

## ASSIMILATION OF IMMIGRANTS IN EUROPE: A MULTIDIMENSIONAL PROCESS

*The first decade of the century was marked by increased migration inflows into numerous European countries. The ability of immigrants to integrate, as well as the ability of receiving countries to promote the equality of chances, has been at heart of vivid debates. However, in general, we lack statistical indicators that would allow understanding the degree of assimilation of immigrants. In this Letter, we compute the indices of similarity between immigrants and native-born for a number of European destination countries, distinguishing between origin countries and several generations of immigrants. Obtained measures suggest a multi-dimensional character of the assimilation processes, which vary along economic, cultural, and civic characteristics of individuals.*

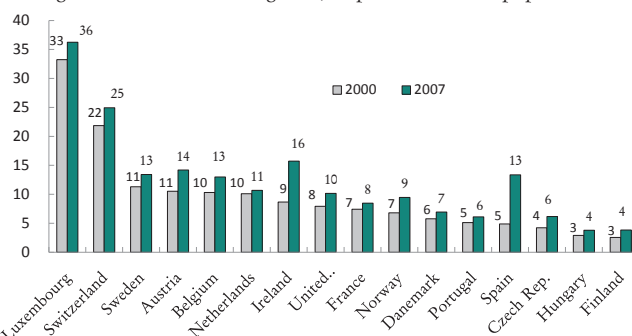
European countries are living through an especially vivid political and social polemics about immigrants' assimilation and integration into receiving societies. In 2009, in France, Switzerland, and Belgium, immigrants' integration was subject of numerous nation-wide debates, ranging from the questions of wearing an Islamic veil to what constitutes national identity. Such debates were partly driven by the growing number of immigrants in some of the European countries in the beginning of the century. For example, between 2000 and 2007, the number of first-generation immigrants increased from 9,6% to 12,3% of the European population, although this increase varied largely from country to country (Figure 1).

### Index of Similarity between Immigrants and Native-born

One of the ways to understand the processes underlying successful immigration is to obtain quantitative information about the degree of actual immigrants' assimilation.<sup>1</sup> This is the aim of this Letter, which computes indices of similarity between immigrants and native-born for several European destination countries, distinguishing between origin countries and immigrants' generations. The methodology is borrowed from Vigdor (2008), who computes similarity indices for various groups of immigrants in the US.<sup>2</sup> The idea of the index is to measure how easy it is to infer whether an individual is not a native-born,

observing his or her socio-economic characteristics. For example, if one knows that a person does not speak a country's language at home, and that this same person is employed in a low-skilled position, one may easily guess that this individual is foreign-born. Thus, technically, computing the index amounts to comparing the characteristics (such as family status, occupied position, income, language spoken at home, participation to civic life, etc) of immigrants to that of the native-born, and calculating a one-dimension measure of the differences in these characteristics between the two population groups (see Box 1 for details). The index ranges from 0 to 1; 1 implying no difference in the distribution of characteristics between immigrants and native-born, and hence a perfect similarity; while 0 suggesting a perfect dissimilarity between two population groups.

Figure 1 – Stock of immigrants, as percent of total population



Source: OECD Statistics Portal\* (sept. 2010).

\* OECD Statistics Portal, 2010. Available online at: [www.oecd.org](http://www.oecd.org). Accessed: Sept. 2010.

1. For more details, please refer to M. Aleksynska & Y. Algan, Y. (2010), Economic and Cultural Assimilation and Integration of Immigrants in Europe, *CEPII Working Paper*, n.o 2010-29.

2. J. Vidgor (2008), "Measuring Immigrant Assimilation in the United States", Civic Report: Manhattan Institute.

### Box 1 – Computation of the Similarity Index

The similarity index is obtained by comparing economic, cultural, and civic characteristics (denoted by  $x$ ) of immigrants and native-born, given their general characteristics (denoted by  $z$ ), such as age, gender, education, place of residence and duration of stay. It is computed using the following formula:

$$I = 2 \int \frac{1}{1 + \frac{f_1(x|z)}{f_0(x|z)}} f_1(x|z) dx$$

where  $f_0(x|z)$  is the density function of characteristics  $x$  among native-born, conditional on  $z$ ;  $f_1(x|z)$  is a similarly defined density function for immigrants. The formula for the index is based on the idea that if immigrants and native-born have the same distribution of characteristics  $x$  given  $z$ , the density functions of their characteristics should be identical; their ratio should equal one.

Steps to compute the index, proposed by Alan Manning\*:

1. Use a pooled sample of immigrants and native-born, do a probit regression of probability of being an immigrant on individual characteristics  $x$ , and also on general characteristics  $z$ ;
2. Obtain predicted values  $P_a(x, z)$  for each individual in the sample;
3. Estimate a probit model for being an immigrant conditional only on general characteristics  $z$ ;
4. Obtain predicted values  $P_b(z)$  for each individual in the sample;
5. For each individual, compute:

$$I' = \frac{f_1(x|z)}{f_0(x|z)} = \frac{P_a(x, z)}{(1 - P_a(x, z))} * \frac{(1 - P_b(z))}{P_b(z)}$$

6. Compute the similarity index,  $I$ , by averaging the value of  $2/(1 + I')$  across immigrants.

\* Y. Algan, A. Bisin, A. Manning, T. Verdier (Eds) (2011), Cultural and Economic Integration in Europe, Oxford University Press, *forthcoming* in 2011.

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The differences between immigrants and native-born by themselves should not necessarily be interpreted as a negative phenomenon. For example, it is rather desirable that immigrants and native-born of the same age, gender, level of education, and living in the same country, are similar along economic dimensions, such as in terms of incomes and occupied positions. In contrast, it is more of an open question whether immigrants should resemble native-born in cultural and social terms, such as, for instance, choosing which language to speak at home. In fact, in countries favoring cultural diversity and rights for self-expression, high and persisting cultural differences may signify the success, rather than failure, of integration, and may rather point to immigrants' freedom to exercise their differences, and potential acceptance by the native-born. Thus, the similarity index is not carrying the judgment about existing differences in terms of qualifying them as being good or bad, but simply states the existing differences.

To compute the aggregate similarity index, individual characteristics of immigrants and native-born may be grouped into the following broad categories: economic, cultural, and civic (see Box 2).

Similarity index can be constructed for these components separately, as well as for all of them grouped together. The nature of the similarity index is such that the more characteristics are included into its computation, the lower is its value. This is because finding similar individuals conditionally only on one characteristic is always easier than finding similar individuals conditionally on many characteristics. Thus, for comparability, the computation of economic, cultural and civic similarity indices are based on the same number of characteristics. At the same time, the composite index based on all available characteristics is not just an average of its components: being based on three different sets of information, it extends the information range on the basis of which the comparisons are made.

The aggregate similarity index and its components are computed using the European Social Survey (ESS)<sup>3</sup>, conducted biannually between 2002 and 2009. We retain information on 8683 first generation immigrants (defined as individuals born abroad), 2330 second generation immigrants (defined as individuals born in the country of current residence from foreign-born parents), 5160 individuals with one foreign-born parent, and 84636 native-born with both native-born parents in 14 European countries. About 40% of all first generation immigrants are coming from other developed countries, which broadly corresponds to the official statistics on immigrants obtained from country censuses (OECD).

### ■ Similarity between Immigrants and Native-born is Strong in Economic Terms; it is Weaker in Cultural and Civic Terms

Figure 2 presents the values of the composite similarity index for first generation immigrants across Europe, as well as its components, for the first decade of the century. The overall value of the composite index is 0,45 which means that on the basis of all observed characteristics, immigrants can easily be distinguished from the native-born in the majority of cases.

◆ The economic similarity index has the highest value: it indicates that differences in economic characteristics between immigrants and native-born are, on average, relatively small. They are mostly driven by higher unemployment probability and higher probability to occupy a low-skilled job by first generation immigrants as compared to native-born.

◆ The index of cultural similarity is also quite high, and equals 0,84. The main components driving this index are the differences

3. European Social Survey. Available online at : [www.europeansocialsurvey.org](http://www.europeansocialsurvey.org) . Accessed: September 2009.

### Box 2 – Variables behind Index Components

Economic component includes the probability of being inactive or unemployed, the probability to occupy a low-skilled or a high-skilled job, as well as earning a certain income.

Cultural component includes characteristics describing family arrangements, such as marital status and the age gap between members of the couple. It also includes the choice of language spoken at home (any official language of the country of residence, or other languages), and the degree of religiosity, measured by the frequency of praying.

Civic component includes citizenship status, participation to civic life (such as membership in trade unions, associations, or parties, taking part in lawful demonstrations or signing petitions), degree of satisfaction with democracy, general trust, and trust in the police.

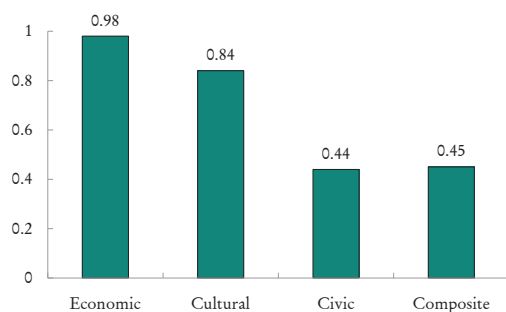
Composite index is the aggregate of these three components.

Of course, these three categories are not exhaustive. They may include also other individual characteristics, depending on the data availability and research interest.

between immigrants and native-born in language spoken at home and the degree of religiosity. Almost 17% of immigrants name a language other than an official language of the country as the language spoken at home. Only 27% of immigrants never pray, versus 40% of the native-born; while 30% of immigrants pray daily, regardless their religious affiliation, versus 19% of natives. In contrast, family arrangements of immigrants are largely similar to those of the native-born and have little overall impact on the value of the similarity index.

◆ The index of civic similarity is substantially lower than economic and cultural indices, and equals 0,44. This means that immigrants can be distinguished from native-born almost exclusively on the basis of information about civic outcomes. Among these characteristics, not being a citizen is the key identification factor, as only 47% of all first generation immigrants in the sample are also naturalized citizens. However, there also other, *a priori* less obvious factors, that determine the value of this index. One immigrant out of six, in contrast to one native out of four, is a member of an association or of a political party. In contrast, rather unexpectedly, trust in the police and satisfaction with democracy are higher among first-generation immigrants than among native-born.

Figure 2 – Assimilation index: first generation immigrants, Europe, 2002-2009

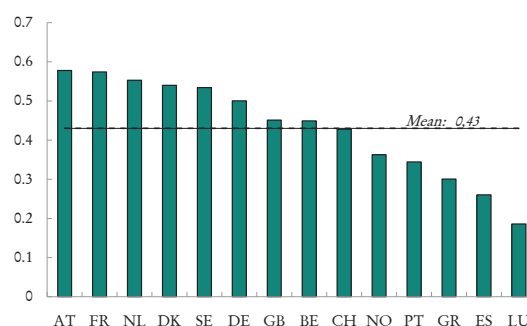


Source: ESS, own calculation. For methodology details, see Box 1 and 2.

## ■ Important Differences across Destination Countries, Generations, and Origins

The average composite similarity index of first generation immigrants hinders important variation across European destination countries (Figure 3). It is the highest for Austria and France, countries which historically have been important immigration destinations hosting large numbers of long-term immigrants. The lowest values are for Luxembourg, which is due to its migration specifics, and for Spain, Greece, and Portugal, which are relatively young immigration countries, and the majority of their immigrants have a relatively low duration of residence.

Figure 3 – Composite index of similarity, by destination country



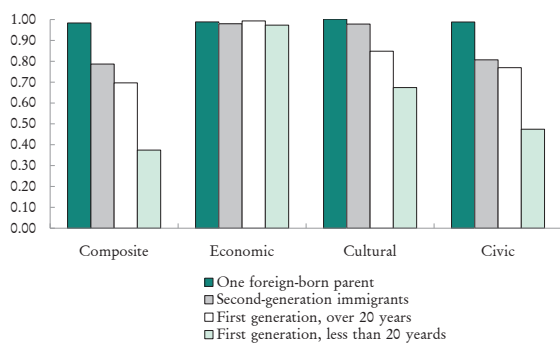
Source: ESS, own calculation.

The importance of the length of residence is confirmed in Figure 4, which distinguishes sub-types of immigrants by duration of residence and by generation. In fact, the low values of the composite index are attributed to immigrants with less than 20 years at destination. A spectacular assimilation progress is observed, as the composite similarity index of first generation immigrants with more than 20 years at destination is twice as high as the index of immigrants with shorter residency.<sup>4</sup> This progress is driven mainly by citizenship acquisition and growing civic participation, despite declining general trust, or a “disillusion effect” (civic component). It is also driven by progress in language and decline in religiosity (cultural component), as well as improvement of income (economic component).

Figure 4 also contrasts first-generation immigrants with second-generation immigrants and with individuals who have only one foreign-born parent. In general, and as expected, second generation immigrants are more similar to native-born than first generation immigrants, suggesting that the assimilation across generations is further taking place. In particular, the probability to occupy a high-skilled position is significantly higher for second-generation immigrants than for first-generation immigrants. Also, the religious practice of second generation immigrants is much more similar to the religious practice of native-born than of first-generation immigrants.

4. It is important to distinguish between assimilation and cohort effects in this setting: immigrants who arrived 20 years ago may not only have a longer experience at destination, but also may be intrinsically different from more recent immigrants. To mitigate the cohort effect, we control for the year of entry, as well as for the continent of origin. Thus, most of the resulting effect can be interpreted as assimilation.

Figure 4 – Composite index, by individual's type

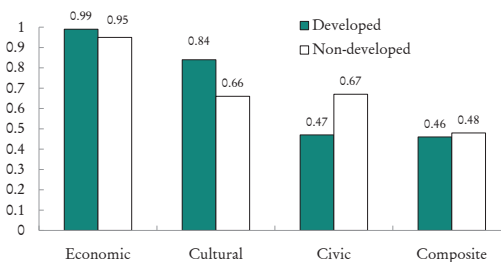


Source: ESS, own calculation.

At the same time, a concern remains to why, given the same birth country and language of schooling (although maybe not the same schools), the similarity index is actually quite low for the second generation immigrants. The answer is partly provided by the values of each component of the index: they are again the lowest for civic outcomes, and naturalization remains among one of leading reasons for this discrepancy. In fact, in several countries, the proportion of non-naturalized second generation immigrants is high. This concerns Luxembourg (55%), Switzerland (36%), and Germany (25%). In addition, there is also a divergence, rather than a convergence, along some other characteristics for second-generation immigrants. For example, unemployment is highly persisting, while trust in the police is actually lower than trust of both natives and first generation immigrants. Widening unemployment and distrust among second generation immigrants are coupled with an especially aggravated feeling of perceived discrimination. Since the latter reflects immigrants' experiences with the attitudes and behaviors of native-born in the receiving societies, this finding suggests that immigrants' assimilation is interdependent with the attitudes and acceptance of immigrants on the part of the native-born. Successful integration is a two-way process in which both immigrants and native-born participate. In contrast, individuals born in European countries, but who have one foreign-born parent, are almost identical in their economic, social, and cultural characteristics to the native-born with both native-born parents.

Lastly, Figure 5 shows that the composite index for subgroups of first generation immigrants from developed countries (such as other EU-15 countries, Switzerland, Norway, USA, Canada, Australia, or Japan) and non-developed countries (all other) is very similar, and that, contrary to popular perceptions, immigrants from non-developed countries are not necessarily less assimilated. While the values of both economic and cultural similarity index are higher for immigrants from developed countries, the civic component is substantially higher for immigrants from non-developed countries. If we further disentangle non-developed countries by regions (Sub-Saharan Africa, Latin America, Asia, Central and Eastern Europe, and Middle East and North African), we find that, in economic terms, the greatest similarity vis-à-vis natives is observed among Africans and Latin-Americans. In cultural terms, it is Latin-Americans and Central and Eastern Europeans who have the highest indicators. In contrast, immigrants from Asia, MENA, and Africa have the highest similarity to natives in civic terms.

Figure 5 – Composite index of similarity, by origin



Source: ESS, own calculation.

Being a complex process, assimilation along one dimension is not necessarily a pre-condition for assimilation on another dimension. Successful integration policies should take this multidimensionality into account.

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