

3.3 DETERMINANTS OF THE CULTURAL INTEGRATION OF IMMIGRANTS

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Introduction

The cultural integration (assimilation) of immigrants is crucial for the evaluation of the economic and social effects of immigration. *Economic assimilation* is the phenomenon where immigrants fit into the labor market of the host country and find jobs that suit their skills and qualifications. This is usually the end of a process, whose speed and completion has been examined in many studies.¹

Parallel and closely related to labor market integration is the *cultural assimilation* of immigrants. This includes the learning of the language and acquiring the norms of the host country, which helps immigrants not only to get ahead more easily on the labor market but also in their social interactions. Cultural assimilation is an important factor in the labor market and economic integration of immigrants (Borjas, 2013, and Chiswick–Miller, 2015), but it can also have significant welfare consequences for both immigrants (Angelini et al., 2015) and natives (Lazear, 1999 and Kónya, 2007) on its own.

Imagined or real differences in values, cultural frictions and actual costs of integration that originate from language differences have a significant impact on how immigrants are perceived, and are ultimately important determinants of immigration policy. Studying cultural assimilation is harder and more complex than analyzing economic assimilation. Because of the various aspects, there is room for both methods based on qualitative information, interviews, case studies, and also statistical methods using standardized databases.

In this section, we examine the individual and group level determinants of language learning, which is perhaps the most important element of cultural assimilation. As a starting point, we can mention Kónya (2007), which analyzed assimilation in a theoretical model, and documented empirical results – using English knowledge as a measure of assimilation – for the United States. The model in Kónya (2007) – which derives results for integration – weighs the costs and benefits of cultural assimilation. The model’s main mechanism is that since cultural interaction has increasing returns to scale, larger immigrant groups assimilate less.

On the other hand, the immigrant composition of the host country depends on the attributes of the sending and receiving countries, such as geographical distance, relative development or common history. Therefore, cultural assimilation can indirectly – through group size – be explained by country characteristics. Besides these, individual attributes are also important, like education, age or time spent in the host country. In this study, we empirically examine the impact of individual and group characteristics on cultural integration.

¹ Duleep (2015) gives a general overview of economic assimilation. Two classic articles in the United States are Chiswick (1978) and Borjas (1987). Eckstein–Weiss (2004) studies the integration of immigrants from the Soviet Union into the Israeli labor market. Lemos (2013) looks at the question in the United Kingdom.

Similar to *Kónya* (2007), we analyze a somewhat narrow, but well-documented measure of cultural assimilation, which is the language skill of immigrants. How well an immigrant speaks the language of the host country is perhaps the most important indicator of integration. It is also likely that language learning is highly correlated with other indicators of cultural assimilation. A great advantage of the measure is that it is relatively easy to observe, and can be found one way or another in many international databases.

Among the available databases, we use the OECD Programme for International Assessment of Adult Competencies (PIAAC) survey, which was conducted between 2008 and 2013. The PIAAC database contains representative samples for the age group 16–65 in the 23 participating countries, where the sample size is between 5 and 8 thousand individuals. Out of the full sample of 152 thousand, we use those 5–6 thousand persons who are first generation immigrants in Europe and came from an origin country where the official language is different from that of the host country. The data has information on language skills, and we also know the immigrants' country of origin, the time of arrival and many other individual characteristics. To measure language skills, we use a measure that asks immigrants for the language they use at home. We consider immigrants "strongly assimilated" if they – as non-native speakers – switched to the language of the host country. Given our measure, we concentrate on the immigrant group whose native tongue is different from the official language of the host country so that acquiring the latter is the result of a conscious assimilation decision.

An issue with our definition of strong assimilation is that in the control group there are immigrants who use their native tongue at home, but not in their social interactions. These people should also be considered as assimilated, but unfortunately, we cannot identify them in our data because the PIAAC does not ask direct questions about language proficiency. Due to the heterogeneity of the control group we are likely to underestimate the impact of language learning. In 2017, we will have access to the ad-hoc immigrant module of the European Labor Force Survey (EU-LFS), which was recorded in 2014 and asks directly about language proficiency. It is important to emphasize, however, that because our estimates are lower bounds, whenever we find a significant effect these can be considered quite robust.

Our study is closely related to two recent publications that document various aspects on the cultural assimilation of immigrants. The *OECD/EU* (2015) book presents detailed information on immigrants into OECD and EU countries. Besides measures on the labor market, family, religion and political issues, there is also information on language skills and reading competencies. *Algan et al.* (2012) is another detailed study of the assimilation of European immigrants. The chapters summarize the experience of individual countries, using mostly data from the EU-LFS. In addition, the last chapter of the books con-

tains cross-country comparisons using the *European Social Survey*. Compared to the descriptive statistics found in these two books, our multi-variable analysis tries to systematically identify the main determinants behind assimilation.

Basic statistics of immigrants

As a first step, we present some basic statistics from our database. Although PIAAC contains a few advanced, non-European host countries, we concentrate our analysis on Europe. The reasons for this are partly missing data (United States, Canada), and the small number of immigrants (Japan, South Korea). Also, readers of this volume are likely to be more interested in European results. Overall, we use data from 16 countries,² these are: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Ireland, Italy, Netherlands, Norway, Poland, Slovakia, Spain, Sweden, United Kingdom.

Figure 3.3.1 shows the population share and main categories of European immigrants by the host country. Based on the country of origin, we separate within European migration (“EU”) from immigration from outside Europe (“non-EU”). This classification should correspond to the cultural distance between countries/regions. Since in the subsequent analysis we measure cultural assimilation with acquired language proficiency, it is also important to know the fraction of immigrants whose native tongue is different from the official language of the host country.³ Therefore, the figure differentiates “native” and “non-native” immigrants. In our subsequent analysis, we naturally concentrate on the latter but show their weight among immigrants here.

Overall, we see the following on *Figure 3.3.1*.

1. There are huge differences among European countries in population share of immigrants. In Western European countries migrants typically make up 10–15% of the population, while in Eastern Europe the share is much lower.⁴
2. The majority of immigrants in European countries come from within the continent. Only France and Spain, with large former colonies, are significant exceptions.
3. The share of non-native immigrants is significant primarily in Western Europe. Roughly half of first-generation immigrants in our sample are non-native migrants. Based on the numbers, in Eastern Europe linguistic – and presumably cultural – assimilation is not an important problem.⁵

Table 3.3.1 shows summary statistics about non-native immigrants, native immigrants, and non-immigrants. In most attributes there are no major differences between native and non-native immigrants. The former arrived earlier into the host country and have marginally more education. Compared to non-immigrants, immigrants are somewhat younger, and their other attributes are practically the same as those born in the host country, although there are somewhat more immigrants with either uneducated or highly educated parents.

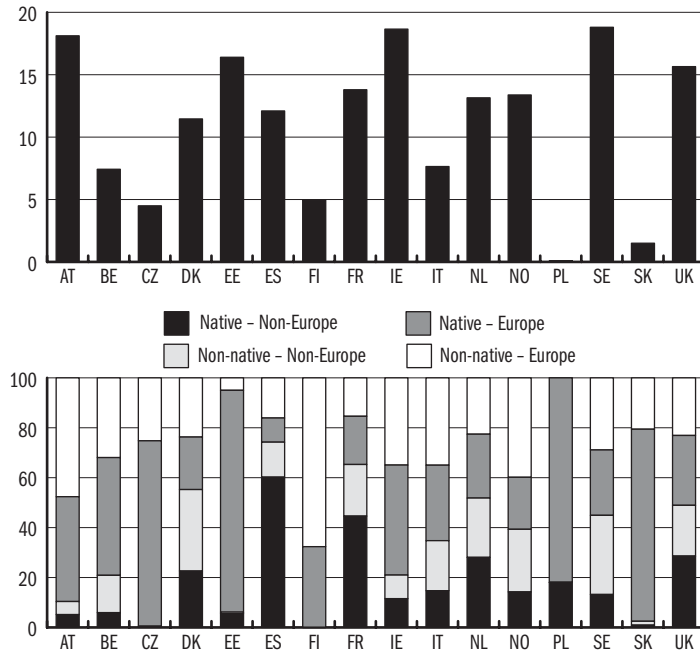
2 Unfortunately Hungary did not participate in the survey. For Germany the country of origin of immigrants is not available, so we cannot use German data either.

3 We define native immigrants as those whose mother tongue is the same as the language of the PIAAC competence survey, which is always the same as (an) official language of the host country. Therefore, whoever speaks an official but minority language is also a native immigrant. Such a group is, for example, the Russian language minority in Estonia.

4 In Estonia we see a large immigrant share because of the earlier inflow of the Russian speaking part of the population.

5 Although Hungary is not included in the PIAAC sample, we can find language information in the EU-LFS 2014 migration survey. Based on this, 79.5% of first generation immigrants in Hungary are native Hungarian speakers, and another 10.4% speaks the language fluently. Source: Eurostat, LFS, 2014 ad hoc module on immigration.

Figure 3.3.1: Share of first generation immigrants from and outside the EU in a given country by mother tongue



AT: Austria, BE: Belgium, CZ: Czech Republic, DK: Denmark, EE: Estonia, ES: Spain, FI: Finland, FR: France, IE: Ireland, IT: Italy, NL: Netherlands, NO: Norway, PL: Poland, SE: Sweden, SK: Slovakia, UK: United Kingdom.
 Note: Europe = European and North-American countries.

Table 3.3.1: Stylized facts

Variable	Non-native immigrant		Native Immigrant		Non-immigrant	
	mean	s.d.	mean	s.d.	mean	s.d.
Education (year)	11.5	3.8	12.0	3.3	11.9	3.3
Time since immigration	14.1	12.0	19.7	16.0	0.0	0.0
Both parents uneducated (%)	48	50	44	50	40	49
At least one parent with secondary education (%)	27	44	34	47	40	49
At least one parent with tertiary education (%)	25	43	22	42	20	40
Age	38.7	11.9	38.4	13.4	41.0	14.1
Speaks language of host country at home (%)	44	50	86	35	98	12
NEET (not in educ., emp. or training) (%)	22	41	18	39	20	40
Paid work in last 12 months (%)	70	46	73	44	73	45

Linguistic assimilation

As we have stressed already, we study the individual and group level determinants of strong assimilation, where a non-native immigrant fully switches to

the language of the host country. Based on the economics literature (for example *Kónya*, 2007) we assume that linguistic assimilation is – at least partially – the result of a rational decision. Since language learning is an investment, the immigrant weighs its costs and benefits. Costs presumably decline with general skills and human capital, and they increase with age. Benefits are expected to rise with time spent in the host country, and with general skills.

Based on *Kónya* (2007) we also expect that larger immigrant groups assimilate less. *Kónya* (2007) traces group size to the cost-benefit analysis of immigration: the bigger wealth differences between two countries, the easier to move, and the smaller cultural differences between the countries, the larger groups from the same sending country will be in the host country. *Kónya* (2007) verifies these hypotheses in the 5% sample of the United States Census.

Since our database containing European countries is relatively small and heterogeneous – with respect to not only the sending but also the host countries –, we cannot study country characteristics in detail. We examine two specifications that are less data intensive than what can be found in *Kónya* (2007). In the first specification, we study how the size of the immigrant group influences linguistic assimilation, besides individual characteristics. In the second specification we group countries of origin into regions, and see if there are differences in linguistic assimilation based on the sending region. In both cases, we control for individual characteristics and carry out the estimation with or without host country fixed effects.

Table 3.3.2 shows the results. Columns (1) and (2) use only *individual characteristics*. It is clear that immigrants who are more educated and who have been longer in the host country have a higher probability to switch to the language of the country. Older immigrants are less likely to assimilate, but point estimates are typically not significant, so we omit these from the table. The likelihood to assimilate is significantly higher for women, the difference being 8–9 percentage points. This could be due to mixed marriages, but we think of these also as strong assimilation. Our results are therefore consistent with economic intuition: the linguistic assimilation of immigrants is influenced by its costs and benefits.

From group level variables we first look at the *effect of group size*. Columns (3) and (4) indicate that larger groups are less likely to assimilate. Both the raw effect and the effect filtered from individual controls are negative and significant. The point estimate means that when the size of an immigrant group grows from 0 to 7.5 percent (the upper limit of the size of groups in the sample), linguistic assimilation falls by 3.75 percentage points. It is interesting, however, that after including a host country fixed effect, group size is no longer significant, and changes signs [column (5)]. This indicates a large degree of heterogeneity among European countries along this dimension. Unfortunately, we cannot carry out a more detailed analysis, due to our small sample.

Table 3.3.2: Determinants of linguistic assimilation

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	speak the language of the host country at home							
Education (years)	0.0123*** (0.00262)	0.0131*** (0.00230)		0.0133*** (0.00229)	0.0131*** (0.00228)		0.0118*** (0.00249)	0.0123*** (0.00232)
Years since immigration: 6-10	0.0890*** (0.0261)	0.0803*** (0.0255)		0.0854*** (0.0263)	0.0799*** (0.0256)		0.0910*** (0.0262)	0.0784*** (0.0249)
Years since immigration: 11-15	0.179*** (0.0241)	0.171*** (0.0248)		0.168*** (0.0256)	0.171*** (0.0247)		0.171*** (0.0207)	0.163*** (0.0203)
Years since immigration: 15+	0.351*** (0.0298)	0.351*** (0.0285)		0.341*** (0.0289)	0.350*** (0.0282)		0.366*** (0.0318)	0.359*** (0.0306)
Parents' education: at least one secondary	0.0256 (0.0210)	0.0353* (0.0194)		0.0254 (0.0206)	0.0354* (0.0193)		0.0346 (0.0249)	0.0326 (0.0212)
Parents' education: at least one tertiary	0.0200 (0.0231)	0.0340* (0.0185)		0.0232 (0.0218)	0.0353* (0.0183)		0.0190 (0.0252)	0.0283 (0.0194)
Woman	0.0870*** (0.0198)	0.0850*** (0.0185)		0.0860*** (0.0197)	0.0850*** (0.0185)		0.0869*** (0.0193)	0.0820*** (0.0185)
Size of immigrant group (% of population)			-0.00503** (0.00209)	-0.00443*** (0.00149)	0.0276 (0.0219)			
Arabic countries						-0.166** (0.0733)	-0.101 (0.0716)	-0.125** (0.0601)
South and West Asia						-0.221*** (0.0364)	-0.173*** (0.0299)	-0.200*** (0.0287)
Latin-America and the Caribbean						-0.0704 (0.0744)	-0.00986 (0.0685)	-0.0252 (0.0575)
Sub-Saharan Africa						-0.0414 (0.0487)	0.0583 (0.0428)	0.0294 (0.0370)
East Asia and Oceania (poor countries)						-0.0582 (0.0546)	0.00555 (0.0469)	-0.00839 (0.0441)
Central Asia						-0.182** (0.0814)	-0.105 (0.0811)	-0.133 (0.0949)
East Asia and Oceania (rich countries)						0.157** (0.0772)	0.152** (0.0589)	0.128** (0.0598)
East-Central Europe						-0.193*** (0.0475)	-0.154*** (0.0391)	-0.190*** (0.0313)
Constant	0.00686 (0.0387)	-0.00187 (0.0333)	0.438*** (0.0212)	0.0294 (0.0453)	-0.177 (0.137)	0.522*** (0.0341)	0.0926* (0.0554)	0.123** (0.0502)
Sample size	5,627	5,627	6,495	5,627	5,627	5,825	5,473	5,473
R ²	0.092	0.119	0.004	0.095	0.121	0.031	0.122	0.152
Binary age group variable	yes	yes	no	yes	yes	no	yes	yes
Host country fixed effect	no	yes	no	no	yes	no	no	yes

Note: Robust standard errors clustered at the immigrant group level in parentheses; weights correcting for sampling differences that are normalized to add up to one within countries are used.

***1 percent, **5 percent, *10 percent level significance.

The other group level variable is the *region of origin*. Columns (6)–(8) show effects with or without individual controls, and when host country fixed effects are taken into account. The omitted region is Western Europe and North America; coefficients should be interpreted relative to migrants from this region. Our results show that immigrants from other regions are less likely to speak the language of the host country. The exception is developed East Asia, but we have a very small sample size. Most of Asia and Eastern Europe are strongly negative and significant. On the other hand, Sub-Saharan Africa and Latin America are less negative and not significant.

These results basically confirm that immigrants from less distant regions, who come more easily and in larger numbers, assimilate less. The effects are large: the probability of strong assimilation is 10–15 percent lower for an immigrant from Eastern Europe than for an immigrant from Western Europe. Unfortunately, a more detailed analysis is not possible here either, but we think it is worthwhile to study individual and group level determinants of cultural assimilation further.

Labor market outcomes

As we discussed in the Introduction, the literature considers linguistic assimilation to be an important determinant of the labor market integration of immigrants. We look at this channel in *Table 3.3.3*. In two specifications each, we examine how individual characteristics and language proficiency influence (1) labor market and school participation,⁶ and (2) whether the interviewee had a paid job in the previous 12 months.

The regressions confirm the importance of both individual characteristics and language proficiency on the labor market. The likelihood of labor market/school participation and employment increases with education, and with years since immigration. The latter result is economic assimilation, according to which it takes time for immigrants to get ahead on the labor market of the host country. Interestingly, parental education strongly influences labor market/school participation, but not the likelihood of paid employment. This may be caused by the fact that children of more educated parents are likelier to be in school, which increases the school participation of the young in this social stratus.

⁶ We therefore look at those who either got a job, or were at school – in contrast to those who were either unemployed or inactive. This is the opposite of the NEET indicator used in statistics (*not in education, employment or training*).

The effect of language proficiency is positive, both on participation and on employment. The value of the parameter is somewhat above 4 percent, if we control for host country fixed effects; this is how likelier strongly assimilated immigrants are to participate in the labor market/school or to be employed.

Table 3.3.3: Determinants of labor market integration

Variable	(1)	(2)	(3)	(4)
	Labor market participation		Paid work last year	
Speak host country language at home	0.0339** (0.0136)	0.0434*** (0.0128)	0.0348*** (0.0135)	0.0415*** (0.0134)
Education (years)	0.0148*** (0.00217)	0.0157*** (0.00185)	0.0242*** (0.00336)	0.0265*** (0.00289)
Years since immigration: 6-10	0.00702 (0.0119)	0.0187 (0.0123)	0.0567** (0.0268)	0.0569** (0.0284)
Years since immigration: 11-15	-0.0107 (0.0202)	-0.0116 (0.0218)	0.0535* (0.0292)	0.0482 (0.0341)
Years since immigration: 15+	-0.0225 (0.0163)	-0.0351** (0.0150)	0.111*** (0.0216)	0.0990*** (0.0276)
Parents' education: at least one secondary	0.0495*** (0.0125)	0.0417*** (0.0121)	0.0215 (0.0157)	0.00923 (0.0147)
Parents' education: at least one tertiary	0.0989*** (0.0141)	0.0778*** (0.0120)	0.0310** (0.0132)	0.0196* (0.0116)
Age: 20-24	0.0370 (0.0308)	0.0410 (0.0310)	0.0515 (0.0357)	0.0524 (0.0365)
Age: 25-29	-0.0286* (0.0173)	-0.0213 (0.0172)	0.0676*** (0.0187)	0.0703*** (0.0197)
Age: 30-34	-0.0469*** (0.0147)	-0.0418*** (0.0153)	0.0802*** (0.0174)	0.0804*** (0.0175)
Age: 35-39	-0.0408** (0.0167)	-0.0380** (0.0176)	0.0796*** (0.0260)	0.0787*** (0.0258)
Age: 45-49	-0.0379 (0.0272)	-0.0345 (0.0289)	0.0683** (0.0267)	0.0719*** (0.0265)
Age: 50-54	-0.0624*** (0.0204)	-0.0655*** (0.0201)	0.0340 (0.0261)	0.0289 (0.0257)
Age: 55-59	-0.178*** (0.0304)	-0.172*** (0.0291)	-0.0949*** (0.0331)	-0.0892*** (0.0330)
Age: 60-64	-0.390*** (0.0375)	-0.390*** (0.0358)	-0.283*** (0.0450)	-0.282*** (0.0446)
Woman	-0.104*** (0.0111)	-0.102*** (0.0108)	-0.153*** (0.0179)	-0.152*** (0.0183)
Constant	0.697*** (0.0298)	0.690*** (0.0308)	0.389*** (0.0551)	0.370*** (0.0570)
Sample size	5,623	5,623	5,627	5,627
R ²	0.138	0.156	0.118	0.129
Host country fixed effect	no	yes	no	yes

Note: Robust standard errors clustered at the immigrant group level in parentheses; weights correcting for sampling differences that are normalized to add up to one within countries are used.

***1 percent, **5 percent, *10 percent level significance.

Summary

Our study measured the impact of individual and group level characteristics on linguistic assimilation. We also showed how language proficiency influences the labor market status of immigrants. Although there are many other aspects of cultural assimilation, we think that language proficiency is a fundamental ingredient. Our analysis supports earlier findings in the literature, which argue that cultural assimilation can be the result of rational decisions. An indication for this is that the size of an immigrant group is related to the extent of language learning, or cultural assimilation: larger groups are less likely to assimilate. We also showed that cultural assimilation strongly influences economic assimilation. Those non-native immigrants who speak the language of the host country at home are 3–4 percent more likely to participate in the labor market or education, or to have found paid employment in the 12 months preceding the survey.

Because of the limitations of the database, we used a particularly strong indicator of cultural assimilation, the language used at home. Once the migration module of the EU-LFS becomes available, we would like to repeat the analysis using a question on the knowledge of the language of the host country. We expect that this further study will confirm our current findings, and will highlight even more the importance of cultural (linguistic) assimilation.

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