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Giampaolo LANZIERI

FEWER, OLDER AND MULTICULTURAL? A PROJECTION OF THE POPULATIONS OF THE EUROPEAN UNION MEMBER STATES BY FOREIGN/NATIONAL BACKGROUND*

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FEWER, OLDER AND MULTICULTURAL? A PROJECTION OF THE POPULATIONS OF THE EUROPEAN UNION MEMBER STATES BY FOREIGN/NATIONAL BACKGROUND*

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1. INTRODUCTION

Since several years, migration has been the main driver of population growth in many European countries. In some of them, where the natural growth had become negative, migration has even counterbalanced the otherwise declining population, sustaining the continuation of their population growth (Lanzieri, 2008). At the beginning of the third millennium, migration in the European Union (EU) has reached considerable levels, which have rapidly modified the composition of the population in those Member States more exposed to the migratory flows. In five years, from 2002 to 2007, the estimated stock of foreign-born population (Kupiszewska and Bijak, 2009) has increased by 1.2 percentage points (p.p.), passing from 7.7% to 8.9% of the total EU population. However, this increase has been effective mainly in selected Mediterranean countries: in the same period, Spain and Italy have nearly doubled the quota of foreign-born population, reaching in 2007 the 12% and 7%. Coleman (2006) has already pointed out some potential consequences of these trends and has developed the theory of a third demographic transition concerning the Western countries with low fertility and high immigration, which would affect their population composition and national identity. At the limit, this may bring in the long term to divergent patterns in terms of ethnic composition between European countries and other areas of the world (Coleman, 2009). Coleman's analysis is based on the results of selected national projections (carried out independently each other), mostly based on the concept of citizenship. To my knowledge, no comprehensive set of projections is indeed available, that provides data disaggregated by some variable related to migration issues (like citizenship) and thus international comparisons between results of different projections may be affected by the methodological diversity.

Further, the analysis of population totals broken down by ethnic composition may be not enough to display the full contribution of migration to the population dynamics. The typically younger age profile of the migrants particularly modifies selected age classes. Looking at the available estimates of the population by country of birth and age group (Table 1), it may be noted that the major changes have occurred in the age class 20-49, and especially in the class of persons aged from 25 to 34 years, where the changes in stocks of foreign-born population have been bigger than 2 p.p. in 5 years. In particular, in the EU the number of foreign-born persons in the age class 25-29, the one most affected by migratory flows, has increased from 3.6 to 4.4 million. However, this increase of 2.3 p.p. of the stock of foreign-born 25-29 years old, from 10.7% to 13.0% of the total population of the same age, is due also to the parallel shrinking of the number of native-born persons, who reduces from 30.3 to 29.5 million. Relevant shrinkages of the native-born population are present in other age classes as well. From the Table 1 it can also be noted that the bigger part of these migrants has extra-EU origin.

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** Eurostat, Luxembourg. E-mail for correspondence: giampaolo.lanzieri@ec.europa.eu .

Table 1: aggregation to the whole European Union of the Member States population composition by country of birth								
Age classes	On 1 January 2002				On 1 January 2007			
	Native- born persons	Foreign- born persons	of which:		Native- born persons	Foreign- born persons	of which:	
			in other MS	non in the EU			in other MS	non in the EU
Total	92.3%	7.7%	2.7%	5.0%	91.1%	8.9%	3.1%	5.8%
0-4	97.9%	2.1%	0.7%	1.4%	97.9%	2.1%	0.8%	1.3%
5-9	96.7%	3.3%	1.0%	2.3%	96.3%	3.7%	1.3%	2.5%
10-14	95.7%	4.3%	1.2%	3.1%	95.3%	4.7%	1.4%	3.3%
15-19	94.3%	5.7%	1.5%	4.1%	93.7%	6.3%	1.8%	4.5%
20-24	91.6%	8.4%	2.6%	5.8%	90.1%	9.9%	3.2%	6.7%
25-29	89.3%	10.7%	3.3%	7.4%	87.0%	13.0%	4.1%	8.9%
30-34	89.0%	11.0%	3.5%	7.5%	86.9%	13.1%	4.0%	9.0%
35-39	89.4%	10.6%	3.4%	7.2%	87.5%	12.5%	4.0%	8.4%
40-44	90.3%	9.7%	3.1%	6.6%	88.4%	11.6%	3.7%	7.9%
45-49	90.8%	9.2%	3.1%	6.1%	89.4%	10.6%	3.5%	7.1%
50-54	91.3%	8.7%	3.3%	5.4%	90.2%	9.8%	3.3%	6.5%
55-59	91.8%	8.2%	3.5%	4.7%	91.3%	8.7%	3.3%	5.4%
60-64	92.0%	8.0%	3.3%	4.7%	91.3%	8.7%	3.7%	5.0%
65-69	93.1%	6.9%	2.9%	4.0%	91.8%	8.2%	3.3%	4.8%
70-74	93.5%	6.5%	2.9%	3.6%	92.9%	7.1%	3.0%	4.1%
75-79	93.6%	6.4%	3.1%	3.3%	93.2%	6.8%	3.0%	3.8%
80-84	93.5%	6.5%	3.2%	3.2%	93.1%	6.9%	3.3%	3.7%
85+	93.7%	6.3%	3.2%	3.1%	93.2%	6.8%	3.3%	3.5%

Source: calculations of the author on data from Kupiszewska and Bijak (2009).

Even though the rise of the share in selected age classes of foreign-born persons in general is not yet very visible, it is likely it will become much more relevant in the future, as it is common opinion that migratory flows will continue to augment the EU population in the years to come. In the so-called EUROPOP2008, the Eurostat Population Projections 2008-based (Lanzieri, 2009), net migration is assumed to cumulate up to 59 million over the period 2008-2060. Comparing the variant with migration with the one (purely theoretical) without migration, it is possible to assess the multiplicative effect of the net migration assumptions.

Table 2: cumulated vital events and demographic changes 2008-2060 for the EU in the two variants (with and without migration) of EUROPOP2008						
(million)	Births	Deaths	Natural change	Net migration	Total change	Population 1.1.2061
With migration	255	305	-50	59	9	505
Without migration	219	301	-82	0	-82	414
Difference	36	4	32	59	91	91

Source: replication of Table 3 in Lanzieri (2009).

From Table 2 it can be noted that the projected total increase of 91 million for the EU population can be decomposed in 59 million of (net) migration plus its indirect contribution of 32 million to the natural change. This highlights an element sometimes overlooked: the overall contribution of migration is not limited to the assumptions themselves, but includes a relevant quota of indirect effects (roughly +54% in EUROPOP2008).

Although the comparison between the two variants (with and without migration) is a helpful way of quickly assessing the impact of the migration assumptions, it does not provide all the information necessary to estimate the entire contribution of migration to the population structure and dynamics. Such an analysis does not indeed include the existing stock of migrants and their role in the demographic dynamics; in addition, it does not make clear the contribution of the migrants of first or further generations. To do so, it is needed to enlarge the scope of the analysis to the set of persons with

foreign background. According to international recommendations (UNECE, 2006; §398), the persons with a foreign background are “...*those persons whose parents were born outside the country. The persons in this group may or may not have directly experienced an international migration.*” Further to the group of persons with foreign background, these international recommendations define other two groups (UNECE, 2006; §399): persons with a national background, defined as persons whose parents were born in the country, and persons with a mixed background, defined as persons who have one parent born in the country and the other one born abroad. Considering the country of births of the persons it is thus possible to define the “descendants of foreign-born”, that is the group of persons born in the country whose ascendants were born abroad. Normally the focus is on the so-called “second generation”, meaning those persons whose parents were born abroad (UNECE, 2006; §364). Thus, limiting the analysis to two generations, the foreign-born persons whose parents were born abroad (so-called “first generation” of migrants) together with the native-born persons whose parents were born abroad (the second generation) forms the group of persons with foreign background. The population of a country could thus be classified as follows¹:

Table 3: classification of resident population by country of birth and background				
<i>Country of birth of the parents</i>	<i>Both parents born in the country</i>	<i>One parent born in the country, the other abroad</i>	<i>Both parents born abroad</i>	Total
<i>Country of birth</i>				
<i>Abroad</i>	Foreign-born with national background	Foreign-born with mixed background	Foreign-born with foreign background (<i>1st generation</i>)	International migrants
<i>In the country</i>	Native-born with national background (<i>indigenous</i>)	Native-born with mixed background	Native-born with foreign background (<i>2nd generation</i>)	Native-born persons
Total	Persons with national background	Persons with mixed background	Persons with foreign background	

To make a comparative analysis on the extent the demography of the single Member States may be influenced by future migration flows, it is necessary to use a comparable set of projections. The purpose of this paper is to assess the contribution of migration to the future population dynamics by computing projections by foreign/national (f/n) background. Section 2 describes the method and the data used for this study; Section 3 presents the results and in Section 4 a few conclusions are drawn.

2. DATA AND METHOD

2.1. The choice of the input data

From the point of view of the projections calculations, the classification of Table 3 is rather difficult to implement as information on every category is scarce. In particular, data on the country of birth of both parents are hard to find, if not impossible. It is then necessary to seek for other data to be used as proxy of the f/n background. In order to assess the demographic effect of migration on the hosting population, a common approach is to consider the citizenship (see, e.g., Tsimbos, 2008), the main reason behind being the larger availability of data classified by this variable. However, the use of the citizenship in population projections has several drawbacks. First of all, citizenship is not an immutable characteristic of a person, and can thus change over time: projections makers should therefore explicitly formulate assumptions about future naturalisations. Secondly, due to increasing number of international agreements, it is now more likely that persons may hold two (or even more) citizenships. Information collected by citizenship should then be clear about the rules of allocation in the categories and/or projections should consider the case of double citizenships. Third, as citizenship

¹ In principle, also native-born persons may be international migrants if they have resided in another country for at least one year. Adding this category to foreign-born persons forms the group of ever-international migrants. For sake of simplicity, the international migrants are here defined as foreign-born persons. For the same reason, persons whose one or both parents were of unknown country of birth are not explicitly considered.

is a varying characteristic, all events which can be replicated (like fertility and migration) can see their age patterns modify over time due to the change of citizenship². Last but not least, the citizenship attributed to offspring of foreign citizens may be different country by country, depending for instance from which between the *ius soli* and the *ius sanguinis* is the legal criterion; as this may depend from the citizenship of both parents, additional information and assumptions would then be necessary.

Ethnicity is probably one of the best proxy for the f/n background, as, according to the international recommendations, “...is based on a shared understanding of the history and territorial origins (regional, national) of an ethnic group or community as well as on particular cultural characteristics: language and/or religion and/or specific customs and ways of life...” (UNECE, 2006; §419). However, besides the fact that the collection of data by ethnicity does not belong to the tradition of all the EU Member States, and consequently the data necessary for projections purposes are (for the bulk of the countries) not available, inconveniences due to the presence/absence of ethnic categories in censuses questionnaires and to the fact that it is a subjective dimension, subject to changes over time, hinders the use of this variable for analysis by f/n background as above defined. In fact, it could be argued that responses to census questions about ethnicity in reality measure identity, and not ancestry, the former being influenced by the number of generation from the arrival of the ancestors, knowledge of ancestral origins, etc. (Perez and Hirschman, 2009).

An option is then the use of information broken down by country of birth. The country of birth does not change over time and thus overcomes some of the shortcomings of the use of citizenship for projections purposes. Obviously, the basic assumption is that the country of birth determines the demographic behaviour of the person. In practice, adopting the country of birth as proxy for the background means using the classification of the Table 3 by row and not by columns. It is therefore necessary to introduce simplifying assumptions for the beginning of the projections period. The foreign-born persons may indeed include somebody with national background, born abroad from parents whose country of birth was actually that under consideration; at the same way, native-born may be descendants of persons born abroad. Hence, by only using data by country of birth, it must be assumed that these two “crossed” categories (native-born from foreign-born parents and foreign-born from native-born parents) are not present or that are of perfectly equal size and structure, such to exactly compensate each other. This applies as well in the cases where only one of the two parents has country of birth different from the one of the descendant, and therefore also the mixed background disappears from the statistical view. The base population broken down by background can finally be estimated as follows: the number of foreign-born persons is taken (or estimated) from available statistics and it is considered as representative of the population with foreign background; the population with national background is calculated as residual from the total population. Although the errors works in both directions (national background persons included in the foreign background category and vice versa), it is reasonable to think the bias to be unfavourable for the population with foreign background, as for the EU countries it is likely that the group of native-born descendants from foreign-born persons is bigger in size of those returning to the country of birth of their parents. However, these simplifying assumptions on the breakdown of the base population are necessary only for the beginning of the projections period, as during the computation of the projections it is possible to control the background by attributing the newborns to the proper category. Moreover, the concept itself of background should better be limited back in the time: the more generations are considered for the ancestors, the more likely is that (at least) mixed background could be found, not to say about the change of geographical borders of the countries or even their dissolution³. From this point of view, it could make a sense to implement a rule according which the foreign background is limited to a fixed number of generations. If instead the purpose is to assess the overall future contribution of migration to the demographic dynamics, then the background – once attributed - could be considered unchangeable. In this case, for the reasons just above mentioned, it may be acceptable to start from a

² For instance, a person may immigrate a first time in a country as foreigner and a second time as national, or may deliver a first birth being foreigner and a second birth after acquiring the citizenship, etc.

³ For instance, how to classify the persons born in Czechoslovakia, within the territory of the current Czech Republic from parents born in the current Slovakia? In general, according to international recommendations, census data should refer to the current borders; however, it is not certain that such practice is applied during the collection of information about vital events.

“time zero” in which there is no present stock of descendants, and therefore the influence of migration is limited to the current migrants and their *following* descendants, as if these migrants would have just arrived in the country. For projections, this time zero may correspond to the time of reference of the base population.

The projections by f/n background of this study will thus be based on the information by country of birth and cover the period from 1 January 2008 to 1 January 2061. The countries⁴ included in this study are the 27 Member States (MS) of the European Union (EU): Belgium (BE), Bulgaria (BG), Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain (ES), France (FX), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), the Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE) and the United Kingdom (UK). In particular, data for France refer to Metropolitan France, thus excluding the French Overseas Departments (DOM) and Overseas Territories (TOM), and data for Cyprus refer to the government-controlled area.

These projections are nested within the Eurostat Population Projections 2008-based (EUROPOP2008), covering all the EU Member States for the same period. The EUROPOP2008 are often used for official purposes and can thus be considered as a set of reference for projections for EU countries. Its methodology and main results are presented elsewhere (Lanzieri, 2009) and are therefore not replicated here. For each country, the base population of EUROPOP2008 have been adopted as total base population to be broken down by f/n background. Its assumptions for fertility have been used where they were not assumed different by background; those for mortality and migration were also taken from EUROPOP2008. The choice of nesting within the Eurostat projections has some methodological implications, which will be described later in this paper.

The description of the method to disaggregate the total base population by f/n background is given below; assumptions by the same breakdown have been considered for fertility and migration, but not for mortality. In order to compute projections by f/n background, four models have been developed, corresponding to different assumptions. As clarified above, in this study, due to lack of data, mixed background is not considered. Thus, as these projections consider the live births only from the mother side, the case of a person born by a foreign-born father and a native-born mother is considered equal to the case of a birth from both native-born parents and vice versa. The calculations have been executed using the software LIPRO 4.0 (van Imhoff, 1999).

2.2. Population estimates

Although a provisional estimation of the number of persons born from parents born abroad was available from the Labour Force Survey ad-hoc module 2008 for the EU, it was not possible to have reliable information by age and sex. Considering that the structure of this sub-population may be different from the foreign-born population and the concerns about the robustness of these estimates, this information has been used for only one model.

Therefore, as explained above, as proxy of the f/n breakdown has been here adopted the country of birth, of which have been considered only the two major categories: native-born and foreign-born persons. The collection on data on population stocks by country of birth has recently been started by Eurostat, in compliance of a recently issued EU regulation. The first official data, available for most of the EU Member States, refer to 1 January 2009. However, in order to preserve the consistency with EUROPOP2008, it is necessary the disaggregation on 1 January 2008. The estimation of the foreign-born population on 1 January 2008 has been made by cohort interpolation between the foreign-born population as available from the MIMOSA project⁵ for the year 2007 and the very first available figures transmitted by the countries to Eurostat on the population by country of birth on 1 January 2009. Estimating with data from two different sources may be less accurate and therefore results should not be considered uncritically.

⁴ The countries are sorted following the official EU protocol order (based on the alphabetical order of the country name in the country-specific language) and with the official abbreviations. It is by this order that data on these countries are usually listed in the EU publications.

⁵ The “MIMOSA: Modelling of statistical data on migration and migrant populations” Research Project is funded by the European Commission. Project 2006/S 100-106607/EN. Project’s website: <http://mimosa.gedap.be>

2.3. The four models

The projections by f/n require some simplifying assumptions. In order to assess the differential effect of some of them, various sets of assumptions have been implemented, each of them adding a further/different element to the previous model. The first model assimilates the migrants from the 3rd generation onwards to the native-born population. Thus, persons with national background are all native-born persons but those whose mother was born abroad. However, such a model does not entirely show the long-term contribution of migration to the population change. To meet this need, the model 2 considers all descendants from foreign-born mothers, regardless of their generation, as persons with foreign background. For these two models, assumptions on vital events are taken entirely from EUROPOP2008, with no distinction by background. Yet, it is a common view that the two population subgroups (f/n background) have different demographic behaviour, although different opinions exist about the speed of the demographic convergence – if any – of the foreign background persons to the hosting population. Then, the model 3 adds different fertility assumptions for the national and foreign background subgroups; unfortunately, here the scarcity of data does not allow a full coverage of the EU Member States. The last model, the number 4, tries to provide a comprehensive appraisal of the full contribution of migrants by including in the base population available estimates of the irregular foreign resident population and of the stock of second generation migrants. Therefore, the model 1 and the model 2 differ only by the way the descendants of migrants are classified, the model 3 incorporates differential fertility in the model 2, and the model 4 adjusts the base population of the model 3: each model is a potential improvements of the previous one but, at the same time, brings in further weaknesses due to the concerns about the reliability of the input data. Details about data and assumptions in each model are given below.

2.3.1. Model 1

In the first model, the population in each country is broken down in three categories: persons with national background, foreign-born persons and second generation migrants. The main assumptions of this model are the following:

- a) there are no second generation migrants on 1 January 2008;
- b) there are no persons with mixed background;
- c) the sum of foreign-born persons present on 1 January 2008 and following second generation migrants composes the group of persons with foreign background;
- d) the sum of the native-born persons present on 1 January 2008, their descendants and the descendants from second generation migrants composes the group of persons with national background;
- e) the same assumptions on fertility and mortality, borrowed from EUROPOP2008, have been applied to each category;
- f) immigrants are supposed to be 90% foreign background and 10% national background;
- g) emigrants are supposed to be 67% foreign background and 33% national background;
- h) second generation migrants do not migrate.

The assumption a) is due to the lack of proper information on the structure of this subpopulation. Assuming that there are no second generation migrants has the effect of reducing the overall contribution of migration to the population change. The assumption e) allows disentangling the effect of the population structure and migration assumptions from the fertility and mortality differentials. The difference in size between foreign and national background groups is thus the combined effect of the age and sex structure of the related base populations plus the cumulative impact of the migratory flows. The assumptions f) and g) distribute the migration flows between the sub-populations. The proportions there proposed are based on average EU values of the migratory flows by country of birth observed in 2008. Although these proportions may be rather different for specific countries, common values have been chosen to avoid adding a further element of differentiation across countries without solid bases; in addition, even if the latest observed proportions are different, it could be assumed that in the future the bulk of the migratory flows will be composed by persons with foreign background, because their propensity to mobility may be higher than the native population. However, the reader

should be aware that the results are rather sensitive to these assumptions on migratory flows⁶: extreme caution should therefore apply when using the results of these projections. Some complications arise from the treatment of the second generation migrants, and the choice foreign-born vs. foreign background in the migrations assumptions deserves a clarification. Let consider the case of a second generation migrant (thus born in the country under analysis): if (s)he migrates, is an emigrant with foreign background but native-born; if, afterwards, (s)he immigrates back in the same country may be considered as immigrant with national background (as (s)he was born there). Indeed, if immigration flows are distributed by country of birth, a second generation migrant would be attributed to the group with national background, inflating the size of this group. If immigration is instead correctly distributed by background, the projected live births from second generation migrant women should be classified as with national background and not with foreign background. Therefore, it makes a difference if the immigrants with foreign background are of the first or second generation. As there is no stock of 2nd generation migrants for 2008, considering the potential implication just above described and the fact that no information is available on the migratory behaviour of this group, the assumption h) simplifies the framework without harming the overall results. In fact, the assumption c) gathers in one single group the two categories and no distinction is anymore visible between them in the final results; the assumption d) is simply the complementary part of the previous assumption. Still, foreign-born migrants may include persons born abroad from native-born mothers, thus persons actually of national background⁷. Hence, the migration assumptions based on empirical data by country of birth need to be formally translated in assumptions by background, although originally expressed in terms of native- and foreign-born. Alternatively, it could be assumed that foreign-born immigrants are all of foreign background⁸. A final simplification is necessary for the persons with mixed background: given the lack of proper data about them, it is indeed assumed in b) that there is no person with such characteristic and therefore all live births belong to the same group of the mother (with the exception of the 3rd generation of migrants, see assumption d)).

2.3.2. *Model 2*

In the second model, the population in each country is broken down in only two categories: persons with national background and persons with foreign background. The main assumptions of this model are similar to those of the model 1 and are here below listed:

- a) there are no persons with mixed background;
- b) there are no descendants from foreign-born persons born in the country before 1 January 2008;
- c) the sum of foreign-born persons present on 1 January 2008 and all their descendants composes the group of persons with foreign background;
- d) the sum of native-born persons present on 1 January 2008 and all their descendants composes the group of persons with national background;
- e) the same assumptions on fertility and mortality, borrowed from EUROPOP2008, have been applied to each category;
- f) immigrants are supposed to be 90% of foreign background and 10% of national background;
- g) emigrants are supposed to be 67% of foreign background and 33% of national background.

The main difference with the model 1 is in the classification of the descendants of the second generation of migrants, who are here considered to belong to the population with foreign background. To put it simpler, in the model 2 the persons with national background are those who have no ascendants⁹ born abroad, while the persons with foreign background have at least one ascendant born abroad. Therefore, the model 2 allows analysing the full contribution of migration to the demographic

⁶ A test carried over a few countries has shown that simply changing the proportion of emigrants belonging to the native-born group from 50% to 33% (and obviously vice versa for the foreign-born persons, from 50% to 67%) may reduce the proportion of persons with foreign background of several percentage points at the end of the projections period.

⁷ The inverse case is not possible, as a native-born immigrant with foreign background is by definition a second generation migrant, who does not migrate by assumption.

⁸ The corresponding assumption for native-born persons is not necessary. See footnote 7.

⁹ Although this rule should formally apply only to mothers, the assumption on the absence of persons with mixed background makes irrelevant this further specification: any mother would indeed be accompanied by a father of the same group.

development of the country. For instance, a person whose grand-mother was born abroad would not be there if migration had not taken place two generations before.

2.3.3. Model 3

The next step is based on the acknowledgment that the two categories (f/n background) may have different demographic behaviours. Information to this regard is unfortunately scarce and sometimes of questionable quality. Eurostat has recently started to collect annually vital events by country of birth and/or citizenship from European countries. Being on voluntary basis, unfortunately this data collection does not cover all the EU Member States. Further, as it has been run only a very few times, it is still early to make a well founded assessment of the reliability of these data. Bearing these caveats in mind, Table 4 presents the estimates of the total fertility rate and of the mean age at childbearing by country of birth group in 2007 for the available countries. Whether this information was not available, these indicators have been calculated by citizenship group. As it can be noted, only for 10 countries it has been possible to use the classification by country of birth, and for further 9 the proxy based on citizenship (national/foreigner) has been computed instead; for the remaining 8 countries, none of the two classifications was available, or the results were considered too unlikely. It must be said that, where the information was available by both country of birth and citizenship, not always the indicator by citizenship was a close proxy of the one by country of birth. Therefore, great prudence should be used with these data. Looking at the total fertility rate, in general the values for the foreign-born persons are higher than for the native-born; however, for a few countries, this rule does not apply: Denmark, Estonia, Hungary and Malta reveal a higher fertility for the native-born persons. Unfortunately, always under the assumption that the input data used were fair estimates, the data at disposal did not allow to test if this was an occasional outcome or the result of a structural (positive) difference. Similarly, the mean age at childbearing in 2007 is lower in the foreign-born (or foreigner) population, with a few exceptions.

MS	Type	TFR native- born	TFR foreign- born	MAC native- born	MAC foreign- born	TFR native- born	TFR foreign- born
		2007	2007	2007	2007	2060	2060
BE	Country of birth	1.58	3.04	29.8	29.1	1.68	2.60
BG	Citizenship	1.41	2.65	26.6	28.9	1.57	2.35
CZ	<i>None</i>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
DK	Country of birth	1.86	1.76	30.5	30.9	1.86	1.79
DE	Citizenship	1.33	1.64	30.0	29.2	1.52	1.72
EE	Country of birth	1.64	1.57	28.7	28.1	1.72	1.67
IE	<i>None</i>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
EL	Citizenship	1.33	1.99	30.8	26.7	1.52	1.94
ES	Citizenship	1.33	1.79	31.8	28.2	1.52	1.81
FX	<i>None</i>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
IT	Citizenship	1.28	2.40	31.7	28.0	1.49	2.19
CY	Citizenship	1.32	1.70	30.5	28.6	1.52	1.76
LV	<i>None</i>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
LT	Country of birth	1.35	1.44	27.9	28.1	1.53	1.59
LU	Citizenship	1.64	1.67	31.1	29.7	1.72	1.74
HU	Citizenship	1.32	1.26	28.8	28.6	1.51	1.48
MT	Country of birth	1.38	1.27	28.6	28.5	1.55	1.49
NL	Country of birth	1.71	1.85	31.0	30.1	1.76	1.85
AT	Country of birth	1.25	1.90	29.7	28.6	1.47	1.88
PL	<i>None</i>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
PT	Citizenship	1.28	2.15	29.6	29.4	1.49	2.04
RO	<i>None</i>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

SI	Country of birth	1.38	1.53	30.0	28.3	1.55	1.65
SK	<i>None</i>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FI	Country of birth	1.82	2.04	30.1	29.5	1.83	1.97
SE	Country of birth	1.82	2.20	30.9	29.9	1.83	2.07
UK	<i>None</i>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: calculation of the author on Eurostat data for 2007; own assumptions for 2060.
n.a.: not available.

The age patterns by country of birth/citizenship resumed in the Table 4 have been assumed to be representative of the age profiles by background. To build the assumptions for future developments of fertility, the age patterns of fertility rates of the year 2007 have been modelled with the Schertmann's method (Schmertmann, 2003, 2005) and then assumed to slowly converge to common values in the future. The assumption of convergence is central in the EUROPOP2008 projections (Lanzieri, 2009, 2010) and it is therefore consistently applied on their breakdown by f/n background. The values assumed for the total fertility rate in 2060 are shown in the Table 4. In order to ensure the consistency with the results of EUROPOP2008, a constraint¹⁰ has been implemented in the projections calculation that imposes the number of live births by sex from national and foreign background persons to be equal to the projected number of live births by sex as from EUROPOP2008. In other words, the overall number of projected live births is in fact given by the EUROPOP2008, and the current projections provide their breakdown by background in accordance with the assumed age fertility patterns.

Information on mortality differentials by country of birth is even more limited and probably less reliable. Considering the number of potential difficulties, both conceptual and empirical, it has been preferred not to develop specific assumptions broken down by f/n background and to apply instead the assumptions developed in EUROPOP2008 to both groups.

The assumptions for the model 3 can thus be summarised as follows:

- a) there are no persons with mixed background;
- b) there are no descendants from foreign-born persons born in the country before 1 January 2008;
- c) the sum of foreign-born persons present on 1 January 2008 and all their descendants composes the group of persons with foreign background;
- d) the sum of native-born persons present on 1 January 2008 and all their descendants composes the group of persons with national background;
- e) specific assumptions on fertility by background have been developed for each group, based on the idea of convergence and with results consistent with EUROPOP2008;
- f) the same assumptions on mortality, borrowed from EUROPOP2008, have been applied to each category;
- g) immigrants are supposed to be 90% of foreign background and 10% of national background;
- h) emigrants are supposed to be 67% of foreign background and 33% of national background.

The only difference from the model 2 is thus the adoption of different fertility assumptions for the national and foreign background populations. Although intended to be closer to reality, the scarcity of information makes these assumptions even more subject to errors and results should be used with carefulness. Model 3 is computed only for those countries for which fertility assumptions by f/n background are available.

2.3.4. Model 4

It is sometimes claimed that the official figures about migrants are underestimating the real size of the phenomenon. The CLANDESTINO¹¹ research project, concluded in 2009, has made an attempt to provide estimates of irregular foreign resident population in the EU and aggregated values are available for the year 2008 from Kovacheva and Vogel (2009). The model 4 tries therefore to be based on a more comprehensive estimate of the current stock of migrants. For the purposes of these projections, the minimum and maximum estimates published in the report have been averaged and

¹⁰ For details about the implementation of consistency rules in LIPRO, see Van Imhoff and Keilman (1991).

¹¹ The "CLANDESTINO: Counting the Uncountable – Data and Trends across Europe" Research Project is funded by the European Commission, DG Research, 6th Framework Programme, Priority 8 - Scientific Support to Policies. Project's web site: <http://clandestino.eliamep.gr>.

equally divided by sex. These totals by sex have then been distributed in the foreign-born base population proportionally to the corresponding age structure. The native-born populations have been adapted accordingly to keep the consistency with the total base population as from EUROPOP2008.

The base population has been further tailored including a partial estimate of the stock of second generation migrants in 2008. Very provisional data from the Labour Force Survey ad hoc module 2008 on migrants estimate in about 5% for the EU the share of persons whose one or both parents were born abroad in the total population aged 15-64 years¹². Such a proportion has been applied in each country to the pertinent population to obtain the size of the stock of second generation migrants whose age is included between 15 and 64 years. This incomplete estimate has been added to the foreign-born persons (as above calculated, including the irregular migrants) to obtain a stock of the population with foreign background including at least part of the second generation migrants; again, the native-born populations have been adapted accordingly to keep the consistency with the total base population as from EUROPOP2008.

The assumptions for the model 4 are thus the following:

- a) the base population for persons with foreign background includes irregular migrants and second generation migrants aged 15-64 years;
- b) there are no persons with mixed background;
- c) the sum of foreign-born persons present on 1 January 2008 and all their descendants composes the group of persons with foreign background;
- d) the sum of native-born persons present on 1 January 2008 and all their descendants composes the group of persons with national background;
- e) specific assumptions on fertility by background have been applied for each group;
- f) the same assumptions on mortality, borrowed from EUROPOP2008, have been applied to each category;
- g) immigrants are supposed to be 90% of foreign background and 10% of national background;
- h) emigrants are supposed to be 67% of foreign background and 33% of national background.

The difference from model 3 is therefore only in the different base populations. However, calculations have been carried out also for the countries for which no differential fertility was available, to show at least the impact of this assumption on the projected share of persons with foreign background. For these countries, fertility assumptions are borrowed from EUROPOP2008 as in the model 2.

3. RESULTS

As the projected values for the total population, calculated as the sum of the populations with national and foreign background, are – by methodology - equal to those of EUROPOP2008, the results will be given for the population with foreign background, which is of main interest in this study. Readers interested to the outcomes for the total population may refer to Lanzieri (2009).

Results from the various models are reported in Annex in the Table 5 and Table 5 bis, focusing on the share of persons with foreign background the beginning of each decade over a time span of 50 years. By using the data from EUROPOP2008¹³, due to the consistency with that set of projections, the reader can easily calculate the size of the two groups of subpopulation, even broken down by broad age group¹⁴. When the share of persons with foreign background is greater or equal to 50%, the value is reported in red bold.

The following Table 6 and Table 6 bis present the demographic balances of the population with foreign background for each country over the period 2008-2061 according to each of the four models. The column reporting the cumulated values of net migration is shown on the left and it is not duplicated because these values do not change from one model to another. Demographic balances for the population with national background can be easily derived subtracting the values in Table 6 from the corresponding values for EUROPOP2008 (as, for instance, reported in the Table 2 in Lanzieri, 2009).

¹² More precisely, the provisional estimate is 5.4% for males and 5.3% for females.

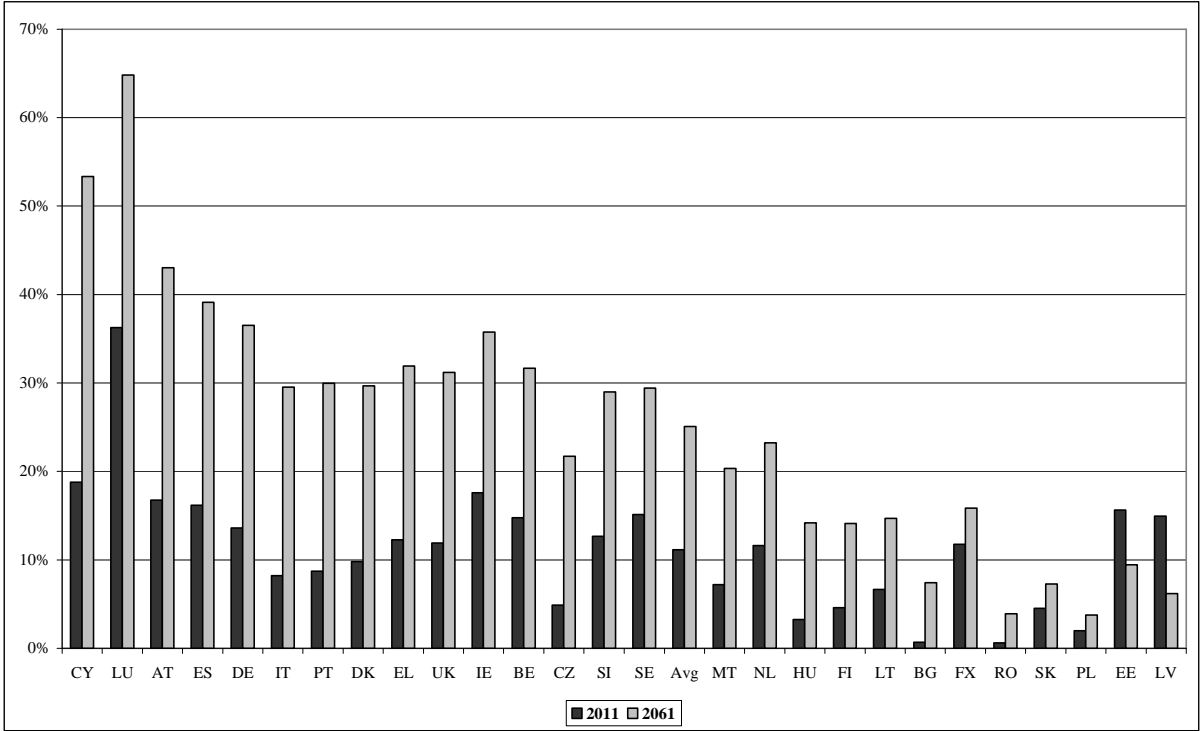
¹³ Freely available at Eurobase, the Eurostat database: <http://epp.eurostat.ec.europa.eu>

¹⁴ Detailed results by country, single year, single age, sex and background for any of the four models are available upon request.

On the results from model 4, it should be kept in mind that for Czech Republic, Ireland, France, Latvia, Poland, Romania, Slovakia and the United Kingdom have not been applied different fertility assumptions by f/n background, and thus the outcomes for these countries are not strictly comparable to the others. In fact, only for ten countries (Belgium, Denmark, Estonia, Lithuania, Malta, the Netherlands, Austria, Slovenia, Finland and Sweden) the input data used across the four models are fully consistent (with the due concerns about the reliability of the estimates); for the other nine countries, i.e. Bulgaria, Germany, Greece, Spain, Italy, Cyprus, Luxembourg, Hungary and Portugal, fertility assumptions by f/n background have been calculated on the basis of the fertility rates by citizenship as proxy.

For sake of brevity, the description of the main results is here mostly limited to the model 1. In the EU, the share of persons with foreign background, as composed by first and second generation of migrants, is projected to increase by 16 percentage points in half a century, reaching over 133 millions of persons in 2061. However, the results are rather different by country: in general, those with low fertility and higher migration flows will experience the larger increases; on the opposite, countries with limited or negative migration flows will have modest increases or even a decrease of the share of foreign background persons. Indeed, though these results are obviously influenced by the size and structure of the population of foreign-born persons present in the countries at the beginning of the projections period, future migratory flows make the real difference¹⁵. The large variety across countries is evident looking at the increase of their share on the total population between 2011 and 2061, as displayed in the Figure 1. Cyprus has in 2011 a share comparable to those of Ireland and Estonia, but, contrary to them, it has a “sky-rocket” increase of the population with foreign background. Looking at the migration assumptions, for each person of foreign background in 2008, in 53 years Cyprus is assumed to receive a cumulative net surplus of 3.9 migrants, against the 2.1 of Ireland and the 0.2 of Estonia (see Table 6). In 2011, there is only one country (Luxembourg) with more than 30% of persons with foreign background; by 2061, other nine countries are projected to cross this threshold. By the same year, only six countries will have that share on values less than 10%.

Figure 1: projected share of foreign background persons in the EU Member States according to model 1, sorted by size of the difference between 2011 and 2061



¹⁵ In the model 1, fertility (like mortality) is assumed to be equal for both the population with national background and foreign background.

However, analysing the results for the intermediate years, it emerges that in the majority of the countries the growth of the share of the population with foreign background slows down during the projections period. This is indeed the case for Belgium, Denmark, Ireland, Greece, Spain, France, Italy, Cyprus, Luxembourg, Malta, the Netherlands, Austria, Portugal, Slovenia, Finland, Sweden and the United Kingdom.

In Cyprus and Luxembourg, the persons with foreign background are projected to become the absolute majority, in the latter country much earlier than the former; in Germany, Ireland, Spain and Austria their share in 2061 is more than one third of the total population¹⁶. As noted above, in these six countries, as in all the others here considered, the increase of the population with foreign background is mainly fed by the migratory flows (see Table 6), as their subpopulations will experience - in this scenario - negative natural changes during the projections period (with the exception of Denmark and the United Kingdom) and their net migration is each year bigger than the natural change. Estonia and Latvia are the only two countries where the share (and size) of the population with foreign background is projected to decrease. For both countries, the bulk of these persons are estimated to belong to the older age classes, and therefore they do not contribute (anymore or to a less extent) to fertility, whilst they enter the age classes with higher risk of death relatively early in the projections period.

The distribution by age shows the greater impact on the younger age classes. In about half of the countries (Belgium, Denmark, Ireland, Spain, France, Italy, Cyprus, Luxembourg, the Netherlands, Austria, Finland, Sweden and the United Kingdom), the size and the share of persons with foreign background increases in the first part of the projections period in the age group 0-14 years old and then decreases. It reaches more than one third of the total population aged 0-14 years in Ireland, Spain, Cyprus, Luxembourg (where it represents the absolute majority for a long period) and Austria. Looking at the age group 15-39 of the persons with foreign background, the younger working age population group, its relevance decreases only in the last period of the projections in Belgium, Denmark, Ireland, Spain, France, Cyprus, Luxembourg, the Netherlands, Finland, Sweden and the United Kingdom; in the remaining countries but Lithuania, the increase of their share slows down in the same period. This age group reaches higher shares in 2061 than the others: in Belgium, Denmark, Germany, Ireland, Greece, Spain, Italy, Portugal, Slovenia and the United Kingdom the population with foreign background in 2061 is well over one third of the total population, in Austria is the majority, in Cyprus and Luxemburg is close to two third. The age group 40-64 years old follows a different pattern: with the exception of a few countries, the share of persons with foreign background on the total population increases at a reducing pace in the first part the projections period and then accelerates in the last part. Again, Belgium, Denmark, Germany, Ireland, Greece, Spain, Italy, Austria, Portugal, Sweden and the United Kingdom show shares above one third of the total population in 2061, and Cyprus and Luxembourg reach respectively 60% and 72%. In several countries of Eastern Europe and in the Baltic countries, the oldest age group, composed by the persons aged 65 and over, reduces its share, constantly or for at least a part of the projections period. Only in Ireland, Spain, Cyprus, Austria it becomes more than one third of the total population; in Luxembourg, the elderly with foreign background are projected to be two third of the total population in 2061. The projected trends for the whole EU show (Figure 2) the increase of the share of the population with foreign background in the total population for all the age groups. Of the 133 millions of first and second generation of migrants, 33 are projected to be aged more than 65 years in 2061 and 87 millions will be in the working age.

¹⁶ It should be noted that, for the majority of the EU Member States, the total population is projected to decline in the next 50 years: in Germany this is already occurring, in Spain the decline is projected to start in 2045 and in Austria in 2046 (see the Table 4 in Lanzieri, 2009).

Figure 2: projected share of the population with foreign background in the EU by age group – model 1

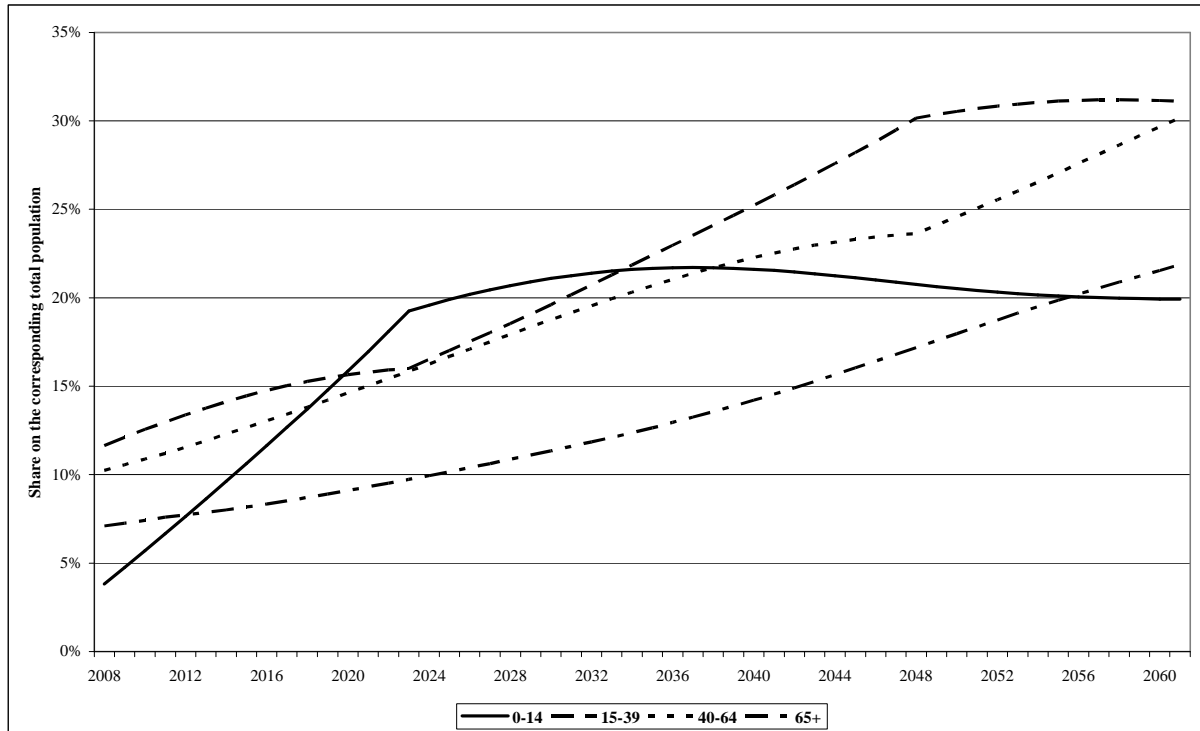
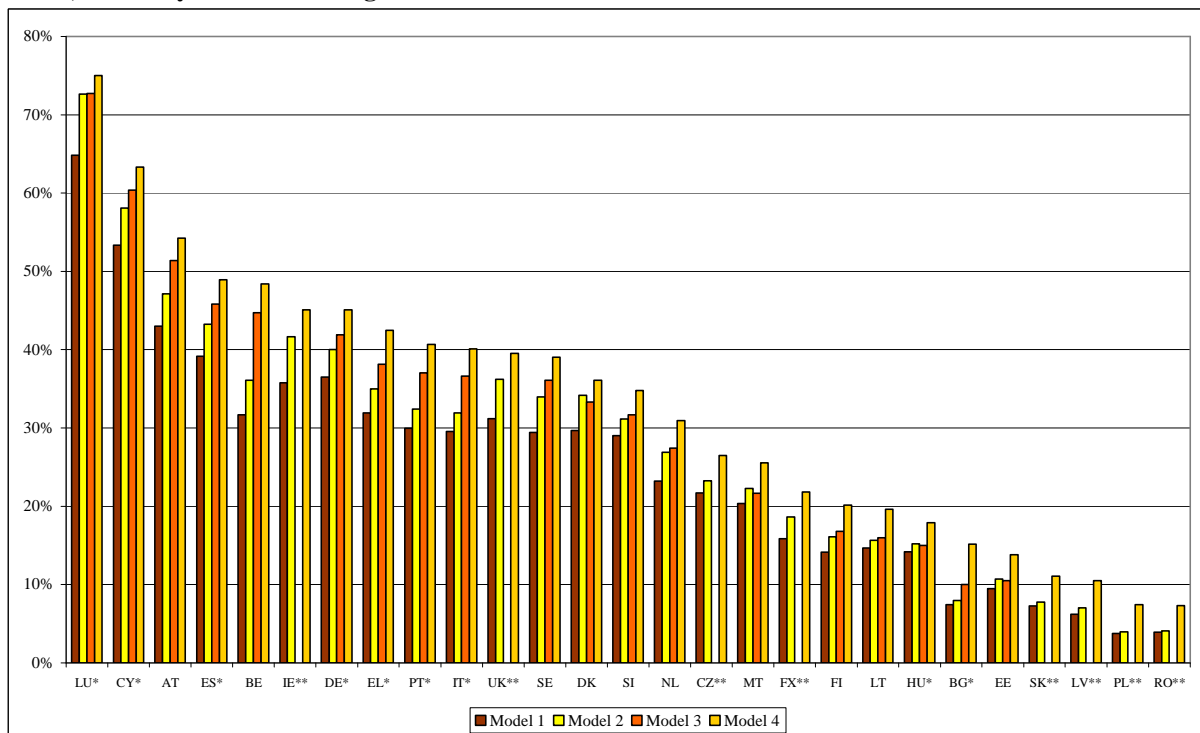


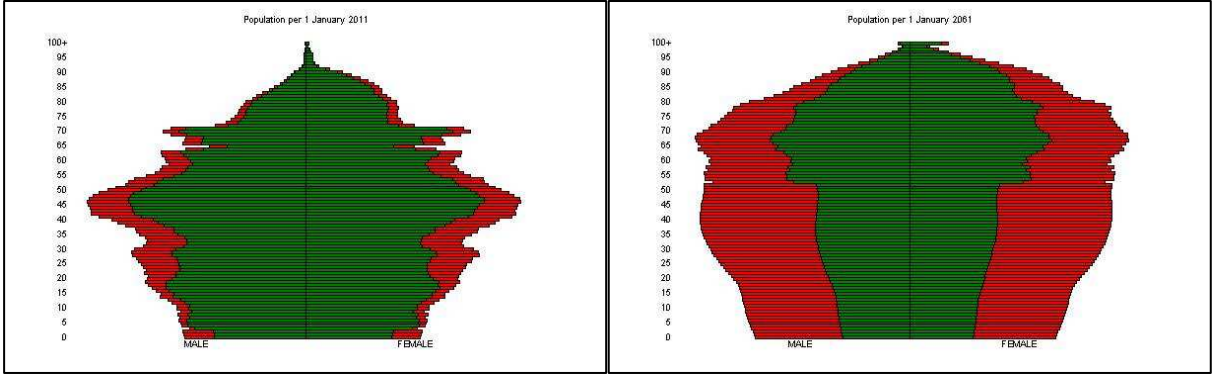
Figure 3: projected share of the population with foreign background on 1 January 2061 by country and model, sorted by value according to model 4



(*): results for model 3 using fertility by citizenship
(**): results for model 4 without fertility differentials

The Figure 3 introduces the results from other models. In general, passing from one model to the following increases the share of persons with foreign background, except in the case of model 3 for the countries where this subpopulation has fertility lower than the population with national background (Denmark, Estonia, Hungary and Malta). If one would adopt the model 4, only two countries would present shares lower than 10%, and fifteen countries would be above 30%, of which three even above 50%. At EU level, the number of persons with foreign background would then be more than 174 millions, 40 millions more than the value projected by the model 1. In the model 4, ten countries present one or more of the younger broad age groups composed for the majority by persons with foreign background. In fact, most of the difference at these age groups emerges already passing from the model 1 to the model 2, where it changes the statistical treatment of the descendants of foreign-born persons. After a couple of decades, the differences become evident for the age group 0-14, and after 3-4 decades for the age group 15-39; no changes occur instead for the shares of the older age groups between the two models, due to the time horizon of the projections. The persons with foreign background would contribute with 42% of the live births in 2060, against the 26% in 2008. Explicitly considering the f/n background allows for a better showing off of the contribution of migration. Taking Austria as example, assuming a flow of net migration of about 28 thousand persons per year, this cumulates to 1.5 million persons until 2060, representing only the 18.0% of the base population in 2008. If the indirect effects (as estimated by means of the No-Migration variant of EUROPOP2008) are taken into account, then these migrants generate an additional gain of 1 million of persons, for an overall total effect of 2.5 million of persons at the end of the period, which represents the 30.1% of the base population in 2008 and the 27.8% of the population in 2061. However, when the estimated stock of 1.2 million of foreign-born persons in 2008 enters into the picture, the share of persons with foreign background at the end of the projections period climbs to about half of the Austrian population. The Figure 4 shows the growth over half a century of the foreign background population at all ages.

Figure 4: projected age pyramids for Austria on 1 January 2011 (left panel) and on 1 January 2061 (right panel) by national (green colour) and foreign (red colour) background according to model 2



This brings to evidence that, from the point of view of the assumptions setting in the projections exercises, care should be taken of the implications and effects of the hypothesis on future migration flows. For instance, the migration assumptions in EUROPOP2008 project a reduction of the net migration in Austria in the future, from a level around 33 thousand in 2008 to a level around 22 thousand in 2060. At a first glance, this may look as less plausible than an upward trend, especially considering the ongoing ageing process, the shrinkage in the working-age classes and the (expected) negative natural change. These assumptions project the negative natural change of the Austrian population to be postponed to 2016 and its decline to 2046. When the overall impact is instead taken into account, then it may be noted how even prudent assumptions may imply (combined with the assumptions on fertility and mortality) relevant challenges for the hosting societies: in Austria the share of persons with foreign background in the total population aged 15-39 years is estimated to be the 19% in 2008¹⁷ (15% in 2002) and it is projected to reach values between 51% and 64% by 2061, depending on the model.

¹⁷ Value for the first three models; 25% if model 4 is considered instead.

Overall, the increase of the number and share of persons with foreign-background may take place at different speed and extent in the various Member States. As it may be noted in the Table 5 and Table 5 bis, certain countries may experience only in several decades what other countries may deal with already in the near future. This would give them the potential advantage to benefit of the best practices at international level in terms of integration policies. On the other side, other countries may need to quickly develop proper policies to deal with “higher-than-expected” contributions from the migrants to the demographic developments.

The particularly high results obtained for some countries may raise the question about how realistic such outcomes are. Projecting the population with national background to change to a position of minority in its own country, or even estimating relevant quotas of persons with foreign background, means to portray a situation that has never occurred in the past (at least the recent one), with unforeseeable social consequences. Yet, the framework assumptions (those referring to the total population) may be considered as plausible, and the assumptions formulated specifically for the breakdown by background are based on the few available observed data. For instance, in the model 1 (the most conservative as concerns the results), the only elements which could be modified are the estimates of the base population by background and the proportion of the migratory flows attributed to the national and foreign background populations. Results have shown to be rather sensitive to this latter factor and therefore, for countries where the share of persons with foreign background is considered to grow implausibly, could be a lever on which to play to adjust these results to more conventional values. Apart the general consideration that the future does not have to look necessarily like the present (e.g., a few decades ago several EU countries where essentially emigration countries and fertility was on much higher levels), the values assumed for the present study do not present large margins of action: higher quotas of immigration of persons with national background would in principle be interpreted as return migration, and therefore their age structure should be older than the one of the “common” migrants, thus probably with limited effect on fertility; smaller quotas of emigration with national background could be acceptable (although emigration is necessary to “feed” the return migration), but must have some empirical basis. Looking at the countries with the highest shares in 2061, Cyprus and Luxembourg, the former does not have empirical data for 2008 and the latter has indeed a (estimated) lower emigration quota for the persons with national background, but as well a lower immigration quota. Considering the weaknesses of the information available on migration flows, and especially on emigration, it has been chosen to set a common assumption valid for all the countries based on the average EU values estimated for 2008. While it is clear that the results, due to their sensitivity to the assumptions, have to be interpreted with caution, at the same time they should hopefully be slightly more robust as based on the largest possible empirical basis. It should not be forgotten that these projections are the outcomes of *what-if* scenarios, thus they show *what* would happen *if* certain conditions hold.

4. CONCLUSIONS

Whatever of the four models is adopted, from the results it emerges that the European Union is going to experience unprecedented changes from the point of view of the population composition. Without the contribution of migration, the population dynamic in several countries would be much less positive. On the other side, the ever increasing share of persons with foreign background will represent a challenge for the integration policies of the hosting countries. However, the growth of the populations with foreign background is not self-sustained, as the assumed migratory flows (and their breakdown by f/n background) still play the major role for their demographic developments in the period under consideration. Although for some specific group this may be not anymore the case (Finney and Simpson, 2009), at aggregated level and with all the necessary simplifications¹⁸, the prominent role of the natural change for the growth of the populations with foreign background does not emerge.

While it should not be forgotten that these are the outcomes of a number of assumptions based sometimes on data of uncertain reliability, at the same time it should be taken into account that these (overall) migration assumptions have been sometimes considered too conservative. From the methodological point of view, these projections by f/n background show as well that consideration

¹⁸ For instance, fertility rates may be very different from one subgroup with foreign background to another.

should be made about the full effects (direct and indirect) of migration flows when building the assumptions. Further, complications arising from the use of proxy variables for the concept of background should not be underestimated.

The renewal of the labour force supply is undoubtedly expected to come from migration. The European Union would see its group of persons aged 15-39 with national background to decrease without interruption its size of about 50-60 millions¹⁹ from about 140; at the same time, the size of those with foreign background more than double, although not fully compensating that loss. The younger age classes are indeed those where the most relevant changes are projected, but this is explained also by the time window considered in this study: in 53 years, from 2008 to 2061, the large majority of the newborns will not have completed their life cycle, and their impact on the composition of the older age classes is not yet visible. Another consequence is that the process of ageing, which obviously concerns as well the persons with foreign background, does not fully display its effects. Somehow, it is like considering only the positive demographic bonus of migration.

What stated above applies for the European Union as a whole. Going down at country level, it emerges a clear geographical divide. The weight of the population with foreign background will grow to a very different extent in the EU Member States: most of the Mediterranean and Central-Northern Europe countries will see their share rising to values (in some cases, much) above one third; on the opposite, Eastern EU and Baltic countries will hardly go above levels experienced already today in some countries. Striking exception in the former group of countries is France, which due to (relatively) high fertility and low migration sees the share of persons with foreign background growing only by about 4-7 percentage points. Therefore, similarly to ageing, the increase of population diversity seems certain, but its extent and speed vary considerably across countries. A few Member States are projected to have the absolute majority of the population (or of some age groups) composed by persons with foreign background: considering the recent past, this is definitely a new demographic situation for these countries. How likely are these results and whether this may give origin to xenophobic reactions from the hosting populations is not discussed here, as well as it has not been analysed the fact that migrants tend to distribute not uniformly within the national territories²⁰ nor the important (and increasing) role of mixed unions. Nevertheless, it can be concluded that, according to this projections scenario, in a few decades several countries will have to deal with relevant social changes: European increasing population diversity could then be considered a major socio-demographic challenge for the current century. As from EUROPOP2008 is projected that some European population may decline, but it is certain to age, the current set of projections by background reveals the multicultural character of the future for most of the EU countries.

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¹⁹ The precise value depends on the model and it has thus just been indicated a broad range.

²⁰ For an application at regional level, see, for instance, Planelles *et al.* (2010).

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ANNEX

Table 5:
projected share (in %) of persons with foreign background
in the total population in selected years by country and broad age group
according to model 1 and 2

	Model 1						Model 2					
	2011	2021	2031	2041	2051	2061	2011	2021	2031	2041	2051	2061
EU												
0-14	6.7	17.0	21.3	21.5	20.4	19.9	6.7	17.0	21.4	24.5	30.8	35.6
15-39	13.0	15.8	20.2	25.8	30.7	31.1	13.0	15.8	20.2	25.8	31.2	34.7
40-64	11.2	15.0	19.2	22.5	25.1	30.2	11.2	15.0	19.2	22.5	25.1	30.2
65+	7.6	9.3	11.6	14.6	18.4	21.9	7.6	9.3	11.6	14.6	18.3	21.9
Total	10.4	14.4	17.9	21.1	24.0	26.5	10.4	14.4	18.0	21.6	25.6	29.6
BE												
0-14	9.5	22.4	26.0	25.4	23.3	22.0	9.5	22.4	26.2	29.7	37.4	41.2
15-39	17.2	19.8	24.9	31.2	35.7	35.0	17.2	19.8	24.9	31.2	36.4	40.1
40-64	16.6	21.3	26.2	28.7	30.6	36.2	16.6	21.3	26.2	28.7	30.6	36.2
65+	11.7	14.5	17.2	20.9	25.4	28.7	11.7	14.5	17.2	20.9	25.4	28.7
Total	14.8	19.7	23.7	27.0	29.6	31.7	14.8	19.7	23.7	27.6	32.0	36.1
BG												
0-14	0.7	2.7	4.7	6.7	8.3	9.6	0.7	2.7	4.7	7.1	9.9	13.0
15-39	0.9	2.7	4.5	6.8	9.8	12.0	0.9	2.7	4.5	6.8	9.9	12.6
40-64	0.6	0.9	1.7	3.4	5.8	8.4	0.6	0.9	1.7	3.4	5.8	8.4
65+	0.5	0.4	0.5	0.7	1.3	2.6	0.5	0.4	0.5	0.7	1.3	2.6
Total	0.7	1.6	2.5	3.9	5.7	7.4	0.7	1.6	2.5	4.0	5.9	8.0
CZ												
0-14	2.5	8.9	14.5	17.7	19.2	20.9	2.5	8.9	14.5	19.1	24.5	30.4
15-39	5.6	9.8	13.4	18.4	24.5	27.7	5.6	9.8	13.4	18.4	24.7	29.4
40-64	5.1	8.2	11.6	15.7	20.0	24.8	5.1	8.2	11.6	15.7	20.0	24.8
65+	4.8	4.7	6.2	8.5	11.4	14.8	4.8	4.7	6.2	8.5	11.4	14.8
Total	4.9	8.1	11.2	14.7	18.3	21.7	4.9	8.1	11.2	14.9	19.1	23.3
DK												
0-14	6.8	20.3	25.2	24.5	23.7	22.4	6.8	20.3	25.3	27.5	36.8	42.2
15-39	14.6	18.2	22.5	30.5	35.9	35.5	14.6	18.2	22.5	30.5	36.3	39.8
40-64	9.7	13.5	20.0	24.5	26.8	33.5	9.7	13.5	20.0	24.5	26.8	33.5
65+	4.7	6.5	9.4	12.5	17.7	23.2	4.7	6.5	9.4	12.5	17.7	23.2
Total	9.8	14.6	19.2	23.3	26.8	29.7	9.8	14.6	19.2	23.8	29.0	34.2
DE												
0-14	6.9	22.3	27.4	29.3	30.4	30.7	6.9	22.3	27.6	33.0	43.5	50.0
15-39	18.1	19.3	25.9	34.9	41.9	44.0	18.1	19.3	25.9	34.9	42.4	48.2
40-64	15.5	19.9	25.8	29.5	32.8	41.0	15.5	19.9	25.8	29.5	32.8	41.0
65+	8.3	12.1	15.2	19.1	24.2	28.8	8.3	12.1	15.2	19.1	24.2	28.8
Total	13.6	18.2	23.0	27.6	32.1	36.5	13.6	18.2	23.1	28.0	33.8	40.0
EE												
0-14	2.8	5.9	6.5	7.2	7.7	8.7	2.8	5.9	6.6	8.9	11.7	14.1
15-39	5.1	4.6	6.6	8.7	11.0	12.0	5.1	4.6	6.6	8.7	11.3	13.8
40-64	23.1	14.7	7.7	6.1	7.1	10.2	23.1	14.7	7.7	6.1	7.1	10.2
65+	34.8	31.6	26.4	18.1	10.8	7.0	34.8	31.6	26.4	18.1	10.8	7.0
Total	15.6	13.3	11.3	9.9	9.3	9.5	15.6	13.3	11.3	10.2	10.0	10.7

	2011	2021	2031	2041	2051	2061	2011	2021	2031	2041	2051	2061
IE												
0-14	16.3	28.7	34.7	32.6	25.5	21.5	16.3	28.7	35.0	37.0	41.2	47.0
15-39	21.6	29.0	32.7	36.8	41.7	40.6	21.6	29.0	32.7	36.8	42.5	46.1
40-64	16.1	24.4	30.9	35.3	37.6	40.8	16.1	24.4	30.9	35.3	37.6	40.8
65+	10.1	12.7	16.5	22.5	28.4	33.9	10.1	12.7	16.5	22.5	28.4	33.9
Total	17.6	25.3	29.8	32.8	34.6	35.8	17.6	25.3	29.9	33.5	37.5	41.7
EL												
0-14	10.0	20.6	26.2	27.0	26.1	26.1	10.0	20.6	26.4	30.3	36.9	42.5
15-39	17.4	20.2	24.7	30.8	36.9	37.3	17.4	20.2	24.7	30.8	37.4	41.1
40-64	12.6	18.3	23.3	27.6	30.5	35.7	12.6	18.3	23.3	27.6	30.5	35.7
65+	4.7	7.1	11.9	17.2	22.2	26.4	4.7	7.1	11.9	17.2	22.2	26.4
Total	12.3	16.8	21.2	25.4	28.9	31.9	12.3	16.8	21.3	25.8	30.5	35.0
ES												
0-14	14.3	29.5	36.8	35.0	30.0	28.2	14.3	29.5	37.0	38.7	44.1	51.4
15-39	23.3	30.1	33.4	38.7	45.7	45.2	23.3	30.1	33.4	38.7	46.3	49.7
40-64	14.3	23.1	30.8	36.9	38.8	43.0	14.3	23.1	30.8	36.9	38.8	43.0
65+	6.8	11.6	16.2	22.1	28.9	35.2	6.8	11.6	16.2	22.1	28.9	35.2
Total	16.2	24.0	29.0	33.0	36.2	39.1	16.2	24.0	29.1	33.4	38.2	43.3
FX												
0-14	5.7	12.8	13.4	12.2	10.9	10.2	5.7	12.8	13.5	14.9	19.4	21.1
15-39	10.7	10.1	12.9	16.3	18.2	16.8	10.7	10.1	12.9	16.3	18.7	20.1
40-64	15.2	15.5	15.3	15.0	15.1	18.4	15.2	15.5	15.3	15.0	15.1	18.4
65+	13.7	15.2	16.0	15.9	16.2	15.8	13.7	15.2	16.0	15.9	16.2	15.8
Total	11.8	13.3	14.4	15.1	15.6	15.9	11.8	13.3	14.4	15.6	17.1	18.7
IT												
0-14	6.3	16.8	22.6	23.6	23.5	23.4	6.3	16.8	22.7	25.7	32.1	37.7
15-39	12.3	16.5	21.4	27.8	33.4	34.1	12.3	16.5	21.4	27.8	33.7	36.7
40-64	8.7	14.4	20.4	26.0	29.5	33.9	8.7	14.4	20.4	26.0	29.5	33.9
65+	2.6	4.4	8.4	13.5	18.6	24.3	2.6	4.4	8.4	13.5	18.6	24.3
Total	8.2	13.0	17.7	22.3	26.2	29.5	8.2	13.0	17.8	22.5	27.3	31.9
CY												
0-14	15.6	36.9	44.3	47.8	45.6	42.8	15.6	36.9	44.4	52.0	60.8	65.8
15-39	24.5	33.4	43.5	52.9	59.2	60.5	24.5	33.4	43.5	52.9	59.7	65.1
40-64	17.2	28.1	38.5	45.0	51.8	59.9	17.2	28.1	38.5	45.0	51.8	59.9
65+	9.4	13.3	19.0	27.7	36.9	44.1	9.4	13.3	19.0	27.7	36.9	44.1
Total	18.8	29.2	37.5	44.4	49.6	53.3	18.8	29.2	37.5	45.0	52.0	58.1
LV												
0-14	2.6	4.7	4.1	4.0	4.3	5.2	2.6	4.7	4.2	5.5	7.6	9.0
15-39	4.8	3.4	4.3	5.6	6.8	7.1	4.8	3.4	4.3	5.6	7.1	8.7
40-64	22.3	14.0	6.8	4.4	4.3	6.4	22.3	14.0	6.8	4.4	4.3	6.4
65+	31.7	29.7	25.0	17.1	10.1	5.7	31.7	29.7	25.0	17.1	10.1	5.7
Total	14.9	12.2	9.8	8.0	6.7	6.2	14.9	12.2	9.9	8.1	7.2	7.0
LT												
0-14	3.2	4.7	7.1	11.3	12.6	14.6	3.2	4.6	7.0	12.3	16.0	21.0
15-39	3.0	4.3	7.4	10.8	14.4	19.5	3.0	4.3	7.2	10.4	14.2	20.6
40-64	10.2	8.8	7.3	8.4	12.0	16.7	10.2	8.8	7.3	8.4	11.9	16.4
65+	10.8	12.4	13.2	11.6	10.1	9.7	10.8	12.4	13.2	11.6	10.1	9.7
Total	6.7	7.3	8.6	10.2	12.1	14.7	6.7	7.3	8.6	10.2	12.4	15.7

	2011	2021	2031	2041	2051	2061	2011	2021	2031	2041	2051	2061
LU												
0-14	24.2	51.6	56.7	54.2	49.7	45.4	24.2	51.6	57.1	61.2	73.7	79.3
15-39	43.0	44.5	53.2	64.4	71.3	68.3	43.0	44.5	53.2	64.4	72.3	76.1
40-64	41.1	50.5	59.0	62.3	63.0	72.4	41.1	50.5	59.0	62.3	63.0	72.4
65+	23.8	34.3	42.4	49.9	59.1	64.0	23.8	34.3	42.4	49.9	59.1	64.0
Total	36.3	46.1	53.5	58.8	62.5	64.8	36.3	46.1	53.5	60.0	66.7	72.6
HU												
0-14	1.8	6.9	10.0	12.4	14.4	15.3	1.8	6.9	10.1	13.2	17.6	21.1
15-39	3.2	5.6	8.5	12.4	16.4	18.7	3.2	5.6	8.5	12.4	16.5	19.8
40-64	3.2	4.7	6.6	8.9	12.0	15.6	3.2	4.7	6.6	8.9	12.0	15.6
65+	4.7	4.1	4.5	5.5	6.8	8.9	4.7	4.1	4.5	5.5	6.8	8.9
Total	3.2	5.2	7.1	9.4	11.9	14.2	3.2	5.2	7.1	9.5	12.4	15.2
MT												
0-14	5.0	12.2	14.8	16.4	17.0	17.4	5.0	12.2	14.9	18.7	24.1	27.6
15-39	9.3	10.8	14.5	19.1	23.0	24.7	9.3	10.8	14.5	19.1	23.4	27.2
40-64	6.9	11.1	14.5	15.5	18.3	22.9	6.9	11.1	14.5	15.5	18.3	23.0
65+	5.4	5.6	6.9	10.7	13.8	15.8	5.4	5.6	6.9	10.7	13.8	15.8
Total	7.2	10.0	12.7	15.3	18.0	20.4	7.2	10.0	12.7	15.6	19.0	22.3
NL												
0-14	6.1	17.7	19.4	17.7	16.6	15.9	6.1	17.7	19.5	20.7	28.8	32.7
15-39	14.9	14.2	17.9	24.0	27.7	26.5	14.9	14.2	17.9	24.0	28.2	30.5
40-64	13.0	16.4	20.0	20.8	21.0	26.6	13.0	16.4	20.0	20.8	21.0	26.6
65+	8.0	9.5	11.8	14.8	18.3	20.3	8.0	9.5	11.8	14.8	18.3	20.3
Total	11.6	14.6	17.3	19.6	21.5	23.2	11.6	14.6	17.3	20.1	23.5	26.9
AT												
0-14	11.0	27.7	33.8	36.4	36.6	35.7	11.0	27.7	34.0	40.6	50.6	56.5
15-39	20.8	25.2	32.9	42.5	49.2	50.9	20.8	25.2	32.9	42.5	49.9	55.4
40-64	17.6	22.5	29.9	35.1	39.7	48.5	17.6	22.5	29.9	35.1	39.7	48.5
65+	12.4	15.3	17.7	21.8	27.7	33.4	12.4	15.3	17.7	21.8	27.7	33.4
Total	16.8	22.6	28.4	33.7	38.5	43.0	16.8	22.6	28.4	34.2	40.6	47.1
PL												
0-14	0.9	1.2	2.1	2.9	4.0	5.0	0.9	1.2	2.1	3.0	4.6	6.5
15-39	0.5	1.3	2.1	2.7	4.7	6.2	0.5	1.3	2.1	2.7	4.7	6.4
40-64	1.5	0.9	0.9	1.5	2.9	4.2	1.5	0.9	0.9	1.5	2.9	4.2
65+	8.7	4.6	2.3	1.3	1.0	1.4	8.7	4.6	2.3	1.3	1.0	1.4
Total	2.0	1.8	1.7	1.9	2.8	3.7	2.0	1.8	1.7	1.9	2.9	4.0
PT												
0-14	6.7	17.8	23.1	25.1	26.1	26.3	6.7	17.8	23.3	27.7	34.6	39.8
15-39	13.0	16.2	21.8	28.3	34.2	35.5	13.0	16.2	21.8	28.3	34.6	38.4
40-64	8.5	14.8	20.1	24.1	28.0	33.2	8.5	14.8	20.1	24.1	28.0	33.2
65+	2.9	4.9	8.7	14.2	19.0	23.6	2.9	4.9	8.7	14.2	19.0	23.6
Total	8.7	13.6	18.3	22.7	26.6	30.0	8.7	13.6	18.3	23.0	27.9	32.4
RO												
0-14	0.6	1.1	1.6	3.1	4.4	5.4	0.6	1.1	1.6	3.2	5.0	6.6
15-39	0.4	1.0	1.6	3.1	4.8	6.2	0.4	1.0	1.6	3.1	4.8	6.4
40-64	0.4	0.5	0.7	1.4	2.8	4.6	0.4	0.5	0.7	1.4	2.8	4.6
65+	1.7	0.9	0.5	0.5	0.8	1.3	1.7	0.9	0.5	0.5	0.8	1.3
Total	0.6	0.8	1.0	1.8	2.9	3.9	0.6	0.8	1.0	1.8	2.9	4.1

	2011	2021	2031	2041	2051	2061	2011	2021	2031	2041	2051	2061
SI												
0-14	6.2	15.4	21.4	25.7	27.6	29.4	6.2	15.4	21.5	27.5	34.7	41.5
15-39	10.6	14.0	19.7	26.0	33.0	37.4	10.6	14.0	19.7	26.0	33.2	39.7
40-64	17.4	17.6	17.5	20.3	25.5	31.8	17.4	17.6	17.5	20.3	25.5	31.8
65+	12.0	16.1	19.1	19.0	18.6	20.2	12.0	16.1	19.1	19.0	18.6	20.2
Total	12.7	15.9	19.0	22.1	25.4	29.0	12.7	15.9	19.0	22.3	26.4	31.1
SK												
0-14	1.2	3.1	3.9	4.6	5.9	7.2	1.2	3.1	4.0	5.3	8.0	10.2
15-39	2.7	2.9	3.6	5.2	7.4	8.7	2.7	2.9	3.6	5.2	7.5	9.4
40-64	6.6	5.3	4.9	4.8	6.1	8.0	6.6	5.3	4.9	4.8	6.1	8.0
65+	8.7	8.7	7.7	6.8	5.9	5.8	8.7	8.7	7.7	6.8	5.9	5.8
Total	4.5	4.8	5.0	5.4	6.3	7.3	4.5	4.8	5.0	5.5	6.6	7.8
FI												
0-14	4.0	10.1	11.4	10.9	10.2	9.8	4.0	10.1	11.4	12.7	16.5	18.6
15-39	7.4	8.5	10.6	13.6	15.7	15.5	7.4	8.5	10.6	13.6	16.0	17.8
40-64	4.0	8.2	11.9	12.8	13.4	16.2	4.0	8.2	11.9	12.8	13.4	16.2
65+	1.5	2.4	4.1	7.2	10.9	13.0	1.5	2.4	4.1	7.2	10.9	13.0
Total	4.6	7.3	9.4	11.3	12.9	14.1	4.6	7.3	9.5	11.6	14.0	16.1
SE												
0-14	10.1	23.8	25.7	24.3	21.6	19.7	10.1	23.8	25.8	28.0	35.5	39.0
15-39	17.6	19.9	24.0	30.1	34.0	32.5	17.6	19.9	24.0	30.1	34.5	37.2
40-64	17.1	21.7	26.0	27.8	27.9	34.4	17.1	21.7	26.0	27.8	27.9	34.4
65+	11.8	14.1	16.9	20.0	25.2	26.9	11.8	14.1	16.9	20.0	25.2	26.9
Total	15.1	19.9	23.3	26.0	28.0	29.4	15.1	19.9	23.3	26.6	30.4	34.0
UK												
0-14	7.3	20.1	26.2	25.3	22.2	20.5	7.3	20.1	26.5	30.0	36.6	41.7
15-39	17.2	21.3	26.0	32.2	37.1	36.2	17.2	21.3	26.0	32.2	38.0	41.3
40-64	11.1	16.1	23.3	29.1	31.2	36.7	11.1	16.1	23.3	29.1	31.2	36.7
65+	7.7	8.3	9.8	12.8	19.6	25.8	7.7	8.3	9.8	12.8	19.6	25.8
Total	11.9	17.1	21.8	25.8	28.8	31.2	11.9	17.1	21.9	26.5	31.5	36.2
Average												
0-14	7.0	16.5	20.1	20.9	20.3	20.0	7.0	16.5	20.3	23.5	29.3	33.6
15-39	12.6	15.1	19.1	24.2	28.7	29.4	12.6	15.1	19.0	24.2	29.1	32.5
40-64	12.4	15.4	18.6	21.2	23.5	28.3	12.4	15.4	18.6	21.1	23.5	28.3
65+	9.8	11.3	13.1	15.3	18.1	20.8	9.8	11.3	13.1	15.3	18.1	20.8
Total	11.2	14.7	17.7	20.4	22.9	25.1	11.2	14.7	17.7	20.8	24.3	27.9

Table 5 bis:
projected share (in %) of persons with foreign background
in the total population in selected years by country and broad age group
according to model 3 and 4

	Model 3						Model 4					
	2011	2021	2031	2041	2051	2061	2011	2021	2031	2041	2051	2061
EU												
0-14	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	8.6	23.6	26.8	29.8	38.2	42.8
15-39	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	18.4	18.8	23.1	30.4	36.5	39.9
40-64	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	17.2	21.0	24.9	26.4	27.5	33.7
65+	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.0	13.3	17.1	20.5	24.3	26.9
Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	14.8	19.2	22.8	26.4	30.5	34.6
BE												
0-14	11.8	32.2	37.8	44.2	56.4	62.2	13.9	38.3	41.7	46.9	60.6	65.6
15-39	17.2	19.8	28.1	38.6	47.3	53.5	23.0	22.9	31.1	42.6	51.2	56.5
40-64	16.6	21.3	26.2	28.7	31.7	41.3	23.2	27.9	32.3	32.7	34.2	44.6
65+	11.7	14.5	17.2	20.9	25.4	28.7	13.5	19.0	23.3	27.4	31.7	33.9
Total	15.2	21.3	26.6	32.1	38.4	44.7	19.9	26.3	31.4	36.5	42.6	48.4
BG												
0-14	0.8	3.7	7.1	10.8	15.6	20.9	2.9	11.0	12.2	16.0	23.5	28.0
15-39	0.9	2.7	4.8	7.8	12.1	16.3	5.8	5.8	8.3	13.0	18.0	21.8
40-64	0.6	0.9	1.7	3.4	5.8	9.1	6.0	6.4	7.1	7.5	8.8	13.5
65+	0.5	0.4	0.5	0.7	1.3	2.6	1.6	4.3	5.6	6.1	6.8	7.5
Total	0.7	1.7	2.9	4.7	7.2	10.0	4.7	6.4	7.7	9.6	12.2	15.1
CZ												
0-14	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.9	13.4	17.5	20.8	27.7	33.0
15-39	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	11.0	13.0	15.7	21.4	27.6	31.5
40-64	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	11.0	14.2	17.3	19.8	22.3	27.2
65+	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	6.6	9.1	11.8	14.4	17.1	19.7
Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.3	12.7	15.6	18.9	22.7	26.5
DK												
0-14	6.6	19.3	24.2	26.4	34.8	40.1	7.6	23.4	26.9	27.7	37.7	42.8
15-39	14.6	18.2	22.2	29.7	35.4	38.6	19.3	20.5	24.0	32.5	37.9	40.4
40-64	9.7	13.5	20.0	24.5	26.7	33.0	15.1	19.0	25.3	27.9	28.6	35.2
65+	4.7	6.5	9.4	12.5	17.7	23.2	5.9	10.2	14.4	18.0	23.1	27.7
Total	9.8	14.5	18.9	23.4	28.4	33.3	13.5	18.4	22.6	26.7	31.5	36.1
DE												
0-14	7.4	24.9	30.4	36.8	48.5	55.2	8.7	29.7	33.5	38.7	51.6	58.0
15-39	18.1	19.3	26.7	36.7	45.1	51.6	23.3	22.2	28.8	39.7	48.1	53.7
40-64	15.5	19.9	25.8	29.5	33.0	42.3	21.4	25.7	31.5	33.3	35.2	44.6
65+	8.3	12.1	15.2	19.1	24.2	28.8	9.4	15.6	20.5	24.9	30.0	33.8
Total	13.7	18.5	23.6	29.0	35.2	41.9	17.8	22.9	27.9	33.0	38.8	45.1
EE												
0-14	2.7	5.7	6.3	8.6	11.3	13.4	3.9	9.9	9.2	10.6	14.7	16.2
15-39	5.1	4.6	6.6	8.6	11.1	13.5	10.2	7.8	8.9	11.6	14.2	15.9
40-64	23.1	14.7	7.7	6.1	7.1	10.1	29.3	20.6	13.3	10.3	9.7	12.8
65+	34.8	31.6	26.4	18.1	10.8	7.0	36.7	36.1	32.2	24.1	16.6	12.0
Total	15.6	13.2	11.3	10.1	9.8	10.5	19.9	17.7	15.6	14.1	13.6	13.8

	2011	2021	2031	2041	2051	2061	2011	2021	2031	2041	2051	2061
IE												
0-14	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	18.3	33.4	38.4	39.1	44.5	50.4
15-39	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	27.3	32.1	35.3	40.3	45.8	48.6
40-64	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	22.4	30.7	36.7	39.4	40.1	43.8
65+	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	11.9	17.1	22.3	28.7	34.6	39.1
Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	22.3	29.9	34.2	37.5	41.3	45.1
EL												
0-14	10.8	23.9	30.8	37.3	45.3	51.4	13.5	30.2	35.0	40.6	49.7	55.1
15-39	17.4	20.2	25.7	33.2	41.6	46.9	24.5	24.3	29.1	37.4	45.7	50.1
40-64	12.6	18.3	23.3	27.6	30.9	37.3	19.8	25.9	30.6	32.8	33.9	40.7
65+	4.7	7.1	11.9	17.2	22.2	26.4	6.2	11.4	18.3	24.5	29.7	32.8
Total	12.4	17.2	22.1	27.3	32.8	38.1	17.8	23.0	27.8	32.6	37.7	42.5
ES												
0-14	15.1	32.2	41.1	44.6	50.6	58.2	16.8	36.7	44.2	46.7	53.5	61.0
15-39	23.3	30.1	34.3	40.8	49.9	54.7	28.9	33.0	36.5	43.8	52.9	56.8
40-64	14.3	23.1	30.8	36.9	39.1	44.4	20.2	28.9	36.4	40.8	41.2	46.8
65+	6.8	11.6	16.2	22.1	28.9	35.2	8.0	15.3	21.4	27.7	34.6	40.0
Total	16.3	24.4	29.8	34.8	40.1	45.8	20.7	28.8	34.1	38.7	43.7	49.0
FX												
0-14	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7.0	17.3	16.4	16.6	22.8	24.0
15-39	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	15.8	12.9	15.1	19.4	21.6	22.4
40-64	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	21.2	21.3	20.9	18.8	17.3	21.0
65+	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	15.1	19.3	21.5	21.8	21.9	20.7
Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	15.8	17.6	18.5	19.3	20.7	21.8
IT												
0-14	7.5	22.5	29.8	35.9	45.4	52.2	9.4	28.5	33.4	38.7	49.4	55.5
15-39	12.3	16.5	23.2	31.8	40.2	45.5	17.8	19.4	25.9	35.4	43.8	48.2
40-64	8.7	14.4	20.4	26.0	30.0	36.5	14.7	20.5	26.0	29.6	32.2	39.2
65+	2.6	4.4	8.4	13.5	18.6	24.3	3.7	7.9	13.7	19.4	24.4	29.0
Total	8.4	13.7	19.1	24.8	30.7	36.6	12.7	18.4	23.6	29.0	34.6	40.1
CY												
0-14	16.5	40.0	48.2	56.8	66.1	71.3	18.7	45.3	51.4	58.6	68.9	73.5
15-39	24.5	33.4	44.5	54.9	62.8	68.8	31.0	36.9	47.0	58.0	65.5	70.7
40-64	17.2	28.1	38.5	45.0	52.1	61.2	24.1	35.0	44.8	49.1	54.3	63.6
65+	9.4	13.3	19.0	27.7	36.9	44.1	11.4	18.0	25.2	34.4	43.4	49.2
Total	18.9	29.8	38.4	46.3	53.8	60.4	24.2	34.9	43.0	50.3	57.3	63.3
LV												
0-14	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.8	8.9	7.2	7.7	11.1	12.0
15-39	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.8	6.7	6.6	8.8	10.4	11.2
40-64	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	28.1	19.6	12.3	8.6	7.0	9.1
65+	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	33.1	33.6	30.4	22.8	15.7	10.7
Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	19.1	16.5	14.2	12.2	11.0	10.5
LT												
0-14	3.2	4.9	7.4	12.9	16.8	22.1	4.5	9.5	10.6	15.2	20.9	25.4
15-39	3.0	4.3	7.3	10.7	14.6	21.2	7.9	7.5	9.8	14.2	18.2	24.1
40-64	10.2	8.8	7.3	8.4	11.9	16.6	16.0	14.4	12.8	12.4	14.6	19.5
65+	10.8	12.4	13.2	11.6	10.1	9.7	12.1	16.3	18.6	17.2	15.6	14.6
Total	6.7	7.4	8.6	10.4	12.7	16.0	10.8	11.8	13.0	14.5	16.6	19.6

	2011	2021	2031	2041	2051	2061	2011	2021	2031	2041	2051	2061
LU												
0-14	24.2	51.7	57.4	60.9	73.7	79.8	25.6	55.8	59.8	62.2	75.9	81.8
15-39	43.0	44.5	53.2	64.5	72.4	76.0	48.1	46.9	55.0	66.9	74.5	77.4
40-64	41.1	50.5	59.0	62.3	63.0	72.4	47.2	56.3	64.1	65.3	64.6	74.2
65+	23.8	34.3	42.4	49.9	59.1	64.0	25.1	38.4	47.9	55.7	64.6	68.2
Total	36.2	46.1	53.6	60.0	66.7	72.7	40.5	50.2	57.3	63.1	69.5	75.0
HU												
0-14	1.8	6.7	9.8	12.9	17.1	20.5	2.9	10.7	12.4	14.5	19.8	22.9
15-39	3.2	5.6	8.4	12.2	16.3	19.4	8.2	8.6	10.4	14.9	18.9	21.3
40-64	3.2	4.7	6.6	8.9	11.9	15.5	8.9	10.3	12.0	12.7	14.0	17.7
65+	4.7	4.1	4.5	5.5	6.8	8.9	6.2	8.1	9.6	11.0	12.3	13.6
Total	3.2	5.2	7.1	9.4	12.2	15.0	7.3	9.4	11.1	13.1	15.5	17.9
MT												
0-14	4.8	11.4	14.1	17.7	22.5	25.8	6.7	16.5	17.5	20.1	26.0	28.8
15-39	9.3	10.8	14.3	18.6	22.6	26.2	15.9	14.7	17.1	22.1	26.0	28.8
40-64	6.9	11.1	14.5	15.5	18.2	22.6	13.8	18.5	21.7	20.4	21.1	25.4
65+	5.4	5.6	6.9	10.7	13.8	15.8	7.9	10.7	13.3	18.0	21.1	21.9
Total	7.2	9.9	12.5	15.3	18.6	21.7	12.6	15.4	17.8	20.2	23.0	25.6
NL												
0-14	6.3	18.2	19.9	21.8	30.0	34.0	7.6	23.3	23.3	23.8	33.7	37.4
15-39	14.9	14.2	18.0	24.3	28.8	31.5	20.3	17.0	20.4	27.7	32.1	33.9
40-64	13.0	16.4	20.0	20.8	21.1	26.8	19.1	22.7	26.1	24.7	23.4	29.6
65+	8.0	9.5	11.8	14.8	18.3	20.3	9.4	13.8	17.5	21.1	24.7	25.7
Total	11.6	14.6	17.4	20.3	23.9	27.4	16.0	19.3	21.9	24.5	27.7	30.9
AT												
0-14	12.4	33.6	40.8	49.1	61.0	67.4	13.8	38.4	43.7	50.9	63.8	69.6
15-39	20.8	25.2	34.6	46.5	55.8	62.6	26.0	28.0	36.7	49.3	58.5	64.4
40-64	17.6	22.5	29.9	35.1	40.4	51.3	23.5	28.3	35.4	38.6	42.4	53.5
65+	12.4	15.3	17.7	21.8	27.7	33.4	13.6	19.1	23.0	27.6	33.5	38.2
Total	17.0	23.5	29.9	36.5	43.9	51.4	21.1	27.8	34.0	40.3	47.2	54.2
PL												
0-14	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.2	5.5	5.1	5.0	8.2	9.5
15-39	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.4	4.5	4.4	5.9	7.9	8.8
40-64	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7.2	6.4	6.3	5.6	5.4	6.9
65+	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	11.2	9.3	7.8	6.9	6.4	6.3
Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	6.3	6.2	6.0	5.9	6.7	7.4
PT												
0-14	7.9	23.6	30.7	37.0	46.7	53.3	9.9	29.8	34.7	39.6	50.7	56.7
15-39	13.0	16.2	23.6	32.4	41.1	46.5	19.0	19.3	26.3	36.2	44.8	49.3
40-64	8.5	14.8	20.1	24.1	28.5	35.9	14.8	21.3	26.2	28.2	30.9	38.8
65+	2.9	4.9	8.7	14.2	19.0	23.6	4.1	8.7	14.2	20.5	25.2	28.7
Total	8.9	14.5	19.8	25.3	31.3	37.0	13.5	19.4	24.5	29.7	35.3	40.7
RO												
0-14	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.7	5.1	4.3	5.2	8.2	9.3
15-39	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.3	4.1	3.7	6.0	7.8	8.7
40-64	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.7	5.8	6.1	5.4	5.3	6.9
65+	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.7	4.7	5.6	5.9	6.2	6.1
Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4.5	5.0	5.1	5.7	6.5	7.3

	2011	2021	2031	2041	2051	2061	2011	2021	2031	2041	2051	2061
SI												
0-14	6.3	15.8	22.1	29.0	36.2	43.1	7.6	20.0	24.8	30.7	39.2	45.6
15-39	10.6	14.0	19.8	26.3	34.0	40.8	15.6	16.9	21.9	29.1	36.7	42.9
40-64	17.4	17.6	17.5	20.3	25.5	32.0	23.2	23.2	22.9	24.2	27.7	34.4
65+	12.0	16.1	19.1	19.0	18.6	20.2	13.2	20.0	24.5	24.7	24.2	25.0
Total	12.7	16.0	19.1	22.5	26.8	31.7	16.8	20.3	23.3	26.4	30.3	34.8
SK												
0-14	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.3	7.3	6.8	7.2	11.3	13.0
15-39	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7.7	6.0	5.8	8.2	10.6	11.7
40-64	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	12.4	10.9	10.4	8.8	8.5	10.4
65+	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	10.4	13.2	13.1	12.4	11.4	10.6
Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	8.8	9.2	9.3	9.4	10.2	11.1
FI												
0-14	4.1	10.7	12.2	13.9	18.0	20.4	5.5	15.3	15.3	16.1	21.7	23.7
15-39	7.4	8.5	10.8	14.1	16.8	18.9	12.3	11.3	13.1	17.4	20.1	21.5
40-64	4.0	8.2	11.9	12.8	13.5	16.5	9.6	13.8	17.4	16.6	15.7	19.3
65+	1.5	2.4	4.1	7.2	10.9	13.0	2.6	6.2	9.1	12.7	16.4	17.7
Total	4.6	7.4	9.6	11.9	14.4	16.8	8.5	11.6	13.7	15.7	18.1	20.2
SE												
0-14	10.7	26.0	28.3	31.8	40.2	43.9	12.0	30.3	31.2	33.7	43.3	46.8
15-39	17.6	19.9	24.8	31.7	37.0	40.6	22.3	22.4	26.9	34.7	39.9	42.8
40-64	17.1	21.7	26.0	27.8	28.2	35.6	22.6	27.1	31.0	31.1	30.2	38.0
65+	11.8	14.1	16.9	20.0	25.2	26.9	13.0	17.8	21.9	25.4	30.4	31.3
Total	15.2	20.3	24.0	27.7	32.0	36.1	19.0	24.3	27.8	31.2	35.3	39.0
UK												
0-14	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.0	25.1	29.6	32.0	39.9	44.6
15-39	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	23.2	24.5	28.4	35.4	41.0	43.6
40-64	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	17.6	22.9	29.9	33.3	33.6	39.4
65+	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.5	12.8	15.9	19.6	26.6	31.4
Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	16.6	22.0	26.4	30.7	35.3	39.5
Average												
0-14	8.5	21.4	26.2	31.0	38.7	44.0	8.9	22.9	25.4	28.3	36.2	40.4
15-39	14.5	17.3	22.7	29.7	36.1	40.7	18.0	18.1	21.9	28.6	34.1	37.3
40-64	13.6	17.4	21.4	24.4	27.3	33.7	18.4	21.4	24.3	25.1	26.0	31.7
65+	9.3	11.6	14.2	17.2	20.8	24.0	11.3	15.4	18.6	21.2	24.0	25.7
Total	12.3	16.8	20.8	24.8	29.4	34.1	15.6	19.5	22.5	25.5	29.1	32.6

Table 6:
projected demographic balance 2008–2061 of the population with foreign background
according to model 1 and model 2 (in thousand)

	Common	Model 1				Model 2			
	Net migration 2008-2060	Population on 1.1.2008	Natural change 2008-2060	Total change 2008-2060	Population on 1.1.2061	Population on 1.1.2008	Natural change 2008-2060	Total change 2008-2060	Population on 1.1.2061
EU	78 737	45 446	9 494	88 231	133 682	45 446	25 403	104 140	149 587
BE	2 296	1 395	205	2 501	3 896	1 395	750	3 046	4 441
BG	276	40	87	363	404	40	116	393	433
CZ	1 534	417	104	1 637	2 055	417	253	1 787	2 204
DK	932	461	366	1 298	1 759	461	631	1 563	2 024
DE	15 317	10 123	265	15 583	25 706	10 123	2 740	18 057	28 181
EE	50	220	-163	-113	107	220	-150	-99	120
IE	1 303	613	504	1 807	2 420	613	903	2 207	2 820
EL	2 099	1 231	207	2 306	3 537	1 231	547	2 646	3 877
ES	13 028	5 737	1 480	14 508	20 246	5 737	3 614	16 642	22 380
FX	5 516	6 960	-1 068	4 448	11 408	6 960	934	6 449	13 410
IT	11 856	4 027	1 595	13 450	17 478	4 027	3 004	14 859	18 887
CY	469	119	119	588	707	119	182	651	770
LV	35	360	-292	-256	103	360	-278	-242	117
LT	305	221	-158	147	372	221	-131	175	396
LU	279	159	39	318	476	159	97	375	534
MT	53	26	3	56	82	26	11	64	90
HU	965	279	-11	954	1 232	279	76	1 040	1 319
AT	2 289	1 248	346	2 635	3 883	1 248	717	3 006	4 255
NL	1 724	1 762	363	2 087	3 850	1 762	975	2 699	4 461
PL	754	862	-458	296	1 159	862	-393	361	1 223
PT	2 297	762	308	2 604	3 366	762	585	2 882	3 644
RO	462	148	47	509	657	148	79	541	689
SI	349	235	-71	277	513	235	-34	315	550
SK	258	244	-174	84	329	244	-151	107	351
FI	460	201	100	561	762	201	209	670	871
SE	1 697	1 228	282	1 979	3 206	1 228	776	2 472	3 700
UK	12 135	6 366	5 469	17 604	23 970	6 366	9 340	21 475	27 841

Table 6 bis:
projected demographic balance 2008–2061 of the population with foreign background
according to model 3 and model 4 (in thousand)

	Common	Model 3			Model 4				
	Net migration 2008-2060	Population on 1.1.2008	Natural change 2008-2060	Total change 2008-2060	Population on 1.1.2061	Population on 1.1.2008	Natural change 2008-2060	Total change 2008-2060	Population on 1.1.2061
EU	78 737	45 446	n.a.	n.a.	n.a.	66 155	29 599	108 336	174 491
BE	2 296	1 395	1 809	4 105	5 500	1 882	1 778	4 075	5 956
BG	276	40	227	503	544	327	221	497	824
CZ	1 534	417	n.a.	n.a.	n.a.	869	103	1 636	2 506
DK	932	461	581	1 513	1 974	657	548	1 480	2 138
DE	15 317	10 123	4 063	19 381	29 504	13 361	3 068	18 385	31 746
EE	50	220	-152	-102	118	276	-170	-120	156
IE	1 303	613	n.a.	n.a.	n.a.	821	929	2 232	3 053
EL	2 099	1 231	894	2 993	4 224	1 824	780	2 879	4 704
ES	13 028	5 737	4 931	17 959	23 696	7 720	4 579	17 607	25 327
FX	5 516	6 960	n.a.	n.a.	n.a.	9 406	755	6 270	15 677
IT	11 856	4 027	5 780	17 636	21 663	6 496	5 371	17 226	23 722
CY	469	119	212	681	800	162	209	678	839
LV	35	360	n.a.	n.a.	n.a.	450	-310	-275	176
LT	305	221	-122	183	404	355	-165	141	496
LU	279	159	97	376	534	179	94	372	551
MT	53	26	9	61	88	48	3	55	103
HU	965	279	59	1 023	1 302	679	-88	877	1 555
AT	2 289	1 248	1 103	3 392	4 641	1 586	1 023	3 311	4 897
NL	1 724	1 762	1 061	2 785	4 547	2 451	951	2 675	5 126
PL	754	862	n.a.	n.a.	n.a.	2 486	-948	-194	2 292
PT	2 297	762	1 104	3 401	4 163	1 234	1 039	3 336	4 570
RO	462	148	n.a.	n.a.	n.a.	957	-191	272	1 229
SI	349	235	-24	325	560	317	-51	298	615
SK	258	244	n.a.	n.a.	n.a.	471	-229	29	500
FI	460	201	246	707	908	400	228	688	1 088
SE	1 697	1 228	1 006	2 703	3 930	1 560	994	2 690	4 251
UK	12 135	6 366	n.a.	n.a.	n.a.	9 181	9 080	21 215	30 396