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When the Going Gets Tough: The Differential Impact of National Unemployment on the Perceived Threats of Immigration

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Economic competition theory predicts that anti-immigration sentiments will increase in periods with high unemployment, in particular among low-skilled workers. Using five rounds of cross-sectional data from the European Social Survey and utilising the rise in unemployment in many European countries due to the financial crisis, this article provides a more effective empirical test of interest-based theories than previous studies. It employs hierarchical, two-stage regression techniques to estimate the relationship between aggregate unemployment rates and immigration opinion, and explores whether the relationship differs according to respondent's level of education. It is found that high unemployment rates are associated with a high level of economic concern over immigration – particularly if the size of the foreign-born population is large. The relationship is stronger among the low skilled, implying a tendency for polarisation of opinions about immigration in economic recessions. Finally, it is discovered that the general level of cultural concern over immigration is unrelated to variation in unemployment.

Keywords: immigration; public opinion; comparative; unemployment

Spurred by a substantial rise in immigration over the last decades, European attitudes to immigrants and immigration are high on the agenda of social research. The widespread anti-immigration sentiments that have been observed in many countries are considered to be an important constraint on migration policy and an obstacle to the successful integration of newcomers. Two perspectives dominate the literature on how individuals in the majority population form their attitudes towards immigrants. According to interest-based theories, anti-immigration attitudes have a rational core and are rooted in competition with immigrants over scarce resources (Mayda, 2006; Semyonov *et al.*, 2006). The alternative view maintains that anti-immigration attitudes are the result of cultural conflicts and symbolic predispositions such as values, ideology and identity. This controversy over the sources of anti-immigration attitudes relates to the general theoretical and empirical debate about the role of self-interest for individuals' behaviour in general and for their political thinking in particular (Green and Shapiro, 1994; Mansbridge, 1990; Sears *et al.*, 1980). The controversy also has important political implications. If popular discontent with immigration is rooted in economic interests, it calls for different political measures than if it is rooted in identity conflicts and cultural orientations.

In a highly influential study based on data from the first round of the European Social Survey (ESS), 2002–3, John Sides and Jack Citrin (2007) found that cultural factors and national identities far outweigh the role of economic interests in explaining negative attitudes to immigration and immigrants. In a related study of data covering both European countries and the US, the authors re-affirm this conclusion: 'Fundamental personal and political values play a particularly important role for immigrant attitudes' (Citrin and Sides, 2008, p. 48).

While recognising the multidimensionality and complexity of attitudes towards immigration, we believe that dismissing the role of economic interests is premature due to limitations of the research design applied in previous research. As argued in more detail below, we maintain that a proper test of interest-based theories should be based on diachronic data and focus on societal contexts and population subgroups where economic competition with immigrants is likely to be particularly strong. We therefore set out to investigate: (1) whether immigration opinions are more negative in situations where the unemployment rate is high; (2) whether the impact of unemployment on opinions is more negative in national contexts with many immigrants; (3) whether the impact of unemployment (contingent on a high share of immigrants) is stronger in population segments that are particularly vulnerable to economic recession and increased competition from immigrants; and (4) whether concerns about negative economic consequences of immigration are more strongly associated with unemployment than cultural concerns.

In order to examine the relationship between unemployment, level of immigration and immigration opinion we use data from five rounds of the ESS, covering the period 2002–10. The fact that our data comprise the economic downturn in the wake of the financial crisis implies that we have sufficient variation in our main independent variable across country-years to conduct a convincing test of the role played by the state of the national economy in influencing attitudes towards immigrants.

Economic Competition or Lack of Tolerance: Anti-Immigrant Attitudes among the Low Skilled

The academic controversy about the motivation behind anti-immigrant attitudes manifests itself most strongly in debates about the underlying mechanisms behind the strong effect of education. It is well established that individuals with low educational credentials tend to hold more negative attitudes towards immigrants and to be more sceptical towards liberal immigration policies than individuals with better education (Facchini and Mayda, 2009; Hainmueller and Hiscox, 2007; 2010; Mayda, 2006; Scheve and Slaughter, 2001; Sides and Citrin, 2007). Recent studies also demonstrate that the low skilled are more inclined to support the idea of welfare dualism (Bay *et al*., 2013; Van der Waal *et al*. 2010).

According to cultural theories, the difference is due to the ability of education to widen the horizon and change the value orientation of the individual (Hainmueller and Hiscox, 2007). Adherents of interest-based theories, on the other hand, emphasise that people with low education have a vulnerable position on the labour market and compete directly with immigrants for jobs. Moreover, Peter Nannestad (1999) argues that economic competition over public resources also contributes to negative attitudes towards immigrants. Asylum seekers and refugees are typically a burden on public finances in the short run, and 'the price of solidarity' will be heavier when the economy weakens. Individuals in the lower socio-economic strata are likely to feel the weight more heavily since family budgets are tighter for this group, and therefore their attitudes towards immigrants should be particularly sensitive to the state of the economy.

It is often claimed that different aspects of anti-immigration attitudes are part of the same underlying phenomenon of culturally-based ethnocentrism (Citrin and Sides, 2008; Hainmueller and Hiscox, 2007). Interest-based theories, on the other hand, predict a

relationship between the current state of the economy and the degree of economic concerns felt among the low skilled (Semyonov *et al.*, 2006),[1] while it gives no reason to expect a systematic relationship with cultural concerns.

The Business Cycle and Immigration Opinion

According to interest-based theories, an important source of hostility towards newcomers is that individuals in the majority population believe that immigrants challenge their position in the labour market or impose a burden on public finances by increasing the proportion of the population that depends on provisions from the welfare state (Coenders *et al.*, 2008; Golder, 2003; Nannestad, 1999). In this perspective, there is reason to expect that economic recessions with souring unemployment rates will intensify the sense of competition with immigrants over scarce resources and hence trigger an increase in anti-immigrant attitudes within the majority population. However, the relationship between unemployment and immigration attitudes should depend on the size of the foreign-born population (Brüker *et al.*, 2002; Golder, 2003; Van Oorschot, 2006). In a context with few immigrants, the actual competition with immigrants for jobs and resources is likely to be limited and so also the effect of high unemployment.

The bulk of the existing research on immigrant attitudes has been undertaken on cross-sectional data. There are some recent exceptions. Coenders *et al.*, (2008) studied support for ethnic discrimination in the Netherlands in the period 1979–2002. They found that support for (economic) discrimination 'is more widespread in times of high levels of immigration, when the unemployment level has increased recently, and among cohorts that grew to maturity in times of relatively large immigration waves or high unemployment' (Coenders *et al.*, 2008, p. 277). Meuleman *et al.* (2009) and Aksoy (2012) analyse the relationship between unemployment and immigration opinion using diachronic data, and both conclude that the level of negative sentiments increases with rises in the unemployment rate. However, neither Meuleman *et al.* (2009) nor Aksoy (2012) study attitudes in population subgroups with different degrees of risk exposure. This topic is addressed in Dancygier and Donnelly (2013), who investigate the role of economic interests by relating immigration attitudes to individuals' sector of employment. They find that individuals employed in growing sectors are more likely to support immigration than those in shrinking sectors. Moreover, they find that sector-level inflows of immigrant workers have little effect when economies are expanding, but dampen support for immigration when the economy deteriorates.

Based on economic competition theory we expect an increase in the proportion of people who support the view that immigrants are bad for the economy when the unemployment rate is high, and we expect effect to be stronger in national contexts with more immigrants. Moreover, we expect this contingent effect of unemployment to be particularly strong among the low skilled. Finally, we will distinguish in the empirical analysis between economic and cultural concerns about immigration. While economic competition theory predicts that economic concerns will be sensitive to the state of the economy, it gives us no reason to expect that concerns over immigrants' cultural role will be influenced by the level of unemployment. We therefore expect to find consistent effects of unemployment on economic concerns, but little or no effects on cultural concerns.

Data and Methods

In order to examine the relationship between unemployment and immigration opinion, we use data from all five rounds of the ESS. We study two dependent variables: a measure of economic concerns over immigration and a measure of cultural concerns. Economic concern is captured by the survey item 'Would you say it is generally bad or good for [country]'s economy that people come to live here from other countries?'. The respondents choose their position on a scale from 0 ('Bad for the economy') to 10 ('Good for the economy'). Cultural concern is captured by the survey item 'Would you say that [country]'s cultural life is generally undermined or enriched by people coming to live here from other countries?'. The respondents are again asked to state their position on a scale from 0 ('Cultural life undermined') to 10 ('Cultural life enriched'). We have recoded both variables so that a high score refers to a more negative view on immigrants.

Our main independent variables are the respondents' level of education, the unemployment rate, the size of the foreign-born population, and the interaction between the unemployment rate and the size of the foreign-born population. We measure education as years of completed full-time education, standardised within each country-year to have a mean of 0 and standard deviation of 1.[2] The unemployment rate is the annual harmonised unemployment rate, while the size of the foreign-born population refers to the share of the population born abroad (including non-citizens). The unemployment rate and the size of the foreign-born population are centred on their respective means in order to ease the interpretation of all constitutive terms of the interactive relationship between the unemployment rate and size of the foreign-born population (see e.g. Kam and Franzese, 2007). We restrict the analysis to the OECD countries, and OECD (2012) is the source of the country-level data. Descriptive statistics are reported in the Appendix, while control variables are defined when they are introduced to the analysis.

We rely on a hierarchical, two-stage regression model to estimate the relationship between unemployment, percentage of foreign born and anti-immigration attitudes. The two-stage regression model was introduced in a 2005 special edition of *Political Analysis* on multilevel modeling, where a series of articles demonstrated its usefulness to the study of comparative public opinion in situations with relatively few (i.e. around twenty) country cases (see e.g. Huber *et al.*, 2005). The two-stage model, not to be confused with a two-stage least squares model, is a special version of a general multilevel regression model, but is simplified by not smoothing/shrinking the first-level regression estimates by the group-level model (Gelman, 2005). Although smoothing/shrinking can be statistically efficient, the standard maximum likelihood multilevel model is likely to yield misleading confidence intervals when the model one wants to estimate is complex – as it is in our case since we are interested in cross-level interaction terms between education-level and country-level variables – and the number of countries is around twenty (Stegmueller, 2013). Thus, we find the simplicity of the two-stage approach to be attractive.

The first stage in this approach is to estimate individual-level regressions for each country-year where the immigration opinion variables are dependent variables and the

respondents' education level is the independent variable of main interest. For each country-year, a total of 86, we estimate the following ordinary least squares (OLS) regression:

$$Y_i = \beta_0 + \beta_1 \text{EDUCATION}_i + \beta_K X_{K,i} + \varepsilon_i \quad (1)$$

where subscript i refers to the respondent and K refers to a vector of control variables (described below). From each of these 86 regressions we collect β_0, which represents the intercept and hence the level of Y for cases where all variables are set to zero, and β_1, which represents the correlation between attitudes and education. Since the number of observations within each country is large, the estimates of β_0 and β_1 are consistent and asymptotically normal (Huber *et al.*, 2005, p. 377).

The second step is to use the β_0 and β_1 as dependent variables, which in multilevel modeling terminology amounts to the group-level part of the model. We have a more complicated group-level model than, for instance, Huber *et al.* (2005) as we have variation not only across countries, but also over time. The diachronic nature of the data is, however, extremely useful as it allows us to add country and year fixed effects in the second step of the model. The reasoning for including country fixed effects is that both the level of anti-immigration sentiments and the educational differences in these attitudes are likely to vary across countries due to historical, geographical and institutional differences (economic, political, welfare state regime type) which are stable over time. These types of differences might be correlated with the unemployment level and the percentage of foreign born and thereby conceal the relationship between our key variables of interest and anti-immigration sentiments. The time fixed effects further control for common trends in the variables, as well as potential idiosyncrasies of each particular ESS wave. In other words, our estimates are based on variation across country-years net of stable differences between countries and net of shared variation between waves. The second-stage models of the intercepts, β_0, and the education differences, β_1, are thus:

$$\begin{aligned}\beta_{j,t} = {} & \alpha_1 \text{UNEMP}_{j,t} + \alpha_2 \text{FORBORN}_{j,t} \\ & + \alpha_3 \text{UNEMP}_{j,t} \star \text{FORBORN}_{j,t} + \gamma_j + \delta_t + \varepsilon_{j,t}\end{aligned} \quad (2)$$

where j refers to country and t refers to year. UNEMP is the unemployment rate, FORBORN is the size of the foreign-born population, and UNEMP*FORBORN is the interaction term. γ_j and δ_t represent the country and year fixed effects, respectively. Our empirical set-up is demanding in light of the small sample size that we rely upon, which will make it difficult to get precise estimates of the relationships. In the online Appendix S1 accompanying this article we plot the variation across countries and time for our key independent and dependent variables to illustrate the variation we rely upon in our estimations. These figures show that our estimates are not driven by variation from a single country or a single time point.

We report standard errors robust to heteroscedasticity and adjusted for country clustering to account for non-independence of errors. Since these errors might be biased downwards as we have relatively few clusters/countries in our sample (Angrist and Pischke 2009, pp. 308ff), we also report results (see Appendix Table A3) when relying on Colin Cameron *et al.*'s (2008) 'wild bootstrap' standard errors which should be more accurate when the

number of clusters is small. The 'wild bootstrapped' SEs are somewhat larger than the clustered SEs, but all our conclusions remain. Furthermore, the standard errors in the second-stage regression might be inconsistent due to varying sample sizes in the first stage (Huber *et al.*, 2005). However, we get almost identical coefficient estimates if we weight the second-stage observations with the corresponding first-stage standard errors, which suggests that the robust standard errors we rely on in the second-stage regressions are consistent (Lewis and Linzer, 2005). The weighted least square results are reported in the online Appendix S2.

Empirical Results

In the first-stage regressions we control for the respondent's gender (1 = male), age and age-squared, and whether the respondent belongs to a minority ethnic group (1 = belong to a minority ethnic group). Age is centred on the sample mean (47 years of age).[3] This implies that the intercept in these regressions, β_0, refers to the mean level of anti-immigration sentiments for a 47-year-old (age and age-squared = 0), non-minority (minority = 0) female (male = 0) with a medium level of education (standardised years of education = 0). This group of respondents is the baseline comparison group in the later analyses. The education coefficient, β_1, refers to the correlation between years of education and anti-immigration sentiments.

The results from the 86 first-stage regressions are presented in the online Appendix S3, while the results from the second-stage analysis of 'Immigration bad for the economy' are reported in Table 1. Results without the interaction term between unemployment and size of the foreign-born population are reported in the online Appendix. The coefficients in Table 1 should be interpreted in the following manner. The unemployment coefficient in the intercept-regression tells us how views on 'Immigration bad for the economy' changes for the baseline group when unemployment increases by one percentage point, with size of the foreign-born population held at its sample mean. The coefficient for size of the foreign-born population should be interpreted in a similar manner. The interaction term tells us whether the impact of unemployment depends on the size of the foreign-born population.

The unemployment coefficient in the education-regression tells us to what degree the negative relationship between years of education and immigration attitudes changes when unemployment increases. A negative coefficient implies that the negative education gradient becomes steeper when unemployment is high. Again the coefficient for foreign born can be interpreted similarly, and the interaction term tells us how the education slope is affected by the interaction between unemployment and the share of foreign born. Following the economic competition theories, we expect negative coefficients in the education-slope-regression since the low skilled are competing with immigrants.

The coefficients of the education model must, of course, be interpreted in light of the results from the intercept model. Positive coefficients in the intercept model imply a tendency for concerns about immigration to increase in periods of unemployment (reinforced by a high share of foreign born) for individuals with an average level of education. If this is combined with negative coefficients in the education model, it implies that the tendency for concerns about immigration to increase with unemployment is stronger

Table 1: Linear Regression Models: The Dependent Variables are First-Stage Coefficients on 'Immigration Bad for the Economy'

	Intercept β_0	*Education* β_1
Unemployment	0.062	–0.021
	(0.017)	(0.006)
	[3.68]	[3.32]
Foreign-born pop.	0.046	–0.005
	(0.029)	(0.019)
	[1.62]	[0.26]
Unemp.*Foreign born	0.005	–0.002
	(0.002)	(0.001)
	[2.19]	[2.52]
Country fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
Observations	86	86
R^2	0.35	0.22
Dep. mean	5.2	–0.5
Number of countries	20	20

Notes: Standard errors adjusted for heteroscedasticity and country clustering in parentheses. Corresponding t-statistics in brackets. Unemployment and Foreign-born pop. are centred on their sample means.

among the low educated and weaker (or perhaps even non-existant or reversed) among the highly educated.

The intercept model in Table 1 shows that a one percentage point increase in the unemployment rate shifts a 47-year-old non-minority woman with medium education 0.062 units towards the view that immigrants are bad for the economy. The positive and significant interaction term tells us that this effect is larger if the size of the foreign-born population is above the sample mean: The marginal effect of unemployment increases by 0.005 units for each percentage point increase in the proportion of foreign born.

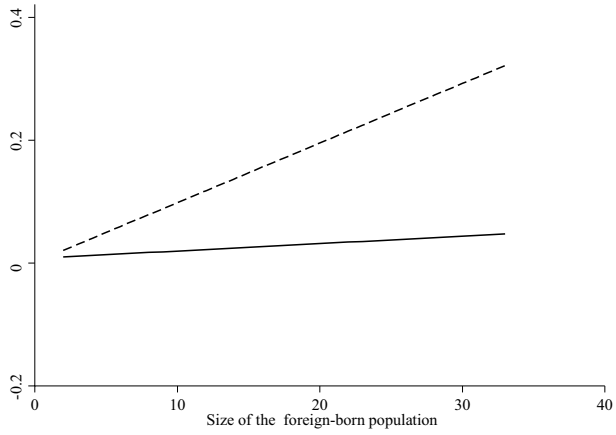
The negative, but relatively small, coefficient for unemployment in the education model implies that the impact of unemployment on economic concerns is bigger for those with low education and smaller for those with high education. At the mean level of foreign born, our results suggest that a one percentage point increase in unemployment shifts the views of a 47-year-old non-minority woman with high education (0.062–0.021*1) 0.041 units in a negative direction. High education is here defined as years of education being one standard deviation above the country mean. For a similar woman with low education, the increase in unemployment shifts her position (0.062–0.021*(–1)) 0.078 units towards the view that immigration is bad for the economy. Thus, the effect of unemployment is clearly stronger among those with low education, which is in line with economic competition theory.

Since those with low education hold more negative views from the outset, the stronger effect of unemployment on the low skilled implies that increasing unemployment leads to stronger polarisation in immigration opinions. The polarising effect of unemployment does, however, depend on the size of the foreign-born population. This is evident from the negative and significant interaction term, which implies that the polarising effect of unemployment grows with the size of the foreign-born population. To ease interpretation, Figure 1 displays the marginal effect of unemployment against the size of the foreign-born population. The dashed line is for those with low education, and the full line is for those with high education. 'High education' is defined as years of education being two standard deviations above the country mean, while 'low education' is years of education being two standard deviations below the country mean. The figure visualises the much steeper marginal effect for those with a low level of education.

In Table 2 we report the results of the cultural concern models. The intercept model shows that the unemployment rate is insignificantly related to cultural concern, and the sign of the coefficient is in fact negative. Also the interaction term fails to reach statistical significance. However, at mean level of unemployment, a one percentage point increase in the size of the foreign-born population increases the baseline group's cultural concern over immigration by 0.05 units. Thus, the general level of cultural concern is related to the size of the out-group but not to the state of the economy.

In the education model all coefficients are negative, indicating that the education gradient becomes steeper when unemployment and the share of foreign born is high.

Figure 1: Marginal Effect of Unemployment (*Y*-Axis) on Economic Concern Over Immigration at Different Levels of Proportion Foreign Born (*X*-Axis)



Notes: The dashed line indicates low education, the full line high education. 'High education' is defined as years of education being two standard deviations above the country mean, while 'low education' is years of education being two standard deviations below the country mean. The estimates are derived from the coefficients presented in Table 1.

Table 2: Linear Regression Models: The Dependent Variables are First-Stage Coefficients on 'Cultural Life Undermined by Immigration'

	Intercept B_0	*Education* β_1
Unemployment	–0.011	–0.014
	(0.011)	(0.005)
	[1.00]	[2.62]
Foreign-born pop.	0.053	–0.026
	(0.024)	(0.013)
	[2.24]	[2.06]
Unemp.*Foreign born	0.001	–0.002
	(0.002)	(0.001)
	[0.51]	[3.16]
Country fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
Observations	86	86
R^2	0.27	0.35
Dep. mean	4.3	–0.5
Number of countries	20	20

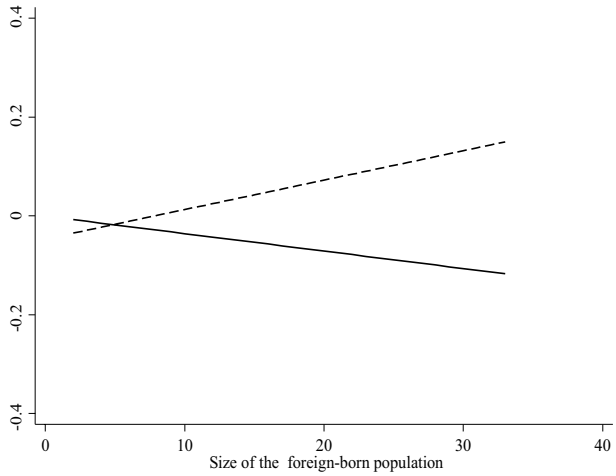
Notes: Standard errors adjusted for heteroscedasticity and country clustering in parentheses. Corresponding t-statistics in brackets. Unemployment and Foreign-born pop. are centred on their sample means.

Combining the findings from the intercept and the education models, Figure 2 shows the marginal effect of unemployment for the two educational groups at different levels of the proportion of foreign born. Although we also find clear tendencies towards polarisation when unemployment is high in combination with a high share of foreign born, the slope for those with low education is substantively flatter than it was for economic concerns, and the marginal effect of unemployment is insignificant from zero for most of the sample. The slope is negative for those with high education, but the marginal effect of unemployment is generally insignificant. Clearly, the impact of unemployment is weaker for cultural concerns.

Conclusion

Inspired by strong claims regarding the irrelevance of economic interests to immigration attitudes (Sides and Citrin, 2007), we have analysed whether immigration opinions co-vary with economic cycles. We have done so using five rounds of data from the European Social Survey, which spans the financial crisis and thus ensures a substantive variation in the economies of most European countries. We have paid particular attention to the influence of the unemployment rate and its interaction with the foreign-born share of the population, and we are the first to analyse whether the impact of the unemployment rate differs

Figure 2: Marginal Effect of Unemployment (*Y*-Axis) on Cultural Concern Over Immigration at Different Levels of Proportion Foreign Born (*X*-Axis)



Notes: The dashed line indicates low education, the full line high education. 'High education' is defined as years of education being two standard deviations above the country mean, while 'low education' is years of education being two standard deviations below the country mean. The estimates are derived from the coefficients presented in Table 2.

across education groups. We argue that our analysis is a more comprehensive test of the relationship between the macro-economy and immigration opinion than what has been conducted in previous analyses of survey data.

Our results are consistent with expectations derived from economic competition theory. We find that a high level of unemployment is associated with more economic concerns over immigration; however, this is true only in countries with a comparatively high proportion of foreign born. Moreover, the association is stronger within groups that have a low level of education. Our findings are consistent with Matt Golder (2003), who finds that support for populist right parties is elevated when unemployment is high, but only in countries with a significant proportion of foreign citizens. We believe that the consistency with Golder's findings suggests that our results are not only sociologically relevant, but also politically relevant.

In contrast, we find that cultural concerns about immigration do not vary systematically with the state of the economy. Instead, cultural concern is related to the size of the foreign-born population (see e.g. Quillian, 1995; Semyonov *et al.*, 2006), particularly among those with low education. Our finding that economic concern is associated with the state of economy and not with the size of the immigrant population *per se*, while cultural concerns are sensitive to the size of the immigrant population but not to the state of the economy, is a strong warning against conflating economic concerns about immigration with cultural concerns in empirical work. One should not simply assume that all types of anti-immigration attitudes are part of the same underlying ideological phenomenon. Our

results suggest that changes in these variables are distinct processes driven by different structural factors and with different policy implications. Sides and Citrin, (2007, p. 502) conclude that 'a thicker cultural brew may be needed to sustain social solidarity and welcome newcomers into a democratic welfare state'. Our findings indicate that successful integration also demands political recognition of economic vulnerability and policy measures directed towards groups at risk.

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Appendix

Table A1: Descriptive Statistics

	Variation	*Mean*	*Standard deviation*	*Minimum*	*Maximum*
Intercept economic concern	Overall	5.19	0.71	3.26	6.89
	Between		0.71	3.77	6.63
	Within		0.26	4.57	5.76
Education coeff. econ. concern	Overall	–0.51	0.14	–0.77	–0.15
	Between		0.13	–0.71	–0.16
	Within		0.08	–0.74	–0.34
Intercept cultural concern	Overall	4.28	0.93	2.39	6.79
	Between		0.96	2.59	6.60
	Within		0.19	3.70	4.77
Education coeff. cultural concern	Overall	–0.52	0.16	–0.89	–0.12
	Between		0.15	–0.76	–0.13
	Within		0.07	–0.73	–0.28
Unemployment	Overall	–0.37	3.08	–4.90	12.70
	Between		2.80	–3.92	6.30
	Within		1.59	–4.57	7.29
Foreign born	Overall	0.16	6.19	–8.08	23.67
	Between		7.22	–7.33	23.00
	Within		1.22	–3.58	3.81
Unemployment*Foreign born	Overall	–5.40	21.18	–107.21	46.99
	Between		22.74	–82.01	10.19
	Within		9.65	–42.26	31.40

Note: N = 86. Number of countries = 20.

Table A2: Linear Regression Models

	Economy Intercept β_0	*Economy Education* β_1	*Culture Intercept* β_0	*Culture Education* β_1
Unemployment	0.059	–0.019	–0.012	–0.012
	(0.017)	(0.008)	(0.010)	(0.006)
	[3.51]	[2.44]	[1.17]	[1.85]
Foreign-born pop.	0.071	–0.014	0.058	–0.037
	(0.022)	(0.018)	(0.022)	(0.016)
	[3.18]	[0.79]	[2.71]	[2.30]
Country fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	86	86	86	86
R^2	0.311	0.164	0.268	0.272
Dep. mean	5.2	–0.5	4.3	–0.5
Number of countries	20	20	20	20

Note: Standard errors adjusted for heteroscedasticity and country clustering in parentheses. Corresponding t-statistics in brackets. Unemployment and Foreign-born pop. are centred on their sample means.

Table A3: Linear Regression Models: Wild Bootstrap Standard Errors

	Economy Intercept β_0	*Economy Education* β_1	*Culture Intercept* β_0	*Culture Education* β_1
Unemployment	0.062	–0.021	–0.011	–0.014
	(0.019)	(0.007)	(0.013)	(0.006)
	[3.20]	[2.88]	[0.87]	[2.28]
Foreign-born pop.	0.046	–0.005	0.053	–0.026
	(0.033)	(0.022)	(0.027)	(0.015)
	[1.41]	[0.23]	[1.94]	[1.79]
Unemp.*Foreign-born	0.005	–0.002	0.001	–0.002
	(0.003)	(0.001)	(0.003)	(0.001)
	[1.90]	[2.19]	[0.44]	[2.75]
Country fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	86	86	86	86
R^2	0.910	0.751	0.969	0.857
Dep. mean	5.2	–0.5	4.3	–0.5
Number of countries	20	20	20	20

Notes: Wild bootstrap standard errors clustered on country in parentheses. Corresponding t-statistics in brackets. Unemployment and Foreign-born pop. are centred on their sample means.

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Notes

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1 Obviously, there is variation within education groups and across countries in the degree to which people with a vulnerable position compete with immigrants, but our data do not allow us to derive a more fine-tuned hypothesis in this regard. However, the majority of this variation is likely to be constant over time and will be accounted for by the way we set up the empirical model. See Scheve and Slaughter (2001), Mayda (2006) and Facchini and Mayda (2009) for more sophisticated arguments on discontent across groups in the labour market. In most cases, the most vulnerable groups are workers with low education.
2 The ESS contains a survey item on education level; however, this variable is missing in several surveys.
3 One might argue that we should control for being unemployed in case the aggregate unemployment rate simply picks up compositional differences between countries. Such a control is problematic when we are interested in educational differences since education level is a strong predictor of unemployment. Therefore, we decided not to control for unemployment at the individual level. Nonetheless, coefficient estimates are almost identical, and all conclusions remain, if we control for unemployment in the first stage.

References

Aksoy, D. (2012) 'The Flag or the Pocketbook: To What are Immigrants a Threat?', *International Migration*, 50 (6), 28–41.
Angrist, J. D. and Pischke, J.-S. (2009) *Mostly Harmless Econometrics*. Princeton, NJ: Princeton University Press.
Bay, A.-H., Finseraas, H. and Pedersen, A. W. (2013) 'Welfare Dualism in Two Scandinavian Welfare States: Public Opinion and Party Politics', *West European Politics*, 36 (1), 199–220.
Brüker, H., *et al*. (2002) 'Welfare State Provision', in T. Boeri, G. Hanson and B. McCormick (eds), *Immigration Policy and the Welfare System*. Oxford: Oxford University Press, pp. 66–89.
Cameron, C., Gelbach, J. and Miller, D. L. (2008) 'Bootstrap-Based Improvements for Inference with Clustered Errors', *Review of Economics and Statistics*, 90 (3), 414–27.
Citrin, J. and Sides, J. (2008) 'Immigration and the Imagined Community in Europe and the United States', *Political Studies*, 56 (1), 33–56.
Coenders, M., Lubbers, M., Scheepers, P. and Verkuyten, M. (2008) 'More than Two Decades of Changing Ethnic Attitudes in the Netherlands', *Journal of Social Issues*, 64 (2), 269–85.
Dancygier, R. and Donnelly, M. (2013) 'Sectoral Economies, Economic Contexts, and Attitudes toward Immigration', *Journal of Politics*, 75 (1), 17–35.
Facchini, G. and Mayda, A. M. (2009) 'Does the Welfare State Affect Individual Attitudes Toward Immigrants? Evidence across Countries', *Review of Economics and Statistics*, 91 (2), 295–314.
Gelman, A. (2005) 'Two-Stage Regression and Multilevel Modeling: A Commentary', *Political Analysis*, 13 (4), 459–61.
Golder, M. (2003) 'Explaining Variation in the Success of Extreme Right Parties in Western Europe', *Comparative Political Studies*, 36 (4), 432–66.
Green, D. and Shapiro, I. (eds) (1994) *Pathologies of Rational Choice Theory: A Critique of Applications in Political Science*. New Haven, CT: Yale University Press.
Hainmueller, J. and Hiscox, M. J. (2007) 'Educated Preferences: Explaining Attitudes toward Immigration in Europe', *International Organization*, 61 (2), 399–442.

Hainmueller, J. and Hiscox, M. J. (2010) 'Attitudes toward Highly Skilled and Low Skilled Immigration: Evidence from a Survey Experiment', *American Political Science Review*, 104 (1), 61–84.
Huber, J. D., Kernell, G. and Leoni, E. L. (2005) 'Institutional Context, Cognitive Resources and Party Attachments across Democracies', *Political Analysis*, 13 (4), 365–86.
Kam, C. and Franzese, R. (2007) *Modeling and Interpreting Interactive Hypotheses in Regression Analysis*. Ann Arbor, MI: University of Michigan Press.
Lewis, J. B. and Linzer, D. A. (2005) 'Estimating Regression Models in Which the Dependent Variable is Based on Estimates', *Political Analysis*, 13 (4), 345–64.
Mansbridge, J. J. (ed.) (1990) *Beyond Self-Interest*. Chicago, IL: University of Chicago Press.
Mayda, A. M. (2006) 'Who is against Immigration? A Cross-Country Investigation of Individual Attitudes toward Immigrants', *Review of Economics and Statistics*, 88 (3), 510–30.
Meuleman, B., Davidov, E. and Billiet, J. (2009) 'Changing Attitudes toward Immigration in Europe, 2002–2007: A Dynamic Group Conflict Theory Approach', *Social Science Research*, 38 (2), 352–65.
Nannestad, P. (1999) *Solidaritetens Pris: Holdningen Til Indvandrere Og Flygtninge I Danmark 1987–1993*. Aarhus: Aarhus Universitetsforlag.
OECD (2012) *OECD Stat (database)*, doi: 10.1787/data-00285-en [Accessed 8 May 2012].
Quillian, L. (1995) 'Prejudice as a Response to Perceived Group Threat: Population Composition and Anti-Immigrant and Racial Prejudice in Europe', *American Sociological Review*, 60 (4), 586–611.
Scheve, K. and Slaughter, M. (2001) 'Labor Market Competition and Individual Preferences over Immigration Policy', *Review of Economics and Statistics*, 83 (1), 133–45.
Sears, D. O., Lau, R. R., Tyler, T. R. and Allen, H. M. Jr (1980) 'Self-Interest vs Symbolic Politics in Policy Attitudes and Presidential Voting', *American Political Science Review*, 74 (3), 670–84.
Semyonov, M., Raijman, R. and Gorodzeisky, A. (2006) 'The Rise of Anti-Foreigner Sentiment in European Societies, 1988–2000', *American Sociological Review*, 71 (3), 426–49.
Sides, J. and Citrin, J. (2007) 'European Opinion about Immigration: The Role of Identities, Interests and Information', *British Journal of Political Science*, 37 (3), 477–504.
Stegmueller, D. (2013) 'How Many Countries for Multilevel Modeling? A Comparison of Frequentist and Bayesian Approaches', *American Journal of Political Science*, 57 (3), 748–61.
Van der Waal, J., Achterberg, P., Houtman, D., De Koster, W. and Manevska, K. (2010) 'Some are More Equal than Others. Economic Egalitarianism and Welfare Chauvinism in the Netherlands', *Journal of European Social Policy*, 20 (4), 350–63.
Van Oorschot, W. (2006) 'Making the Difference in Social Europe: Deservingness Perceptions among Citizens of European Welfare States', *Journal of European Social Policy*, 16 (1), 23–42.

Supporting Information

Additional Supporting Information can be found in the online version of this article at the publisher's website:

Appendix S1: Descriptive Graphs.
Appendix S2: Results from the Survey-specific Regressions (First Stage Regressions).
Appendix S3: Additional Results.