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# Ethnic Diversity, Trust and Ethnocentrism and Europe

# A Multilevel Analysis of 21 European Countries

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**Abstract**

Most of the research that finds a negative relation between racial or ethnic diversity and social cohesion is either based on observations of one country or uses just one attitudinal aspect of social cohesion. In this article, we expand earlier research on this relationship by combining attitudinal measurements from the European Social Survey (2002) with OECD data on migration patterns to include 20 European countries. Thus more detailed measurements of both social cohesion (including generalized trust and ethnocentrism) and diversity (including type and rise of diversity over time as well as the legal status of immigrants) are utilized in multilevel models. At the individual level, most of the familiar relations between individual characteristics and trust and ethnocentrism were confirmed. At the country level, on the other hand, and contrary to findings with US census tracts or neighborhoods, hardly any indicators for migration or diversity proved to be significantly related to social cohesion. Our paper contributes to theoretical insights on the development of generalized trust and other civic attitudes and suggests that the pessimistic conclusion about ethnic diversity's negative effects on social capital might have been drawn too early.

## 1. Introduction

A number of recent studies suggest that increasing social diversity could have detrimental effects on social cohesion in Western societies. The main argument here is that in more diverse societies generalized trust is more difficult to foster, resulting in a loss of a sense of community and togetherness. More specifically, generalized trust tends to be lower in ethnically fractionalized neighborhoods or in communities with a strong presence of ethnic minorities. Trust levels are not just lower among ethnic minorities themselves, but they are also suppressed among the dominant groups within society (Alesina & La Ferrara 2002; Hero 2003; Delhey & Newton 2005; Soroka et al forthcoming). At first sight, these findings should not come as a surprise as some socio-psychological research seems to suggest that trust prospers more in homogenous settings (Messick and Kramer 2001, 100; see also Uslaner 2002). The influx of immigrants from unfamiliar cultures therefore makes it potentially more difficult to predict the future behavior of one's neighbors, friends and colleagues, which might reduce generalized trust.

However, the current research on the relation between social diversity and social cohesion suffers from a number of shortcomings which will be elaborated below. A major concern is that the research so far has been conducted mostly in a one-country setting, predominantly in the US. Many studies thus far have used limited measurements of diversity and one-sided measurements of social cohesion. Finally, the analysis of diversity as a characteristic of the place in which people live or interact necessitates multi-level modeling, which is rarely being used. As a result of these shortcomings very few empirical studies offer a general and cross-cultural valid analysis of the relation between increasing ethnic diversity and social cohesion indicators. In this paper we examine survey data from 20 European countries included in the European Social Survey 2002-03 combined with data on migration provided by the OECD. These data sources allow us to create a variety of measurements of diversity, as well as two attitudes that capture social cohesion: generalized trust and feelings of ethnocentrism. These advantages, combined with the fact that we do cross-national research using multi-level modeling will help to overcome most of the limitations of earlier work and shed new light on the relationship between diversity and social cohesion.

## 2. Diversity in Europe

Since the 1970s, most countries in Western Europe have experienced rising ethnic diversity. Traditionally, migration figures have been high for the former colonial powers like France, Spain, the United Kingdom, Belgium or the Netherlands. After the breakdown of the authoritarian regimes in Eastern Europe, migration toward these newly democratizing countries increased substantially. Since the mid-1990s, Southern European countries like Portugal, Spain and Italy, too, received an influx from migrants from Africa and Latin America (Castles & Miller 2003). The overall result is that, in practically every country in Europe ethnic diversity has become more widespread. While in 1980, 3.3 percent of the population of the European member states of the OECD were foreigners (i.e., those not having citizenship status), this was up to 5.3 percent in 2004. While this increase does not seem to be very spectacular, it has to be remembered that these numbers tend to underestimate diversity. Migrants who receive citizenship status or become naturalized, self-evidently are no longer included in the statistics as "residing foreigners", while they still might be perceived as distinct or different by the original inhabitants of the country. A different way of measuring rising diversity is to focus on the annual number of newly arriving immigrants. While in the 1980s all European OECD countries taken together on average received 1,070,000 migrants, in the 1990s this was up to 2,000,000 every year (Hooghe, Trappers, Meuleman & Reeskens 2006).

A major research question opens up about the consequences of rising diversity for social cohesion. Some theoretical approaches highlight the importance of the *visibility* of diversity or otherness. Diversity might cause feelings of *threat* and increased negative out-group orientations. Most empirical studies that utilized or tested this *threat hypothesis* have been conducted in North America (see exceptions in Letki 2006; Delhey and Newton 2005). The studies in the US and Canada have indeed found negative consequences of racial or ethnic diversity for trust (Alesina and Ferrara 2000; Costa and Kahn 2003, Rice and Steele 2001; Soroka et al 2005; Stolle, Soroka and Johnston 2005). In racially diverse cities, communities, neighborhoods or census subdivisions or tracts, generalized trust levels tend to be lower for visible minorities and white majorities alike. Studies on racial attitudes confirm that whites who live in close proximity to minority groups experience increasing racial hostility and prejudice (Fossett & Kielcolt 1989; Giles 1977; Stein et al. 2000; Taylor 1998). In sum, when

only considering the proximity of different racial groups we often see negative effects of diversity on various civic attitudes.

However, there are a number of theoretical and empirical issues that need to be re-considered before drawing the general conclusion about the negative potential of diversity. These aspects include 1) the exclusive concentration on studying such effects in the US or other one-country settings; 2) the limited measures of diversity utilized; 3) the sole concentration on trust; 4) insufficient controls and 5) modeling errors. We deal with these issues in turn below and show how this paper might overcome most of them.

First, as is obvious from the short review, thus far most studies in this area have been conducted in a US setting only. It has to be remembered, however, that US society developed a very distinctive pattern of racial relations (Sniderman & Piazza 1993). Furthermore, also in other respects the US can be characterized as a very a-typical Western society. Income inequality, e.g., is particularly strong, with a Gini coefficient of .408, which is far above average for Western societies (Uslaner 2002). In that respect, Germany (Gini coefficient of .283), France (.327), Belgium (.250) or Sweden (.250) can be considered as more typical countries for the industrialized world (UNDP 2005, 270). This difference in (in)equality patterns in the US is relevant, because income inequality has a strong negative effect on generalized trust and other indicators of social capital and social cohesion (Uslaner 2002; Rothstein & Uslaner 2005). Therefore, any findings on the US situation should at least be supplemented with an analysis of other Western countries.

Second, most research utilizes a rather crude measurement of ethnic diversity, often relying on only one form of diversity or on data for a single point in time. It has to be remembered, however, that an important form of diversity results from processes of migration and not just from long-lived and historically grown racial or ethnic differences. Migration is certainly a dynamic phenomenon and *increasing* diversity over time might have an even stronger effect on social cohesion than stable forms of diversity. In other words, if the threat hypothesis is correct, a rapid rise in diverse others in one's living environment should influence the white majority's feelings of threat and therefore lead to reduced trust in their social environment. Furthermore, migration can take many different forms (labor migration, migration from former colonies, asylum seekers, etc …) and each one of these forms of migration could lead to specific aspects of cultural threat among the original inhabitants of a country. For example,

some countries receive by far more foreigners who are perceived by native nationals as relatively distinct and different with regard to culture or language. So we can assume that the cultural distance is larger if most immigrants do not speak the language of the country. Alternatively, we could also speculate that social cohesion might be less threatened if immigrants come predominantly from known backgrounds (former colonies) or similar linguistic backgrounds. Our assumption here is that rapidly increasing forms of diversity might lead to feelings of cultural threat much more easily compared to long-established ethnic fractionalization. In short, instead of utilizing only some standard static accounts of diversity the research needs better testing of the threat hypothesis that includes dynamic and hence theoretically suitable measurements of dissimilarity.

Third, most of these studies on the effects of diversity focus exclusively on generalized trust as the main measurement of social cohesion, whereas several other aspects of this construct remain untapped. However, we propose that in diverse settings social cohesion should be more explicitly captured by minority-majority relations and by attitudes of acceptance or hostility toward outside groups within the population. Group hostility towards 'outsiders' can be particularly captured by measurements of ethnocentrism, which indicate how well otherness is respected and accepted (LeVine & Campbell 1971). The logic here is that in contemporary diverse societies, ethnocentrism, racism and other feelings of ethnic prejudice can be just as detrimental for the maintenance of social cohesion as the absence of generalized trust (Hooghe 2003). Ideally, social cohesion is measured by actual differences in majority and minority political representation, participation and social relations, but such an analysis necessitates data sets with large numbers of the minority population (Reitz 2005; Soroka, Johnston and Banting 2005).

Our fourth critique is that – as Oliver and Mendelberg (2000:575) point out – the impact of racial threat on whites' racial and a host of other attitudes has typically been demonstrated with bivariate analyses so that the effects of other salient contextual features are infrequently controlled. Using multivariate tests and multiple contextual measures, they find that whites' racial dispositions are affected not by the racial composition of neighborhoods, but instead by neighborhood socio-economic status. There is also consistent evidence regarding the effects of neighborhood socio-economic status on a range of individual-level psychological orientations. For example, recent work by Ross et al. (2001) finds that net of individual disadvantage, residents of disadvantaged neighborhoods have low levels of trust as a result of

high levels of disorder in their neighborhoods. In other words, disadvantage sets in motion a process that magnifies mistrust among persons with few resources. The insight here is that socio-economic conditions need to be controlled when examining the diversity hypothesis.

A last more technical problem is that most of the studies thus far relied on single level analyses. However, diversity is a contextual phenomenon, which several individuals experience in their environments; this contextual variable necessitates special modeling techniques to account for their lower variance and changed standard errors in multi-level data (Hox 2002; Snijders & Bosker, 1999). The only methodologically sound way to deal with this kind of data structure is to use multi-level modeling, a step that has not been taken by many researchers studying the effects of diversity.

Our paper attempts to circumvent or overcome several of these weaknesses in the current diversity research. First, we base our analysis on the results of the first European Social Survey which was conducted in 2002-2003. In most of our analyses we include about 20 European countries. Because of the wide variety with regard to static and dynamic diversity as well as social cohesion within Europe, we can offer more conclusive evidence than analyses on just one country. However, we are also aware of the problems inherent in small N cross-national research, as of course several other factors such as immigration policies or historically grown cultural differences in social cohesion could also account for the results. This research presented here is sensitive to such potential interpretations.

Second, the survey data is combined with OECD data on migration into European countries. Since the 1980s, the OECD has been collecting statistics on migration flows and stocks, providing information on immigrants' origin and legal status. Thus, the analysis can capture the effects of (trends in) ethnic diversity as well as static differences in types of diversity much more accurately than previous work. Third, this analysis will focus not only on generalized trust as a dependent variable, and as a proxy for social cohesion, but also on feelings of ethnocentrism, which more explicitly depict majority-minority relations. Fourth, all analyses control for socio-economic differences, and finally, this analysis uses multi-level modeling by simultaneously including the influence of individual-level and country-level independent variables and by controlling for aggregate level standard errors.

In short, with these innovations, the European countries, offer an ideal testing ground for the investigation into the relationship between diversity and social cohesion. We will see below that they not only differ quite strongly with regard to diversity levels, they also show marked differences with regard to social cohesion.

## 3. Data and methods

The data used in this paper are obtained from several sources. The European Social Survey (ESS) provides the individual-level data for the dependent and individual-level independent variables (NSD 2003). The ESS survey was collected in 2002/2003 by means of face-to-face interviews in representative samples.[1] Because of uniform field work procedures and strict scientific norms ESS data can be considered as reliable for cross-national research (Jowell et al. 2003).

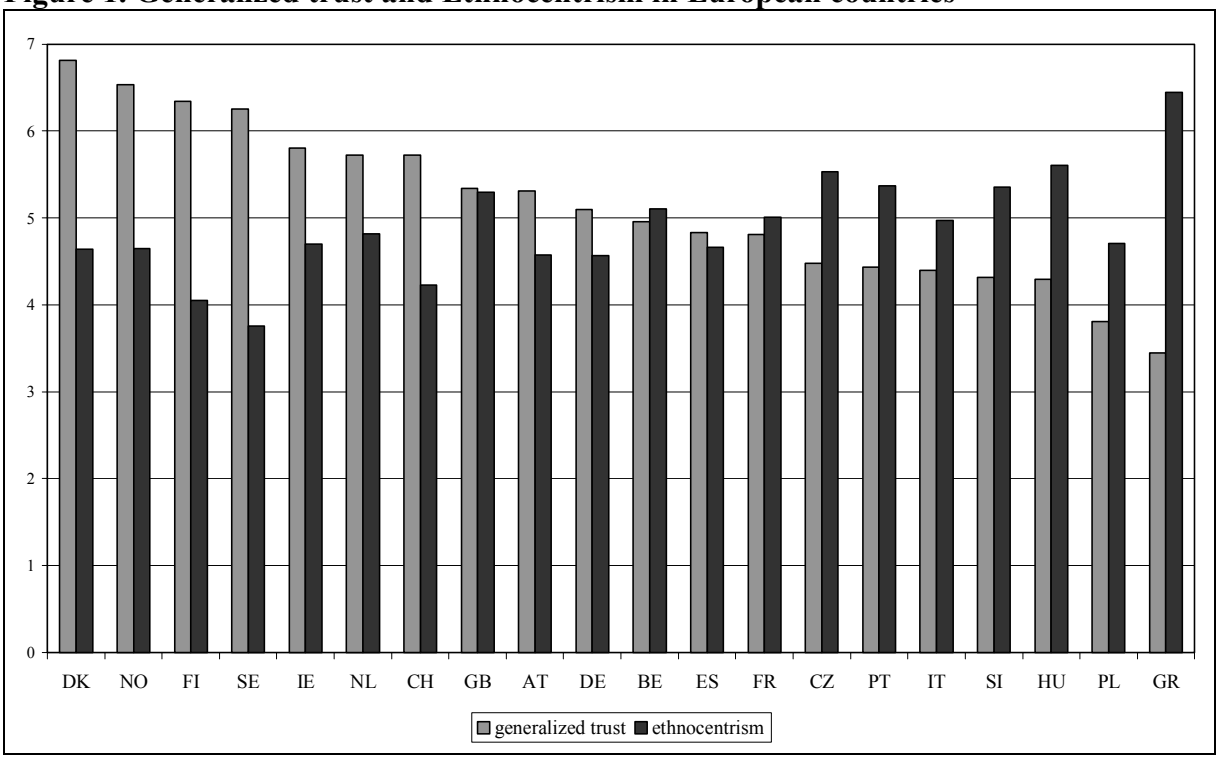
In this analysis, again, two different indicators for social cohesion are utilized as dependent variables: generalized trust and feelings of ethnocentrism at the individual level. We hypothesize that individual's experiences in the diverse or homogeneous context of their respective country might influence and shape their attitudes of trust and ethnocentrism. For the latter, the cultural component of ethnocentrism, a summated rating scale with 4 items is included, as this aspect of ethnocentrism captures more closely the concept of social cohesion. A typical Likert item here probes into the question whether the presence of migrants enriches the cultural life of the country. The generalized trust scale was based on three items measuring the belief that "most people can be trusted". For scaling information please see the Appendix I. Both measurement scales are internally consistent and well-tested in international comparative research.

The variance in these two indicators between the European countries included in the analysis below can be observed in Figure 1, which shows that generalized trust is particularly high in Scandinavian countries such as Denmark, Norway, Finland and Sweden, where ethnocentrism

[1]. Israel was excluded from the analysis and so was Luxembourg, the latter because of its very small scale and its specific immigration pattern, which influenced the regression slopes heavily and could have led to biased results. Consequently, the data set for this analysis includes 20 European countries.

is also fairly low. Generalized trust levels are lowest in Portugal and Greece and ethnocentrism is most wide-spread in Greece and several formerly communist countries.

**Figure 1. Generalized trust and Ethnocentrism in European countries**




Note: The graph represents the mean scores per country on the generalized trust scale (0-10) and the ethnocentrism scale (0-10). The countries in the graph are Denmark (DK), Norway (NO), Finland (FI), Sweden (SE), Ireland (IE), Netherlands (NL), Switzerland (CH), Great Britain (GB), Austria (AT), Germany (DE), Belgium (BE), Spain (ES), France (FR), Czech Republic (CZ), Portugal (PT), Italy (IT), Slovenia (SI), Hungary (HU), Poland (PL) and Greece (GR). Source: ESS 2002.

At the individual level independent variables are included which in earlier research have proven to have an effect on trust and/or ethnocentrism. Research has shown, for example, that women, on average are more trusting than men, while in most of the research, age too has a significant effect on trust and/or ethnocentrism (Putnam 2000; Stolle 2001; Uslaner 2002; Scheepers et al. 1992; Sniderman et al. 2003). Based on the literature, we can also expect the highly educated, the employed, the financially secured, and those actively involved in churches to trust more and to have reduced feelings of ethnocentrism (Brehm & Rahn 1997). Since it is very difficult to arrive at a reliable and comparable measurement of income levels across 20 countries, we included financial satisfaction of the respondent as a proxy for socio-economic position. We also expect immigrants to be less trusting and to have lower feelings of ethnocentrism, of course, than majority citizens (Soroka et al. 2005). We also included an attitudinal scale on political efficacy because political powerlessness tends to have a negative

effect on generalized trust, while it is positively related to ethnocentrism (Hooghe 2003). All scales are documented in the Appendix II of this paper.

With regard to diversity, this analysis relies mainly on the OECD figures on migration and the presence of foreign nationals, which list not only the number of new immigrants arriving in a specific country, but also the total "stock" of foreign nationals in a country. They also contain information on the origin of migrants, on the number of naturalizations and the number of asylum applications. Since these statistics are assembled for numerous countries since the 1980s, they also allow detecting changes over time. Although some questions have been raised about the degree of comparability of the OECD statistical sources (Lemaitre 2005), in practice they provide the most reliable data on migration available (Hooghe, Trappers, Meuleman & Reeskens 2006).

Available measures include the following:

- foreign population of the country, in absolute figures and as a percentage of the total population (2002)
- stocks of foreign population of the country, in thousands and as a percentage of the total population (2002)
- stocks of foreign-born population of the country, in thousands and as a percentage of the total population (2002)
- inflow of foreign workers to the country, in thousands and as a percentage of the total population (2002)
- increase in the annual inflow of foreigners during the 1996-2002 period, in thousands and as a percentage of the total population
- increase in the stocks of foreign-born population during the 1996-2002 period, in thousands and as a percentage of the total population
- increase in the inflow of foreign workers during the 1996-2002 period, in thousands and as a percentage of the total population
- influx of asylum seekers in 2002 in thousands
- granted asylums in 2002 in thousands and as a percentage of the total population
- increase in the number of granted asylums during the 1996-2002 period, in thousands and as a percentage of the total population
- increase in the numbers of granted asylums during the 1996-2002 period, in thousands and as a percentage of the total population

- number of naturalization in 2002 as a part of the total population
- Naturalization ratio, which is the ratio of the naturalizations in 2002 and the inflow in 1995[2]
- Asylum ratio, which is the ratio of the requested and granted asylums in 2002

All these measurements are documented in the Appendix IV.

In analyzing the inflow of immigrants for the period 1996-2002 we also made a distinction between immigrants originating from the same language areas or immigrants who originate from former colonies of the receiving country. We also calculated the ratio of immigrants originating from developing countries opposed to those from other OECD member countries. The reason for making these distinctions is, again, that we can assume that the smaller the cultural distance between the receiving society and the newly arriving immigrants, the weaker the impact on social cohesion. The cultural similarity is obviously larger if the immigrant speaks the language of the country, or when the immigrant originates from an OECD country. Again, it is important here to note that we were able to measure not just the number of foreigners residing in these countries, but also some dynamic variables with regard to the recent influx of foreigners or asylum seekers. Again, our more specific assumption here is that rapidly increasing forms of diversity might lead to feelings of cultural threat much more easily compared to long-established ethnic fractionalization. For the latter the fractionalization index established by Alesina and La Ferrara (2002) as a general measurement for diversity in a country as included.

In addition, also socio-economic variables at the country level were included. The economic, political and demographic data at the country level were obtained from official statistics from the OECD (Organisation for Economic Co-operation and Development 2005) and the Human Development Reports (United Nations Development Program 2003). The socio-economic variables are the population growth rate of the period 1998-2002, population density, Gross Domestic Product per capita and the Gini coefficient as a measure for income inequality. We

[2]. A time-series analysis with the number of naturalizations as the dependent variable in a specific year and the inflow of foreigners as the independent variable revealed that a timelag of seven years produces the best results: T-value of the slope-parameter of the inflow of foreigners on the number of naturalizations: no timelag: 7.84; of a timelag of 1 years: 10.95; of a timelag of 2 years: 11.70; of a timelag of 3 years: 14.72; of a timelag of 4 years: 32.29; of a timelag of 5 years: 43.42; of timelag of 6 years: 59.35; of a timelag of 7 years: 62.78; of a timelag of 8 years: 45.47 and of a timelag of 9 years: 27.67. This would suggest that, on average, newly arriving immigrants can gain naturalization after approximately seven years.

expect that densely populated countries, those with an aging population and countries with economic problems and stagnation, might be more prone to the feelings of being threatened by immigration. Socio-economic inequality should be negatively related particularly to generalized trust.

The method used to model these data is a random intercept multilevel model.[3] There are various reasons for doing multilevel analysis in this cross-national data set. First, the basic assumption of a multiple regression model is the one of independent observations. In doing comparative country research, citizens are not independent: Irish citizens have things in common that makes them distinct from Swedish citizens, which implies that respondents are nested within their country backgrounds. Multilevel analysis copes with this independency assumption. Second, whereas previous research has used aggregated measures in cross-national analyses, such methods neglect the true nested nature of the data and leads to wrong estimations of the standard errors. In our analysis, we will develop a random intercept model, meaning that we allow the intercepts between countries to vary[4].

For both dependent variables we proceed in the same manner. First we estimate a baseline model to ascertain whether it makes sense to distinguish individual level and society level variables. Subsequently we investigate the individual level variables and controlling country level variables, before we move further to develop a full model including micro and macro level effects. It has to be remembered, however, that these analyses are built on only 20 cases, and therefore not all variables at the country level could be included simultaneously. We therefore used only a slim baseline model for country level variables, and entered additional diversity measures one by one, to ascertain the effects of every variable separately.

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[3]. Social research that tries to explain variance in a dependent variable by independent variables at two or more levels often uses a regular multivariate regression analysis, whether the data at micro-level is aggregated or not. However, this method is less appropriate in a multi-level context. Multivariate regression analysis requires some assumptions. One of these assumptions is the independence of the observations (Hox 2002, 5). This assumption is met at the micro-level: in all the 20 countries studied, the data are obtained by a random sample. However, the countries were not randomly chosen but assigned on theoretical premises, i.e., the ESS-investigation. The violation of this assumption has consequences for the variance-distribution at both the individual and country levels, a fact which is adjusted in a multilevel regression analysis. In coping with this estimation problem, multilevel analysis therefore is the best statistical technique equipped to analyse micro and macro-level variables in their relationship to generalized trust and ethnocentrism.

[4]. More elaborated analyses sometimes use random slopes models. In these types of models, the slopes of the micro level variables are estimated. However, there is no theoretical reason for estimating random slopes models for explaining the impact of ethnic diversity on social cohesion.

## 4. Generalized Trust

The first step in the investigation of the effects of ethnic diversity on social cohesion is the analysis of generalized trust. Before performing a multilevel regression analysis, it needs to be estimated whether there is a sufficient level of country-variability in the dependent variable. According to the baseline model, about 20.6 per cent[5] of the variation in generalized trust can be explained by country-relevant information, thus a multilevel regression analysis is appropriate.

In Table 1 we provide the results of the multilevel regression model with the test of all relevant micro level variables together with gross domestic product per capita and the GINI index. As previous research has already established, a substantial part of the variation in generalized trust in Europe can be explained by the income level of the country (Delhey & Newton 2005). For this reason, we include this country characteristic into the baseline model which will be used below for the one by one test of the diversity variables. Simultaneously, income inequality will be included in this model.

[5]. Individual-level variance: 3.1497; Country-level variance: 0.8152. Intraclass correlation: 0.8512/(0.8512+3.1497) = 0.2056.

**Table 1. Multilevel regression model for generalized trust (20 countries, N = 36,697)**

| | | parameter | t-value |
|---|---|---|---|
| **Fixed part** | | | |
| Intercept | | 5.300*** | 7.42 |
| Gender | Reference: male | | |
| | female | 0.173*** | 9.36 |
| Age | | 0.002** | 3.05 |
| Educational level | Reference: lower | | |
| | secondary | 0.078** | 2.74 |
| | higher | 0.261*** | 7.35 |
| Employment status | Reference: employed | | |
| | unemployed | -0.144** | -2.97 |
| | other employment status | 0.086*** | 4.23 |
| Financial satisfaction | | 0.285*** | 22.34 |
| Religious involvement | Reference: core | | |
| | modal | -0.167*** | -6.28 |
| | marginal | -0.233*** | -7.79 |
| Immigration status | Reference: majority | | |
| | born abroad | -0.104** | -2.97 |
| Political powerlessness | | -0.434*** | -31.06 |
| GDP/capita (in thousands USD) | | 0.084*** | 6.26 |
| Gini coefficient | | -0.059** | -2.88 |
| **Random part** | | | |
| Level 1. Individuals (residual variance) | | 2.926*** | 135.42 |
| Level 2. Countries (intercept variance) | | 0.166*** | 3.13 |
| $R^2$ at individual level | | 22.03% | |
| $R^2$ at country level | | 67.90% | |

Entries are results of a multilevel regression analysis, with generalized trust scale as dependent variable. Sign: * $p < 0.01$; ** $p < 0.001$; *** $p < 0.0001$ Source: ESS 2002

Table 1 confirms previous research on generalized trust: all theoretically relevant variables have a significant effect on the trust scale. With regard to gender, women are more trustful than men. Older people are more trusting than younger ones. The socio-economical status has powerful effects as well: education, employment status and financial satisfaction are positively related to generalized trust. Concerning religious involvement, we see that the modal and marginal members are less trusting than the core members, namely these people who go at least once a week to a religious service. On average, people who are born abroad are less trustful than European majority citizens. Political powerlessness shows a strong negative relation: people who feel that they cannot influence politics are in general also less trustful. With respect to the only two macro variables, the strong relation of gross domestic

product with generalized trust is confirmed: the wealthier the nation, the higher the levels of trust of its citizens. The Gini coefficient also affects the levels of the trust as expected: people are more trustful in countries with low levels of income disparities.

The next step in our analysis is to test the additional macro-variables supplementing the baseline multilevel model as reported in Table 1. The additional variables are divided into four categories. The first block contains relevant country information such as the population (in thousands) as an indicator for the size of the country and the country population density. In the second block, we included static diversity variables, such as the Alesina and La Ferrara fractionalization index, inflow variables, such as the inflow of foreigners in 2002 and the percentage of foreigners arriving from former colonies. In the third block, dynamic country diversity characteristics are enclosed, for instance the average annual increase of the inflow of foreigners in the period 1996-2002. In the fourth block, macro variables with respect to asylum and naturalization are included. Table 2 summarizes the analysis on these variables. As is mentioned before but certainly needs to be stressed again, because of the limited number of cases (n=20) and the risk of multicollinearity, in practice it proved to be impossible to include several macro level variables simultaneously, so that every variable is tested separately together with the baseline model.

With respect to the first block, not a single macro variable showed a significant relation with generalized trust. Population size and density show negative relations, meaning that large and densely populated countries are less trustful than small and sparsely populated countries. Nevertheless, these effects are not significant.

**Table 2. Effect of additional macro-variables on generalized trust**

| | parameter | t-value | # cntries |
|---|---|---|---|
| Population size (in thousands) | -0.003 | -0.80 | 20 |
| Density | -0.001 | -1.05 | 20 |
| Fractionalization index | -0.818 | -1.36 | 20 |
| Inflow of foreigners in 2002 (in thousands) | -0.000 | -0.86 | 20 |
| Inflow of foreigners in 2002 (per 1000 inhabitants) | -0.031 | -0.91 | 20 |
| Stocks of foreigners in 2002 (in thousands) | -0.000 | -1.18 | 20 |
| Stocks of foreigners in 2002 (percentage of the total population) | -2.42 | -0.98 | 20 |
| Stock of foreign born population in 2002 (in thousands) | 0.000 | 0.07 | 8 |
| Stock of foreign born population in 2002 (per 1000 inhabitants) | -0.030 | -0.72 | 8 |
| Inflow of foreign workers in 2002 (in thousands) | -0.000 | -1.43 | 16 |
| Inflow of foreign workers in 2002 (per 1000 inhabitants) | -0.007 | -0.16 | 16 |
| Percentage of the inflow of foreigners in 2002 from former colonies | 0.012 | 1.58 | 20 |
| Percentage of the inflow of foreigners in 2002 from same language area | 0.005 | 0.55 | 20 |
| Ratio of sending development countries and sending OECD countries | -0.142 | -0.37 | 19 |
| Average increase of foreigners inflow (in thousands) | 0.000 | 0.14 | 19 |
| Average increase of foreigners inflow (per 1000 inhabitants) | 0.112 | 0.53 | 19 |
| Average increase of stock of foreign born population (in thousands) | 0.004 | 0.36 | 8 |
| Average increase of stock of foreign born population (percentage of the total population) | -0.615 | -0.31 | 8 |
| Average increase of foreign workers inflow (in thousands) | -0.023 | -1.84* | 16 |
| Average increase of foreign workers inflow (per 1000 inhabitants) | 0.064 | 0.27 | 16 |
| Average increase in the percentage of inflow of foreigners coming from former colonies | 0.098 | 1.20 | 20 |
| Average increase in the percentage of inflow of foreigners coming from the same language area | 0.069 | 1.15 | 20 |
| Asylum requests in 2002 (in thousands) | -0.001 | -0.30 | 19 |
| Asylums granted in 2002 (in thousands) | 0.002 | 0.12 | 18 |
| Asylums granted in 2002 (per 1000 inhabitants) | 0.280 | 0.36 | 18 |
| Average increase of granted asylums (in thousands) | 0.071 | 0.87 | 18 |
| Average increase of granted asylums (per 1000 inhabitants) | 4.956 | 0.98 | 18 |
| Naturalizations in 2002 (per 1000) | -0.003 | -1.33 | 18 |
| Naturalization ratio | -0.001 | -0.43 | 18 |
| Asylum ratio | 0.002 | 0.10 | 19 |

Entries are results from 26 separate multilevel regressions as reported in Table 1. Every model included *all* the variables reported in Table 1 (not reported here for lack of space), and one additional variable at the macro level (reported here). Sign: *p=<.10

The second block with the static diversity variables reveals no significant relation with generalized trust. The Alesina and La Ferrera ethnic fractionalization index has a negative but non-significant relation, and this is contrary to the findings of Delhey and Newton (2005) who estimated a negative relationship in a larger group of countries. Their model, however, did not use multi-level methods and did not consistently control for socio-economic development. In countries with high levels of inflow of foreigners, expressed both in absolute figures and per 1000 inhabitants, the levels of trust are lower, but again this relation is not significant. The same story can be told for the stocks of foreigners and stocks of foreign-born population residing in a country: countries with, in absolute figures and per 1000 inhabitants, more foreigners or foreign-born residing in the country record lower trust levels but in a non-significant way. The inflow of foreign workers also does not contribute to the explanation of trust levels in Europe: the inhabitants of countries with high levels of foreign workers inflow are less trustful but these levels are not significant. When inflow figures of immigrants with the same cultural background are analyzed, namely those coming from former colonies and the same language area, high percentages of culturally similar immigrants increase the trust levels, but not significantly. The last tested variable is the ratio of the sending development and sending OECD countries. In countries where a larger percentage of all new immigrants originate from developing countries, trust tends to be lower but again this effect is not significant. To conclude, the more static diversity variables do not affect generalized trust in Europe in any significant way: whereas citizens of ethnically heterogeneous countries are less trustful than those in homogeneous places, this difference is statistically insignificant.

The third block (Table 2) with the figures of diversity trends also shows no surprises. First, countries with a sharp increase in the inflow of foreigners even seem to have more trusting citizens. However, this effect is not significant. Concerning the stocks of foreign-born population, the average annual increase in absolute figures has a positive effect while this annual increase per 1000 inhabitants has a negative effect, both of which are not significant. The increase in the absolute inflow of foreign workers seems to have a negative and slightly significant effect on trust levels (level .10): the stronger the rise in the average annual inflow of foreign workers, the less trusting the citizens. Yet, when analyzed more thoroughly, this negative trend can be attributed mainly to one outlier, which is Spain. This country is, since the millennium change, faced with high levels of foreign workers and also shows low trust levels. At the same time, the average annual increase in the number of foreign workers/1000 inhabitants does not affect generalized trust. There is also no effect of the two cultural macro

variables, namely the annual increase in the percentage of inflow of foreigners from former colonies or the same language area, on generalized trust. In sum, also the rapid increase or decrease in the inflow of foreigners does not seem to offer an explanation for overall European trust levels.

The last block of variables is the one with asylum and naturalization figures. As Table 2 indicates, the asylum figures are not related to the generalized trust levels of the country nationals. In countries with high levels of asylum requests, granted asylums or sharply increased asylum figures, citizens are more trustful but not in a statistically significant way. High levels of naturalizations though seem to affect generalized trust negatively. However, when the effect of the naturalization ratio – the ratio between naturalizations granted in 2002 and inflow of immigrants in 1995 – on generalized trust is analyzed, no significant effect can be found. Thus, the asylum and naturalization figures cannot explain country generalized trust variation.

The only safe conclusion from this massive test of all possible diversity indicators is that in practice most relations are not significant. Only the average increase of the inflow of foreign workers moves toward any significance, but only at the .10 level. Contrary to earlier studies, which employed less precise and theoretically less meaningful diversity measurements, we cannot conclude that (increasing) ethnic diversity has a negative impact on generalized trust.

## 5. Ethnocentrism

In addition to the investigation of diversity effects on generalized trust, the second step is an in-depth analysis on ethnocentrism as dependent variable. The baseline model of the multilevel regression analysis showed that only 8.92 percent[6] of the variability in ethnocentrism can be explained by information at the country level. Of course, this percentage is not as high compared with generalized trust. Nevertheless, multilevel analysis seems to be the appropriate technique to investigate both micro- and macro-level effects on ethnocentrism.

[6]. Individual-level variance: 3.5019; Country-level variance: 0.3431. Intraclass correlation: 0.3431/(0.3431+3.5019) = 0.0892.

First, we analyze the micro-level variables together with the theoretically relevant control variables GDP per capita and the Gini index. In a later phase, we analyze the additional macro level variables. As Table 3 below shows, the micro-level variables confirm in most of the cases the theoretical discussion. Men seem to have more negative feelings about immigrants compared to women. Older people are more negative towards outsider groups compared to the younger ones. With respect to the indicators for socio-economic status, namely educational level, employment status and financial satisfaction, all three show significant relations within a confidence interval of 99 percent: the higher educated are less hostile against immigrants, just as the people who are satisfied with their financial situation; respondents who are unemployed on the other hand are significantly less open to foreigners. Religious orientation is not related to ethnocentrism. Respondents that were not born in the country are, one could say self-evidently, less negative toward outsider groups. People with high levels of political powerlessness indicate more negative feelings towards outsiders. The test of GDP per capita and the Gini-coefficient on ethnocentrism did not reveal any significant results: wealthy countries and those with low income inequalities are not significantly more positive towards foreigners than less developed or more unequal European countries.

**Table 3. Multilevel model for ethnocentrism (20 countries, N = 35,890)**

| | | parameter | t-value |
|---|---|---|---|
| **Fixed part** | | | |
| Intercept | | 4.584*** | 5.64 |
| Gender | Reference: man | | |
| | woman | -0.066*** | -3.45 |
| Age | | 0.008*** | 14.30 |
| Educational level | Reference: lower secondary | | |
| | higher | -0.195*** | -6.53 |
| | | -0.858*** | -23.39 |
| Employment status | Reference: employed | | |
| | unemployed | 0.101* | 2.00 |
| | other employment status | -0.021 | -1.01 |
| Financial satisfaction | | -0.185*** | -14.00 |
| Religious involvement | Reference: core modal | | |
| | marginal | 0.022 | 0.81 |
| | | 0.008 | 0.26 |
| Immigration status | Reference: majority | | |
| | born abroad | -0.929*** | -25.76 |
| Political powerlessness | | 0.544*** | 37.66 |
| GDP/capita (in thousands) | | -0.017 | -1.13 |
| Gini coefficient | | -0.014 | 0.58 |
| **Random part** | | | |
| Level 1. Individuals (residual variance) | | 3.058*** | 133.92 |
| Level 2. Countries (intercept variance) | | 0.216*** | 3.14 |
| $R^2$ at individual level | | 14.85% | |
| $R^2$ at country level | | 28.81% | |

Results are entries from a multilevel regression model, with ethnocentrism as dependent variable. Sign: * p < 0.01; ** p < 0.001; *** p < 0.0001 Source: ESS 2002

For ethnocentrism, too, we proceed in the same manner by adding one macro level variable at a time (Table 4). The first block of tested variables is the one with other relevant country information. The testing of these variables revealed that large countries are less ethnocentric while more densely populated countries are more hostile towards foreigners, however, both effects are not significant. The additional country characteristics do not seem to offer additional information on the variation of ethnocentrism levels.

Measures of static diversity do not seem to be related to levels of ethnocentrism. All the effects we entered were very weak, not significant, and moving in opposite directions. When analyzing the trend figures of the annual inflow between 1996 and 2002, once again, the effect parameters are not even uniformly pointing in one direction. Countries which have been faced with a sharp increase in their foreigner inflow show lower ethnocentrism compared with

countries with a decrease or moderate increase, but not in a significant way. On the other hand, a sharp increase of foreign-born people results in higher but not significant levels of ethnocentrism. A steep increase in the inflow of foreign workers resulted in slightly higher ethnocentrism levels: in these countries, citizens are more but not significantly prejudiced towards strangers. When the cultural background of the immigration inflow is taken into account, neither the colonial, nor the linguistic linkage affects the levels of ethnocentrism. Thus, the annual trends do not affect ethnocentrism levels in Europe.

**Table 4. Effect of additional macro-variables on ethnocentrism**

| | parameter | t-value | # cntries |
|---|---|---|---|
| Population size (in thousands) | -0.003 | -0.69 | 20 |
| Density | 0.001 | 0.96 | 20 |
| Fractionalization index | -0.020 | -0.03 | 20 |
| Inflow of foreigners in 2002 (in thousands) | -0.000 | -0.64 | 20 |
| Inflow of foreigners in 2002 (per 1000 inhabitants) | -0.034 | -0.88 | 20 |
| Stocks of foreigners in 2002 (in thousands) | -0.001 | -0.10 | 20 |
| Stocks of foreigners in 2002 (percentage of the total population) | 0.099 | 0.03 | 20 |
| Stock of foreign born population in 2002 (in thousands) | -0.000 | -0.20 | 8 |
| Stock of foreign born population in 2002 (percentage of the total population) | -0.035 | -0.65 | 8 |
| Inflow of foreign workers in 2002 (in thousands) | -0.000 | -0.01 | 16 |
| Inflow of foreign workers in 2002 (per 1000 inhabitants) | 0.001 | 0.02 | 16 |
| Percentage of the inflow of foreigners in 2002 coming from former colonies | -0.003 | -0.33 | 20 |
| Percentage of the inflow of foreigners in 2002 coming from the same language area | -0.009 | -0.94 | 20 |
| Ratio of sending development countries and sending OECD countries | 0.168 | 0.44 | 19 |
| Average increase of foreigners inflow (in thousands) | -0.003 | -0.51 | 19 |
| Average increase of foreigners inflow (per 1000 inhabitants) | -0.145 | -0.68 | 19 |
| Average increase of stock of foreign born population (in thousands) | 0.000 | 0.03 | 8 |
| Average increase of stock of foreign born population (percentage of the total population) | 2.358 | 0.95 | 8 |
| Average increase of foreign workers inflow (in thousands) | 0.006 | 0.50 | 16 |
| Average increase of foreign workers inflow (per 1000 inhabitants) | 0.117 | 0.56 | 16 |
| Average increase in the percentage of inflow of foreigners coming from former colonies | -0.139 | -1.52 | 20 |
| Average increase in the percentage of inflow of foreigners coming from the same language area | -0.0695 | -1.01 | 20 |
| Asylum requests in 2002 (in thousands) | 0.003 | 1.26 | 19 |
| Asylums granted in 2002 (in thousands) | 0.026 | 1.87* | 18 |
| Asylums granted in 2002 (per 1000 inhabitants) | 1.017 | 1.37 | 18 |
| Average increase of granted asylums (in thousands) | 0.153 | 2.00** | 18 |
| Average increase of granted asylums (per 1000 inhabitants) | 10.262 | 2.21** | 18 |
| Naturalizations in 2002 (per 1000) | 0.002 | 1.04 | 18 |
| Naturalization ratio | 0.002 | 0.78 | 18 |
| Asylum ratio | 0.037 | 1.78* | 19 |

Entries are results from 26 separate multilevel regressions as reported in Table 1. Every model included *all* the variables reported in Table 3 (not reported here for lack of space), and one additional variable at the macro level (reported here). Sign.: *: p=<.10; **:p=<.O5

The last block of tested variables, namely the block concerned with asylum and naturalization indicates more uniform effects: almost all parameter effects are positive, meaning that in countries with high levels of asylum requests, granted asylums, average increase of granted asylums, naturalizations and the naturalization ratio go hand in hand with high levels of prejudice towards foreigners. The increase in granted asylums in the period 1996-2002 is even significantly positively related to ethnocentrism (.05 level). We find weakly significant effects (.10) for the naturalization ratio and the number of asylums granted in 2002. So an increase in asylum seekers indeed tends to strengthen feelings of ethnocentrism among the original inhabitants. Again, however, we see that one country is mainly responsible for this significance, but this time the United Kingdom. In the UK, both the number of asylum seekers, as the number of granted asylums has increased sharply in recent years, and apparently this leads to higher levels of ethnocentrism.

The analysis of the diversity indicators on ethnocentrism revealed diverse results: the effects of ethnic diversity on feelings towards immigrants are not uniform. There is no trend that ethnic diversity affects outsider hostility. Only the recent increase in asylum seekers is significant, as it tends to boost ethnocentrism. Overall though, the analysis of the diversity indicators on ethnocentrism revealed the same conclusion as for generalized trust: it is difficult to sustain the theory that ethnic diversity affects social cohesion negatively, at least within Europe.

## 5. Discussion

Our investigation into the relation between ethnic diversity and indicators of social cohesion in European societies has built on earlier work, but at the same time developed innovations. With a comparative data set we were able to test in an appropriate multi-level model whether the inflow and/or the presence of migrants as well as the rapid increases of inflows have had an effect on generalized trust and ethnocentrism.

Our analysis has also confirmed results of earlier studies. At the individual level: all usual suspects are confirmed, across Europe: Men, older people, lowly educated and the unemployed are more ethnocentric and less trusting. Ethnic minorities themselves are on average less trusting, but also less ethnocentric (as we could reasonably expect).

Despite several such findings for US society, in Europe it was not confirmed that rising ethnic diversity or even the rate of influx of foreign citizens had any significant detrimental effects on social cohesion. To the contrary, the higher the share of immigrants, the less ethnocentrism we find in European societies, although not significantly so. Ethnic diversity did show negative relationships with generalized trust, but they did not reach any level of statistical significance with the exception of the trend in the inflow of foreign workers. This finding in itself is important for the discussion about the negative effects of diversity particularly in within North America. It has to be remembered in this respect that for Western Europe, we could rely on much more precise indicators for diversity than in most of the research on the US. It is also plausible that our results are not directly comparable to many North American studies as we examine the effect of diversity at a much higher level of aggregation, namely the country (as opposed to smaller units such as neighborhood or census tracts). Yet out of 26 different measurements of ethnic diversity, including various dynamic ones, only very few showed a significant negative relationship with social cohesion—in comparison, most earlier research tended to rely on just one measurement for ethnic diversity. At least with regard to European countries therefore, the pessimistic notion that (increasing levels of) diversity threatens social cohesion, could not be confirmed in this analysis.

And yet some noteworthy results stand out as candidates for further investigations. The inflow of foreign workers as well as granted asylum revealed themselves as two types of measurements which significantly related to generalized trust and ethnocentrism respectively. Obviously further research could pick up here and investigate whether employment status or employment sector are behind the observed relationship with the inflow of foreign workers. Similarly, the effects of asylum have to be investigated further as well in order to understand why particularly asylum seeking makes such a difference. Disentangling the various aspects of diversity has paid off: while some indicators of (increasing) diversity seem to have some effects, the overall conclusion has to be that for Europe ethnic diversity cannot be considered as a threat for the maintenance of social cohesion.

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## Appendix I

### Factor loadings on generalized trust

| Variable name | Indicator | Factor loading |
|---|---|---|
| PPLTRST | "Most people can be trusted or you can't be too careful" | 0.74 |
| PPLFAIR | "Most people try to take advantage of you, or try to be fair" | 0.78 |
| PPLHLP | "Most of the time people helpful or mostly looking out for themselves | 0.65 |

Cronbach alpha: 0.77

### Factor loadings on ethnocentrism

| Variable name | Indicator | Factor loading |
|---|---|---|
| IMBGECO | "Immigration bad or good for country's economy" | 0.73 |
| IMUECLT | "Country's cultural life undermined or enriched by immigrants" | 0.78 |
| IMWBCNT | "Immigrants make country worse or better place to live" | 0.79 |

Cronbach alpha: 0.73

### Factor loadings on political powerlessness

| Variable name | Indicator | Factor loading |
|---|---|---|
| POLCMPL | "Politics too complicated to understand" | 0.47 |
| POLACTIV | "Could take an active role in a group involved with a political issue" | 0.50 |
| POLDCS | "Making mind up about political issue" | 0.45 |
| PLTCARE | "Politicians in general care what people like respondent think" | 0.63 |
| PLTINVT | "Politicians interested in votes rather than peoples opinions" | 0.57 |

Cronbach alpha: 0.65

## Appendix III

### Percentages of the categorical variables

| | AT | BE | CH | CZ | DE | DK | ES | FI | FR | GB | GR | HU | IE | IT | NL | NO | PL | PT | SE | SI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 2257 | 1899 | 2040 | 1360 | 2919 | 1506 | 1729 | 2000 | 1503 | 2052 | 2566 | 1685 | 2046 | 1207 | 2364 | 2036 | 2110 | 1511 | 1999 | 1519 |
| Male | 47.54 | 51.50 | 49.61 | 50.89 | 48.09 | 50.73 | 47.35 | 48.00 | 46.89 | 48.60 | 44.13 | 48.01 | 45.64 | 44.83 | 45.74 | 54.20 | 48.98 | 45.14 | 50.83 | 47.63 |
| Female | 52.46 | 48.50 | 50.39 | 49.11 | 51.91 | 49.27 | 52.65 | 52.00 | 53.11 | 51.40 | 55.87 | 51.99 | 54.36 | 55.17 | 54.26 | 45.80 | 51.02 | 54.86 | 49.17 | 52.37 |
| Lower edu | 2.04 | 16.48 | 3.33 | 1.82 | 2.01 | 21.20 | 36.01 | 20.90 | 25.03 | 0.80 | 38.93 | 36.20 | 21.89 | 23.47 | 10.43 | 16.50 | 25.93 | 59.00 | 28.51 | 6.45 |
| Secu edu | 85.87 | 70.14 | 82.37 | 86.92 | 76.44 | 80.81 | 49.10 | 54.25 | 48.97 | 76.59 | 47.70 | 50.68 | 65.41 | 69.54 | 68.10 | 70.65 | 61.18 | 33.78 | 40.92 | 79.59 |
| Higher edu | 12.09 | 13.38 | 14.30 | 11.26 | 21.55 | 17.07 | 14.89 | 24.85 | 26.00 | 22.61 | 13.37 | 13.12 | 12.70 | 6.99 | 21.47 | 27.70 | 12.89 | 7.22 | 30.57 | 13.96 |
| Employed | 60.41 | 53.03 | 63.53 | 55.68 | 52.30 | 63.62 | 45.28 | 54.20 | 48.77 | 57.28 | 43.18 | 45.99 | 53.89 | 49.26 | 59.55 | 68.03 | 42.91 | 52.88 | 60.98 | 50.56 |
| Unemployed | 2.84 | 4.37 | 0.85 | 2.89 | 4.93 | 3.25 | 5.31 | 4.30 | 5.19 | 3.21 | 4.08 | 3.09 | 3.85 | 7.71 | 0.93 | 2.48 | 8.11 | 2.48 | 3.30 | 4.54 |
| Other empl. | 36.75 | 42.60 | 35.62 | 41.43 | 42.77 | 33.13 | 49.41 | 41.50 | 46.04 | 39.51 | 52.74 | 50.92 | 42.26 | 43.03 | 39.52 | 29.49 | 48.98 | 44.64 | 35.72 | 44.90 |
| Core memb | 19.98 | 11.43 | 11.03 | 9.00 | 9.56 | 3.25 | 20.36 | 4.90 | 8.88 | 12.62 | 26.26 | 11.57 | 53.90 | 32.52 | 12.27 | 50.60 | 57.02 | 30.78 | 4.70 | 20.28 |
| Mod memb | 53.33 | 42.23 | 59.90 | 36.12 | 54.26 | 58.30 | 45.57 | 72.25 | 42.49 | 37.44 | 69.71 | 51.10 | 35.23 | 52.81 | 37.74 | 60.64 | 38.53 | 46.87 | 57.78 | 54.31 |
| Marg memb | 26.69 | 46.34 | 29.07 | 54.88 | 36.18 | 38.45 | 34.07 | 22.85 | 48.63 | 49.94 | 4.03 | 37.33 | 10.87 | 14.67 | 49.99 | 34.30 | 4.45 | 22.35 | 37.52 | 25.41 |
| Majority | 90.46 | 91.67 | 83.71 | 96.09 | 91.42 | 94.74 | 95.55 | 96.85 | 89.14 | 90.80 | 90.27 | 97.63 | 92.55 | 97.55 | 93.59 | 93.44 | 98.50 | 93.84 | 89.34 | 91.05 |
| Foreign born | 9.54 | 8.33 | 16.29 | 3.91 | 8.58 | 5.26 | 4.45 | 3.15 | 10.86 | 9.20 | 9.73 | 2.37 | 7.45 | 2.45 | 6.41 | 6.56 | 1.50 | 6.16 | 10.66 | 8.95 |

### Mean scores of the interval scaled variables

| | AT | BE | CH | CZ | DE | DK | ES | FI | FR | GB | GR | HU | IE | IT | NL | NO | PL | PT | SE | SI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | 2257 | 1899 | 2040 | 1360 | 2919 | 1506 | 1729 | 2000 | 1503 | 2052 | 2566 | 1685 | 2046 | 1207 | 2364 | 2036 | 2110 | 1511 | 1999 | 1519 |
| General. trust | 5.31 | 4.96 | 5.72 | 4.48 | 5.10 | 6.81 | 4.84 | 6.34 | 4.81 | 5.34 | 3.45 | 4.30 | 5.80 | 4.40 | 5.72 | 6.53 | 3.81 | 4.43 | 6.25 | 4.31 |
| Ethnocentrism | 4.57 | 5.11 | 4.23 | 5.53 | 4.57 | 4.64 | 4.66 | 4.05 | 5.01 | 5.30 | 6.45 | 5.61 | 4.70 | 4.97 | 4.81 | 4.65 | 4.71 | 5.37 | 3.76 | 5.36 |
| Age | 44.76 | 45.81 | 45.94 | 50.01 | 47.38 | 47.34 | 46.65 | 46.63 | 45.32 | 47.43 | 47.68 | 47.14 | 44.88 | 46.49 | 46.42 | 46.80 | 43.80 | 46.35 | 47.26 | 45.42 |
| Financ satisf. | 3.09 | 3.22 | 3.43 | 2.69 | 3.14 | 3.56 | 3.06 | 3.04 | 2.52 | 3.28 | 2.43 | 2.50 | 3.18 | 3.14 | 3.43 | 3.43 | 2.54 | 2.61 | 3.44 | 3.19 |
| Political powerlessness | 3.45 | 3.54 | 3.23 | 3.65 | 3.32 | 2.87 | 3.77 | 3.38 | 3.70 | 3.41 | 3.64 | 3.50 | 3.45 | 3.73 | 3.32 | 3.05 | 3.68 | 3.86 | 3.13 | 3.63 |

**Information about the scales**

| | |
|---|---|
| Generalized trust: | Ranging from 0 to 10 |
| Ethnocentrism: | Ranging from 0 to 10 |
| Political powerlessness: | Ranging from 1 to 5 |
| Gross Domestic Product per capita: | Ranging from 10,560 to 36,600 |

## Appendix IV. Explanation of the used macro-variables

- Population size: Population figures for 2002 (source: International Historical Statistics).
- Density: The number of inhabitants per square kilometer (source: World Development Report).
- Fractionalization index: taken form Alesina & La Ferrara 2002.
- Inflow of foreigners in 2002 (in thousands): Figures of the inflow of foreign population in 2002 (source: SOPEMI/OECD).
- Inflow of foreigners in 2002 (per 1000 inhabitants): The inflow of foreign population in 2002 expressed as the ratio of the inflow and the total population (source: SOPEMI/OECD + own calculations).
- Stocks of foreigners in 2002 (in thousands): Figures about the stocks of foreign population in 2002 (source: SOPEMI/OECD).
- Stocks of foreigners in 2002 (per 1000 inhabitants): The stocks of the foreign population in 2002 expressed as the ratio of the stocks and the total population (source: SOPEMI/OECD + own calculations).
- Inflow of foreign workers in 2002 (in thousands): Figures of the inflow of foreign workers in 2002 (source: SOPEMI/OECD).
- Inflow of foreign workers in 2002 (per 1000 inhabitants): The inflow of foreign workers in 2002 expressed as the ratio of the inflow and the total population (source: SOPEMI/OECD + own calculations).
- Percentage of the inflow of foreigners in 2002 coming from former colonies: For Belgium, France, Italy, the Netherlands, Portugal, Spain and United Kingdom, based on the OECD inflow by nationality statistics, the percentage of the inflow of immigrants coming from the former colonies was calculated, e.g. the percentage of the 2002 inflow to Belgium coming from Congo, Rwanda and Burundi (Belgium's former colonies) (source: SOPEMI/OECD + own calculations).
- Percentage of the inflow of foreigners in 2002 coming from the same language area: Per country and based on the OECD inflow by nationality statistics, the percentage of the inflow of immigrants coming from the same language area (or country with special rights for specific languages) was calculated, e.g. the percentage of the 2002 inflow to Ireland coming from United Kingdom, United States of America, Canada, Australia, etc (source: SOPEMI/OECD + own calculations).
- Ratio of sending development and sending OECD countries: Based on the OECD inflow by nationality statistics, a ratio was calculated between the sending development and sending OECD countries in the list. (source: SOPEMI/OECD + own calculations).
- Average increase of foreigners inflow in thousands: Based on the inflow figures between 1996 and 2002, the regression slope was calculated as an indication for the strong increase

or decrease of foreigner inflows in the recent years (source: SOPEMI/OECD + own calculations).

- Average increase of foreigners inflow (per 1000 inhabitants): Based on the inflow figures per 1000 inhabitants between 1996 and 2002, the regression slope was calculated and used as an indicator for the average increase of the inflow of foreign people per 1000 inhabitants (source: SOPEMI/OECD + own calculations).
- Average increase of foreign workers inflow (in thousands): Based on the inflow of foreign workers figures between 1996 and 2002, the regression slope was calculated and used as an indicator for the average increase of the inflow of foreign workers (source: SOPEMI/OECD + own calculations).
- Average increase of foreign workers inflow (per 1000 inhabitants): Based on the inflow figures per 1000 inhabitants between 1996 and 2002, the regression slope was calculated and used for the average increase of the inflow of foreign workers per 1000 inhabitants (source: SOPEMI/OECD + own calculations).
- Average increase in the percentage of inflow of foreigners coming from former colonies: Based on the percentage of the inflow of foreigners coming from former colonies between 1996 and 2002, the regression slope was calculated and is used to indicate the increase or decrease in immigrants coming from former colonies (source: SOPEMI/OECD + own calculations).
- Average increase in the percentage of inflow of foreigners coming from the same language area: Based on the percentage of the inflow of foreigners coming from the same language area between 1996 and 2002, the regression slope was calculated and used to indicate the increase or decrease in immigrants coming from the same language area (source: SOPEMI/OECD + own calculations).
- Asylum requests in 2002 (in thousands): Number of asylum requests in 2002 (source: UNHCR).
- Asylums granted in 2002 (in thousands): Number of asylums granted in 2002 (source: UNHCR).
- Asylums granted in 2002 (per 1000 inhabitants): The number of granted asylums in 2002 expressed as the ratio with the total population (source: UNHCR + own calculations).
- Average increase of granted asylums (in thousands): Based on the figures of granted asylums between 1996 and 2002, the regression slope was calculated for this variable (source: UNHCR + own calculations).
- Average increase of granted asylums (per 1000 inhabitants): Based on the figures of granted asylums between 1996 and 2002 expressed as the ratio with the total population, the regression slope was calculated for this variable (source: UNHCR + own calculations).
- Naturalizations in 2002: The figures of naturalizations in 2002 (source: OECD).
- Naturalization ratio: The ratio of the naturalizations in 2002 and the inflow of foreign population in 1995. A time-series analysis revealed that a time lag of seven years works very well to explain the naturalization figures (source: SOPEMI/OECD + own calculations).
- Asylum ratio: The ratio of the requested and granted asylums in 2002 (source: UNHCR + own calculations).