(0.399)	(0.132)	(0.239)
exussr	-0.845***	-0.958***	-1.204***	-0.854***	-1.071***	-1.116***	-0.667***	-0.928***	-1.042***	-0.676***	-0.918***	-1.007***
	(0.189)	(0.066)	(0.156)	(0.170)	(0.061)	(0.146)	(0.229)	(0.071)	(0.187)	(0.228)	(0.069)	(0.184)
tiny	-0.380*	-0.596***	-0.294	-0.391*	-0.478***	-0.244	-0.860***	-2.545***	-2.279***	-0.845***	-2.662***	-2.363***
	(0.209)	(0.094)	(0.200)	(0.203)	(0.083)	(0.185)	(0.220)	(0.091)	(0.294)	(0.220)	(0.091)	(0.297)
eastaf	-0.253	0.557***	0.522	-0.235	0.686***	0.632*	-0.040	0.905***	1.165***	-0.020	0.983***	1.261***
	(0.233)	(0.141)	(0.321)	(0.230)	(0.151)	(0.337)	(0.242)	(0.169)	(0.398)	(0.241)	(0.170)	(0.388)
noraf	0.046	0.002	-0.021	0.016	-0.056	-0.074	0.273**	0.348***	0.493**	0.281**	0.357***	0.499**
	(0.112)	(0.052)	(0.145)	(0.111)	(0.055)	(0.161)	(0.114)	(0.059)	(0.202)	(0.114)	(0.058)	(0.204)
souaf	-0.091	-0.213***	-0.439***	-0.141	-0.233***	-0.433***	-0.203	-0.553***	-0.767***	-0.203	-0.543***	-0.742***
	(0.161)	(0.073)	(0.166)	(0.157)	(0.060)	(0.150)	(0.167)	(0.077)	(0.216)	(0.167)	(0.071)	(0.214)
noram	-0.022	0.483***	0.313*	-0.009	0.417***	0.304	0.134	0.846***	0.972***	0.130	0.809***	0.903***
	(0.147)	(0.062)	(0.180)	(0.145)	(0.066)	(0.185)	(0.151)	(0.084)	(0.264)	(0.151)	(0.072)	(0.251)
cenam	-0.061	-0.695***	-0.834***	-0.126	-0.743***	-0.839***	-0.225**	-1.321***	-1.649***	-0.241**	-1.476***	-1.775***
	(0.106)	(0.035)	(0.100)	(0.103)	(0.046)	(0.116)	(0.107)	(0.040)	(0.174)	(0.107)	(0.040)	(0.178)
souam	-0.007	-0.117***	-0.235*	0.001	-0.004	-0.177	-0.110	-0.109***	-0.228	-0.110	-0.081**	-0.243*
	(0.086)	(0.035)	(0.137)	(0.085)	(0.036)	(0.136)	(0.088)	(0.040)	(0.148)	(0.088)	(0.040)	(0.146)
eastas	0.380**	0.087*	0.003	0.360**	0.185***	0.090	0.744***	1.332***	1.294***	0.765***	1.458***	1.550***
	(0.160)	(0.045)	(0.153)	(0.157)	(0.053)	(0.152)	(0.166)	(0.070)	(0.307)	(0.166)	(0.076)	(0.303)
souas	-0.171	-0.258***	-0.601***	-0.208*	-0.287***	-0.643***	0.145	0.784***	0.478*	0.195	0.855***	0.642**
	(0.122)	(0.052)	(0.195)	(0.120)	(0.061)	(0.209)	(0.124)	(0.065)	(0.264)	(0.124)	(0.064)	(0.269)
seastas	0.051	-0.294***	-0.427***	-0.009	-0.257***	-0.402**	0.218**	-0.057	-0.186	0.231**	-0.021	-0.187
	(0.107)	(0.041)	(0.165)	(0.105)	(0.043)	(0.157)	(0.110)	(0.041)	(0.163)	(0.109)	(0.041)	(0.155)
mideast	-0.392*	0.176*	0.262	-0.342*	0.302***	0.358*	-0.553***	-0.466***	-0.984***	-0.566***	-0.440***	-1.021***
	(0.203)	(0.095)	(0.175)	(0.198)	(0.107)	(0.201)	(0.213)	(0.124)	(0.211)	(0.213)	(0.124)	(0.189)
oce	0.316**	1.152***	1.064***	0.358**	1.178***	1.110***	0.195	0.202**	0.103	0.174	0.108	-0.031
	(0.160)	(0.090)	(0.292)	(0.158)	(0.091)	(0.290)	(0.165)	(0.079)	(0.177)	(0.165)	(0.077)	(0.177)
						1996-2000						
turkey	-0.071	0.845***	0.922***	-0.077	0.679***	0.818***	0.051	1.624***	1.829***	0.060	1.710***	1.972***
	(0.241)	(0.140)	(0.278)	(0.236)	(0.149)	(0.279)	(0.252)	(0.208)	(0.414)	(0.252)	(0.211)	(0.418)
exyugo	0.430	-0.162	-0.093	0.427	-0.095	-0.024	-0.035	-0.043	-0.494**	-0.071	-0.298***	-0.574***
	(0.319)	(0.121)	(0.151)	(0.285)	(0.106)	(0.143)	(0.393)	(0.037)	(0.193)	(0.391)	(0.090)	(0.194)
exussr	-0.496***	-0.823***	-1.006***	-0.514***	-0.963***	-0.923***	-0.270	-0.708***	-0.823***	-0.289	-0.770***	-0.810***
	(0.183)	(0.025)	(0.159)	(0.164)	(0.027)	(0.146)	(0.224)	(0.056)	(0.232)	(0.224)	(0.046)	(0.228)
tiny	-0.418*	-0.959***	-0.569**	-0.446**	-0.916***	-0.556**	-0.843***	-2.510***	-2.365***	-0.829***	-2.627***	-2.460***
	(0.216)	(0.043)	(0.270)	(0.208)	(0.032)	(0.242)	(0.228)	(0.090)	(0.329)	(0.228)	(0.087)	(0.332)
eastaf	-0.377	0.267*	0.333	-0.364	0.369***	0.452	-0.079	0.902***	1.281***	-0.044	0.977***	1.381***
	(0.250)	(0.139)	(0.297)	(0.246)	(0.137)	(0.301)	(0.259)	(0.176)	(0.439)	(0.258)	(0.175)	(0.433)
noraf	-0.007	-0.086	-0.214	-0.050	-0.094	-0.216	0.324***	0.390***	0.558***	0.336***	0.396***	0.571***
	(0.121)	(0.058)	(0.181)	(0.119)	(0.064)	(0.199)	(0.122)	(0.068)	(0.192)	(0.122)	(0.067)	(0.188)
souaf	-0.019	-0.208***	-0.436***	-0.073	-0.060	-0.407***	-0.079	-0.494***	-0.868***	-0.077	-0.461***	-0.852***
	(0.169)	(0.079)	(0.134)	(0.165)	(0.062)	(0.137)	(0.176)	(0.100)	(0.230)	(0.176)	(0.097)	(0.231)
noram	0.090	0.640***	0.427**	0.097	0.582***	0.438**	0.304*	1.071***	1.254***	0.301*	1.026***	1.173***
	(0.159)	(0.063)	(0.195)	(0.157)	(0.073)	(0.206)	(0.163)	(0.095)	(0.284)	(0.163)	(0.079)	(0.271)
cenam	-0.119	-0.871***	-0.974***	-0.187*	-0.928***	-0.946***	-0.240**	-1.403***	-1.703***	-0.262**	-1.557***	-1.849***
	(0.112)	(0.030)	(0.124)	(0.109)	(0.034)	(0.130)	(0.112)	(0.051)	(0.180)	(0.112)	(0.031)	(0.189)
souam	-0.104	-0.303***	-0.448***	-0.100	-0.141***	-0.364**	-0.142	-0.171***	-0.320**	-0.138	-0.127***	-0.331**
	(0.094)	(0.031)	(0.150)	(0.092)	(0.034)	(0.151)	(0.094)	(0.045)	(0.159)	(0.094)	(0.046)	(0.155)
eastas	0.368**	0.022	-0.156	0.337**	0.104**	-0.063	0.816***	1.371***	1.263***	0.831***	1.452***	1.453***
	(0.168)	(0.039)	(0.154)	(0.164)	(0.052)	(0.150)	(0.174)	(0.042)	(0.349)	(0.174)	(0.055)	(0.317)
souas	-0.196	-0.361***	-0.701***	-0.242*	-0.371***	-0.732***	0.212	0.843***	0.582**	0.273**	0.913***	0.754***
	(0.130)	(0.060)	(0.216)	(0.127)	(0.069)	(0.232)	(0.132)	(0.071)	(0.275)	(0.131)	(0.068)	(0.279)
seastas	0.027	-0.448***	-0.551***	-0.042	-0.415***	-0.498***	0.286**	-0.102***	-0.281	0.303***	-0.053	-0.285
	(0.114)	(0.026)	(0.162)	(0.111)	(0.031)	(0.147)	(0.115)	(0.035)	(0.196)	(0.114)	(0.037)	(0.185)
mideast	-0.561***	-0.164*	-0.046	-0.519**	0.041	0.125	-0.647***	-0.596***	-0.978***	-0.664***	-0.573***	-1.043***
	(0.212)	(0.086)	(0.228)	(0.205)	(0.104)	(0.233)	(0.223)	(0.127)	(0.326)	(0.222)	(0.131)	(0.289)
oce	0.412**	1.237***	1.084***	0.452***	1.264***	1.152***	0.324*	0.310***	0.135	0.301*	0.183**	-0.016
	(0.172)	(0.071)	(0.291)	(0.169)	(0.091)	(0.301)	(0.176)	(0.091)	(0.204)	(0.176)	(0.084)	(0.207)

NOTE: Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. (1) Random effects with common AR(1); (2) FGLS with heterogeneous panels and panel-specific AR(1); (3) PCSEs with panel-specific AR(1). CEECS and 1981-85 are the excluded dummies.

Table 8: Population by citizenship (code (6))												
	gdp			*pop*			*dgdp*			*dpop*		
	(1)	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*
						1986-90						
turkey	0.212	2.111***	2.042***	0.276	1.612***	1.821***	0.223	2.799***	2.077***	0.241	3.030***	2.145***
	(0.172)	(0.197)	(0.234)	(0.170)	(0.218)	(0.250)	(0.181)	(0.229)	(0.518)	(0.181)	(0.232)	(0.485)
tiny	0.133	1.028***	1.240***	0.173	1.089***	1.118***	-0.037	-0.351***	-0.597**	-0.071	-0.759***	-0.536**
	(0.172)	(0.143)	(0.235)	(0.170)	(0.136)	(0.235)	(0.180)	(0.098)	(0.238)	(0.180)	(0.121)	(0.234)
eastaf	0.241	0.628***	0.617**	0.263	0.770***	0.561*	0.431**	0.713***	0.997***	0.446**	0.991***	1.099***
	(0.200)	(0.121)	(0.279)	(0.199)	(0.162)	(0.306)	(0.210)	(0.126)	(0.347)	(0.210)	(0.120)	(0.310)
noraf	-0.078	0.001	0.392*	-0.054	-0.033	0.400*	0.088	0.375***	1.010***	0.098	0.325***	0.966***
	(0.090)	(0.037)	(0.201)	(0.089)	(0.038)	(0.213)	(0.094)	(0.060)	(0.265)	(0.094)	(0.060)	(0.264)
souaf	-0.185	-0.028	0.077	-0.189	-0.203***	-0.064	-0.196	-0.352***	-0.286	-0.200	-0.344***	-0.303
	(0.150)	(0.049)	(0.141)	(0.148)	(0.049)	(0.151)	(0.158)	(0.088)	(0.178)	(0.158)	(0.089)	(0.184)
noram	0.086	0.751***	0.570***	0.116	0.824***	0.574***	0.232*	1.317***	0.948***	0.221*	0.924***	0.864***
	(0.122)	(0.043)	(0.135)	(0.121)	(0.048)	(0.148)	(0.128)	(0.080)	(0.175)	(0.128)	(0.067)	(0.169)
cenam	-0.199**	-0.380***	-0.297***	-0.210**	-0.452***	-0.372***	-0.179*	-0.581***	-0.522***	-0.193**	-0.752***	-0.545***
	(0.093)	(0.038)	(0.083)	(0.092)	(0.040)	(0.079)	(0.096)	(0.058)	(0.117)	(0.096)	(0.061)	(0.115)
souam	-0.124*	-0.102***	-0.025	-0.094	-0.018	-0.010	-0.063	0.025	0.038	-0.058	0.063**	0.013
	(0.075)	(0.031)	(0.074)	(0.074)	(0.030)	(0.073)	(0.079)	(0.031)	(0.123)	(0.079)	(0.030)	(0.118)
eastas	-0.180	-0.250***	-0.207**	-0.173	-0.235***	-0.163	0.118	0.496***	0.940***	0.116	0.687***	1.235***
	(0.129)	(0.041)	(0.096)	(0.128)	(0.042)	(0.100)	(0.135)	(0.069)	(0.245)	(0.136)	(0.072)	(0.221)
souas	0.047	-0.116***	0.028	0.036	-0.113***	0.016	0.294***	0.537***	0.947***	0.310***	0.846***	1.159***
	(0.091)	(0.029)	(0.098)	(0.090)	(0.031)	(0.100)	(0.094)	(0.056)	(0.158)	(0.094)	(0.059)	(0.136)
seastas	-0.117	-0.215***	-0.201**	-0.148*	-0.255***	-0.174*	0.074	-0.104**	0.018	0.085	-0.076*	-0.010
	(0.086)	(0.039)	(0.102)	(0.086)	(0.038)	(0.098)	(0.090)	(0.042)	(0.139)	(0.090)	(0.042)	(0.132)
mideast	-0.063	0.888***	0.959***	-0.017	0.953***	0.972***	-0.053	-0.519***	-0.339	-0.067	-1.069***	-0.380
	(0.154)	(0.087)	(0.141)	(0.152)	(0.080)	(0.142)	(0.161)	(0.071)	(0.242)	(0.161)	(0.074)	(0.240)
oce	0.181	0.791***	0.754***	0.221	0.882***	0.706***	0.137	0.133***	-0.057	0.129	0.094**	-0.149
	(0.141)	(0.054)	(0.114)	(0.140)	(0.065)	(0.120)	(0.147)	(0.043)	(0.133)	(0.148)	(0.042)	(0.127)
						1991-95						
turkey	0.281	2.112***	2.216***	0.349*	0.349*	2.090***	0.392*	2.840***	2.559***	0.414**	3.092***	2.699***
	(0.197)	(0.197)	(0.238)	(0.194)	(0.194)	(0.242)	(0.209)	(0.225)	(0.410)	(0.209)	(0.228)	(0.364)
exyugo	-0.543	0.008	0.581**	-0.485	-0.485	0.563**	-0.888*	-0.553***	-0.429	-0.974**	-0.961***	-0.493
	(0.402)	(0.094)	(0.253)	(0.358)	(0.358)	(0.284)	(0.497)	(0.117)	(0.384)	(0.494)	(0.121)	(0.380)
exussr	-2.182***	-1.857***	-2.162***	-2.156***	-2.156***	-2.200***	-1.848***	-1.558***	-1.982***	-1.826***	-1.579***	-1.999***
	(0.225)	(0.071)	(0.154)	(0.200)	(0.200)	(0.151)	(0.277)	(0.071)	(0.206)	(0.276)	(0.072)	(0.205)
tiny	-0.469**	0.330***	0.901***	-0.394**	-0.394**	0.833***	-0.515**	-0.929***	-1.582***	-0.565***	-1.687***	-1.477***
	(0.196)	(0.039)	(0.162)	(0.191)	(0.191)	(0.160)	(0.209)	(0.090)	(0.184)	(0.209)	(0.086)	(0.166)
eastaf	0.417*	0.699***	1.092***	0.459**	0.459**	1.145***	0.891***	1.181***	1.849***	0.918***	1.499***	1.928***
	(0.228)	(0.111)	(0.244)	(0.225)	(0.225)	(0.271)	(0.241)	(0.117)	(0.307)	(0.241)	(0.109)	(0.266)
noraf	0.042	0.194***	0.344**	0.068	0.068	0.397**	0.431***	0.683***	1.116***	0.448***	0.628***	1.078***
	(0.103)	(0.042)	(0.149)	(0.102)	(0.102)	(0.166)	(0.107)	(0.065)	(0.186)	(0.107)	(0.065)	(0.185)
souaf	-0.352**	-0.022	0.006	-0.365**	-0.365**	-0.184	-0.172	-0.436***	-0.843***	-0.173	-0.417***	-0.887***
	(0.168)	(0.051)	(0.135)	(0.163)	(0.163)	(0.128)	(0.180)	(0.094)	(0.206)	(0.180)	(0.096)	(0.210)
noram	-0.011	0.745***	0.726***	0.031	0.031	0.809***	0.344**	1.418***	1.182***	0.328**	1.026***	1.089***
	(0.137)	(0.043)	(0.103)	(0.135)	(0.135)	(0.115)	(0.144)	(0.081)	(0.142)	(0.144)	(0.068)	(0.130)
cenam	-0.312***	-0.568***	-0.430***	-0.312***	-0.312***	-0.450***	-0.185	-0.962***	-1.390***	-0.215*	-1.240***	-1.456***
	(0.109)	(0.038)	(0.111)	(0.106)	(0.106)	(0.099)	(0.114)	(0.054)	(0.158)	(0.114)	(0.048)	(0.141)
souam	-0.265***	-0.121***	-0.068	-0.212**	-0.212**	0.028	-0.116	0.044	-0.143	-0.106	0.097***	-0.144
	(0.087)	(0.031)	(0.076)	(0.085)	(0.085)	(0.077)	(0.091)	(0.034)	(0.123)	(0.091)	(0.032)	(0.119)
eastas	-0.074	-0.209***	-0.075	-0.050	-0.050	0.081	0.466***	0.888***	1.176***	0.451***	1.109***	1.626***
	(0.145)	(0.042)	(0.110)	(0.142)	(0.142)	(0.124)	(0.153)	(0.071)	(0.228)	(0.153)	(0.073)	(0.196)
souas	0.064	-0.121***	0.012	0.053	0.053	0.023	0.586***	0.773***	1.199***	0.605***	1.106***	1.438***
	(0.106)	(0.033)	(0.077)	(0.105)	(0.105)	(0.086)	(0.110)	(0.059)	(0.158)	(0.110)	(0.058)	(0.130)
seastas	-0.137	-0.228***	-0.290**	-0.171*	-0.171*	-0.210*	0.302***	-0.048	-0.206	0.320***	-0.005	-0.182
	(0.101)	(0.041)	(0.129)	(0.099)	(0.099)	(0.117)	(0.105)	(0.044)	(0.156)	(0.105)	(0.044)	(0.142)
mideast	-0.080	0.922***	1.127***	-0.009	-0.009	1.204***	0.124	-0.556***	-0.693***	0.111	-1.170***	-0.755***
	(0.174)	(0.080)	(0.134)	(0.171)	(0.171)	(0.144)	(0.184)	(0.059)	(0.162)	(0.184)	(0.051)	(0.146)
oce	0.217	0.866***	0.941***	0.278*	0.278*	0.963***	0.407**	0.342***	-0.061	0.398**	0.289***	-0.205
	(0.160)	(0.052)	(0.119)	(0.158)	(0.158)	(0.125)	(0.169)	(0.048)	(0.172)	(0.169)	(0.046)	(0.158)
						1996-2000						
turkey	0.114	2.049***	2.205***	0.193	1.605***	2.119***	0.293	2.799***	2.833***	0.300	3.060***	2.944***
	(0.208)	(0.202)	(0.249)	(0.206)	(0.223)	(0.264)	(0.222)	(0.228)	(0.348)	(0.222)	(0.231)	(0.325)
exyugo	0.052	0.416***	1.189***	0.113	0.057	1.114***	-0.219	-0.019	0.399	-0.305	-0.451***	0.344
	(0.399)	(0.100)	(0.250)	(0.354)	(0.093)	(0.278)	(0.494)	(0.110)	(0.389)	(0.491)	(0.113)	(0.386)
exussr	-1.540***	-1.421***	-1.652***	-1.514***	-1.561***	-1.695***	-1.148***	-0.963***	-1.324***	-1.137***	-1.063***	-1.375***
	(0.223)	(0.068)	(0.134)	(0.198)	(0.074)	(0.133)	(0.275)	(0.067)	(0.172)	(0.274)	(0.059)	(0.172)
tiny	-0.679***	0.222***	0.643***	-0.601***	0.269***	0.517***	-0.578***	-0.984***	-1.716***	-0.630***	-1.748***	-1.604***
	(0.201)	(0.047)	(0.167)	(0.197)	(0.053)	(0.165)	(0.215)	(0.094)	(0.194)	(0.216)	(0.092)	(0.177)
eastaf	0.313	0.630***	1.210***	0.361	0.788***	1.295***	0.932***	1.283***	2.098***	0.966***	1.613***	2.185***
	(0.238)	(0.121)	(0.254)	(0.235)	(0.158)	(0.267)	(0.253)	(0.128)	(0.319)	(0.253)	(0.120)	(0.277)
noraf	-0.039	0.146***	0.220*	-0.008	0.158***	0.290**	0.523***	0.707***	1.198***	0.544***	0.660***	1.163***
	(0.110)	(0.048)	(0.124)	(0.109)	(0.050)	(0.144)	(0.114)	(0.070)	(0.167)	(0.114)	(0.068)	(0.166)
souaf	-0.408**	-0.037	-0.078	-0.415**	-0.287***	-0.253*	-0.108	-0.414***	-0.965***	-0.107	-0.393***	-1.023***
	(0.173)	(0.054)	(0.156)	(0.168)	(0.055)	(0.151)	(0.185)	(0.100)	(0.241)	(0.185)	(0.101)	(0.247)
noram	-0.095	0.735***	0.752***	-0.045	0.825***	0.831***	0.397***	1.447***	1.288***	0.380**	1.055***	1.209***
	(0.146)	(0.045)	(0.104)	(0.144)	(0.049)	(0.110)	(0.153)	(0.083)	(0.151)	(0.153)	(0.071)	(0.138)
cenam	-0.426***	-0.643***	-0.574***	-0.420***	-0.714***	-0.590***	-0.195*	-1.012***	-1.460***	-0.230**	-1.294***	-1.545***
	(0.112)	(0.040)	(0.119)	(0.109)	(0.039)	(0.105)	(0.117)	(0.055)	(0.182)	(0.116)	(0.048)	(0.164)
souam	-0.418***	-0.245***	-0.250***	-0.361***	-0.155***	-0.151*	-0.129	0.008	-0.148	-0.117	0.067**	-0.160
	(0.092)	(0.033)	(0.083)	(0.090)	(0.031)	(0.084)	(0.096)	(0.036)	(0.138)	(0.096)	(0.032)	(0.132)
eastas	-0.130	-0.297***	-0.179*	-0.107	-0.210***	-0.022	0.562***	0.964***	1.346***	0.534***	1.204***	1.808***
	(0.152)	(0.043)	(0.104)	(0.149)	(0.043)	(0.113)	(0.160)	(0.076)	(0.227)	(0.161)	(0.076)	(0.198)
souas	0.057	-0.130***	0.069	0.053	-0.132***	0.062	0.721***	0.800***	1.368***	0.739***	1.130***	1.589***
	(0.113)	(0.038)	(0.091)	(0.112)	(0.040)	(0.096)	(0.116)	(0.064)	(0.160)	(0.117)	(0.063)	(0.135)
seastas	-0.161	-0.283***	-0.348**	-0.193*	-0.359***	-0.282**	0.425***	0.001	-0.175	0.443***	0.043	-0.156
	(0.105)	(0.044)	(0.147)	(0.103)	(0.043)	(0.140)	(0.109)	(0.047)	(0.168)	(0.109)	(0.047)	(0.154)
mideast	-0.351*	0.795***	0.962***	-0.274	0.850***	1.049***	0.003	-0.689***	-0.985***	-0.005	-1.315***	-1.006***
	(0.182)	(0.085)	(0.145)	(0.179)	(0.074)	(0.158)	(0.193)	(0.058)	(0.151)	(0.194)	(0.054)	(0.130)
oce	0.158	0.839***	0.962***	0.225	0.968***	0.988***	0.479***	0.385***	0.028	0.469***	0.334***	-0.126
	(0.167)	(0.055)	(0.124)	(0.165)	(0.066)	(0.134)	(0.177)	(0.052)	(0.166)	(0.177)	(0.050)	(0.150)

NOTE: Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. (1) Random effects with common AR(1); (2) FGLS with heterogeneous panels and panel-specific AR(1); (3) PCSEs with panel-specific AR(1). CEECS and 1981-85 are the excluded dummies.

5.2 Country of previous residence and country of birth

Citizenship may not be the most accurate measure of an immigrant's true origin or migration path. Hence it is important to test the robustness of the results with respect to other measures. One is the country of previous residence (Table 9), which measures indirect immigration, via a stopping country where the immigrant originates from but that may not necessarily be the country of citizenship. Another is the country of birth (Table 10), which accounts for cases where the country of citizenship may differ from the country of birth.

Table 9: Immigration by country of previous residence (code (1))

	(1)	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*
gdpi	0.329***	0.343***	0.372***									
	(0.072)	(0.013)	(0.052)									
gdpj	0.519***	0.604***	0.646***									
	(0.048)	(0.009)	(0.033)									
dgdp							-0.201***	-0.294***	-0.317***			
							(0.046)	(0.008)	(0.042)			
popi				0.585***	0.480***	0.580***						
				(0.064)	(0.015)	(0.052)						
popj				0.560***	0.639***	0.659***						
				(0.045)	(0.004)	(0.034)						
dpop										-0.028	0.063***	0.003
										(0.067)	(0.018)	(0.053)
gdppci	-0.333***	0.126***	0.139	0.011	0.423***	0.482***						
	(0.090)	(0.033)	(0.088)	(0.053)	(0.033)	(0.071)						
gdppcj	-0.483***	-0.600***	-0.621***	0.031***	-0.005**	0.020*						
	(0.051)	(0.011)	(0.037)	(0.010)	(0.002)	(0.010)						
dgdppc							0.135***	0.265***	0.254***	-0.068***	-0.038***	-0.068***
							(0.048)	(0.009)	(0.047)	(0.011)	(0.004)	(0.017)
uri	-0.746***	-0.881***	-1.032***	-0.819***	-0.929***	-1.152***						
	(0.067)	(0.035)	(0.068)	(0.067)	(0.037)	(0.065)						
urj	0.245***	0.377***	0.440***	0.253***	0.391***	0.429***						
	(0.040)	(0.015)	(0.038)	(0.039)	(0.015)	(0.034)						
dur							-0.268***	-0.398***	-0.511***	-0.263***	-0.400***	-0.537***
							(0.039)	(0.014)	(0.045)	(0.039)	(0.016)	(0.052)
lang	1.392***	1.708***	1.913***	1.379***	1.617***	1.885***	1.414***	1.472***	1.634***	1.240***	1.135***	1.250***
	(0.298)	(0.086)	(0.145)	(0.276)	(0.086)	(0.143)	(0.362)	(0.116)	(0.211)	(0.374)	(0.129)	(0.196)
dist	-0.935***	-0.791***	-1.136***	-0.976***	-1.002***	-1.182***	-0.839***	-0.715***	-1.275***	-0.893***	-0.946***	-1.276***
	(0.208)	(0.055)	(0.172)	(0.194)	(0.039)	(0.164)	(0.256)	(0.080)	(0.270)	(0.265)	(0.070)	(0.257)
border	-0.007	0.143**	-0.070	-0.010	0.088	-0.090	-0.006	0.047	-0.250*	-0.030	-0.042***	-0.165***
	(0.117)	(0.058)	(0.100)	(0.109)	(0.059)	(0.114)	(0.143)	(0.064)	(0.146)	(0.148)	(0.015)	(0.059)
turkey	-0.041	-0.647**	-0.577*	-0.053	-0.638**	-0.436	0.420	0.051	0.445	0.895	0.854***	0.760**
	(0.582)	(0.269)	(0.320)	(0.544)	(0.286)	(0.379)	(0.711)	(0.232)	(0.566)	(0.729)	(0.201)	(0.364)
exyugo	-0.451	-0.345*	-0.537**	-0.332	-0.388*	-0.527**	-0.718	-0.611***	-0.715**	-0.805	-0.896***	-1.237***
	(0.450)	(0.200)	(0.239)	(0.421)	(0.206)	(0.239)	(0.555)	(0.205)	(0.288)	(0.575)	(0.252)	(0.296)
exussr	-0.387	-0.218***	-0.448***	-0.336	-0.071	-0.389**	-0.222	-0.189	0.055	-0.073	0.158	0.117
	(0.306)	(0.048)	(0.167)	(0.285)	(0.052)	(0.173)	(0.376)	(0.142)	(0.214)	(0.388)	(0.121)	(0.209)
tiny	0.644*	0.797***	0.859***	0.686*	0.946***	0.967***	-0.208	-0.052	0.268	-0.618	-0.973***	-0.677**
	(0.392)	(0.037)	(0.202)	(0.365)	(0.053)	(0.192)	(0.471)	(0.096)	(0.313)	(0.498)	(0.079)	(0.326)
eastaf	1.997***	2.259***	2.387***	1.946***	2.572***	2.408***	2.861***	2.379***	3.067***	3.295***	3.375***	3.801***
	(0.594)	(0.287)	(0.472)	(0.555)	(0.300)	(0.487)	(0.724)	(0.428)	(0.646)	(0.745)	(0.444)	(0.616)
noraf	0.189	-0.086	-0.116	0.187	0.010	-0.176	0.556	0.442**	1.071***	0.848**	0.976***	1.361***
	(0.318)	(0.107)	(0.188)	(0.295)	(0.131)	(0.183)	(0.393)	(0.176)	(0.343)	(0.403)	(0.158)	(0.315)
souaf	1.217**	1.007***	1.441***	1.214**	1.207***	1.490***	1.011	0.867***	1.824***	1.181*	1.280***	2.001***
	(0.507)	(0.121)	(0.302)	(0.471)	(0.093)	(0.296)	(0.620)	(0.192)	(0.479)	(0.643)	(0.195)	(0.540)
noram	1.865***	2.130***	2.379***	1.980***	2.429***	2.549***	2.879***	2.817***	4.036***	2.846***	2.839***	3.361***
	(0.526)	(0.104)	(0.270)	(0.489)	(0.118)	(0.282)	(0.626)	(0.152)	(0.468)	(0.650)	(0.141)	(0.442)
cenam	0.761*	0.503***	0.889***	0.774*	0.869***	0.975***	0.522	0.375**	1.067**	0.540	0.561***	0.865
	(0.457)	(0.101)	(0.295)	(0.425)	(0.087)	(0.295)	(0.561)	(0.173)	(0.508)	(0.584)	(0.165)	(0.592)
souam	1.389***	1.003***	1.546***	1.422***	1.379***	1.561***	1.421**	1.064***	2.002***	1.719***	1.866***	2.390***
	(0.482)	(0.102)	(0.322)	(0.448)	(0.091)	(0.319)	(0.595)	(0.177)	(0.556)	(0.614)	(0.178)	(0.569)
eastas	1.099**	1.013***	1.216**	1.196**	1.532***	1.335**	2.035***	2.092***	2.688***	2.398***	2.627***	3.178***
	(0.552)	(0.145)	(0.509)	(0.513)	(0.085)	(0.527)	(0.659)	(0.173)	(0.406)	(0.683)	(0.198)	(0.520)
souas	0.452	0.273*	0.081	0.481	0.535***	0.158	1.180**	1.073***	1.420**	1.894***	2.165***	2.386***
	(0.467)	(0.154)	(0.391)	(0.434)	(0.154)	(0.385)	(0.572)	(0.202)	(0.553)	(0.572)	(0.219)	(0.496)
seastas	0.837*	0.727***	1.015***	0.841*	1.070***	1.053***	0.994*	0.711***	1.636***	1.425**	1.669***	2.067***
	(0.485)	(0.112)	(0.336)	(0.450)	(0.098)	(0.327)	(0.597)	(0.178)	(0.596)	(0.612)	(0.178)	(0.597)
mideast	1.077**	1.797***	1.876***	1.205***	1.949***	1.906***	0.585	1.242***	1.455***	0.371	0.922***	0.886**
	(0.425)	(0.093)	(0.257)	(0.397)	(0.090)	(0.265)	(0.520)	(0.140)	(0.364)	(0.541)	(0.148)	(0.432)
oce	2.856***	3.285***	3.421***	2.941***	3.687***	3.265***	2.444***	2.633***	3.209***	2.590***	3.179***	3.127***
	(0.649)	(0.143)	(0.485)	(0.603)	(0.118)	(0.515)	(0.799)	(0.237)	(0.725)	(0.829)	(0.229)	(0.661)
Constant	-1.356	-8.570***	-7.353***	-5.999***	-9.317***	-10.112***	11.195***	9.969***	14.367***	11.439***	11.470***	14.261***
	(2.014)	(0.343)	(1.734)	(1.893)	(0.462)	(1.570)	(1.849)	(0.578)	(2.012)	(1.921)	(0.484)	(1.860)
Observations	3032	3006	3032	3032	3006	3032	3032	3006	3032	3032	3006	3032
R-squared			0.7912			0.7845			0.7331			0.7327
Chi-squared	517.24***	16306.95***	2672.45***	637.01***	99000.85***	2235.54***	239.89***	15845.70***	1159.89***	210.46***	22528.42***	1359.18***

NOTE: Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. (1) Random effects with common AR(1); (2) FGLS with heterogeneous panels and panel-specific AR(1); (3) PCSEs with panel-specific AR(1). CEECS is the excluded dummy.

Table 10: Population by country of birth (code (8))												
	(1)	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*
gdpi	0.888***	-1.334***	1.155***									
	(0.295)	(0.014)	(0.186)									
gdpj	0.475***	0.582***	0.453***									
	(0.068)	(0.002)	(0.040)									
dgdp							-0.115	0.000	-0.282***			
							(0.076)	(0.000)	(0.081)			
popi				0.888***	-0.263***	1.155***						
				(0.295)	(0.002)	(0.186)						
popj				0.475***	0.674***	0.453***						
				(0.068)	(0.001)	(0.040)						
dpop										0.108	0.000	0.225*
										(0.116)	(0.000)	(0.131)
gdppci	1.737***	4.465***	3.130***	2.624***	0.000	4.286***						
	(0.589)	(0.031)	(0.649)	(0.781)	(0.000)	(0.754)						
gdppcj	-0.482***	-0.537***	-0.442***	-0.008	-0.159***	0.010						
	(0.079)	(0.002)	(0.048)	(0.024)	(0.002)	(0.022)						
dgdppc							0.102	0.527***	0.297***	-0.018	0.130***	-0.000
							(0.088)	(0.000)	(0.091)	(0.030)	(0.003)	(0.035)
uri	-0.167	-2.190***	0.135	-0.167	0.000	0.135						
	(0.278)	(0.007)	(0.219)	(0.278)	(0.000)	(0.219)						
urj	0.413***	0.310***	0.486***	0.413***	0.821***	0.486***						
	(0.085)	(0.008)	(0.069)	(0.085)	(0.004)	(0.069)						
dur							-0.218**	0.000	-0.556***	-0.211**	1.004***	-0.576***
							(0.098)	(0.000)	(0.117)	(0.099)	(0.008)	(0.132)
dist	-0.692***	-1.221***	-0.587*	-0.692***	0.000	-0.587*	-0.645*	0.000	-0.736	-0.605*	0.000	-0.682
	(0.266)	(0.032)	(0.327)	(0.266)	(0.000)	(0.327)	(0.358)	(0.000)	(0.536)	(0.361)	(0.000)	(0.527)
exyugo	-0.290	-1.737***	-0.331	-0.290	-1.737***	-0.331	-0.504	-1.269***	-0.475	-0.540	-1.333***	-0.558
	(0.464)	(0.165)	(0.478)	(0.464)	(0.165)	(0.478)	(0.624)	(0.121)	(0.930)	(0.629)	(0.104)	(0.924)
exussr	-0.948***	-1.822***	-1.300***	-0.948***	-1.822***	-1.300***	-1.090**	1.393***	-1.541**	-1.022**	1.897***	-1.376*
	(0.351)	(0.124)	(0.378)	(0.351)	(0.124)	(0.378)	(0.463)	(0.123)	(0.700)	(0.465)	(0.103)	(0.719)
tiny	1.584***	1.470***	1.387***	1.584***	1.470***	1.387***	0.389	0.501***	0.262	-0.059	0.391***	-0.694
	(0.499)	(0.129)	(0.430)	(0.499)	(0.129)	(0.430)	(0.648)	(0.117)	(0.892)	(0.667)	(0.051)	(0.900)
eastaf	3.964***	0.000	3.971***	3.964***	0.000	3.971***	3.123**	0.000	3.962***	3.245**	0.000	4.504***
	(1.202)	(0.000)	(0.733)	(1.202)	(0.000)	(0.733)	(1.581)	(0.000)	(1.360)	(1.592)	(0.000)	(1.477)
noraf	1.308***	0.948***	0.808**	1.308***	0.948***	0.808**	1.679**	4.642***	1.614**	1.767***	4.572***	1.649**
	(0.495)	(0.112)	(0.374)	(0.495)	(0.112)	(0.374)	(0.662)	(0.063)	(0.757)	(0.663)	(0.056)	(0.693)
souaf	1.859**	1.832***	1.296*	1.859**	1.832***	1.296*	1.120	0.248***	1.197	1.048	1.005***	1.342
	(0.724)	(0.129)	(0.773)	(0.724)	(0.129)	(0.773)	(0.931)	(0.025)	(1.480)	(0.942)	(0.128)	(1.554)
cenam	1.256**	1.385***	0.814	1.256**	1.385***	0.814	0.941	0.294***	0.790	0.775	0.679***	0.532
	(0.618)	(0.129)	(0.731)	(0.618)	(0.129)	(0.731)	(0.828)	(0.009)	(1.417)	(0.835)	(0.035)	(1.364)
souam	1.422**	1.554***	0.899	1.422**	1.554***	0.899	1.401	1.830***	1.223	1.367	0.101***	1.383
	(0.663)	(0.132)	(0.779)	(0.663)	(0.132)	(0.779)	(0.893)	(0.022)	(1.487)	(0.904)	(0.014)	(1.552)
eastas	2.376***	1.583***	1.775***	2.376***	1.583***	1.775***	2.574**	6.332***	3.644**	2.250*	6.292***	2.254*
	(0.916)	(0.131)	(0.643)	(0.916)	(0.131)	(0.643)	(1.246)	(0.168)	(1.421)	(1.247)	(0.083)	(1.263)
souas	1.379**	0.709***	0.899*	1.379**	0.709***	0.899*	1.819**	0.557***	1.450	1.886**	2.947***	1.608
	(0.676)	(0.118)	(0.527)	(0.676)	(0.118)	(0.527)	(0.898)	(0.039)	(1.216)	(0.918)	(0.023)	(1.254)
seastas	1.499**	6.559***	1.323*	1.499**	6.559***	1.323*	1.374	0.739***	1.314	1.308	1.217***	1.190
	(0.653)	(0.133)	(0.761)	(0.653)	(0.133)	(0.761)	(0.867)	(0.065)	(1.394)	(0.886)	(0.081)	(1.406)
mideast	1.557**	0.731***	1.505**	1.557**	0.731***	1.505**	0.131	0.583***	1.377	-0.192	0.001	0.323
	(0.652)	(0.136)	(0.606)	(0.652)	(0.136)	(0.606)	(0.831)	(0.207)	(1.196)	(0.841)	(0.183)	(1.128)
oce	2.252**	3.047***	1.464	2.252**	3.047***	1.464	1.803	0.809***	1.240	1.682	0.922***	0.997
	(0.886)	(0.145)	(1.007)	(0.886)	(0.145)	(1.007)	(1.189)	(0.236)	(2.009)	(1.196)	(0.225)	(2.032)
Constant	-39.072***	0.000	-61.218***	-39.072***	0.000	-61.218***	9.919***	0.000	10.758***	9.491***	0.000	10.172***
	(12.575)	(0.000)	(10.429)	(12.575)	(0.000)	(10.429)	(2.520)	(0.000)	(3.639)	(2.543)	(0.000)	(3.604)
Observations	293	242	293	293	242	293	293	242	293	293	242	293
R-squared			0.9568			0.9568			0.9235			0.9114
Chi-squared	208.97***	1.04e+08***	2212.63***	208.97***	4.71e+11***	2212.63***	55.37***	1.46e+17***	530.34***	53.11***	161030.73***	475.39***
Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. (1) random effects with common AR(1); (2) FGLS with heterogeneous panels and panel-specific AR(1); (3) PCSEs with panel-specific AR(1). CEECS is the excluded dummy.												

Both the country of previous residence and the country of birth seem to be more accurate indicators of the origin of immigrants than the country of citizenship. A higher income in the country of previous residence (or in the country of birth) has a negative impact on outward flows and stocks of migrants, whereas a higher income in the destination countries has a positive impact on immigration. In addition, both stocks and flows of migrants tend to increase with income differences between the recipient country and the country of previous residence (or country of birth). Distance still has a negative impact on flows from the country of previous residence, this is, more immigrants flow into nearer countries. However, the impact of distance on stocks of foreign-born residents is very small and in some cases not significant. This result seems to indicate that distance may not play a role in the initial decision to leave the country of birth, but

it may be an important factor in moving from one foreign country to another. There is no common language or common border in the country of birth dataset, however the results of Table 9 show that more immigrants move to a second country with the same language, but not necessarily adjacent. In addition, the impact of a common language, with a maximum significant value of 1.913, exceeds the impact of distance, with a maximum significant value of –1.276.

The results in Tables 9 and 10 support previous evidence that immigration from the CEECS has a potential to cause diversion away from other European countries, more than from non-European world regions. Whilst the latter show positive country-specific factors with respect to the CEECS, there is evidence that those previously residing or born in ex-USSR, ex-Yugoslavia, and Turkey, show negative country-specific factors.

5.3 Workers and non-workers

The previous data refers to total flows and stocks of foreign citizens, or alternatively individuals previously residents abroad, or born abroad. However it does not distinguish workers from non-workers. This is an important distinction because movements of workers are probably linked to economic variables, but movements of non-workers may not necessarily be. Hence it is important to know whether the previous results hold when only workers are considered. There is no data for inflows of workers with foreign citizenship, but the results for stocks of workers with foreign citizenship are provided in Table 11.

The results in Table 11 are very similar to those in the benchmark Tables 5 and 6 in terms of sign and significance. The main difference pertains to the magnitude of the coefficients for common language and common border. When only workers are considered, the former loses importance (the highest significant coefficient value being 2.184) and the latter gains importance (the highest significant coefficient value being 0.492). As a consequence, workers with CEECS citizenship, sharing borders with the EU-15 but not (official) languages, would be in a stronger position than non-workers. This result would be expected to reflect negative country-specific effects for other world regions with respect to the CEECS. In fact, whilst in the benchmark Tables 5 and 6 only ex-USSR countries show negative country-specific effects

throughout, in Table 11 also ex-Yugoslavia, TINY and Central America exhibit negative country-specific effects.

Table 11: Workers by citizenship (code (3))												
	(1)	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*	*(1)*	*(2)*	*(3)*
gdpi	0.727***	0.695***	0.787***									
	(0.055)	(0.010)	(0.058)									
gdpj	0.515***	0.446***	0.518***									
	(0.056)	(0.012)	(0.047)									
dgdp							0.175***	0.160***	0.113*			
							(0.043)	(0.006)	(0.066)			
popi				0.727***	0.695***	0.787***						
				(0.055)	(0.010)	(0.058)						
popj				0.515***	0.446***	0.518***						
				(0.056)	(0.012)	(0.047)						
dpop										-0.216***	-0.125***	-0.326***
										(0.061)	(0.012)	(0.087)
gdppci	-0.395***	-0.445***	-0.671***	0.332***	0.250***	0.116						
	(0.084)	(0.017)	(0.108)	(0.077)	(0.018)	(0.095)						
gdppcj	-0.440***	-0.408***	-0.492***	0.075***	0.038***	0.025						
	(0.062)	(0.014)	(0.053)	(0.016)	(0.004)	(0.017)						
dgdp							-0.302***	-0.226***	-0.203***	-0.131***	-0.071***	-0.086***
							(0.046)	(0.007)	(0.072)	(0.020)	(0.003)	(0.024)
uri	-0.283***	-0.376***	-0.590***	-0.283***	-0.376***	-0.590***						
	(0.094)	(0.016)	(0.110)	(0.094)	(0.016)	(0.110)						
urj	0.375***	0.370***	0.553***	0.375***	0.370***	0.553***						
	(0.068)	(0.012)	(0.090)	(0.068)	(0.012)	(0.090)						
dur							-0.269***	-0.380***	-0.689***	-0.285***	-0.416***	-0.698***
							(0.074)	(0.015)	(0.159)	(0.074)	(0.010)	(0.154)
lang	2.184***	1.398***	1.972***	2.184***	1.398***	1.972***	0.008	-0.109	0.311	-0.090	-0.410***	0.160
	(0.533)	(0.193)	(0.626)	(0.533)	(0.193)	(0.626)	(0.651)	(0.223)	(0.280)	(0.648)	(0.149)	(0.299)
dist	-0.842***	-0.426***	-0.630***	-0.842***	-0.426***	-0.630***	-0.679**	-0.320***	-0.331	-0.758***	-0.368***	-0.368
	(0.198)	(0.044)	(0.214)	(0.198)	(0.044)	(0.214)	(0.267)	(0.047)	(0.265)	(0.265)	(0.047)	(0.268)
border	0.341***	0.283***	0.129*	0.341***	0.283***	0.129*	0.492***	0.487***	0.234	0.472***	0.481***	0.159
	(0.127)	(0.032)	(0.066)	(0.127)	(0.032)	(0.066)	(0.171)	(0.054)	(0.153)	(0.170)	(0.048)	(0.137)
turkey	0.739	0.309*	0.027	0.739	0.309*	0.027	1.742**	1.448***	1.061	1.631**	1.245***	0.825
	(0.573)	(0.182)	(1.120)	(0.573)	(0.182)	(1.120)	(0.772)	(0.143)	(1.337)	(0.768)	(0.130)	(1.332)
exyugo	0.699	-0.052	0.110	0.699	-0.052	0.110	-0.236	-1.055**	-1.020	-0.256	-0.609	-0.947
	(0.546)	(0.471)	(0.932)	(0.546)	(0.471)	(0.932)	(0.743)	(0.466)	(0.893)	(0.741)	(0.424)	(0.914)
exussr	-1.653***	-1.667***	-1.616***	-1.653***	-1.667***	-1.616***	-1.613***	-1.315***	-1.923***	-1.677***	-1.315***	-2.214***
	(0.348)	(0.097)	(0.265)	(0.348)	(0.097)	(0.265)	(0.465)	(0.148)	(0.259)	(0.463)	(0.130)	(0.326)
tiny	0.460	0.284***	0.416	0.460	0.284***	0.416	-1.471**	-1.504***	-1.766***	-0.612	-0.973***	-0.934***
	(0.442)	(0.074)	(0.336)	(0.442)	(0.074)	(0.336)	(0.572)	(0.102)	(0.460)	(0.560)	(0.083)	(0.326)
eastaf	1.670**	0.425***	1.386**	1.670**	0.425***	1.386**	2.465**	0.905***	2.784*	2.472***	0.841***	2.835*
	(0.741)	(0.121)	(0.663)	(0.741)	(0.121)	(0.663)	(0.961)	(0.148)	(1.488)	(0.959)	(0.178)	(1.520)
noraf	0.056	0.332***	-0.283	0.056	0.332***	-0.283	0.868**	1.068***	0.412	0.785**	0.994***	0.345
	(0.294)	(0.062)	(0.281)	(0.294)	(0.062)	(0.281)	(0.393)	(0.061)	(0.294)	(0.392)	(0.069)	(0.283)
souaf	0.486	0.182*	0.331	0.486	0.182*	0.331	0.582	0.200	-0.437	0.736	0.444***	-0.320
	(0.586)	(0.107)	(0.560)	(0.586)	(0.107)	(0.560)	(0.779)	(0.141)	(0.529)	(0.776)	(0.114)	(0.496)
noram	1.191**	1.201***	1.012**	1.191**	1.201***	1.012**	1.845***	1.829***	1.412***	2.559***	2.732***	1.715***
	(0.517)	(0.115)	(0.470)	(0.517)	(0.115)	(0.470)	(0.697)	(0.099)	(0.531)	(0.687)	(0.134)	(0.604)
cenam	0.414	-0.383***	-0.080	0.414	-0.383***	-0.080	-0.118	-0.619***	-0.949*	0.326	-0.220*	-0.746
	(0.488)	(0.115)	(0.497)	(0.488)	(0.115)	(0.497)	(0.658)	(0.133)	(0.577)	(0.652)	(0.125)	(0.625)
souam	0.991**	0.165	0.599	0.991**	0.165	0.599	1.419**	0.583***	0.454	1.550**	0.639***	0.525
	(0.503)	(0.123)	(0.548)	(0.503)	(0.123)	(0.548)	(0.681)	(0.137)	(0.737)	(0.680)	(0.140)	(0.635)
eastas	0.929*	0.936***	0.995*	0.929*	0.936***	0.995*	1.630**	0.615***	1.253*	2.278***	1.613***	1.744***
	(0.549)	(0.119)	(0.526)	(0.549)	(0.119)	(0.526)	(0.721)	(0.149)	(0.680)	(0.724)	(0.187)	(0.674)
souas	0.547	0.090	0.398	0.547	0.090	0.398	2.188***	0.997***	1.598***	2.274***	1.151***	1.907***
	(0.470)	(0.090)	(0.477)	(0.470)	(0.090)	(0.477)	(0.614)	(0.113)	(0.607)	(0.617)	(0.165)	(0.578)
seastas	0.583	0.242**	0.407	0.583	0.242**	0.407	1.010	0.138	-0.091	1.184*	0.272**	0.131
	(0.505)	(0.103)	(0.537)	(0.505)	(0.103)	(0.537)	(0.677)	(0.155)	(0.505)	(0.677)	(0.138)	(0.480)
mideast	1.033**	0.285***	0.390	1.033**	0.285***	0.390	0.347	0.508***	-0.272	0.814	0.832***	0.205
	(0.480)	(0.067)	(0.501)	(0.480)	(0.067)	(0.501)	(0.646)	(0.091)	(0.294)	(0.639)	(0.197)	(0.317)
oce	2.303***	1.466***	2.016***	2.303***	1.466***	2.016***	1.645*	1.069***	0.805	2.011**	1.425***	0.896
	(0.649)	(0.142)	(0.672)	(0.649)	(0.142)	(0.672)	(0.879)	(0.144)	(0.795)	(0.872)	(0.147)	(0.853)
Constant	-13.125***	-13.699***	-12.990***	-13.125***	-13.699***	-12.990***	9.985***	6.426***	7.841***	10.865***	6.927***	8.577***
	(2.045)	(0.450)	(2.155)	(2.045)	(0.450)	(2.155)	(1.901)	(0.327)	(1.741)	(1.894)	(0.338)	(1.697)
Observations	942	873	942	942	873	942	942	873	942	942	873	942
R-squared			0.8563			0.8563			0.7801			0.7942
Chi-squared	631.14***	19293.41***	1162.47***	631.14***	19293.30***	1162.47***	216.92***	21005.68***	2530.13***	211.28***	58521.13***	8353.21***
NOTE: Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. (1) Random effects with common AR(1); (2) FGLS with heterogeneous panels and panel-specific AR(1); (3) PCSEs with panel-specific AR(1). CEECS is the excluded dummy.												

6 Conclusions

This paper has used the Eurostat migration database to investigate whether in the EU-15 there is any evidence of crowding-out of non-EU immigrants by immigrants from the CEECS. As East-West integration proceeded and the 2004 enlargement took place, there could have been migration creation

towards the integrating CEECS, but also migration diversion from the rest of the world towards the CEECS. The paper's findings reveal that the inflows of CEECS citizens during the 1990s into mostly Austria, Germany, and to a lesser extent Greece, have not negatively affected inflows of non-European citizens. However, the opening up of the EU-15 to the CEECS crowded-out the citizens of other European countries, namely from the former Yugoslavia, the former USSR, and very small European countries (Andorra, San Marino, etc).

The paper's analysis can help to shed some light on why this was so. There is a different regional distribution of foreign citizens in the EU-15, with a predominance of CEECS citizens in Austria, Germany and Greece, of North African citizens in France, Italy, Belgium and the Netherlands, of Latin American citizens in Portugal and Spain, of sub-Saharan Africa citizens in Portugal and the UK, of Asian citizens in the UK. This geographical distribution is quite static across the 1980s and 1990s and did not change substantially with East-West integration. Why was this so?

The gravity estimation shows that the most important factor explaining the geographical distribution of immigration in the EU-15 is a common (official) language. The patterns described above translate to a large extent the knowledge of a common language (even if not the official language), which in turn is largely the product of former colonial relationships. These took precedence over East-West integration and were already firmly established when the CEECS started integrating with the EU-15. Language alone is more important than sharing a border with, or being at a short distance from, the EU-15. Only when the (official) language factor is removed, which happens within Europe, sharing a border and being closer to the EU-15 really matters. This may be why there is weak or no evidence of CEECS immigrants displacing non-European immigrants in the EU-15, but there is a trail of evidence pointing towards a crowding-out effect on the European countries that did not integrate with the EU-15.

Hence, when all the restrictions to the free movement of workers from the new member countries are removed – by 2011 at most – non-European countries should not be greatly affected, but the European outsiders can expect a negative impact on their participation in the European labour market. This effect will be reinforced by the fact that Austria and Germany are two EU-15 countries that have kept the most

severe level of restrictions and thus the greatest impact of lifting those restrictions should be felt there. As these two countries are also those where non-European countries are relatively less important origins of immigrants, and Central and Eastern Europe is a more important origin than average, the impact on the former should be minimised, but the impact on the latter should be maximised. As a consequence, the paper's findings reinforce the importance and point to a potential impact of building up the enlargement of the EU towards the East and the Southeast, so that the current European outsiders can become insiders to the European labour market.

The country data used in this paper has provided some insights, but it only tells a part of the story. In order to know more about why some groups of immigrants may or may not substitute others, it would be necessary to take a deeper look into a number of individual characteristics of the immigrants, such as age group, gender, qualifications and skills, previous occupation, among others. These characteristics are particularly important in a globalised world that more and more tends to manage international migration from the labour market's perspective, for example, enforcing point systems that stress qualifications and skills as the main criteria for the desirability of individual immigrants. This will be dealt with elsewhere.

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