VALUES AND SUPPORT FOR IMMIGRATION: A CROSS-COUNTRY COMPARISON

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Abstract

In this paper we estimate and compare the effects of two value dimensions taken from the theory of basic human values (Schwartz, 1992) – namely, self-transcendence and conservation – on attitudes toward immigration in 19 countries. Data from the first wave (2002-03) of the European Social Survey (ESS) is utilized for the analyses. This cross-national survey measures basic human values with a new 21-item instrument. Attitudes toward immigration are operationalized using two dimensions: willingness to allow immigrants into the country and rejection of conditions to allow them. Effects of the value dimensions on immigration attitudes are compared across 19 nations using multiple-group multiple-indicators structural equation modeling (MGSEM). We hypothesize that these effects are equal across countries. The critical statistical legitimacy for comparing these effects across countries is discussed in detail, and partial measurement invariance is evidenced. The MGSEM provides strong support for our hypotheses in 17 countries: self-transcendence displays a positive effect on support for immigration, and conservation a negative effect. This result is robust also after accounting for several individual and contextual variables. Effects are found to differ a little across countries. It is shown that clusters of countries with equal effect sizes can be distinguished, and possible explanations for effect size differences are discussed.

1. Introduction

Unarguably, during the last decade migration flows into Europe are on the rise. According to the Organisation for Economic Cooperation and Development (OECD) statistics, the annual influx of immigrants into the EU-15 (without Greece and Austria[1]) has evolved from 1,433,000 in 1994, more than 1,719,000 in 1999, to 2,476,000 in 2004 (OECD, 2006). Electoral successes of anti-immigration parties indicate that in the same Europe, negative attitudes toward immigrants or immigration are quite widespread (for example, Anderson, 1996; Lubbers, 2001). Survey research confirms the picture that exclusionist attitudes prevail in large sections of the autochthonous populations. The literature contains numerous studies that attempt to gain a deeper understanding of anti-immigration feelings and negative out-group attitudes. Traditionally, these studies have focused on the effects of structural variables, economic interests, perceived threat and symbolic motives (e.g., Coenders and Scheepers, 1998; Hagendoorn and Nekuee, 1999; Fetzer, 2000; Scheepers, Gijsberts and Coenders, 2002; Raijman, Semyonov and Schmidt, 2003; Dustmann and Preston, 2004; Gijsberts, Hagendoorn and Scheepers, 2004; Raijman and Semyonov, 2004; Sides and Citrin, 2007; Sniderman, Hagendoorn and Prior, 2004; Semyonov, Raijman and Gorodzeisky, 2006). However, far less studies investigate the direct relation between human values and attitudes (exceptions are, e.g., Rokeach, 1973; Peterson, 1994; Sagiv and Schwartz, 1995; Altemeyer, 1998; Duriez, Luyten, Snauwaert, and Hutsebaut, 2002; Pantoja, 2006; Schwartz, 2006). Several reasons can be given for the existence of this lacuna. Firstly, the value concept has never occupied the central position it might deserve in social sciences. Secondly, value research has suffered a long time from the absence of an agreed-upon scale to measure values (Hitlin and Piliavin, 2004). Nevertheless, the theoretical relevance of values to explain attitudes is paramount. After all, human values can be seen as abstract principles that underpin attitudes toward more specific objects, such as immigration (Rokeach, 1973).

In this article, an attempt is undertaken to provide an underlying mechanism of the link between human values and attitudes toward immigration. Thus, the objective of the study is neither a human value theory test, nor a study of attitudes toward immigration[2], but we rather focus on the relation between the two. This article differs from previous studies in several respects. First and foremost, this is a comparative research. The link between human values and attitudes toward immigration is tested simultaneously in 19 different European countries and the equality of the effects across nations is assessed. This allows us to evaluate the cross-cultural robustness of the findings. Consequently, the necessary attention will also be paid to the cross-cultural equivalence of the measurements (Hui and Triandis 1985, Steenkamp and Baumgartner 1998, Vandenberg and Lance 2000, Harkness, van de Vijver and Mohler, 2003), an issue that is neglected too often. Secondly, one of the aspects of attitudes toward immigration this study focuses upon – the rejection of conditions for allowing immigrants - has not been linked to human values before.

2. Theoretical overview: Using values to explain attitudes toward immigration

2.1 Attitudes vs. human values

In the past, the concepts value and attitude have been used interchangeably far too often. A clear delineation of both concepts is a necessary condition for grasping the connection between values and attitudes. Following Rokeach (1968: 550), an attitude can be defined as '*an enduring organization of several beliefs focused on a specific object or situation, predisposing one to respond in some preferential manner*'. Ajzen (1993: 41) similarly defines an attitude as '*an individual's disposition to react with a certain degree of favorableness or unfavorableness to an object, behavior, person, institution, or event – or to any other discriminable aspect of the*

individual's world'. In other words, attitudes can be seen as consistent tendencies to evaluate a particular object positively or negatively. Beliefs with respect to the given object form the foundation on which the evaluation is based. Other authors phrased similar ideas in slightly different words (Fishbein and Ajzen, 1975; Eagly and Chaiken, 1993). In this contribution, we consider attitudes toward two concrete objects: (1) the openness of a country for immigration, and (2) conditions for allowing immigrants into the country. Thus, both attitude variables in this study deal with the readiness of individuals to accept the arrival of newcomers - often with a different ethnic background – into 'their' society. These attitudes can be seen as concrete translations of ethnocentrism (Sumner, 1960), a broad concept that contains many more facets like social distance, perception of ethnic threat and avoidance of out-group contact (LeVine and Campbell, 1972).

Human values, on the other hand, can be defined as '*desirable transsituational goals, varying in importance, that serve as guiding principles in the life of a person or other social entity*' (Schwartz, 1994: 21). To avoid any conceptual confusion, we elaborate the value definition by distinguishing it from the attitude concept. In the first place, a value is a belief, namely, the belief that some end-state or mode of conduct is preferable over another end-state or mode of conduct (Rokeach, 1973). An attitude, on the contrary, is the evaluative sum of several beliefs with respect to a certain object (Fishbein and Ajzen, 1975). Secondly, values transcend specific situations, whereas attitudes explicitly refer to one specific object. Consequently, the number of distinguishable human values is limited: Rokeach (1968), for instance, mentions about six dozen values, and Schwartz (1994) discerns 10 human value types. Conversely, one can have as many attitudes as there are objects in the world (Rokeach, 1973; Fishbein and Ajzen, 1975). Thirdly, values occupy a more central position than attitudes within the personality of an individual (Hitlin and Piliavin, 2004). A minimal level of value stability is necessary for the continuity of personality and society (Rokeach, 1973). Attitudes, on the other hand, are more volatile since

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they refer to one specific object. There is a huge potential for attitude change because attitudes depend on numerous beliefs that could be altered in so many ways (Ball-Rokeach and Loges, 1994).

Schwartz (1992) postulated a theory that describes 10 basic types of human values that are distinguished by their motivational goals (see Table 1). One of the most appealing features of Schwartz' theory is the integration of basic value types into a broader value system. The dynamic relations between the motivational types are represented by a classification of the 10 value types into a circular continuum (see Figure 1). Adjacent value types share some motivational emphases and are therefore compatible, while values that are further away are often more conflicting or even diametrically opposed. Universalism and benevolence, for example, share transcendence of selfish interests, while the opposite value type 'achievement' focuses on personal success (Schwartz, 1994). The circular structure also makes it possible to distinguish four higher-order value types that can be ordered along two orthogonal dimensions: openness to change vs. conservatism and self-enhancement vs. self-transcendence (Schwartz, 1992).

Table 1 about here

Figure 1 about here

Recently, Schwartz et al. developed the Portrait Values Questionnaire (PVQ). This measurement instrument for human values can be applied in large population surveys since it does not demand a high level of abstract thinking. The PVQ was validated in many cultures (Schwartz et al., 2001). In the vast majority of the samples, the hypothesized circular structure was found. This supports the claim that at least some aspects of the content and structure of human values are universal (Schwartz, 1994).

2.2 The relation between human values and attitudes toward immigration: Looking at the underlying mechanism

The conceptual differences between values and attitudes sketched above reveal important information about their relationship. Commonly, it is assumed that human values are general standards that underpin concrete attitudes and behavior. Values can be seen as abstract principles that guide concrete attitudes toward particular objects (Rokeach, 1968). Several conceptions of how the value-attitude linking process operates are possible. Firstly, values can be seen as determining the weight that is given to different beliefs when an overall evaluation of an attitude object is made (Esses, Haddock, and Zanna, 1993). Alternatively, Sagiv and Schwartz (1995) argue that values will influence the attitude toward a certain object if this object has relevant consequences for the attainment of the motivational goals that are associated with these respective values. In this sense, human values whose motivational goals are promoted or blocked by the arrival of immigrants will affect attitudes toward immigration.

Concrete hypotheses can be derived from relating immigration to the attainment of specific motivational goals. Immigration can be seen as an obstacle for values of the higher-order type *conservation*, since immigration often brings along changing traditions and norms. We can expect that exclusionist attitudes are more widespread among individuals who list commitment to customs and traditions (tradition) high among their priorities. Analogously, persons who give much importance to honoring social expectations and norms (conformity) or social order and stability (security), will be probably less willing to accept immigrants (Sagiv and Schwartz, 1995). These hypotheses should come as no surprise since the value types tradition, conservation and security are closely related to authoritarianism. In their classical study, Adorno et al. found a positive relation between ethnocentrism and an authoritarian personality. Among others, fundamental characteristics of this personality type are the tendency to obey social conventions

and traditions (conventionalism) and an aggressive attitude toward violators of these traditions (authoritarian aggression) (Adorno, Frenkel-Brunswick, Levinson, and Sanford, 1950)

Values that pertain to the *self-transcendence* higher-order type are expected to be connected to positive attitudes toward immigration. This should be especially the case for universalism since this value type comprises tolerance, understanding and showing concern for the welfare of all human beings. Admitting immigrants into the country offers possibilities to realize these motivational goals. The relationship between benevolence and attitudes toward immigration will probably be positive as well, albeit weaker. After all, benevolence refers, in the first place, to the enhancement of the welfare of personal contacts rather than all human beings (Schwartz, 1994).

There is far less consensus on the expected relationships between attitudes toward immigration and the other two higher-order value types. Schwartz (1994) and Sagiv and Schwartz (1995) expect values of the *openness to change* higher-order type (self-direction and stimulation) to correlate positively with pro-immigration attitudes. In this line of thinking, immigration yields opportunities to explore new and different ways of life - motivational goals that are central to the self-direction and stimulation value types. On the other hand, Duriez et al. (2002) stress that the presence of out-groups may also be perceived as threatening for one's pursuit of novelty. There also exists some debate on the relation between s*elf-enhancement* value types (achievement and power) and such attitudes. Realistic group conflict theory (Blalock, 1967; Sherif and Sherif, 1969; Olzak and Nagel, 1986) starts from the proposition that negative out-group attitudes originate from economic and political competition. Persons that consider personal success (self-achievement) or wealth and social power (power) of paramount importance are likely to perceive immigrants as greater rivals. Therefore, an association between these two value types and negative attitudes toward immigration is expected (Duriez et al., 2002). Yet, Sagiv and Schwartz (1995) underline a second process that operates in the opposite direction. For the

dominant group, the presence of out-groups might also provide opportunities to gain wealth, power and control. Because immigration can be perceived both as a threat and as an opportunity, Sagiv and Schwartz conclude that a correlation near zero is to be expected.

Thus, according to theory, only the values of the conservation and self-transcendence type have unambiguous effects on attitudes toward immigration. Effects of the values pertaining to the self-enhancement and the openness to change higher-order types have far less robust theoretical foundations and are expected to be ambiguous. For this reason, this study will exclusively focus on the hypotheses concerning the self-transcendence and conservation value types. In the past, empirical studies – principally American – have provided empirical support for these hypothesized effects. Rokeach (1973) found that white Americans with pro-Black attitudes give higher priority to values that pertain to Schwartz' universalism or benevolence type, and a lower priority to values of security, conformity or tradition value types. Although sometimes a different terminology is used, other studies confirm these results for the American (Katz and Hass, 1988; Pantoja 2006), Israeli (Sagiv and Schwartz, 1995), Flemish (Duriez et al., 2002) and German (Iser and Schmidt, 2005) contexts.

Summarizing, we expect individuals scoring high on self-transcendent values to maintain stronger positive attitudes toward immigration. In contrast, individuals scoring high on conservation values are expected to have more negative attitudes. We start from the hypothesis that these relationships between values and attitudes will be invariant across countries. We find no indices in the literature for possible between-country differences in the value-attitudes relation. Schwartz (1992, 1994) evidences on the contrary a high degree of universality of the four higher order value types and of their organisation into two dimensions. Besides that, previous research has given ample support for the relation between authoritarianism, anomia and ethnic prejudice. This is one of the strongest and most stable relations that are

documented in empirical studies in a large number of countries (see for example Roberts and Rokeach, 1956; Billiet, Eisinga and Scheepers, 1996; Meloen, Van der Linden and De Witte, 1996). Ethnic prejudice is conceptually (and empirically) closely related to the attitudes toward immigration that are studied here. Conservation values are built on several items that are conceptually very close to authoritarianism. Self-transcendence values are to some extent the opposite of anomia. Therefore we expect that the relationship between the attitudes toward immigration and the values is also stable and invariant over all countries.

3. Data and indicators

To test the cross-cultural robustness of the link between values and attitudes, the first wave of the European Social Survey (ESS) is used. For each of the 19 European countries[3], respondents were selected by means of strict probability samples of the resident populations aged 15 years and older. The countries and their respective numbers of respondents that completed the basic human values scale and the attitude items on immigration are: Austria (AT) (2,257), Belgium (BE) (1,899), Czech Republic (CZ) (1,360), Denmark (DK) (1,506), Finland (FI) (2,000), France (FR) (1,503), Germany (DE) (2,919), Great Britain (GB) (2,052), Greece (GR) (2,566), Hungary (HU) (1,685), Ireland (IE) (2,046), Netherlands (NL) (2,364), Norway (NO) (2,036), Poland (PL) (2,110), Portugal (PT) (1,510), Slovenia (SI) (1,519), Spain (ES) (1,729), Sweden (SE) (1,999), and Switzerland (CH) (2,037). Thus, the total number of respondents from the 19 countries is 37,097. The data were taken from website http://ess.nsd.uib.no. Translation of the questionnaire into each native language followed the rigorous procedures for cross-cultural surveys set out in Harkness, van de Vijver and Mohler (2003, ch. 3).

The ESS human value scale is derived from the earlier 40-item Portrait Value Questionnaire (PVQ; Schwartz et al. 2001). However, space and budget limitations required reducing the number of items in the ESS 2003. Some items were dropped, others changed so as to include the spectrum of different aspects of each value. The 21 value items in the ESS are verbal portraits of 21 different people, gender-matched with the respondent. Each portrait describes a person's goals, aspirations, or wishes that point implicitly to the importance of a value. For each portrait, the respondents were asked to tell how strong the similarities are between themselves and the described person, using 6-point Likert scales (1 – "very much like me" to 6 – "not like me at all"). From these scores, the respondents' values were inferred. In this study the variables were recoded so that a higher score indicates stronger similarity. Table 2 presents the wording of the items that were included in the analysis. These items measure the values belonging to the dimensions self-transcendence and conservation, namely, universalism, benevolence, tradition, conformity and security. Two portraits were utilized to operationalize each value. Only universalism was operationalized by three items due to its broad content.

Table 2 about here

Two aspects of attitudes toward immigration are considered in this study. The first attitude variable refers to the willingness to let immigrants into the country ('allow'). Each of the items of this measurement scale inquires whether respondents prefer their country to allow many or few immigrants of a certain group. 4-point scales (1 - allow none, 4 - allow many) are used to register the answers of the respondents. The second attitude variable, which we named 'no conditions', refers to the importance placed on certain conditions for allowing immigrants into the country. For example, respondents were asked whether they consider good educational qualifications a necessary condition for allowing immigration. The two

items that indicate support for conditions are measured on an 11-point scale (0 - extremely unimportant, 10 - extremely important).[4] Both attitude variables are recoded in this study in such a manner that a higher score reflects a more open attitude toward immigration, i.e. a greater willingness to allow immigrants and less importance placed on conditions for immigration. These two sets of items were selected based on prior confirmatory factor analyses that we conducted and represent the two different dimensions of attitudes toward immigration. Table 3 presents the question wording for each of the items, grouped by attitude variable.

Table 3 about here

4. Data analysis

Instead of working with single value types, we measure the two higher-order dimensions self-transcendence and conservation directly by the items. Self-transcendence represents two values: universalism, measured by three indicators, and benevolence, measured by two. These five indicators are used to measure self-transcendence directly. Similarly, conservation reflects three other values: tradition, conformity and security, each measured by two indicators. We utilize the six indicators to measure conservation directly. From a purely theoretical point of view, it would be interesting to use the single values as explanatory variables. After all, some of the single values that are combined into the higher-order dimensions are expected to have a different effect on attitudes toward immigration. We hypothesize, for example, that universalism will have a stronger positive effect than benevolence. However, the ESS human value scale does not result in clear-cut measurements of the single values. Instead, all indicators load very strongly on the higher-order dimensions. Models where single values are used tend to suffer from multicollinearity. The problem arises especially when using the highly correlated specific values as predictors.

There is also a strong theoretical justification for using higher-order dimensions. Davidov, Schmidt and Schwartz (in press) argue that the division of the domain of value items into 10 distinct values is an arbitrary convenience. The circular arrangement of values represents a continuum of related motivations, much like the circular continuum of colors, rather than a set of discrete motivations. One could reasonably partition the domain of value items into broader or more fine-tuned distinct value constructs, depending on how finely one wishes to discriminate among motivations.

4.1 Testing for invariance

Before the effects of values on attitudes toward immigration can be compared cross-culturally, we have to guarantee that the measurements possess the characteristic of measurement invariance. This notion refers to the question '*whether or not, under different conditions of observing and studying phenomena, measurement operations yield measures of the same attribute*' (Horn and McArdle, 1992: 117). If invariance is absent, interpretations of between-group comparisons become highly problematic (Vandenberg and Lance, 2000). Various hierarchical levels of invariance can be distinguished, each with its own consequences for the comparability of scores across groups (Steenkamp and Baumgartner, 1998). In this study we want to make cross-national comparisons of effect parameters (regression coefficients). For this type of comparison to be allowed, at least the metric invariance or equivalence of the factor loadings between items and theoretical constructs we are exploring is needed (Rock, Werts and Flaugher, 1978; Hui and Triandis, 1985; Steenkamp and Baumgartner, 1998; Cheung and Rensvold, 2002; Harkness et al. 2003; for an application of an invariance test on the human values scale from the ESS, see Davidov, Schmidt and

Schwartz, in press; for an application of an invariance test on the attitude variables from the ESS, see Meuleman and Billiet, 2005).

There are various techniques to test for measurement invariance, one of which is multiple-group confirmatory factor analysis (MGCFA; Jöreskog, 1971). To assess metric equivalence, we test whether the factor loading of each item on its corresponding construct is the same across all nations. Only if this measurement invariance is supported, can we proceed with the cross-country comparison of the effects of values on attitudes toward immigration. However, for cross-cultural comparisons to be allowed, it is not necessary that all factor loadings are invariant (full measurement invariance). Various scholars have argued the comparability of the meaning of constructs is guaranteed when at least two indicators per construct are equal across all countries (Byrne, Shavelson and Muthen, 1989; Steenkamp and Baumgartner, 1998). Thus, if full measurement invariance appears not to hold, we can still resort to this partial measurement invariance.

To test for metric invariance, we estimate a multi-group model for the 19 countries.[5] This model contains four latent variables: two higher-order values and two immigration attitudes. A 'top-down' strategy is applied: We start with the most restrictive model, a fully invariant model where all loadings are constrained to be equal across all countries (model 1 – full measurement equivalence). Next, we test if freeing some of the constrained factor loadings leads to a substantially improved model fit or to substantial parameter changes (Saris, Satorra and Sörbom, 1987; Kaplan, 1989).

The overall fit measures (CFI = 0.95, NFI = 0.94, RMSEA = 0.01, Pclose = 1.0) suggest that model 1 is acceptable. However, modification indices pointed to misspecifications in the model. Therefore, in model 2 we conducted several modifications. In 12 countries we

changed the constraints on one or more item loadings sequentially. In some countries we added cross-loadings between indicators supposed to measure one value dimension to the other value dimension. However, these cross-loadings were low and not substantial. In other cases we had to relax the measurement invariance constraints for some items. As a result, model 2 displays only partial measurement invariance for some of the countries. No modifications were needed for the attitude variables (A table summarizing the modifications may be obtained from the authors).

Model 2 did not produce any substantial improvement in the fit measures compared to the more restrictive model 1 (CFI = 0.95, NFI = 0.94, RMSEA = 0.01, Pclose = 1.0). After these adaptations, the program neither proposed further substantial model modifications nor expected large parameter changes. In this final model, all factor loadings were statistically significant and most standardized factor loadings were over 0.4 (a table summarizing the standardized and unstandardized factor loadings may be obtained from the authors). Together with the good fit indices, this indicates that the items provide an acceptable measurement of the latent constructs in the model. Furthermore, with the partial metric invariance established, we may now use model 2 to compare the relationships among values and attitudes toward immigration across countries.

4.2 Effects of values on attitudes toward immigration

Before starting with the empirical analyses, let us summarize the main hypotheses from the theory section. We expect self-transcendence to have a significant positive effect on the willingness to allow immigrants into the country (the variable 'allow') (Hypothesis 1) and on the rejection of conditions to allow immigrants into the country (the variable 'no conditions') in all countries (Hypothesis 2). In contrast, conservation values are hypothesized to have a

negative significant effect on 'allow' (Hypothesis 3) and 'no conditions' (Hypothesis 4). These relations are expected to hold in all countries, i.e. regardless of the cultural context. We do not expect any differences in the effect sizes across the different countries (Hypothesis 5).

To address the question of how the value dimensions self-transcendence and conservation influence attitudes toward immigration in different countries, we estimated their direct impact on the variables 'allow' and 'no conditions' simultaneously in the 19 countries. Table 4 provides the unstandardized regression coefficients,

Table 4 about here

Self-transcendence and conservation exhibit significant effects on the variable 'allow'. Self-transcendence has a positive significant effect and conservation a negative significant effect on the variable 'allow' in all countries analyzed. In other words, people who score high on self-transcendence values are also more willing to allow larger numbers of immigrants into the country. In contrast, those scoring high on conservation values are more negative toward immigration. Differences in the strength of this effect across countries seem to be present. We will address the issue of effect size differences in the next section.

Next we turn to the effects of self-transcendence and conservation values on the variable 'no conditions'. Self-transcendence exhibits a positive effect on the variable 'no conditions' in 16 countries. In these countries, people with high scores on self-transcendence values are more prone to reject imposing conditions on immigration. In contrast, conservation displays a negative significant effect in 17 countries. In these countries, as expected, the tendency to reject conditions on immigration is lower among people who attribute high importance to conservation values.

Seventy-one of the estimated 76 regression coefficients perform according to our hypotheses. Thus, the empirical results support our theoretical expectations on the relationship between these value orientations and attitudes toward immigration in most countries. They suggest that values explain attitudes toward immigration in most nations in a meaningful and similar way.

4.3 Comparison of the effects across nations

The finding that partial metric invariance is present allows cross-country comparisons of the effect sizes of values on attitudes toward migration. It enables us to answer questions such as: Which countries have the strongest effects? Which countries have the weakest effects? And even more interesting, which countries have equal effects? Trying to form clusters of countries with equal effect sizes can be a cumbersome task. Given that our model contains 19 countries, an almost infinite number of partitions is possible. Inspired by Welkenhuysen-Gybels and van de Vijver (2001), we adopted a bottom-up strategy to form groups of countries with equal effect sizes. Following this strategy, firstly, the effects of the two countries with the highest agreement in effect size are constrained to be equal. A chi-square difference test is implemented to test whether the model fit deteriorates significantly. If this turns out to be the case, the equality constraint is removed and the conclusion is drawn that all countries have different effects. If the model fit does not become worse, an equality constraint is added for the country that is most similar to the formed cluster. Again, a chi-square difference test is used to determine whether this constraint in tenable. This process continues until there is no country whose effect agrees with the effects of the two nations whose effects were constrained to be equal. The countries that are not part of the cluster are scrutinized again by means of the same bottom-up process. This method was repeated for each of the four

effects of values on attitudes toward immigration. The unstandardized coefficients resulting from the bottom-up approach are shown in Table 5.

Table 5 about here

For the effect of self-transcendence on 'allow', only two clusters of countries are found. The first cluster contains the majority of the countries (13 out of 19). The hypothesis that the effect of self-transcendence on 'allow' is equal across these countries cannot be rejected. The common effect is .532, and this value is significant. For the second cluster, the effect is significantly stronger (.668). Despite the statistical difference, self-transcendence has a similar effect on 'allow' in both clusters. For the effect of conservation on 'allow' we find 5 clusters of countries. Again, the differences in the effect size between the clusters are relatively small. The strongest effect is found for the third cluster, containing only the Czech Republic and Poland (-.556). Sweden, on the other hand, is an outlier and has the weakest effect (-.313). The other countries are situated somewhere in between.

With respect to the effect of self-transcendence on 'no conditions', the strongest effects are found for Belgium, France, Ireland and Sweden (cluster 1; 1.214). Somewhat less strong was the effect in the second cluster, which - with the exception of Slovenia - includes only Western or Northern European countries. From this point on, none of the countries had equal effects according to the chi-square difference test. Hungary, Germany and Spain had a positive effect, the Czech Republic, Poland and Portugal no effect and Greece was an outlier with a negative effect. Finally, for the effect of conservation on the variable 'no conditions' we found eight relatively small clusters. The strongest similar negative effect (-1.317) was found in the first cluster, which included France, Belgium and Slovenia. Countries in the second cluster had also a negative effect, but it was somewhat weaker (-.929). The effect size

of the countries in the third cluster is situated in between the effect sizes of the first two clusters (-1.159). Two German speaking countries (Switzerland and Germany) constituted the fourth cluster. From this point on, none of the other countries had equal effects according to the chi-square difference test, with Greece and Poland having an effect not significantly different from zero.

This type of analysis allows us to estimate the potential explanatory power that values have on attitudes toward immigration in the different countries. Despite our finding that almost all country-specific effects have the same sign, significantly different effect sizes are found across the countries. This is especially the case for the effects of self-transcendence and conservation on 'no conditions'. Providing a sound explanation for the differences in effect size is less evident, since marked patterns are not always present. Probably, a combination of factors in the national context is responsible for the diverging effect size. In the final section we offer explanations for some country-specific differences.

4.4 The robustness of the findings in the presence of control variables

In the previous section we found that – despite some differences with respect to the strength of the effects - values have a substantial impact on attitudes toward immigration. In the literature however, various other variables were quite successfully used to explain attitudes toward out-groups in general. Education, for example, was repeatedly found to have a positive effect (Jackman and Muha, 1984; Coenders and Scheepers, 2003; Kunovich, 2004). Other variables that were shown to have an effect include age, economic situation, political orientation and religiosity (see for example Billiet, 1995; Fetzer, 2000; Semyonov, Raijman and Gorodzeisky, 2006). As some of these characteristics might also be related to the scores

on the human value scales (Schwartz, 2006), there is a possibility that the relation between values and attitudes is spurious.

In order to test whether the value-approach really offers additional explanatory power over existing models, we estimated the effect of values on attitudes toward immigration under control for the following individual variables: age, gender, level of education, household income, religiosity, attendance of religious services and left-right orientation. Additionally, we controlled for four contextual variables, namely GDP per capita, GDP growth, the inflow of immigrants and the stock of foreign born population. Controlling for these variables in a multi-level analysis did not change the substantive results (see Appendix A)[6] and the values conservation and self-transcendence remained the strongest predictors for attitudes toward immigration. Their effect did not exclude other explanatory variables proposed in the literature. Values may complement rather than exclude other variables in explaining attitudes toward immigration[7].

4.5 Explaining effect size differences across nations

Notwithstanding the finding that values have an impact on attitudes toward immigration in the vast majority of countries, we also detected some cross-country variation in the sizes of the effects. Giving a sound explanation for these observed differences in effect sizes is a very difficult task especially given the relatively small differences between countries. Probably, the differences in effect sizes are the result of complex processes, in which certain individual characteristics of the population, historical path dependence and national characteristics interact. The fact that various of these factors are extremely hard to measure, and that information on 19 countries only does not allow us to take too many elements into consideration at once, makes is very hard to model the cross-country variation in effect sizes

in detail. In spite of these difficulties, we undertake an attempt to link the observed differences in effect size to two national context variables, namely GDP per capita and the gross immigration inflow (per 1000 inhabitants).[8] We do this by examining correlation coefficients between the effect sizes and these national characteristics. Self-evidently, this part of the research has an exploratory character. Table 6 provides a summary of the correlations between effect sizes and the two national context variables.

Table 6 about here

First and foremost, the GDP per capita seems to affect the strength of the value effects. The effects of self-transcendence and conservation on 'allow' appear to be more pronounced in countries with a low GDP per capita. In other words: human values give a stronger prediction of the willingness to allow immigrants for poorer countries than for richer ones. For the effects on 'no conditions', the opposite pattern is found: human values tend to provide a stronger explanation in richer countries. The relation between effect sizes and GDP per capita is quite strong, as three out of four correlation coefficients exceed the absolute value of 0.45. It may be the case that in poorer countries, the immigration debate is focused on the quantity of immigration, as inhabitants of these countries may fear that immigration will constitute a competition with their already limited economic resources. Values may be related to such fears (universalistic individuals may fear less than conservative individuals) and as a consequence be better predictors for 'allow' in poorer countries. The question whether migration should be conditioned on certain criteria on the other hand, may occupy a more central role in the debate in wealthier countries. If polarization on this topic took place along value divides, this could have resulted in stronger effects of values on 'no conditions' in richer countries. Further research is needed to verify these explanations.

Second, the inflow of immigrants is connected to the effect sizes for only one of the concepts, namely 'allow'. It is not surprising that the inflow of immigrants is related to the effects on 'allow', as this concept is explicitly linked to the willingness of the respondent to allow immigrants into the country. 'No conditions' on the other hand, deals with modalities for granting entrance in the first place. In countries with a high level of immigration, human values tend to affect 'allow' only to a lesser extent. This may be due to the fact that inhabitants of these immigration countries have a larger amount of information – obtained via personal experiences or through the mass media - at their disposal in the attitude formation process. Therefore, these persons might fall back on general human values only to a lesser extent than inhabitants without this information. Nevertheless, we should not forget that even in countries with high levels of immigration, human values play an important role in the formation of attitudes toward immigration.

5. Summary and Conclusions

This article examines the effect of two value dimensions taken from the basic values theory of Schwartz, namely, self-transcendence and conservation, on attitudes toward immigration. The effects are compared across 19 countries in a multiple-group setting using data from the first wave of the ESS. We addressed three research questions:

1) Whether self-transcendence values have a positive effect on support for immigration.

2) Whether conservation values have a negative effect on support for immigration.

3) Whether these effects are cross-nationally invariant.

In cross-cultural survey research, more methodological issues are often involved than in a single country survey research (van de Vijver and Leung, 1997; Welkenhuysen-Gybels and van de Vijver, 2001). Initially, the test of measurement invariance addressed the question of

whether the latent variables in the model have the same metric across the countries in the study. This is a necessary condition for drawing conclusions about differences and similarities in the effect of the value dimensions on the dependent variables, attitudes toward immigration. After concluding that the constructs were measured in a (partially) equivalent way, we continued on with the comparative analysis.

The multiple-group SEM model supported our hypotheses. In 16 of the 19 countries we compared, all effects worked in the hypothesized direction. Our fifth hypothesis suggesting invariance of the effects of values on attitudes toward immigration across countries was not supported by the data, as effects varied across the 19 countries. However, in spite of differences in effect sizes, these differences were rather small and value dimensions provided a sound explanation for attitudes toward immigration. Indeed, this mechanism seems to be quite universal in the countries studied. Furthermore, controlling for variables often used in the literature to explain anti-minority sentiments[9] did not produce any change in our substantive results.

We also investigated differences and similarities in these effects across nations by grouping the countries into clusters in which their effect sizes are not statistically different. We applied a bottom-up chi-square difference test approach. According to the cluster solutions, the effects on the variable 'allow' proved to be more homogenous than the effects on the variable 'no conditions'. Economic conditions (reflected in GDP per capita) and the inflow of immigrants appeared to be related to the strength of the coefficients between values and attitudes, suggesting possible interaction effects between these contextual variables and values[10].

So far, the value concept has not reached the position it possibly deserves in the social sciences. One likely reason for this gap in the literature is that value research has suffered for

a long time from the absence of an agreed-upon scale to measure values (Hitlin and Piliavin, 2004). However, the theoretical relevance of values to explain attitudes is very large. Human values can be seen as general principles that underpin attitudes toward more specific objects, such as immigration, and we have proposed the underlying mechanism for it which was tested empirically: human values whose motivational goals are promoted or blocked by the arrival of immigrants will affect attitudes toward immigration[11] (for a general discussion on the importance of testing causal relations empirically with large-scale data see, e.g., Blossfeld, 1996; Goldthorpe, 1996). Furthermore, it is in line with Icek Ajzen's (2005) postulation that values may have an effect on attitudes. This is not part of the theory of planned behavior, but '*can complement it… and thereby deepen our understanding of a behavior's determinants*' (Ajzen, 2005: 134)[12].

For the first time, utilizing the data from the ESS, researchers are provided with an opportunity to apply an agreed-upon comparable measurement of values based on Schwartz' theory of basic human values to explain attitudes, opinions and behavior in different domains. This measurement has been validated in 20 countries using the ESS data, and displays construct validity (Davidov, Schmidt and Schwartz, in press). Researchers can now test whether patterns of value/attitude and value/behavior relations generalize across countries. Our study provides solid support for the effect of certain values on attitudes toward immigration in Europe, cross-nationally, and serves as an example of how such a cross-country comparison can be conducted.

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Table 1. Shalom Schwartz' ten basic human value types and their motivational

emphases

Value type	Motivational emphasis
Power	Social status and prestige, control or dominance over people and resources
Achievement	Personal success through demonstrating competence according to social standards
Hedonism	Pleasure and sensuous gratification for oneself
Stimulation	Excitement, novelty and challenge in life
Self-direction	Independent thought and action - choosing, creating and exploring
Universalism	Understanding, appreciation, tolerance and protection for the welfare of all people and for nature
Benevolence	Preservation and enhancement of the welfare of people with whom one has frequent personal contact
Tradition	Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provide
Conformity	Restraint of actions, inclinations and impulses likely to upset or harm others and violate social expectations or norms
Security	Safety, harmony and stability of society, or relationships, and of self

Adopted from Sagiv and Schwartz (1995: 438)

Table 2: Wording of the items of the ESS Human Values Scale

Dimension	Value	Item # (according to its order in the ESS questionnaire) and Wording (Male Version)
Self-transcendence	Universalism	3. He thinks it is important that every person in the world be treated equally. He believes everyone should have equal opportunities in life.
		8. It is important to him to listen to people who are different from him. Even when he disagrees with them, he still wants to understand them .
		19. He strongly believes that people should care for nature. Looking after the environment is important to him.
	Benevolence	12. It's very important to him to help the people around him. He wants to care for their well-being.
		18. It is important to him to be loyal to his friends. He wants to devote himself to people close to him.
Conservation	Tradition	9. It is important to him to be humble and modest. He tries not to draw attention to himself.
		20. Tradition is important to him. He tries to follow the customs handed down by his religion or his family.
	Conformity	7. He believes that people should do what they're told. He thinks people should follow rules at all times, even when no-one is watching.
		16. It is important to him always to behave properly. He wants to avoid doing anything people would say is wrong.
	Security	5. It is important to him to live in secure surroundings. He avoids anything that might endanger his safety.
		14. It is important to him that the government insures his safety against all threats. He wants the state to be strong so it can defend its citizens.

Table 3: Wording for the items measuring attitudes toward immigration

Attitude	Item # (according to its order in the ESS questionnaire) and Wording
Allow	D5. To what extent do you think [*country*] should allow people of a different race or ethnic group from most [*country*] people to come and live here?
	D7. To what extent do you think [*country*] should allow people from the poorer countries in Europe to come and live here?
	D8. To what extent do you think [*country*] should allow people from the richer countries outside Europe to come and live here?
	D9. To what extent do you think [*country*] should allow people from the poorer countries outside Europe to come and live here?
No conditions	Please tell me how important you think each of these things should be in deciding whether someone born, brought up and living outside [*country*] should be able to come and live here.
	D10. How important should it be for them to have good educational qualifications?
	D16. How important should it be for them to have work skills that [*country*] needs?

Table 4. Unstandardized effects (S.E. between parantheses) of value dimensions on Allow and No Conditions

Allow				No Conditions			
Self-Transcendence		Conservation		Self-Transcendence		Conservation	
GB	.744* (-0.062)	CZ	-.603* (-0.073)	BE	1.494* (-0.211)	BE	-1.454* (-0.121)
FI	.732* (-0.052)	PL	-.587* (-0.085)	SE	1.473* (-0.136)	SI	-1.338* (-0.167)
CZ	.730* (-0.094)	GB	-.558* (-0.042)	FR	1.222* (-0.161)	FR	-1.301* (-0.106)
PL	.727* (-0.112)	FR	-.547* (-0.039)	IE	1.074* (-0.160)	SE	-1.291* (-0.102)
BE	.676* (-0.078)	BE	-.509* (-0.044)	FI	.988* (-0.133)	IE	-1.190* (-0.119)
GR	.622* (-0.089)	SI	-.508* (-0.062)	NO	.965* (-0.149)	NL	-1.166* (-0.091)
CH	.599* (-0.050)	GR	-.504* (-0.070)	GB	.943* (-0.140)	NO	-1.118* (-0.096)
FR	.586* (-0.059)	FI	-.481* (-0.034)	NL	.894* (-0.136)	GB	-1.022* (-0.095)
NO	.585* (-0.055)	HU	-.458* (-0.107)	DK	.886* (-0.154)	ES	-.949* (-0.099)
SI	.567* (-0.093)	NO	-.445* (-0.035)	SI	.885* (-0.247)	AT	-.911* (-0.059)
HU	.557* (-0.135)	ES	-.424* (-0.043)	CH	.859* (-0.154)	FI	-.909* (-0.087)
IE	.548* (-0.059)	IE	-.418* (-0.044)	AT	.709* (-0.082)	DK	-.811* (-0.095)
ES	.541* (-0.053)	PT	-.415* (-0.076)	HU	.644* (-0.311)	HU	-.792* (-0.247)
AT	.537* (-0.029)	NL	-.411* (-0.032)	DE	.587* (-0.099)	DE	-.774* (-0.063)
DE	.535* (-0.039)	DE	-.410* (-0.024)	ES	.501* (-0.120)	CH	-.719* (-0.081)
NL	.511* (-0.049)	CH	-.397* (-0.026)	CZ	0.411 (-0.228)	CZ	-.570* (-0.177)
PT	.485* (-0.095)	AT	-.349* (-0.020)	PT	0.198 (-0.185)	PT	-.413* (-0.149)
DK	.484* (-0.049)	DK	-.342* (-0.030)	PL	-0.028 (-0.279)	PL	-0.299 (-0.211)
SE	.467* (-0.037)	SE	-.296* (-0.027)	GR	-.541* (-0.174)	GR	0.012 (-0.138)

* P<0.05

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**Table 5. Clusters of countries by effect type and effect size (unstandardized) (S.E. in parentheses)**

Dependent Variable	Allow				No Conditions			
Predictor/	Self-Transcendence		Conservation		Self-Transcendence		Conservation	
Cluster Number	Countries	Effect (S.E.)	Countries	Effect (S.E.)	Countries	Effect (S.E.)	Countries	Effect (S.E.)
1	AT, CH, DE, DK, ES, FR, HU, IE, NL, NO, PT, SE, SL	.532* (-0.013)	AT, CH, DE, DK, ES, IE, NL, NO, PT	-.395* (-0.010)	BE, FR, IE, SE	1.214* (-0.065)	BE, FR, SL	-1.317* (-0.054)
2	BE, CZ, FI, GB, GR, PL	.668* (-0.023)	BE, FR, GB, GR, SL	-.518* (-0.016)	AT, CH, DK, FI, GB, NL, NO, SL	.851* (-0.043)	AT, DK, ES, FI, GB, HU	-.929* -0.035
3			CZ, PL	-.556* (-0.028)	DE	.567* (-0.088)	IE, NL, NO, SE	-1.159* (-0.043)
4			FI, HU	-.451* (-0.019)	ES	.523* (-0.085)	CH, DE	-.745* (-0.045)
5			SE	-.313* (-0.023)	GR	-.510* (-0.174)	CZ	-.519* (-0.170)
6					CZ	0.361 (-0.220)	GR	0.017 (-0.136)
7					PL	-0.108 (-0.265)	PT	-.388* (-0.145)
8					PT	0.191 (-0.184)	PL	-0.249 (-0.202)
9					HU	.800* (-0.085)		

* P<0.05

Table 6. Correlations between effect sizes and national context variables

	GDP per capita	Inflow of immigrants per 1000 inhabitants
Self-transcendence on allow (+)	-0.28	-0.45
Conservation on allow (-)	0.58	0.53
Self-transcendence on 'no conditions' (+)	0.61	-0.06
Conservation on 'no conditions' (-)	-0.46	0.09

Figure 1: Structural relations among the 10 values and the two dimensions
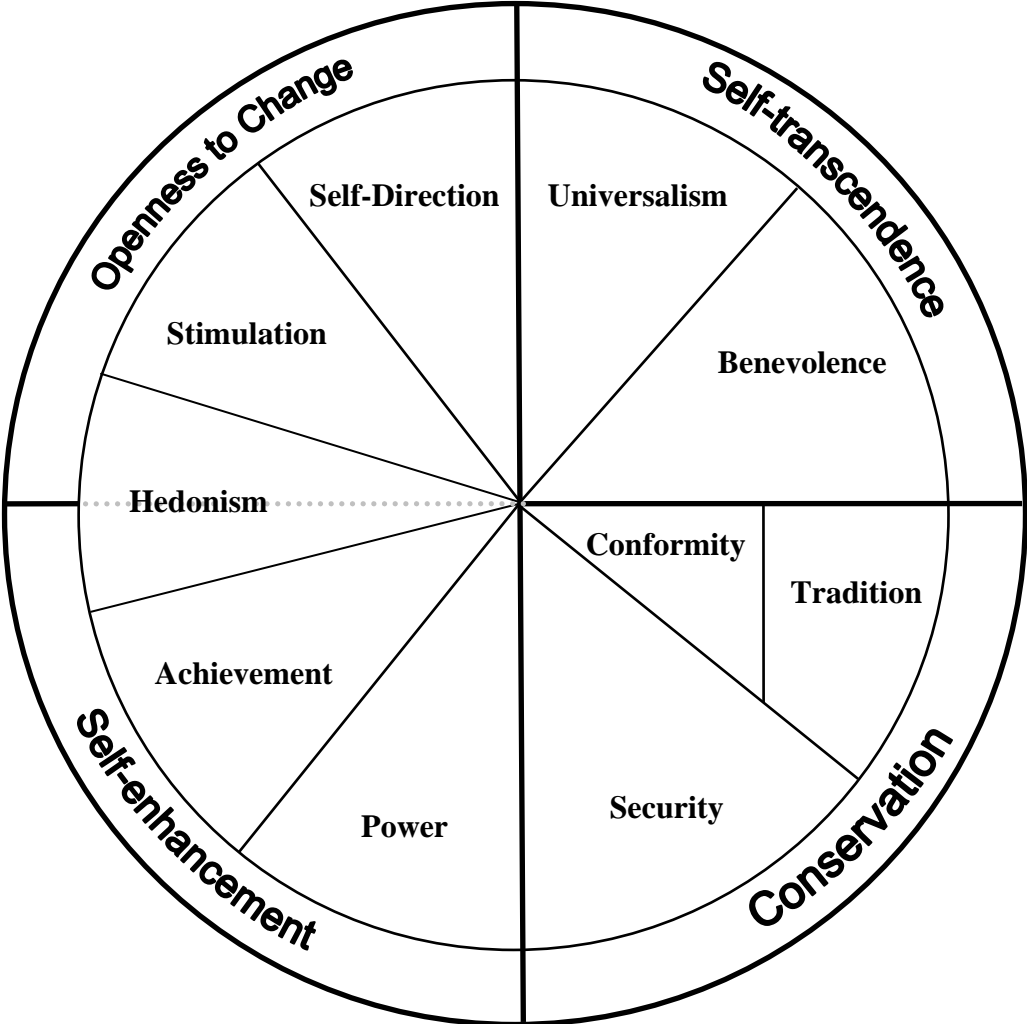
Appendix A. Multilevel models for ALLOW and NO CONDITIONS

	ALLOW						NO CONDITIONS					
	Model 1		*Model 2*		*Model 3*		*Model 1*		*Model 2*		*Model 3*	
Fixed effects	*Par.*	*(T-value)*	*Par.*	*(T-value)*	*Par.*	*(T-value)*	*Par.*	*(T-value)*	*Par.*	*(T-value)*	*Par.*	*(T-value)*
Intercept	0.037	(0.50)	0.029	(0.43)	0.050	(0.67)	0.020	(0.38)	0.023	(0.41)	0.020	(0.34)
Conservation	**-0.284***	**(-20.95)**	**-0.198***	**(-14.50)**	**-0.198***	**(-14.37)**	**-0.253***	**(-10.84)**	**-0.174***	**(-7.64)**	**-0.173***	**(-7.60)**
Self-transcendence	**0.232***	**(15.85)**	**0.191***	**(11.91)**	**0.191***	**(11.84)**	**0.108***	**(6.34)**	**0.071***	**(3.91)**	**0.071***	**(3.91)**
Gender			-0.102*	(-15.34)	-0.102*	(-15.32)			-0.153*	(-21.58)	-0.153*	(-21.56)
Age			-0.020*	(-3.32)	-0.020*	(-3.32)			0.027*	(4.34)	0.027*	(4.34)
Education			0.171*	(25.56)	0.171*	(25.55)			0.079*	(11.08)	0.079*	(11.09)
Income			0.062*	(7.99)	0.063*	(7.98)			-0.007	(-0.87)	-0.007	(-0.89)
Religiosity			0.025*	(3.30)	0.026*	(3.31)			-0.001	(-0.16)	-0.002	(-0.18)
Religious services			0.035*	(4.33)	0.034*	(4.27)			0.032*	(3.75)	0.032*	(3.73)
Left-right			-0.084*	(-13.77)	-0.084*	(-13.77)			-0.113*	(-17.27)	-0.113*	(-17.27)
Macro variables												
GDP per capita					-0.115	(-1.28)					0.008	(0.13)
GDP growth					0.119	(1.61)					0.002	(0.05)
Foreign born					0.153	(1.58)					0.002	(0.03)
Immigration inflow					-0.032	(-0.42)					-0.055	(-1.02)
Random effects	*Par.*	*(Z-value)*	*Par.*	*(Z-value)*	*Par.*	*(Z-value)*	*Par.*	*(Z-value)*	*Par.*	*(Z-value)*	*Par.*	*(Z-value)*
Random intercept	0.095*	(2.81)	0.079*	(2.80)	0.090	(2.33)	0.049*	(2.79)	0.053*	(2.78)	0.058*	(1.98)
Slope Conservation	0.002*	(1.84)	0.002*	(1.89)	0.002	(1.91)	0.008*	(2.44)	0.008*	(2.43)	0.008*	(2.43)
Slope Self-trans.	0.003*	(2.06)	0.004*	(2.22)	0.004	(2.23)	0.004*	(2.20)	0.005*	(2.28)	0.005*	(2.28)
Residual variance	0.769*	(104.14)	0.719*	(104.12)	0.719	(104.12)	0.880*	(105.60)	0.843*	(105.58)	0.843*	(105.58)

* P<0.05; All variables were standardized prior to analysis, so that coefficients are approximately standardized parameters (Snijders & Bosker, 1994). By consequence, it is allowed to compare effect sizes within the model. In the multiple-group comparison, on the other hand, unstandardized coefficients are reported since they allow a comparison of effects across countries. The analysis was conducted on the same data-set as in the multiple-group comparison. The sample size used for the first three models was 21,741 and for the last three models 22,357. Greece and Slovenia were excluded because of missing values at the contextual level for the variables immigration inflow (Greece) and foreign born

(Slovenia). The rate of foreign born could be computed based on the ESS data for Slovenia, but this would still be a proxy and we preferred to avoid it. The income variable had a large rate of missing values causing a large loss of cases. However, there is evidence that income is not missing at random, and imputation would have produced biased estimates. We preferred not to omit this variable from the analysis since it is a central variable used in the literature to explain attitudes toward immigrants.

Operationalization of the variables: Age is measured in years. Gender is a dichotomous variable receiving the value of 1 for males and 2 for females. Education level is coded as an ordinal variable, ranging from 0 to 6: 0= Not completed primary education; 1= Primary or first stage of basic; 2= Lower secondary or second stage of basic; 3= Upper secondary; 4= Post secondary, non-tertiary; 5= First stage of tertiary; 6= Second stage of tertiary. Attendance of religious services ranged from 1 (never) to 7 (every day). Religiosity ranged from 0= not at all religious to 10= very religious. Left-right orientation was coded as 0=left to 10=right. Household income was subdivided in 12 classes (1-12). GDP per capita: GDP per capita of 2003 in thousands of dollars as reported by the OECD. GDP growth: GDP per capita annual growth rate 1990-1999; Immigration inflow: gross immigration figure in thousands, 2001; Foreign born: stock of foreign born population as a percentage of the total population, 2001.

Acknowledgements

End Notes

[1] Austria and Greece are not taken into account because immigration statistics for some years are lacking in the OECD database.

[2] The study is about the effects of values on two dimensions or aspects of attitudes toward immigration and not attitudes toward immigrants or ethnic prejudice. However, attitudes toward immigration are closely linked to ethnic prejudice and out-group attitudes. For further studies on attitudes toward out-groups in general and prejudice see for example Allport, 1954; Adorno, Frenkel-Brunswik, Levinson and Sanford, 1950; Altemeyer, 1998; Bierly, 1985; Bobo, 1999; Brewer, 1999; Schuetz and Six, 1996; Smith, 1981; Whitley, 1999.

[3] Originally, 22 countries participated in ESS round 1. However, Italy and Luxemburg are excluded because the value scales were omitted from the questionnaire in these two countries. Israel is excluded due to large differences in model structure which were revealed during the analysis. We chose all the European countries available in the first round of this survey in order to examine to what extent Europe is homogenous in the effect of values on attitudes towards immigration.

[4] One could reasonably argue that the items measure opinions rather than attitudes, since they are rather specific. We rather treat them as attitudes, since they do not relate to a specific situation in a specific context. We consider opinions to be even more time and place specific than these items. We chose the best items based on confirmatory factor analyses.

[5] We used the Full Information Maximum Likelihood (FIML) estimator to deal with the problem of missing values (see Arbuckle, 2005).

[6] Results of multi-level analyses with this type of data set should be interpreted carefully. First, multilevel modelling assumes random sampling at all levels. Here, random sampling at the country level is not present, as the countries were not selected by means of some sort of probability mechanism. Furthermore, simulation studies have shown that a group sample size of 19 countries only would lead to inaccurate estimation (Meuleman, 2007). However, the multi-level analysis is applied in our paper as an additional support for the results of the multiple group analysis, which provides similar findings when these individual variables are accounted for and the country is held constant.

[7] Another indication for the robustness of the effects of values is provided by Vala, Ramos and Pereira (2007) with the ESS data, where values retained their significant effects on opposition to anti-racist policies in Europe after accounting for some country-level and several individual variables.

[8] GDP per capita is operationalized as the GDP per capita of 2003 in thousands of dollars as reported by the OECD. The inflow of immigrants per capita is the gross immigration figure of 2001 (source: 0ECD, 2006) divided by the population figure in thousands.

[9] See, for example, Coenders and Scheepers, 1998, 2003; Dustmann and Preston, 2004; Hagendoorn and Nekuee, 1999; Gijsberets, Hagendoorn and Scheepers, 2004; Kunovich, 2004; Raijman, Davidov, Schmidt and Hochman, 2006; Raijman and Semyonov, 2004; Raijman, Semyonov and Schmidt, 2003; Scheepers, Gijsberts and Coenders, 2002; Semyonov, Raijman and Gorodzeisky, 2006.

[10] Another possible explanation for effect size differences across countries may be the different immigration laws. However, it is difficult, if not impossible to find or develop reliable measurements for the immigration laws and apply them for such a large number of countries.

[11] A direct test of the underlying mechanism would imply the direct measurement of utility, which is very difficult (Green and Shapiro, 1994).

[12] Although in this study we did not take behavior into account, attitudes are considered an important determinant of behavior in the theory of planned behavior (Ajzen, 2005).