
Anti-Immigrant Attitudes in Europe: Outgroup Size and Perceived Ethnic Threat

Silke L. Schneider

This study focuses on ethnic competition as a contextual explanation of cross-national differences in anti-immigrant prejudice. It contributes to the existing literature by refining the concept of ethnic competition into a socio-economic and a cultural aspect, which is reflected in two different measures of outgroup size. To improve cross-national comparability, the outgroup size measure is based on foreign country of birth instead of citizenship. Moreover, as outgroup size does not only measure competition, but also contact opportunities and familiarity with immigration, intergroup contact theory is taken into account and a non-linear relationship between outgroup size and perceived ethnic threat is tested. This study employs multi-level linear regression and uses the first round data set of the European Social Survey. The main conclusions of this analysis are that economic and social competition between groups might play a lesser role in the explanation of cross-national differences in anti-immigrant attitudes than often assumed, and that it might be rather lacking familiarity and fear of conflict over values and culture that drive the relationship between outgroup size and anti-immigrant attitudes.

Introduction

Research on anti-immigrant attitudes in Europe is relatively widespread today. In particular, comparative research on anti-immigrant prejudice, ethnic threat perceptions and ethnic exclusionism testing ethnic competition theory boomed in recent years (e.g. Quillian, 1995; Scheepers *et al.*, 2002; McLaren, 2003; Kunovich, 2004; Gijsberts *et al.*, 2004a; Coenders *et al.*, 2005; Semyonov *et al.*, 2006). One effect often found in these studies is that the size of the outgroup, i.e. the proportion of immigrants in a country, fosters anti-immigrant attitudes. In light of the significant numbers of immigrants living in European countries today and the threat that negative intergroup attitudes pose to social cohesion, this is a disturbing result. It is therefore important to learn more about why and how

the presence of immigrants increases anti-immigrant attitudes.

Recent studies on anti-immigrant attitudes found that ethnic threat perceptions are a core explanatory variable for a wide set of anti-immigrant attitudes, e.g. resistance to immigrants and refugees, nationalism and chauvinism (Scheepers *et al.*, 2002; Gijsberts *et al.*, 2004b; Coenders *et al.*, 2004b,c, 2005). Therefore, the next step is to find out why perceived ethnic threat differs amongst individuals and between societies. The central question of this study is therefore if and how actual ethnic competition affects perceived ethnic threat, which is 'still a rather unsolved issue' (Coenders *et al.*, 2004a: 14).

This study will build on previous research on ethnic competition theory and propose a number of refinements. First, the proportion of non-EU citizens

or foreigners, the most commonly used measures of outgroup size, are not comparable over countries, which is a well-known problem (see e.g. Coenders *et al.*, 2004d: 241; Semyonov *et al.*, 2006: 434). Thus, the outgroup size indicator used here is not based on citizenship, but country of birth, and hence internationally more comparable. Second, some studies (e.g. Scheepers *et al.*, 2002; Kunovich, 2004; Gijsberts *et al.*, 2004a; Coenders *et al.*, 2005) do not use sufficient controls at the individual level, particularly for intergroup contact, which is necessary because outgroup size correlates with contact opportunities, and intergroup contact in turn is known to influence intergroup attitudes. Additionally, in order to take familiarization on the contextual level into account, it will be tested if the effect of outgroup size is non-linear. Third and most importantly, ethnic competition is a rather vague concept, and the results of the studies cited above do not necessarily reflect an effect of *economic* competition. As suggested previously (Coenders *et al.*, 2004d: 241), this study will differentiate the economic interpretation of ethnic competition theory from a cultural interpretation, involving conflict over values in contrast to material resources. Accordingly, two different measures of outgroup size will be used to gain a less ambiguous interpretation of group size effects: one measure reflecting social and economic competition, another measure reflecting cultural distance. Finally, previous research will be updated by using a more recent and larger data set (in terms of the number of countries and the size of national samples), namely the first wave of the European Social Survey (Jowell *et al.*, 2003). The results suggest a curvilinear effect of the proportion of non-western immigrants on a countries' average level of individually perceived ethnic threat. In contrast, there is no evidence for an effect of the percentage of low-educated immigrants. Thus, the cultural interpretation of ethnic competition theory is supported, whereas the economic interpretation is not.

Theoretical Background

This study focuses on propositions that can be derived from two theoretical approaches: ethnic competition theory and intergroup contact theory. Both frameworks are assumed to work in a complementary way.

Ethnic Competition Theory

Ethnic competition theory (for detailed accounts, see Scheepers *et al.*, 2002; Coenders *et al.*, 2004a) aims at explaining a broad class of anti-immigrant attitudes,

including anti-immigrant prejudice and ethnic exclusionism. It derives from realistic group conflict theory (Coser, 1956; Blumer, 1958; Blalock, 1967; Sherif, 1967; LeVine and Campbell, 1972) and social identity theory (Tajfel and Turner, 1979). The latter explains why people have a general disposition to negative intergroup attitudes in the first place, whereas the former explains more situational differences between individuals and larger social units in such attitudes. The main assumption of realistic group conflict theory is that attitudes and behaviour between groups primarily serve the maintenance of a groups' status position, resources, and prerogatives, but also a groups' culture in terms of identity and values. The intensity of competition for these goods and thus conflict of interest between groups is decisive for the attitudes individuals hold towards other groups and their members.

The degree of ethnic competition in a country is conceptualized as a contextual characteristic comprising first the quantitative demographic relation between ingroup and outgroup and second the amount of resources different groups are competing for (cf. Quillian, 1995; Blalock, 1967; Kunovich, 2004; Semyonov *et al.*, 2006). A relatively larger outgroup increases intergroup competition (holding resources constant) and facilitates political mobilization. With respect to outgroup size, in the studies mentioned in the introduction, conflict over material resources and status on the one hand and cultural values and identity on the other are not differentiated empirically—some authors prefer an economic interpretation (Quillian, 1995), others prefer cultural accounts (Semyonov *et al.*, 2006). However, a larger outgroup might increase economic and social competition *and/or* cultural conflicts over norms and values, identity concerns as well as worries about declining national authority (Ivarsflaten, 2005). Thus, two hypotheses regarding outgroup size can be formulated: First, the economic competition hypothesis, which states that the larger an economically threatening outgroup, the higher the average perceived ethnic threat. Second, the cultural threat hypothesis, which posits that the larger a culturally threatening outgroup, the higher the average perceived ethnic threat. As wealthier countries are preferred destinations for migrants, it is important to control for societal prosperity.¹

In addition to contextual effects, ethnic competition theory also states that the membership in certain social categories makes some people more prone to perceive ethnic threat and thus develop exclusionist attitudes than others. Not only the need for the preservation of the groups' status, but also of the individual status may

lead to the rejection of an outgroup and its members, particularly if these are perceived as threatening the individuals' social status (Blalock, 1967; Coenders, 2001). This is assumed to occur mainly when the 'economic niches' of members of different ethnic groups overlap (Olzak, 1992). Since competition is stronger in low-status jobs, which do not require much formal education, and immigrants in European societies on average have a lower level of formal education than the average majority population and occupy less prestigious jobs with less income, majority group members with the same attributes may feel that their status and resources are more threatened by immigrants than others. Additionally, as most immigrants live in urban areas, competition should be higher in large cities and their suburbs than in the country. Therefore, the individual competition hypothesis states that individuals with a low social status and those living in urban areas perceive more ethnic threat than individuals in higher socio-economic strata and those living in rural areas. However, as McLaren (2003: 916) puts it, 'fear of competition over resources is only likely in certain threatening contexts', namely when there actually *are* potential competitors. Hence, a larger outgroup should be a higher realistic economic threat for low-status than high-status individuals, which would translate into the respective threat perceptions. Thus, the competition interaction hypothesis reads: The larger an economically threatening outgroup, the more ethnic threat is perceived by low status individuals.

Intergroup Contact Theory

On the contextual level, ethnic competition theory suggests a positive relationship between outgroup size and anti-immigrant attitudes among the majority. The proportion of immigrants, however, does not properly isolate the concept 'group competition'. As the outgroup grows, so do the opportunities for majority group members to meet immigrants. It has often been argued that intergroup contact is an efficient means to reduce prejudice (cf. Allport, 1954; Sherif and Sherif, 1969). Intergroup contact theory, further developing Allport's (1954) contact hypothesis, suggests that 'constructive' intergroup contact reduces negative intergroup attitudes, given a 'friendship potential' rather than only short-term acquaintanceship (Pettigrew, 1998).² Thus, there is another mechanism linking relative outgroup size to intergroup attitudes, which predicts *decreasing* prejudice levels with increasing outgroup size (Wagner *et al.*, 2006): familiarity through intergroup contact. In order to take

increasing contact opportunities with growing outgroup size into account, contact with immigrants has to be controlled for at the respondent level (cf. Quillian, 1995: 596).

It can also be assumed that a larger outgroup is culturally more threatening to people who do not have any contact with members of that group than for those who do. Intergroup contact could thereby alleviate the effects of cultural distance. Furthermore, it can be expected that people who have contact with immigrants have *more* such contacts when the outgroup is larger. Thus, the *contact interaction hypothesis* states that the effect of a culturally distant outgroup is smaller for individuals who have contact with outgroup members than for others.

Since higher numbers of immigrants also mean that a society is more experienced with immigration and the integration of immigrants, it is quite plausible that there is an effect of familiarization over and above individual contact with immigrants. It can be expected that a higher proportion of immigrants at some point does not increase anti-immigrant attitudes any more. Then, the relationship between outgroup size and intergroup prejudice might be curvilinear, which has not been tested in any of the studies mentioned in the introduction, but was already hypothesized by Blalock (1967). The familiarization hypothesis thus modifies the economic competition and cultural threat hypotheses, stating that at higher levels of outgroup size, outgroup size does not increase ethnic threat perceptions any more.

Cross-National Studies of Anti-Immigrant Attitudes

In 1995, the first cross-nationally comparative study using individual and contextual predictors simultaneously was published: Quillian (1995) utilized the percentage of non-EEC-citizens in a country to measure the relative outgroup size. He chose the specific subgroup of *non-EEC* citizens as he assumed them to be homogeneous in terms of their motivation to immigrate to one of the European countries, which is economic, so that they mostly compete with manual labourers and low-wage earners on the labour market. In addition to outgroup size and social status, the author included gross domestic product (GDP) and individual level controls, including intergroup contact. Quillian performed several multi-level regression analyses, using data of the Eurobarometer 30 (1988). He found a positive effect of relative group size on anti-immigrant prejudice in a model without cross-level interactions. Thus, there is some evidence for the

group threat hypothesis. The competition interaction hypothesis however was not supported. However, the results may partly be due the small sample of countries (twelve) and also rather small samples within countries.

Several other comparative studies have been released since then, following Quillian's paradigm of multivariate multi-level analyses of anti-immigrant attitudes (Coenders, 2001; Scheepers *et al.*, 2002;³ McLaren, 2003; Kunovich, 2004; Rosar, 2004; Coenders *et al.*, 2004b,c, 2005; Semyonov *et al.*, 2006). Most of them focus on ethnic competition theory. Scheepers *et al.* (2002) predicted ethnic exclusionism, measured by the respondents' opposition to civil rights for legally established immigrants, with the individuals' socio-economic position (education, income, and occupation) as well as contextual measures of competition (including per cent of non-EU citizens, stock and change in asylum seekers as well as unemployment rate and change, but excluding GDP). Intergroup contact was not controlled for. Perceived collective and individual threat perceptions were introduced as intervening variables.⁴ The authors found all the hypothesized *individual* effects, which were largely mediated by collective threat perceptions (measured similarly as anti-immigrant prejudice in Quillian's study). In terms of *contextual* effects, only the proportion of non-EU citizens in a country had the predicted effect on ethnic exclusionism, and only one of the ten tested cross-level interactions—being a manual worker and the percentage of non-EU citizens—turned out significant.

The problem with the percentage of non-citizens, which the measures of ethnic competition are based on in all mentioned studies, is twofold: First, the outgroup, namely immigrants, is equated with the percentage of non-(EU-)citizens in a specific country. However, immigrants (in the strict sense of first generation immigrants) are people who are born abroad, whereas non-citizens are people who do not hold the country's citizenship. In some countries, there are substantial differences between these two populations, since high numbers of immigrants have been naturalized throughout the years (Eurostat, 2004). The notions of non-citizen and immigrant empirically only overlap in countries where immigrants can by no means acquire the national citizenship. This problem is even worse for using non-EU citizenship as a criterion, as people from non-EU countries gain the most from naturalization. The proportion of non-citizens (and especially non-EU citizens) is therefore neither an accurate measure of outgroup size, nor comparable over countries (cf. Dumont and Lemaître, 2004).

Second, non-EU-citizenship is taken as a proxy for immigrants with low qualifications (Quillian, 1995). This may work in times of pure labour migration, but is inappropriate when migration between European and other countries gets more diverse, including selective recruitment of highly skilled migrants. Also, much labour migration in the 1960s and 1970s took place *within* today's EU, mainly from south to north, which is not reflected by the percentage of non-EU citizens. However, in terms of ethnic competition theory, low educated immigrants from southern Europe should be economically just as threatening to low educated northern Europeans as immigrants from other parts of the world. Thus, the percentage of *non-EU* citizens, if compared to the percentage of *all* non-citizens, does not gauge economic competition, but rather reflects a *culturally more distant outgroup*. It would therefore be overhasty to interpret the effects of outgroup size as showing that economic competition increases levels of prejudice.

McLaren (2003) conducted a similar analysis as Scheepers *et al.* (2002) with the same data set. She also used ethnic exclusionism, here measured as the willingness to expel members of the group from society, as the dependent variable of a first series of models, and ethnic threat perceptions as the dependent variable of a second series of models. She incorporates intergroup contact theory (Pettigrew, 1998) in addition to ethnic competition theory. McLaren's results show that the individual's socio-economic position is found to be a weak to insignificant predictor of ethnic exclusionism (model series 1), whereas it turns out to be a significant predictor of ethnic threat perceptions (model series 2). Having minority friends is highly significant in both series of models, but stronger in the prediction of collective threat perceptions. The percentage of foreigners, used as the measure for ethnic competition, is only a significant predictor of threat perceptions, but not exclusionism. The cross-level interaction of this variable with having minority friends is insignificant for exclusionism, but highly significant and negative for threat perceptions. No interaction between outgroup size and socio-economic position is estimated. Thus, with respect to perceived threat, the hypotheses of individual and group threat are corroborated, as well as the contact and conditional contact hypothesis. What is more, ethnic competition at the individual and contextual level as well as intergroup contact seem to be more suitable for explaining perceived ethnic threat than ethnic exclusionism. The reason for this probably is that up to now, we do not know why collective threat perceptions do *not translate directly* into ethnic exclusionism; and even less so do

Table 1 Questionnaire items used to measure perceived ethnic threat

Using this card, would you say that people who come to live here generally take jobs away from workers in [country], or generally help to create new jobs?
Most people who come to live here work and pay taxes. They also use health and welfare services. On balance, do you think people who come here take out more than they put in or put in more than they take out?
Would you say it is generally bad or good for [country]'s economy that people come to live here from other countries?
And, using this card, would you say that [country]'s cultural life is generally undermined or enriched by people coming to live here from other countries?
Is [country] made a worse or a better place to live by people coming to live here from other countries?
Are [country]'s crime problems made worse or better by people coming to live here from other countries?

Source: ESS data archive (2004).

we have hypotheses concerning contextual effects on the relationship between the two.

To summarize, no study has yet empirically differentiated outgroup size into an economic and a cultural measure of ethnic threat. Furthermore, the measure of ethnic competition on the societal level is not cross-nationally comparable, up to now routinely relying on the percentage of non-(EU-)citizens. Moreover, since outgroup size might be correlated with intergroup contact and prosperity (as migrants prefer to migrate to wealthier countries), both variables should be controlled for when building models to predict anti-immigrant attitudes with outgroup size. As a last issue, to my knowledge, for European countries a non-linear relationship between relative outgroup size and anti-immigrant attitudes has not been formally tested yet.

Data, Measurement, and Methods

Data

The individual-level data set used for this study is the European Social Survey (ESS) 2002/2003 (Jowell *et al.*, 2003).⁵ It contains survey data for 42,359 respondents in 21 European countries⁶ and Israel, collected through highly standardized personal interviews. The ESS was carefully designed for optimal international comparability of the data, using state-of-the-art methodology. Much attention was paid to the translation of the questionnaire, and random sampling techniques were used in all countries. In all analyses, the design weight provided with the ESS data is applied to account for slightly different selection probabilities for individuals in some countries. Countries are weighted equally, so that the results do not depend on the population or sample sizes of the different countries. Respondents who are

immigrants, i.e. whose parents and who themselves were born abroad, are excluded from the sample, reducing the number of individual cases to 39,217.

Measurement of Perceived Ethnic Threat

Ethnic threat perceptions are measured using an index (mean score) constructed from six questionnaire items. They ask for an evaluation of the impact of immigration on the individual's national society (see Table 1).⁷ The items were each to be answered on a scale from 0 to 10, high values indicating a negative evaluation. They are similar to the ones that Scheepers *et al.* (2002) and McLaren (2003) used for measuring perceived ethnic threat as an intervening variable to predict exclusionist tendencies, and to the ones Quillian (1995) used for measuring anti-immigrant prejudice. Cases with less than three valid answers are excluded.

The reliability of this measure is rather high (Cronbach's Alpha: 0.84 for the pooled sample, 0.73 to 0.89 in the single countries; see Table A1 in the appendix). Cross-national comparability of the measure and its unidimensionality were shown by means of confirmatory factor analysis (Billiet and Philippens, 2004; Coenders *et al.*, 2005).

Individual Level Predictors

Ethnic competition theory presumes that individuals in disadvantaged socio-economic positions perceive more ethnic threat. This is measured using classical indicators of social status (income, occupational status and education). The income position of respondents is measured by their relative equivalence income (using the 'New OECD-Scale', Hagenaars *et al.*, 1994).⁸ For the purpose of taking the high amount of item non-response into account, relative equivalence income is coded in five categories, with one category representing

respondents with missing data on income. The other categories are represented by people living in relative poverty (< 50% of the average equivalence income); a low-income group (50 to 80%); people with an income around the national average (80 to 120%) and those with relatively high incomes ($\geq 120\%$).

An individual's position in the labour market (occupational status) is also coded as a set of dummy variables. Respondents are either employed, self-employed, unemployed or they do belong to the otherwise not gainfully employed population, where students, retirees and housekeepers are distinguished.⁹ The employed are further differentiated according to ISCO-88 skill levels: manual workers, routine-non-manual workers, and those performing complex non-manual tasks. Manual workers and the unemployed are hypothesized to perceive ethnic competition most strongly.

A subjective indicator for an individual's vulnerability in the labour market is given only for employed respondents, who indicated the subjective degree of difficulty to change the job or the employer on a scale running from 0 (very difficult) to 10 (not difficult). Again four dummy variables were constructed: one for people with missing values (those not employed or self-employed were not asked this question), the others summarizing categories 0 and 1 (very difficult), 2 to 4 (rather difficult), 5 to 6 (neither, nor/rather easy) and 7 to 10 (not difficult). The categories were constructed using quartiles, so that roughly a quarter of the employed fall in each of the categories.

Education is a central factor of the individuals' positioning in the labour market and their opportunities in job competition. An individual's level of formal education is—somewhat suboptimal—measured in years of education. Effects of education are not to be interpreted in terms of economic competition alone: Educational institutions also have a socializing effect, as in modern European societies they convey liberal values that might reduce or prevent ethnic prejudice; and it is also possible that more educated people show a higher tendency to reply in a socially desirable way (cf. Coenders, 2001).

Since immigrants tend to be concentrated in urban areas, competition should be higher for people living there. Therefore and in order to at least minimally control for regional differences *within* countries, the respondents' type of living area is measured with another dummy variable, indicating if the respondent lives either in a large city and its suburbs or in a small town/the country.

However, as contact opportunities increase in urban areas just as well, the latter could largely offset the

former effect. Because of this, the reasons set out in the previous section and in order to test the contact interaction hypothesis, contact with immigrants is measured in the following way: Respondents were asked if they have immigrant friends, immigrant colleagues, and if there are people of a minority race or ethnic group in their current living area. The three items measure contact of different intensity, ranging from high (friends) to low (living area). People with and without contact in the different spheres are contrasted using binary variables. In addition to these variables, age (centred) and sex are controlled for.

Ethnic Competition: Contextual Level Predictors

The size of the outgroup relative to the ingroup is rather difficult to measure (cf. Coenders, 2001). As argued earlier, measures based on citizenship are not comparable over countries. A more comparable criterion for the definition of the outgroup is 'being born abroad', as this indicator is unrelated to a country's citizenship law. It covers all first generation immigrants, naturalized or not.

Though the percentage of immigrants thus defined is comparable over countries, it is substantially still very crude: It could only serve as a measure for competition between majority population and immigrants in the widest sense. Nevertheless, if only particular segments of the outgroup were included in the group size measure, more specific conclusions may be possible. Thus, to better capture the notion of realistic conflict, i.e. competition over scarce resources among (particularly low-status) individuals, the share of *low-educated immigrants* (defined as those with lower secondary education or less, i.e. ISCED 0, 1 and 2, see UNESCO, 1997) *relative to the whole population* (i.e. unconditioned) is used here to test the economic competition hypothesis. The cultural threat hypothesis in turn is tested using the respective share of *immigrants from non-western countries*. The underlying assumptions are that, on the one hand, only low-educated immigrants pose a realistic economic threat, and on the other hand, immigrants from outside Western Europe,¹⁰ North America, Australia, or New Zealand induce more cultural threat to Europeans than immigrants from these regions, because they are culturally less familiar, and are perceived to hold differing values. They are probably also more visible in daily life, e.g. because of their physical appearance, different life-styles and traditions or costume.¹¹ In order to test the familiarisation hypothesis, the squared outgroup size will be included at the contextual level.

Both indicators, i.e. the proportion of low-educated immigrants and non-western immigrants relative to the whole population, can be derived from the OECD's database on immigrants and expatriates (Dumont and Lemaître, 2004; OECD, 2005; for resulting indicators see table A1 in the appendix).¹² As Slovenia and Israel are not covered by the OECD data, they had to be dropped from the analysis. The OECD database on immigrants and expatriates is based on population censuses for 13 of the 20 remaining countries included in this study, register data for five countries, and large general social surveys for two countries. Data collection took place between 1999 (France) and 2003 (Norway), but for the majority of countries this was 2001. The population covered in the database refers to all individuals above 15 years of age.¹³

The amount of resources that is available to a society is measured as average GDP from 1997 to 2001 (World Bank, 2004), assuming some delay in the perception of economic conditions (Coenders, 2001). For international comparison, GDP is harmonized using purchasing power parities and population size weights, resulting in real GDP per capita (rGDP/c). To facilitate the interpretation of coefficients, rGDP/c is given in thousand constant international US Dollars (referring to the year 2000) and centred (see the non-centred variable in Table A1, appendix).

Statistical Analyses: Multilevel Models

To test the proposed hypotheses, the data were analysed using multi-level regressions (Snijders and Bosker, 1999; Hox, 2002; Raudenbush and Bryk, 2002). For this study, seven models were estimated with the software program MLwiN (Rasbash *et al.*, 2002).

The hierarchical linear model is apt for the analysis of clustered sample data, where the independent variables are found on at least two levels of analysis. In this case, standard OLS-regressions can lead to biased estimates of standard errors and therefore wrong conclusions (Snijders and Bosker, 1999; Hox, 2002). With multi-level modelling, variance explained by attributes of the context and variance explained by attributes of the individual are separable, and standard errors are estimated correctly. Contextual and individual effects as well as interaction effects between contextual and individual variables are modelled simultaneously. A context effect here reveals an influence of country characteristics on mean outcomes; a cross-level interaction effect means that a context effect is moderated by individual factors or vice versa.

In a model without any predictor variables (the 'empty model'), the intercept gives the average outcome.

If the intercept is allowed to vary across countries by including the random error term U_{0p} , its variance can be estimated. The share of the overall variance that is context-variance, i.e. theoretically explainable by context variables (although, in practice, context variance will also partly be due to measurement error), is called the intra-class correlation. The empty model also gives the maximal deviance, which serves as a benchmark to test whether the inclusion of an additional independent variable or a random component in a more elaborate model improves the model fit. The likelihood ratio test is used to compare different, but nested models (Snijders and Bosker, 1999; Hox, 2002).

Results and Interpretation

Is it actually necessary to use complex multi-level regressions, i.e. is there a considerable amount of variation between countries in the individuals' average ethnic threat perceptions? The comparison of an empty two-level fixed intercept model with an empty two-level random intercept model shows that the deviance of the random intercept model (model 2, see Table 2) is significantly lower than the deviance of the fixed intercept model (model 1). This improvement in model fit denotes that the differences in average prejudice tendencies between the 20 countries are statistically significant. The share of between-country variance (intra-class correlation) amounts to 10.4% (not shown), which is high enough to justify further investigation.

In a second step, five more elaborate models are estimated; their model fit statistics are also displayed in Table 2. Model 3 includes predictors on the respondent level only. As expected, the inclusion of individual level predictors improves the model fit significantly. The individual-level variance is reduced by 11% as compared to model 2. Moreover, 26% of the original context variance is explained by the different composition of the 20 countries with regard to these respondent level variables. Thus, the intra-class correlation coefficient decreases slightly to 9% (not shown).

In models 4a and 4b, the context variables measuring the relative size of the immigrant population as measured by the two different indicators are added to test the hypothesis if cross-country differences in average perceived ethnic threat can be explained by group competition in economic or cultural terms:¹⁴ the percentage of low-educated immigrants on the one hand, measuring economic competition (model 4a)

Table 2 Model fit overview

	$D = -2 * \text{loglikelih.}$	Δ_D	d.f. = Δ_m	P
Model 1: empty fixed intercept	130852.5			
Model 2: empty random intercept	126932.9	3919.7	1	0.000
Model 3: Model 2 + respondent level predictors	122830.7	4102.2	22	0.000
Model 4: Model 3 + country level predictors:				
Model 4a: GDP and % low educated immigrants + squ.	122825.8	4.9	3	0.187
Model 4b: GDP and % non-western immigrants + squ.	122822.3	8.4	3	0.038
Model 5: Model 4 + cross-level interactions with % immigr.:				
Model 5a: interactions between % low-educated immigrants and poor, manual, unemployed, urban, education	122815.9	9.9	5	0.078
Model 5b: interactions between % non-western immigrants and immigrant friends, colleagues, immigrants in living area, urban	122755.1	67.2	4	0.000

Note: D : Deviance; m : number of estimated parameters. Data source: ESS 2002/2003, own calculations. $N = 33,762$ respondents, 20 countries.

and the percentage of immigrants not born in Western Europe, North America, Australia, or New Zealand on the other hand, thus measuring strangeness or cultural distance (model 4b). A quadratic term of the respective indicator and a country's level of prosperity (rGDP/c) are included in both models. The deviance of model 3 is used as a benchmark to decide which outgroup size indicator introduced in models 4a and 4b fits the data better. The result of the likelihood-ratio test suggests that the inclusion of the percentage of immigrants with non-western origin decreases the deviance significantly, whereas the inclusion of the percentage of low-educated immigrants does not.¹⁵

Models 5a and 5b finally include cross-level interactions as implied by ethnic competition and intergroup contact theory: the interactions between the proportion of low-educated immigrants and very low income, manual occupation, unemployment, education, living in a large city or suburb from the point of view of ethnic competition theory in model 5a, and the interactions between the proportion of non-western immigrants and intergroup contact and living in a large city or suburb from the point of view of intergroup contact theory in model 5b. Looking at the deviance statistic, model 5a does not improve fit, compared with model 4a. The hypothesis of conditional competition therefore is refuted. Model 5b in contrast shows a significant improvement over model 4b.¹⁶

Looking into the results in more detail (see Table 3),¹⁷ the micro-level effects of individual socio-economic position and intergroup contact on perceived ethnic threat are very similar in both models (with variables included in an interaction term of

course showing some differences). Using partial likelihood-ratio-tests, every categorical variable proves to contribute significantly to the prediction of perceived ethnic threat. Most of the individual level effects are as expected from the point of view of ethnic competition and intergroup contact theory: The relatively poorer, the higher is an individuals' tendency to perceive collective ethnic threat. The effect of income is however relatively small. All occupational groups apart from respondents who are still in education have higher ethnic threat perceptions than respondents with complex non-manual jobs, particularly those with a manual job and unemployed respondents. Individuals who evaluate a change of job to be very difficult also tend to perceive collective threats more than others. Years of education are strongly negatively associated with ethnic threat perceptions: A shift from 9 to 14 years of education (lowest to highest quartile) leads to an estimated decrease of 0.46 on the index of ethnic threat perceptions. However, the kind of living area (big city or suburb, as opposed to small towns and the countryside) does not have a significant effect over and above contact and occupational position.

The variables indicating contact between the respondent and immigrants clearly support the notion that people with intergroup contact feel less threatened by immigrants than others. The closer the type of relationship, the stronger the relationship: The effect of having immigrant friends is particularly strong, e.g. stronger than the impact of (any) occupational position. Although the effects of having immigrant colleagues and immigrants in the current living area are much smaller, they are still statistically significant. The design of this study does not allow the causal

Table 3 Final multi-level models

	Model 5a	Model 5b
<i>Coefficients</i>		
Intercept (random)	5.622 (0.197)	6.279 (0.296)
<i>Individual effects (respondent level)</i>		
Relative equivalence income, Ref.: more than 120% of the country average		
80 to 120%	0.069 (0.025)	0.074 (0.025)
50 to 80%	0.101 (0.029)	0.106 (0.029)
less than 50%	0.189 (0.042)	0.194 (0.046)
missing value	0.237 (0.043)	0.240 (0.043)
Position on the labour market, Ref.: complex non-manual job		
routine non-manual job	0.176 (0.035)	0.175 (0.035)
manual job	0.374 (0.037)	0.371 (0.038)
self-employed or family business	0.196 (0.035)	0.194 (0.034)
unemployed	0.421 (0.095)	0.410 (0.077)
in education	− 0.220 (0.062)	− 0.223 (0.060)
retired or permanently disabled	0.300 (0.045)	0.296 (0.044)
housekeeper	0.239 (0.054)	0.240 (0.055)
Evaluation of difficulty to change one's job, Ref.: very easy		
neither, nor/easy	− 0.012 (0.037)	− 0.012 (0.038)
difficult	0.016 (0.035)	0.019 (0.036)
very difficult	0.286 (0.045)	0.286 (0.045)
not applicable/missing value	0.028 (0.034)	0.029 (0.033)
Years of education (centred 12 years)	− 0.077 (0.006)	− 0.077 (0.006)
Living in a large city or suburb (0/1)	−0.055 (0.039)	−0.053 (0.037)
Immigrant friends (0/1)	− 0.497 (0.041)	− 0.491 (0.035)
Immigrant colleagues (0/1)	− 0.137 (0.025)	− 0.125 (0.020)
Immigrants in current living area (0/1)	− 0.099 (0.026)	− 0.098 (0.026)
<i>Contextual effects (country level)</i>		
rGDP/c 1997–2001 in thsd \$ (centred)	−0.031 (0.019)	− 0.030 (0.010)
% low-educated immigrants (centred)	0.110 (0.091)	
% low-educated immigrants squared	−0.005 (0.007)	
% immigrants non-wEU or NA (centred)		0.327 (0.096)
% immigrants non-wEU or NA squared		− 0.021 (0.007)
<i>Cross-level interactions with% immigrants</i>		
Less than 50% equivalence income	0.006 (0.010)	
Manual job	0.002 (0.014)	
Unemployed	0.019 (0.039)	
Years of education	−0.002 (0.003)	
Living in a large city or suburb	−0.007 (0.012)	−0.001 (0.012)
Immigrant friends		− 0.040 (0.010)
Immigrant colleagues		− 0.021 (0.008)
Immigrants in current living area		−0.001 (0.010)
<i>Variance components</i>		
Intercept residual variance (level two)	0.164 (0.055)	0.133 (0.051)
% reduction of variance	43.1	53.8
Respondent residual variance (level one)	2.206 (0.094)	2.203 (0.093)
% reduction of variance	11.3	11.4
Residual intra-class correlation (%)	6.9	5.7

Note: Dependent variable: index of perceived ethnic threat. Bold coefficients: $P < 0.05$. Data source: ESS 2002/2003, own calculations. Standard errors in brackets. $N = 33,762$ respondents, 20 countries.

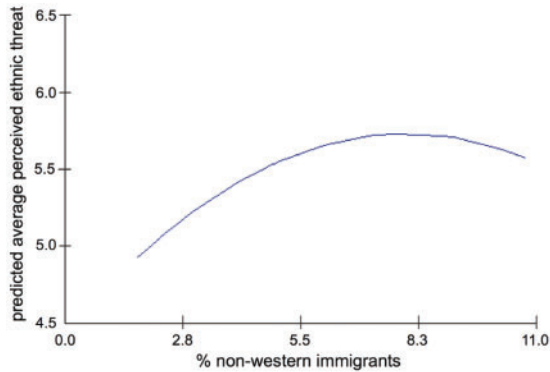


Figure 1 The nonlinear effect of the percentage of non-western immigrants

direction of the contact effect to be established, and the effect of having immigrant friends or living in a mixed neighbourhood might be overestimated because of inverse causality (choice of friends/living area).

Regarding the contextual effects, these are only sufficiently large in model 5b, which is in line with the model fit results comparing models 4a and 4b (see above). The size of the culturally distant outgroup has a significant positive effect: The larger the immigrant population with non-western origin, the higher the average ethnic threat perceptions in a country. However, this effect is not linear (see Figure 1): The quadratic term shows a significant coefficient, too, which is negative. Thus, the slope of outgroup size decreases with increasing outgroup size.

The effect of outgroup size decreases by about a third when GDP is not controlled for, as both are correlated, and have offsetting effects. Societal prosperity is negatively related to average perceived ethnic threat. Taking the range of rGDP/c into account (which is nearly 50,000 international USD), the effect of prosperity is not as small as it seems at first glance.¹⁸

Turning to the cross-level interaction terms, these are very small and statistically insignificant in model 5a. Therefore, manual workers, the unemployed, and people with very low incomes and low education do show more anti-immigrant prejudice than others *irrespective* of the actual presence of potential status competitors: Economically vulnerable people feel economically threatened by immigrants even when there are only very few of them. Empirically, their perceptions of ethnic threat thus can hardly be related to realistic economic competition.

In contrast, the cross-level interaction effects derived from intergroup contact theory are larger and partly

statistically significant. Thus, the effect of outgroup size on perceived ethnic threat to a certain extent depends on contact with immigrants as friends or colleagues: the impact of the proportion of non-western immigrants is weaker for individuals with intergroup contact than for individuals without. The effect of living in the same area as immigrants does not depend on the amount of immigrants present in a country.

In model 5b, the original country level variance is decreased by 54%, which is considerable. The intra-class correlation drops to 5.7%. Thus, the percentage of immigrants from culturally distant origins and economic prosperity contribute significantly and substantially to the explanation of cross-national differences in ethnic threat perceptions. However, there are differences between countries in average collective ethnic threat perceptions left to be explained.

Summary and Conclusions

This study set out to establish whether perceived collective ethnic threat is fostered by factors conventionally related to actual ethnic competition, while also considering intergroup contact theory. On the individual level, the socio-economic position of the individual was measured by income, occupation, and education, and contact with immigrants by having immigrant friends and colleagues as well as sharing one's living area with ethnic minorities. On the contextual level, the societal potential for ethnic competition was measured by the share of the immigrant population and real GDP per capita. The size of the outgroup was conceptualized and measured in two different ways so as to reflect two aspects of ethnic competition, which are hardly ever distinguished neither conceptually nor empirically: the relative size of an economically threatening outgroup (percentage of low educated immigrants among the adult population) and the relative size of a culturally unfamiliar outgroup (percentage of non-western immigrants among the adult population). The economic interpretation of ethnic competition theory suggests that the economic standing of immigrants matters, and that individual susceptibility to competition aggravates ethnic threat perceptions particularly if the societal context suggests competitive conditions. The cultural interpretation of ethnic competition theory in turn suggests that the cultural distance of immigrants matters. Combined with intergroup contact theory, it is argued that familiarity with immigrants decreases ethnic threat perceptions. To test the hypotheses developed above, several multi-level models

were estimated, including predictors on the respondent and country level as well as cross-level interactions.

The main result of the contextual analyses is that not the economic status (low education) of immigrants, but their non-western origin adds to the average level of perceived ethnic threat in European countries. The higher the percentage of non-western immigrants, the higher the country's average level of perceived ethnic threat. In light of this, a reinterpretation of the results of previous studies is suggested: the proportion of non-EU citizens proxies culturally unfamiliar immigrants rather than low educated immigrants. This measure is thus not quite appropriate to test for ethnic *economic* competition at the contextual level. This study also shows that the relationship between the percentage of culturally distant immigrants and average perceived ethnic threat is not linear: the effect levels off at higher levels of outgroup size. Previous comparative studies of ethnic competition theory did not test this non-linear relationship. As intergroup contact is controlled for on the individual level, there seems to be an effect of 'being used to' the presence of immigrants over and above contact as measured in the ESS. This result limits the validity of ethnic competition theory in its economic *and* cultural interpretation: A large outgroup does not only increase competition, but it also increases contact opportunities and familiarity with immigrants. When there was a lot of immigration in a country's past, people are used to having people from different areas of the world around, and can more easily deal with cultural diversity without feeling threatened. Also, cross-national differences in perceived ethnic threat are not fully explained by actual competition. This could be attributed to the still imperfect measurement of competition, but also to countries' historical circumstances and other variables not specified by ethnic competition theory.

On the individual level, the social status of the individual, measured as relative equivalence income, the individual's labour market position, the perceived difficulty to change the employer or the job and education impact on ethnic threat perceptions as expected by ethnic competition theory. However, as these effects are independent of the size of an economically threatening outgroup (low-educated immigrants), they cannot be explained by realistic economic competition between low-status majority population and immigrants. Thus, economic threats at the individual level seem rather distorted or anticipated than real. As a last outcome of this study, contact with immigrants limits ethnic threat perceptions, and especially so in high immigration contexts

where there are more contact opportunities. Thus, the effect of outgroup size is weaker for individuals with intergroup contact than for individuals without.

To conclude, the theoretical framework of ethnic competition theory alone is too narrow to explain cross-national differences in perceived ethnic threat. As outgroup size increases competition *and* contact opportunities, at least intergroup contact theory should be taken into account when building models using outgroup size indicators for ethnic competition. Moreover, the specificity of ethnic competition theory should be increased by more clearly conceptualizing what is meant by ethnic competition. A distinction between economic and cultural threats was proposed and operationalized in this study. Further improvements of measures of outgroup size could be reached by using parent's country of birth as the central criterion, so that the second generation is included in and returning emigrants excluded from the measure. However, detailed data concerning the share of people with immigration background thus defined are currently only available for Norway, Sweden, and Denmark (and Germany since 2005). Provided that ethnic competition theory progresses further, future research might also try to use multi-level structural equation modelling, so that a complex set of anti-immigrant attitudes, e.g. ethnic exclusionism, can be studied in a more complete way, including mediating variables like perceived ethnic threat.

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Notes

1. Although prosperity is also assumed to be negatively related to anti-immigrant attitudes on theoretical grounds, it will only be used as a control variable here.
2. However, more prejudiced individuals also avoid contact with immigrants (Pettigrew, 1998; McLaren, 2003), so that the contact hypothesis can only be tested in a strict way using a

- longitudinal design. Nevertheless, there is some evidence that both mechanisms, attitude change and contact avoidance, are at work, and that the effect of attitude change through contact is the dominant one (Pettigrew, 1998). Thus, contact effects may be regarded as overestimated rather than invalid.
3. This study was republished as Gijsberts *et al.* (2004b).
 4. Coenders *et al.* (2005) analyse a broad set of anti-immigrant attitudes using the European Social Survey in a very similar way.
 5. Rich sources of information are available on the ESS-website and from the Norwegian Social Science Data Services (www.europeansocialsurvey.org and <http://ess.nsd.uib.no>).
 6. These are Austria (AT), Belgium (BE), the Czech Republic (CZ), Denmark (DK), Finland (FI), France (FR), Germany (DE), Greece (GR), Hungary (HU), Ireland (IE), Italy (IT), Luxembourg (LU), the Netherlands (NL), Norway (NO), Poland (PL), Portugal (PT), Slovenia (SI), Spain (ES), Sweden (SE), Switzerland (CH) and the United Kingdom (UK).
 7. The items capture blatant, i.e. publicly expressed, rather than subtle prejudice (Pettigrew and Meertens, 1995). The distinction between the two concepts has been strongly contested (Coenders *et al.*, 2001, but also see the reply by Pettigrew and Meertens, 2001). There is no measure of subtle prejudice available in the ESS.
 8. In the ESS, income was measured in categories. As not all countries applied the predefined scheme of categories—one example of a failure of input-harmonization—, and as further calculations required a metric scale, the income categories in all countries were substituted by the midpoint of each category, according to the interview showcards provided by each country.
 9. If the respondent belongs to one of the latter three groups, his/her partner's status was used if available, as in these cases it can be assumed that the household's status is more decisive than the respondents' status.
 10. Western Europe here comprises the former 15 member states of the EU, members of the EFTA, and the European Micro-States of Andorra, Monaco and San Marino.
 11. Coenders *et al.* (2005) use non-western non-citizens as the outgroup size measure. However, they do not give a theoretical argument for this decision.
 12. An alternative would have been to estimate the data directly from the ESS, which I did for the measure of low-educated foreign-borns in order to validate the measure derived from the OECD database. Although the percentages estimated from the ESS are considerably lower, the correlation between both measures is 0.85. It is probable that the samples in many countries are—at least concerning the proportion of immigrants—not representative, e.g. because of language barriers, which is a common problem in surveys including immigrants. The national sample sizes are also too small for a reliable estimation using ESS data.
 13. A technical annexe with more detailed information on how these measures were derived may be requested from the author.
 14. As the sample of countries represented in the ESS is no random sample, significance testing cannot properly be used for effects of country level variables. Therefore, these effects are interpreted only if they are substantial, and only for this sample, without inference to other countries.
 15. Other models not presented here, using the percentage of all immigrants, low-educated non-western immigrants, or foreigners, also led to non-significant results.
 16. These models are specified with fixed slopes. However, both models 5a and 5b were also estimated with the relevant random slopes. As expected, model fit improved significantly, but the substantial results were basically the same. For the sake of parsimony, the simpler models without random slopes are presented here.
 17. The detailed results for the other models are available from the author on request.
 18. Certainly GDP is a crude measure for the available resources on the societal level; it rather serves as a control variable here.

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Author's Address

Institute for Applied Social Research, University of Cologne, Greinstr. 2, 50939 Köln, Germany.
Email: silke.schneider@nuffield.ox.ac.uk

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Appendix

Table A1 Overview over country data

Country	n ¹	Mean perceived threat score ¹	SD ¹	Cronbach's Alpha ¹	rGDP/c in 1000 int. \$ ²	FB with < ISCED 3 ³	Non-western FB ⁴
AT Austria	1935	5.32	1.70	0.86	27.94	6.83	10.74
BE Belgium	1570	5.73	1.49	0.83	26.34	6.25	5.28
CZ Czech Rep.	1125	6.17	1.55	0.85	15.05	1.94	4.71
DK Denmark	1390	5.19	1.60	0.85	27.82	3.58	4.86
FI Finland	1936	4.95	1.44	0.81	24.44	1.40	1.70
FR France	1321	5.47	1.88	0.88	24.87	6.38	7.70
DE Germany	2645	5.60	1.61	0.83	24.80	5.80	7.19
GR Greece	2308	7.09	1.81	0.86	16.72	4.83	8.79
HU Hungary	1550	6.23	1.65	0.84	12.51	1.33	2.98
IE Ireland	1823	5.39	1.70	0.83	27.83	3.24	2.33
IT Italy	1077	5.31	1.45	0.73	24.43	2.24	2.64
LU Luxembourg	919	4.76	1.59	0.73	50.61	13.14	5.90
NL Netherlands	2185	5.43	1.36	0.79	27.81	5.11	7.27
NO Norway	1925	5.24	1.36	0.80	33.60	1.39	4.85
PL Poland	1942	5.49	1.57	0.82	9.94	1.15	1.93
PT Portugal	1311	5.70	1.65	0.86	17.54	3.69	5.01
ES Spain	1483	5.27	1.47	0.81	21.04	3.24	4.05
SE Sweden	1759	4.55	1.53	0.82	24.84	4.24	9.05
CH Switzerland	1684	5.21	1.35	0.80	29.91	10.03	10.10
UK United Kingdom	1874	5.76	1.72	0.89	25.70	3.78	6.13
all	33762	5.49	1.66	0.84	24.69	4.48	5.67

Data sources:

¹ESS 2002/2003, own calculations. Data refer to cases for which all variables used in the analyses were available (listwise deletion). For single countries, the design weight was used. For the pooled sample, countries were weighted equally.

²Real gross domestic product per capita in year 2000 international US Dollars, average 1997–2001, World Bank (2004).

³Percentage of foreign-borns in a country with less than ISCED level 3, relative to the whole population above age 15 (excluding cases with unknown place of birth). Estimates based on the OECD database on immigrants and expatriates (2005), own calculations.

⁴Percentage of foreign-borns not born in EU-15, EFTA-countries, the European Micro-States (Andorra, San Marino, Monaco), North America, Australia, or New Zealand, relative to the whole population (excluding cases with unknown place of birth), above age 15. Estimates based on the OECD database on immigrants and expatriates (2005), own calculations.

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