

‘Immigrationization’ of welfare politics? Anti-immigration and welfare attitudes in context

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Online Appendix

The results from our baseline broadly hold-up to a range of robustness and sensitivity tests. Table A1 below summarizes alternative estimators and embedding, with the same variables as in our baseline from Table Two. To conserve space, however, Table A1 shows only the interactions capturing possible moderation between *Anti-immigration* sentiments and *Foreign born, Social welfare spending* and *Migrant social benefit dependency* (three rows per specification, hence). The models in specification “A(1)” are our baseline from Table Two (i.e., random intercept models with individuals nested in country-years and a binary dependent variable and therefore logistic regressions). Specification “A(2)” considers an alternative dependent variable, *Support for redistribution (Categorical)*, instead of the dichotomous baseline. The focus is on random-intercept ordered logits of 5-point outcomes (0 = strongly disagree that “government should reduce income differences” and 5 = strongly agree). All moderating effects corroborate our baseline support for Hypotheses 2 through 4. Models in specification “B(1)” include 24 country dummies to mitigate remaining heteroskedasticity and omitted variable bias. The results again closely track the baseline. This is also true for specification B(2), where we substituted our binary dependent variable again with a categorical one and estimated ordered logits. Specifications “C(1)” and “C(2)” closely resemble “B(1)” and “B(2)” except that year dummies have been included as well. This does not change the regression coefficients. In the specifications “D(1)” and “D(2)” we estimated simple models without any multilevel structure

but including country- and year-fixed effects. The results of both the logit and the ordered logit specifications again corroborate our baseline.

Table A1:
Alternative estimators and embedding

	DV: Binary (1)	DV: Categorical (2)
A. Individuals nested in country-years		
<i>Anti-immig X foreign born</i>	-0.002*** (0.000)	-0.003*** (0.000)
<i>Anti-immig X social welfare spending</i>	-0.007*** (0.001)	-0.006*** (0.000)
<i>Anti-immig X migrant soc. ben. dep.</i>	-0.010*** (0.002)	-0.007*** (0.001)
B. Individuals nested in country-years with country-fixed effects		
<i>Anti-immig X foreign born</i>	-0.002*** (0.000)	-0.003*** (0.000)
<i>Anti-immig X social welfare spending</i>	-0.007*** (0.001)	-0.006*** (0.000)
<i>Anti-immig X migrant soc. ben. dep.</i>	-0.010*** (0.002)	-0.007*** (0.001)
C. Individuals nested in country-years with country- and year-fixed effects		
<i>Anti-immig X foreign born</i>	-0.002*** (0.000)	-0.003*** (0.000)
<i>Anti-immig X social welfare spending</i>	-0.007*** (0.001)	-0.006*** (0.000)
<i>Anti-immig X migrant soc. ben. dep.</i>	-0.010*** (0.002)	-0.007*** (0.001)
D. No multilevel structure, country- and year-fixed effects		
<i>Anti-immig X foreign born</i>	-0.002*** (0.000)	-0.003*** (0.000)
<i>Anti-immig X social welfare spending</i>	-0.008*** (0.001)	-0.006*** (0.000)
<i>Anti-immig X migrant soc. ben. dep.</i>	-0.010*** (0.002)	-0.007*** (0.001)
E. Individuals nested in country-years nested in countries		
<i>Anti-immig X foreign born</i>		-0.001 (0.001)
<i>Anti-immig X social welfare spending</i>		-0.003* (0.001)
<i>Anti-immig X migrant soc. ben. dep.</i>		-0.004 (0.004)

DV column (1) is binary; DV column (2) is categorical 5-point scale. All interaction effects are estimated in separate models (see Table Two in original paper), and all models include the same controls as in the main analysis (results not shown), standard errors (in parentheses).

***<0.001, ** p<0.01, * p<0.05, + p<0.10.

In specification “E”, finally, we assess yet another nesting structure: three-levels with individuals nested in country-years, nested in countries (see Schmidt-Catran and Fairbrother 2016). Since the more appropriate logit and ordered logit models do not converge, we consider linear models. Here the results do deviate from the baseline and previous specifications A-D. Only the interaction between *Anti-immigration* and *Social welfare spending* remains statistically significant. This suggests that the findings regarding the other interactions should be interpreted with extra caution. That said, it is important to emphasize that this particular specification is suboptimal: it is unnecessarily and inappropriately complex for our purposes, where most of our variation exists between country-waves; and more importantly, the OLS estimator presumes a continuous DV, whereas our outcome of interest is a Likert scale consisting of only 5 categories.

Table A2 considers robustness checks focused on alternative specifications of the outcome of interest, support for welfare redistribution. Within the limits of the questions repeated across the ESS waves, an important alternative to our baseline focus on support for government redistribution (binary and categorical specifications as in the paper’s Table 2 and Online Appendix Table A1) is to consider the respondent’s deviation from the country-year mean. This allows some explicit consideration for the possible influence (beyond the explicit focus on social policy moderators) that a respondent’s support for redistribution is likely a function of what already garners support in a given country. Hence, Model F shows the results of such a specification, and we see the baseline hold. Model G considers a question asked in ESS round 7, about whether respondents agree that government should be responsible for the standard of living of the unemployed. Here, again, we see the pattern of the baseline holding, though the single wave of analysis helps make the levels of significance somewhat more modest than the baseline. Models H and I, in turn, consider questions that are clearly part of the argumentation

underlying Hypotheses 2-4. Model H gauges respondent support for giving migrants generous access to social policy assistance (ranging from 1=no access, hence “welfare chauvinism” of sorts, through to 5=immediate and full access to benefits). Model I, finally, shows respondent support for the idea that social benefit programs *need not* put too great a strain on the country’s economy (1=strongly agreeing that the strain is too great; to 5=strongly disagreeing that the strain is too great). Both of these parameters correlate strongly positive with respondent support for redistribution (results not shown). But more surprising and important for our arguments, we see a pattern very much in line with our Hypotheses 2-5, and this provides some support for possible mechanisms underlying those Hypotheses.

Table A2:
Alternative Dependent Variables

	F. Support Redist. (Deviation from mean)	G. Support Unemp. assistance	H. Support Migrant access to soc.policy	I. Believe Soc. Ben. do not strain economy
<i>Anti-immig × foreign born</i>	-0.001*** (0.000)	-0.003** (0.011)	-0.003** (0.001)	-0.006*** (0.001)
<i>Anti-immig × social welfare spending</i>	-0.003*** (0.000)	-0.013*** (0.002)	-0.014*** (0.002)	-0.012*** (0.002)
<i>Anti-immig. × migrant soc. ben. dep.</i>	-0.004*** (0.001)	-0.01* (0.004)	-0.02*** (0.004)	-0.012** (0.004)

DVs: (F) is continuous national mean *Support Redistribution* minus respondent’s position on *Support Redistribution*; (G) is categorical 5-point scale, Support for view that government responsible for quality of life of unemployed; (H) Support migrant access to social benefits; (I) Disagree that social benefits put too great a strain on economy. All interaction effects are estimated in separate models (see Table Two in original paper), and all models include the same controls as in the main analysis (results not shown), standard errors (in parentheses).
***<0.001, ** p<0.01, * p<0.05, + p<0.10.

Table A3 considers the specifications using alternative measures of our key explanatory variable of interest: anti-immigration attitudes. Specifications “J” through “L” consider

separately the three alternative 11-point component measures on which our scale *Anti-immigration* is based: about migrants and the economy (model J), migrants and culture (model K) and migrants and quality of life in one's country (model L). The results for all three moderating conditions on which Hypotheses 2 through 4 focus yield the same negative moderating effects of our key macro conditions on any specification of *Anti-immigration* sentiment. While less relevant to our core interest, here, the un-moderated results do reveal interesting contrasts (not shown). We get positive, statistically-significant results for *Anti-immigration (economic)* (based on "Would you say it is generally bad or good for [respondent's country]'s economy that people come to live here from other countries?" (coded 0 = good; 10 = bad)). The other two components – *Anti-immigration (cultural)* (whether "cultural life is generally undermined or enriched" by migration) and *Anti-immigration (country)* (whether migration makes one's "country a worse or better place to live") – are negatively related to *Support for redistribution*. These results suggest that the general and cultural specifications drive the negative direct effect of our scale (Hypothesis 1a). In line with Finseraas (2008) and Schmidt and Spies (2014), these effects suggest that anti-immigrant sentiments with respect to the economy yield compensation effects, while culture-related anti-immigrant sentiments yield anti-solidarity effects. These contrasts, however, are less relevant to our study than the idea that the macro conditions moderate the effects of any of these anti-immigration components in line with Hypotheses 2-4.

Table A4 considers robustness checks focused on alternative measures of the macro-level moderating variables themselves. Specifications M and N show two alternative measures for migrants in the population, our baseline measure being *Foreign born* stocks as a percentage of the population. "M" is based on *Net migration* as a percentage of the population (WDI 2016).

The values are five-year estimates (in 1997, 2002, 2007 and 2012), so we linked these estimates to individual values measured in the next ESS wave. And specification “N” focuses on stocks of foreign born who were born outside of the EU-28, a measure available only since 2013 but captures for a couple of the ESS waves the possible moderating role of this particular, more often maligned, category of migrant population share.¹ The results of both alternative measures of migration conditions (regarding both the logit and ordered logit model) are similar to our main analyses in line with the negative moderation expected in Hypothesis 2.

Table A3:
Alternative measures of Anti-immigration attitudes

	DV: Binary (1)	DV: Categorical (2)
J. Alternative measure of anti-immigration: economic		
<i>Anti-immig X foreign born</i>	-0.001*** (0.000)	-0.002*** (0.000)
<i>Anti-immig X social welfare spending</i>	-0.005*** (0.001)	-0.004*** (0.000)
<i>Anti-immig X migrant soc. ben. dep.</i>	-0.007*** (0.001)	-0.004*** (0.001)
K. Alternative measure of anti-immigration: cultural		
<i>Anti-immig X foreign born</i>	-0.002*** (0.000)	-0.002*** (0.000)
<i>Anti-immig X social welfare spending</i>	-0.005*** (0.000)	-0.004*** (0.000)
<i>Anti-immig X migrant soc. ben. dep.</i>	-0.007*** (0.001)	-0.005*** (0.001)
L. Alternative measure of anti-immigration: country		
<i>Anti-immig X foreign born</i>	-0.002*** (0.000)	-0.002*** (0.000)
<i>Anti-immig X social welfare spending</i>	-0.006*** (0.001)	-0.005*** (0.001)
<i>Anti-immig X migrant soc. ben. dep.</i>	-0.010*** (0.002)	-0.008*** (0.001)

DV column (1): *Support Redistribution* binary, DV column (2) *Support Redistribution* 5-point scale. All interaction effects are estimated in separate models (see Table Two in original paper), and all models include the same controls as in the main analysis (results not shown), standard errors (in parentheses).

***<0.001, ** p<0.01, * p<0.05, + p<0.10.

Specifications O and P in Table A4 consider the moderating roles of alternative measures of redistributive welfare state size relevant to testing Hypothesis 3. In specification “O”, we substitute *Social welfare spending* with a *program-generosity* measure: average net replacement rates (NRR) of social assistance to unemployed residents, averaged across income groups and family composition (OECD 2018). This captures among the most salient measures of benefit generosity and the only benefit-generosity measure available for our full sample of country-years (lagged one year for each ESS wave) (OECD 2018). Specification P, in turn, considers *actual redistribution*, based on pre-tax, pre-transfer Gini index of inequality minus post-tax, post-transfer Gini index. The larger the number, the more one can say that state interventions in the welfare state and tax system have provided redistribution, clearly relevant to attitudes towards government redistribution. Again, for both measures of social policy effort the coefficients are in the expected direction and statistically significant in line with Hypothesis 3.

Table A4:
Alternative measures of macro-level moderating conditions

	DV: Binary (1)	DV: Categorical (2)
Alternative measures of foreign-born macro		
<i>M. Anti-immig X net migration</i>	-0.014*** (0.002)	-0.015*** (0.001)
<i>N. Anti-immig X Non-EU migrants (Round 7 only)</i>	-0.715** (0.262)	-0.483* (0.206)
Alternative measures of welfare redistribution		
<i>O. Anti-immig X generosity</i>	-0.003*** (0.000)	-0.002*** (0.000)
<i>P. Anti-immig X actual redistribution</i>	-0.008*** (0.002)	-0.007*** (0.002)
Alternative measures of for.born welfare-dependency		
<i>Q. Anti-immig X migrant soc. ben. dep.(including educ)</i>	-0.003* (0.002)	0.001 (0.001)

DV column (1): *Support Redistribution* binary, DV column (2) *Support Redistribution* 5-point scale. All interaction effects are estimated in separate models (see Table Two in original paper), and all models include the same controls as in the main analysis (results not shown), standard errors (in parentheses).

***<0.001, ** p<0.01, * p<0.05, + p<0.10.

Finally, specification “Q” in Table A4 considers an alternative measure of migrant welfare-dependency to test Hypothesis 4. It substitutes our baseline measure of Migrant social welfare dependency with an alternative specification that excludes controls in estimating welfare dependency of the foreign-born. This leads to the similar substantive results but at more modest significance ($p < 0.05$).

Table A5 considers the potentially perturbing role of welfare state regime-type in “immigrationization” of social policy attitudes. Most importantly, specification “R” assesses what happens if we include *Type of welfare state* dummies (1 = conservative, 2 = liberal, 3 = social democratic, 4 = Southern Europe, 5 = Eastern Europe). These are the most common categories updating Esping-Andersen’s 1990 conceptualization (Esping-Andersen 1990; Hemerijck 2013; Eikemo et al. 2008). Controlling for these categories of welfare state institutions does not change the main results, relevant particularly to the core claim for Hypothesis 3 that social policy expenditures or redistributive effort have a negative moderating effect in altering how anti-immigration plays out for support for welfare redistribution. While the results are not directly relevant to our argument or study, specification “S” shows how the five welfare regime-types moderate immigrationization, where we see results broadly along the lines reported by Finseraas (2009) (see literature review of main text for review) – for instance, that anti-immigration is particularly more eroding of support for redistribution in social democratic regimes that are more rights-based and heavily financed by taxes. The most important point, however, is that such interaction does not significantly alter our claims about the moderating role of welfare state generosity, spending or actual redistribution.

Table A5:
Controlling for Welfare Regime Types

	DV: Binary (1)	DV: Categorical (2)
R. Controlling for Welfare State Regime Types		
<i>Anti-immig X foreign born</i>	-0.002*** (0.000)	-0.003*** (0.000)
<i>Anti-immig X social welfare spending</i>	-0.007*** (0.001)	-0.006*** (0.001)
<i>Anti-immig X migrant soc. ben. dep.</i>	-0.010*** (0.002)	-0.007*** (0.001)
S. Moderating Role Welfare State Regime Types		
<i>Anti-immig X Conservative Welf. Regime</i>	0.004 (0.006)	0.005 (0.006)
<i>Anti-immig X Liberal Welf. Regime</i>	-0.01 (0.007)	-0.012* (0.006)
<i>Anti-immig X Social Democratic Welf. Regime</i>	-0.10*** (0.006)	-0.09*** (0.005)
<i>Anti-immig X Southern Welf. Regime</i>	-0.036*** (0.009)	-0.033*** (0.006)
<i>Anti-immig X East European Welf. Regime</i>	0.171*** (0.007)	0.141*** (0.005)

DV column (1): *Support Redistribution* binary, DV column (2) *Support Redistribution* 5-point scale. All interaction effects are estimated in separate models (see Table Two in original paper), and all models include the same controls as in the main analysis (results not shown), standard errors (in parentheses).

***<0.001, ** p<0.01, * p<0.05, + p<0.10.

Table A6 considers broader, ostensibly exogenous, macroeconomic conditions relevant as extra controls. Specification “T” add controls for macro-level economic misfortune: GINI index (post-tax, post-transfer) and the (standardized) *Unemployment Rate*. In all cases we see that the baseline results in support of Hypotheses 2-4 hold tone. And Table A6’s final specifications “U” and “V” consider sensitivity to the most important macroeconomic condition of them all for the period of our study: the global financial crisis itself and its enormous disruption of economic, fiscal and political life in all our sample countries. A blanket way to see whether our results on moderated immigration is sensitive to crisis conditions is the time dummy for pre- and post-crisis. Including this dummy as a control does not substantially alter the

baseline results (not shown). More interesting is to consider the triple interactions between the crisis measure and our moderating interactions: crisis dummy X anti-immigration X macro-condition (either foreign born, social welfare spending, or migrant social-benefit dependency). Based on these results we can see whether the two-way interactions relevant to testing Hypotheses 2-4 are stable across the pre- and post-crisis periods. The results suggest that Hypotheses 2-4 of “negative immigrationization” holds broadly to periods both prior to and after onset of the crisis. Most sensitive, here, is the moderating role for *Foreign born*, that falls (just) under statistical significance for the binary-specification pre-crisis. It’s clear that the moderating effects of this and the other macro-level conditions tend to be stronger in both substantive and statistical terms after 2008, when the crisis took hold, after 2012 of course likely exacerbated by the European refugee crisis and major party-political developments.

Table A6:
Controlling for Macro-economic Distress and Crisis

	DV: Binary (1)	DV: Categorical (2)
T. Controlling for Macro-level Inequality and Unemployment		
<i>Anti-immig X foreign born</i>	-0.004*** (0.001)	-0.004*** (0.000)
<i>Anti-immig X social welfare spending</i>	-0.007*** (0.001)	-0.006*** (0.000)
<i>Anti-immig X migrant soc. ben. dep.</i>	-0.011*** (0.002)	-0.007*** (0.001)
U. Pre-Crisis period		
<i>Anti-immig X foreign born</i>	-0.001 (0.001)	-0.0014* (0.001)
<i>Anti-immig X social welfare spending</i>	-0.004*** (0.001)	-0.002* (0.001)
<i>Anti-immig X migrant soc. ben. dep.</i>	-0.013*** (0.003)	-0.009*** (0.002)
V. Post-Crisis period		
<i>Anti-immig X foreign born</i>	-0.005*** (0.001)	-0.005*** (0.001)
<i>Anti-immig X social welfare spending</i>	-0.01*** (0.001)	-0.009*** (0.001)
<i>Anti-immig X migrant soc. ben. dep.</i>	-0.009*** (0.002)	-0.005** (0.002)

DV column (1): *Support Redistribution* binary, DV column (2) *Support Redistribution* 5-point scale. All interaction effects are estimated in separate models (see Table Two in original paper), and all models include the same controls as in the main analysis (results not shown), standard errors (in parentheses).

***<0.001, ** p<0.01, * p<0.05, + p<0.10.

These findings are corroborated by many further sensitivity and robustness tests not shown here but available upon request. Different sub-samples (e.g. focusing on native-born respondents and/or citizens) yield very similar results. And we get stable results with different mixes or additional individual-level controls (e.g. actual income, alternative education measures, occupation dummies, etc.) or country-level controls (e.g. GDP, GDP per capita, government debt, etc.). The results also hold to alternative estimators like random coefficient models, simple (ordered) logits and probits with and without fixed effects for countries and years, and varying calculations of standard errors (e.g. bootstrapped or jackknifed standard errors). And the baseline moderation results survive full jack-knife exclusion of countries or country-years. Altogether, the tests suggest that the jury is out on the net direct effects of *Anti-immigration* sentiments, with support for Hypotheses 1a, 1b and 1c depending how one measures redistribution or anti-immigration sentiments. However, we have strong support for our Hypotheses 3, and moderately strong support for Hypotheses 2 and 4.

Notes

ⁱ The measure comes from Eurostat Population Statistics (2019, accessed September 2019): <https://ec.europa.eu/eurostat/web/population-demography-migration-projections/data/database>.