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Oldenburg Discussion Papers in Economics

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V – 419-19

February 2019

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Abstract

Previous studies on the determinants of attitudes toward immigration can be classified into those that take a utilitarian perspective, focusing on individuals' perceptions of real-world impacts of immigration, and those that look at immigration attitudes from the point of view of ideological orientation, focusing on broad political norms and values. While utilitarian and ideological determinants have largely been studied separately, the present paper sets out to disentangle their role, placing an emphasis on possible interconnections between them. Specifically, the paper studies whether and to what extent individuals' perception of the impacts of immigration is related to their ideological orientation, implying an indirect channel through which ideology may shape attitudes toward immigration policies. Focusing on Germany before and after the so-called refugee crisis of 2015, it is found that while perceptions of economic and cultural impacts are more important than ideological position, perceptions of impacts increasingly depend on ideology. Ideology-dependence of perceptions is stronger with respect to cultural than with respect to economic impacts. While the importance of perceived economic impacts has decreased, cultural impacts have become the dominant concern after the crisis. Ideological position is more important with respect to immigrants of a different race or ethnic group than the majority and immigrants from poorer countries outside Europe than with respect to immigrants of the same race or ethnic group. The relationship between ideology and immigration attitudes rests mainly on the identity/homogeneity domain of ideological position rather than the equity/solidarity domain.

Keywords: immigration; attitude; utilitarianism; left-right scale; equity; identity
JEL codes: F22; I31; J15; O15; Z13

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1. Introduction

Immigration has routinely appeared near the top of public policy concerns in Europe, but the salience of immigration in the public and political sphere has strongly increased with the so-called refugee crisis of 2015. Opposition to immigration is also a defining issue for far-right political parties (e.g., van der Brug et al. 2000) and greatly contributes to their electoral support (e.g. Arzheimer 2009, Dancygier 2010, Georgiadou et al. 2018, Goerres et al. 2018).

While the connection between anti-immigration attitudes and ideological orientation towards the right has been emphasized by political scientists (e.g., Kriesi et al. 2008, Van der Brug and Van Spanje 2009, Dalton 2010), economists have traditionally focused on the role of (perceived) economic impacts of immigration (on wages, taxes and benefits) in shaping attitudes towards it (e.g., MaCurdy et al. 1998, Borjas 1999, Scheve and Slaughter 2001, Hanson et al. 2007, Borjas 2014).[1] More recently, the focus on economic concerns has been complemented by the consideration of "compositional amenities" (Dustmann and Preston 2007, Card et al. 2012). Using data from the 2002 European Social Survey, Card et al. (2012) found concerns over compositional impacts of immigration to be 2–5 times more important in explaining variation in individual attitudes toward immigration than concerns over wages and taxes.

Overall, previous studies on the determinants of attitudes toward immigration can be classified into two broad categories: those that look at immigration attitudes from the point of view of ideological orientation, focusing on broad political norms and values, and those that take a utilitarian perspective, focusing on individuals' perceptions of (economic and cultural)

[1] The evidence on the importance of economic concerns is mixed, ranging from studies that found fears about increased labor market competition to strongly shape individuals' attitudes toward immigrants (for example, Scheve and Slaughter 2001, Mayda 2006) to others that found no or only weak evidence for this effect (Hainmueller and Hiscox 2010, O'Connell 2011, Card et al. 2012). Much of the literature has focused on skill and education levels as determinants of attitudes toward immigration, studying whether the education-attitude relationship reflects education-related differences in concern about economic impacts or differences in cultural values and beliefs (Hainmueller and Hiscox 2007, Hainmueller and Hopkins 2014, Müller and Tai 2016).

impacts of immigration.[2] While ideological and utilitarian factors have largely been studied separately, the present paper sets out to disentangle the role of those factors, placing an emphasis on possible interconnections between them.[3] Specifically, the paper contributes by studying whether and to what extent individuals' perception of the impacts of immigration is related to their ideological orientation, implying an indirect channel through which ideology may shape attitudes toward immigration policies.

The proposition that people with different ideological orientations may have different perceptions of the impacts of immigration ties in with the recently introduced notion of "truthiness", that is, the phenomenon that perceptions of truth depend more on emotions and moral values than on objective facts (Schwarz and Newman 2017). The psychological mechanism behind truthiness relies on the theory of cognitive dissonance (Festinger 1957), which entails that people adjust their perception of reality to their norms and values in order to maintain a coherent self-image (Haidt 2012).[4] With respect to immigration, cognitive dissonance theory would predict that ideological positions that enhance pro-immigration (anti-immigration) attitudes are associated with more positive (more negative) perceptions of immigration's impacts.

When differentiating between indirect and direct channels that may link immigration attitudes to ideological position, some clarification as to the nature of the direct channel is in

[2] To be clear, ideological factors are meant to refer to normative (ethical) sources of immigration attitudes, related to general norms and values. In contrast to immigration attitudes, which refer to a specific issue – immigration – they are not issue-specific, but refer to broad values (e.g., equity, humanity, identity). Moreover, they are respected per se rather than out of instrumental considerations. Utilitarian factors refer to the (perceived) consequences of immigration and the evaluation of those consequences from the point of view of self-interest, rather than general normative principles. We explicitly conceptualize concerns over immigration's cultural impacts as a utilitarian factor. The set of utilitarian factors is thus broader than those related to competition over economic resources featured in what has been labeled the political economy approach to immigration attitudes (Hainmueller and Hopkins 2014).

[3] A third category of determinants comprises socio-economic factors, in particular gender, age, education, the income level, and the labor market status. Our empirical analysis controls for these variables.

[4] There are several ways of avoiding cognitive dissonance. In addition to outright denial of facts ("post-truth"), a frequent strategy consists of narrowing one's information diet such as to minimize exposure to opposing information – a phenomenon supposed to be enhanced by the echo chambers of the internet (Pariser 2011) and potentially relevant in the context of recent migration flows.

order. While the indirect attitude-ideology linkage involves an influence of ideological position on perceptions of immigration's consequences, the direct attitude-ideology linkage relies on non-consequential aspects of immigration. Instead of consequences, the direct linkage involves the compatibility/incompatibility of a specific issue or phenomenon with a set of general norms and values (cp. footnote 2) which are adopted early in life and remain fairly stable over the life cycle (Haidt 2012). In the case of the immigration (and specifically refugee) issue, the relevant norms and values may be described as equity and solidarity on the one hand (inducing pro-immigration attitudes) and identity and homogeneity on the other (inducing anti-immigration attitudes). The political left and right attach different importance to these two domains of values, such that the left is expected to be more pro-immigration whereas the right is expected to be more anti-immigration.[5] This constitutes the rationale behind the "direct" relationship between immigration attitudes and ideological position on the left-right scale noted above,

In this paper we focus on Germany in 2014 and 2016 because Germany experienced a drastic increase in the number of immigrants in 2015, an event referred to as the German refugee crisis.[6] This event triggered heated public debates on immigration. For instance, the migration issue was referred to by the Federal Minister of the Interior as "the mother of all political troubles" (ZEIT online, September 6, 2018).[7] The German "refugee crisis" and the ensuing debates changed immigration attitudes and the way attitudes are shaped by utilitarian and ideology concerns. To illustrate, while in 2014 the proportion of people saying that no immigrants should be allowed to come to Germany was 6.7 percent in the case of "immigrants

[5] The left–right scale is the concept most often used to describe citizens' political positions (Benoit and Laver 2006). Following Lachat (2018), the left-right scale involves economy-related and culture-related norms and values, where the former (in particular, equity and redistribution) are more important on the left side of the spectrum while the latter (in particular, identity and homogeneity) are more important on the right side. Drawing on the differentiation between these two aspects of political position, we use the position towards redistribution as an alternative, narrower indicator of ideological orientation.

[6] In 2015, the inflow of registered immigrants increased steadily from 32.229 in January to 104.460 in August. After the decision by the German Government on September 5 to allow refugees "stranded" in Hungary to come to Germany, the number skyrocketed to 206.101 in November 2015 while dropping thereafter and stabilizing at less than 20.000 per month after March 2016 (Bundeszentrale für politische Bildung 2018).

[7] https://www.zeit.de/news/2018-09/06/streit-in-der-union-seehofer-mutter-aller-probleme-180906-99-842173

of the same race or ethnic group as the majority" and 13.1 percent in the case of "immigrants of a different race or ethnic group than the majority", the corresponding numbers increased to 8.2 percent and 15.5 percent, respectively, in 2016.[8]

The analysis of this paper is based on the seventh and eighth rounds of the biannual European Social Survey (ESS), fielded in August 2014 to February 2015 and August 2016 to March 2017, respectively, that is, before and after the peak of immigration to Germany (see footnote 7). The ESS routinely asks people to state (i) how many immigrants (on a scale from "many" to "none") they think should be allowed to come to the country, (ii) their belief as to whether immigration is good or bad for the economy and for cultural life (utilitarian factors), and (iii) their position on the left-right scale (ideological factor). Our empirical analysis uses the responses to (i) as the dependent (attitude) variable and to (ii) and (iii) as independent variables (controlling for demographic and socio-economic characteristics). In addition, we use responses to (ii) and (iii) as dependent and independent variables, respectively, to test whether perceptions as to the impacts of immigration depend on ideological orientation.

The paper contributes to the literature in the following ways. First, it studies the relative importance of ideological and utilitarian factors, differentiating the latter into perceptions as to the economic and cultural impacts of immigration. Second, it investigates the dependence of those perceptions on individuals' ideological position. Third, it differentiates between the equity/solidarity domain and the identity/homogeneity domain of ideological position. Fourth, by using the most recent data available, it studies differences in the role of the various determinants and channels of influence before and after the recent "refugee crisis".[9]

[8] On data sources see section 2.

[9] It should be noted that some of the most recent pertinent papers (e.g. Card et al. 2012, Müller and Tai 2016) used data for 2002, based on the first round of the ESS because it included a special module on immigration not available in subsequent rounds. This permitted very detailed analyses of the determinants of attitudes toward immigration to be carried out. The interconnection between ideological orientation and immigration's perceived impact is not studied in those papers.

Using data from the 2014 and 2016 ESS, it is found that while perceptions of economic and cultural impacts are more important than ideological position, perceptions of impacts increasingly depend on ideology. Ideology-dependence of perceptions is stronger with respect to cultural than with respect to economic impacts. While the importance of perceived economic impacts has decreased, cultural impacts have become the dominant concern after the crisis. Ideological position is more important with respect to immigrants of a different race or ethnic group than the majority and immigrants from poorer countries outside Europe than with respect to immigrants of the same race or ethnic group. The relationship between ideology and immigration attitudes rests mainly on the identity/homogeneity domain of ideological position rather than the equity/solidarity domain.

The remainder of the paper is organized as follows. Section 2 presents the data and descriptive background. Section 3 presents the analytical framework and results. Section 4 concludes.

2. Data and Descriptive Background

2.1 Data Sources and Definition of Variables

We use survey data for Germany from the seventh and eighth rounds of the European Social Survey (ESS), a repeated cross-sectional biannual survey (see www.europeansocialsurvey.org). ESS data are obtained using random (probability) samples, where the sampling strategies are designed to ensure representativeness and comparability across European countries. The ESS routinely asks individuals to state their attitudes towards immigration policy, their perceptions as to the consequences of immigration, and their ideological position.

The seventh and eighth rounds of the German survey were fielded from August 18, 2014 to February 5, 2015 and from August 23, 2016 to March 26, 2017, respectively, that is, before and after the peak of immigration to Germany in late 2015. The data set involves 3045 observations for 2014 and 2852 observations for 2016. Due to item non-response, the number

of observations used in econometric analysis is somewhat smaller (depending on the variables included in various specifications).

2.1.1 Immigration Attitudes

The dependent variables are indicators of attitudes towards immigration policy (immigration attitude - *IA*) of people of the same race or ethnic group as the majority (*IA-Same*), different race or ethnic group than the majority (*IA-Diff*) and from poorer countries outside Europe (*IA-Poor*). The respective indicators are based on the following questions.

IA-Same: *Now, using this card, to what extent do you think your country should allow people of the same race or ethnic group as most people in this country to come and live here? Allow many to come and live here = 1; Allow some = 2; Allow a few = 3; Allow none = 4.*

IA-Diff: *How about people of a different race or ethnic group from most people in this country? Still use this card. Allow many to come and live here = 1; Allow some = 2; Allow a few = 3; Allow none = 4.*

IA-Poor: *How about people from the poorer countries outside Europe? Use the same card. Allow many to come and live here = 1; Allow some = 2; Allow a few = 3; Allow none = 4.*

2.1.2 Perceived Consequences

Questions concerning the perceived consequences (*PC*) of immigration refer to economic consequences (*PC-Econ*) and cultural consequences (*PC-Cult*). The respective indicators are based on the following questions.

PC-Econ: *Would you say it is generally bad or good for Germany's economy that people come to live here from other countries? Please use this card. Bad for the economy = 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, Good for the economy = 10.*

PC-Cult: *And, using this card, would you say that Germany's cultural life is generally undermined or enriched by people coming to live here from other countries? Cultural life undermined = 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, Cultural life enriched = 10.*

2.1.3 Ideological Position

Ideological position on the left-right scale (*IP-Right*) is obtained from the following question.

IP-Right: *In politics people sometimes talk of "left" and "right". Where would you place yourself on this scale, where 0 means the left and 10 means the right?*

2.1.4 Control Variables

In addition to the perceived consequences of immigration and the ideological position, the set of independent variables includes socio-demographic and socio-economic control variables that were used in previous research (e.g. Hainmueller and Hiscox 2007): age (years), gender (female = 1, male = 0), highest level of education (not completed primary education = 0, completed primary education = 1, …., doctoral degree = 6), household's total net income (1^{st} decile = 1, …, 10^{th} decile = 10), and unemployed status (actively looking for job = 1, other = 0), In addition, some of the regressions will control for whether or not respondents are themselves immigrants.

2.2 Sample Characteristics

Table 1 describes the dependent and independent variables, differentiated by 2014 and 2016. With respect to the variable IA-Same, the (relative) majority of respondents say that "some" immigrants should be allowed to come to the country whereas those who think that "none" should be allowed constitute a small minority of less than 2 percent. The mean value of IA-Same did not change from 2014 to 2016. With respect to IA-Diff, the proportion of

respondents saying that “none” should be allowed to come is larger, amounting to 4.1 percent in 2014 and 4.4 percent in 2016. The increase of this category goes with a decrease in pro-immigration attitudes (“allow many”, “allow some”). These changes manifest in an increase in the mean value of IA-Diff, that is, a less immigration-friendly attitude. With respect to IA-Poor, the proportion saying that “none” should be allowed to come is larger than with respect to IA-Same and IA-Diff, but that proportion has *decreased* in 2014 to 2016 (from 7.4 to 5.7 percent), as has the proportion saying that “few” should be allowed (from 28.1 to 26.1 percent). On the other hand, the proportions saying that “some” as well as “many” should be allowed to come increased. Accordingly, the mean value of IA-Poor decreased, indicating more immigration-friendliness. Overall, while anti-immigration sentiment increased with respect to “immigrants of different race or ethnic group than the majority”, the attitude towards “immigrants from poorer countries outside Europe” became more immigration-friendly. In spite of this change, the mean value of anti-immigration sentiment is largest in the case of the latter group and smallest in the case of immigrants of the same race or ethnic group as the majority.

Turning to the perceived consequences of immigration, the relative majority views immigration as being neither bad nor good for the economy (variable PC-Econ). However, the years 2014 to 2016 saw an increase of the view that immigration is good for the economy in terms of the mean value. The situation is different with respect to immigration’s perceived consequences for cultural life (variable PC-Cult). Those perceptions tend to be somewhat more positive generally, but they became less positive from 2014 to 2016, as indicated by the mean value.

With respect to the position on the left-right scale (variable IP-Right), we find most respondents to take moderate positions. The proportion of the three rightmost categories is considerably smaller than that of the three leftmost categories. The distribution of ideological orientations saw little change in 2014 to 2016, consistent with the stability of the norms and values that characterize those orientations (Haidt 2012).

Overall, it can be stated that both the attitudes towards immigration (pro- vs. anti-immigration) and the perceptions of immigration's impacts (on the economy and on cultural life) underwent some changes in 2014 to 2016, whereas the profile of ideological orientation on the left-right scale remained rather stable. This suggests that ideological position, if anything, is a determinant of immigration attitudes rather than the other way around, and that the relationship between individuals' ideological position and their attitudes towards immigration may have changed.

2.3 Correlations

As a first pass at studying relationships between immigration attitudes, perceptions of immigration's consequences, and ideological position, Table 2 displays the correlations between the main variables of interest, differentiated by 2014 and 2016.

In both years, the variables IA-Same, IA-Diff and IA-Poor – which are coded such that higher values indicate stronger *anti*-immigration sentiments – are significantly negatively correlated to perceptions that immigration is good rather than bad for the economy and for cultural life. The correlations are larger (in absolute terms) with respect to immigrants of a different race or ethnic group than for immigrants of the same race or ethnic group. For the former group of immigrants the correlation with cultural impacts is larger than that with economic impacts whereas the opposite applies to immigrants from the latter group. Comparing 2016 to 2014, the correlations between IA-Same, IA-Diff and IA-Poor on the one hand and perceived economic and cultural impacts of immigration have decreased.

Turning to the correlations between immigration attitudes and the ideological position, we find anti-immigration attitudes to be significantly positively correlated to a more right leaning ideological orientation. The correlations of attitudes with ideological position are of much smaller magnitude than the correlations with perceived consequences of immigration, and the correlation with ideological position is much smaller in the case of immigrants of the

same race or ethnic group as the majority than with respect to the two other groups of immigrants. Comparing 2016 to 2014, the correlations between immigration attitudes and ideological position increased considerably.

With respect to the relationship between ideological position and perceptions of immigration's impacts, a more right leaning ideological position is significantly negatively correlated with negative perceptions of the economic and cultural impacts. The correlation is much stronger with respect to the cultural than to the economic impacts. Comparing 2016 to 2014, the correlations between ideological position and perceived impacts considerably increased in magnitude.[10]

3. Analytical Framework and Results

This section presents the model and empirical approach (3.1), the main estimation results (3.2), robustness checks (3.3), and a summary of main findings (3.4).

3.1 Model and Empirical Approach

Political scientists have demonstrated that individuals' attitudes towards immigration depend on the political norms and values that constitute their ideological position (e.g., Kriesi et al. 2008, Van der Brug and Van Spanje 2009, Dalton 2010). Specifically, the attitude-ideology nexus entails that pro-immigration attitudes are related to left-leaning ideological positions whereas anti-immigration attitudes are related to right-leaning ideological positions. By contrast, economists have focused on the role of immigration's (perceived) real world impacts in shaping immigration attitudes through utilitarian considerations. Specifically, perceived impacts of immigration on the economy and on cultural life were found to influence attitudes towards immigration policy (e.g., Dustmann and Preston 2007, Card et al. 2012).

[10] Table 2 includes correlations with two additional variables, PC-Life and IP-NoRedist, to be discussed later.

Cognitive psychologists have shown that, based on the theory of cognitive dissonance (Festinger 1957), people (unconsciously) adjust their perceptions of what is true to their norms and values in order to avoid psychological distress (Haidt 2012, Schwarz and Newman 2017).

In the case of immigration, the theory and evidence on cognitive dissonance avoidance suggests that perceptions as to immigration's impacts may depend on people's ideological position, creating an indirect channel through which ideological factors may shape attitudes towards immigration. With respect to the ideology-perception nexus, we hypothesize that a more right-leaning (left-leaning) political orientation is associated with more negative (positive) perceptions of immigration's effects on the economy and/or cultural life.

We set up a model that accounts for the complex relationship between ideological factors (norms and values), utilitarian factors (perceived economic and cultural impacts of immigration) and attitudes towards immigration.

The benchmark model captures the dependence of individuals' immigration attitudes on their ideological position, their perception of immigration's economic and cultural consequences, and socio-demographic control variables:

$$IA_i = a_0 + a_1 * IP\text{-}Right_i + a2 * PC\text{-}Econ_i + a_3 * PC\text{-}Cult_i + a_4 * Controls_i + u_i \qquad (1).$$

In this formulation, IA_i denotes indicators of individual *i*'s degree of *anti*-immigration sentiment towards various groups of immigrants (*IA-Same*, *IA-Diff*, *IA-Poor*, see subsection 2.1.1). $IP\text{-}Right_i$, denotes the degree to which an individual places herself towards the right on the left-right scale (subsection 2.1.2). $PC\text{-}Econ_i$ and $PC\text{-}Cult_i$ are the individual's perceptions of the degree to which immigration is good for the economy and for cultural life, respectively (subsection 2.1.3). *Controls* is a vector of socio-demographic controls (subsection 2.1.4); u_i is the error term. The previous literature suggests that a_1 is positive, whereas a_2 and a_3 are expected to be negative.

In equation (1), immigration's perceived consequences (*PC-Econ* and *PC-Cult*) are taken as fixed. On the presumption that perceptions of consequences in fact depend on ideological position, rather than being fixed, equation (1) measures solely a *direct* dependence of immigration attitudes on ideological position, through parameter a_1, disregarding the possibility of an *indirect* channel of the attitude-ideology nexus through ideology-dependence of perceptions.[11]

A convenient way of checking the existence of an indirect attitude-ideology dependence, in addition to the direct dependence, consists of omitting the perception variables *PC-Econ* and *PC-Cult* from the estimating equation. This yields (with v_i being the error term):

$$IA_i = b_0 + b_1 * IP\text{-}Right_i + b_2 * Controls_i + v_i \qquad (2).$$

Referring to equation (1) as the "long" regression and (2) as the "short" regression, the omitted-variable-bias (OVB) formula for OLS estimation can be invoked to link the "short" and "long" regression coefficients to each other: "Short equals long plus the effect of omitted times the regression of omitted on included" (Angrist and Pischke 2009, section 3.2).

As indicated by the formulation "regression of omitted on included", the OVB formula per se is a purely technical result. Yet, it can be given a substantive interpretation on the basis of appropriate substantive assumptions. Specifically, upon hypothesizing that the "regression of omitted" (perceptions) on "included" (ideology) represents an effect of the latter on the former (establishing an indirect channel through which attitudes are related to ideology), the coefficient from the long regression (a_1) measures the direct relationship whereas the coefficient

[11] As noted in the introduction, the direct attitude-ideology linkage relies on non-consequential aspects of immigration. Specifically, the direct linkage involves attitudes towards immigrants from the point of view of broad norms and values such as equity, solidarity, or identity.

from the short regression (b_1) measures the total relationship, the difference between the coefficients measuring the indirect relationship.[12]

In the present case, we expect $b_1 > a_1$, that is, the total dependence of anti-immigration attitudes on right-leaning political orientation is greater than the direct effect; their difference capturing the hypothesis that a more right-leaning political orientation triggers more negative perceptions of immigration's consequences which, in turn, trigger more anti-immigration sentiment.

While this reasoning offers a first clue as to the existence of an indirect attitude-ideology relationship by comparison of a_1 and b_1, it does not permit to decompose that relationship (if any) into channels that involve economic consequences and cultural consequences. To achieve such a decomposition, we will estimate regressions that specify the dependence of perceived economic and cultural consequences on ideological position ("regression of omitted on included"):

$$PC\text{-}Econ_i = c_0 + c_1 * IP\text{-}Right_i + c_2 * Controls_i + w\text{-}Econ_i \quad (3a),$$

$$PC\text{-}Cult_i = d_0 + d_1 * IP\text{-}Right_i + d_2 * Controls_i + w\text{-}Cult_i \quad (3b),$$

where $w\text{-}Econ_i$ and $w\text{-}Cult_i$ are error terms.

It is obvious that, consistent with the OVB formula, plugging (3a) and (3b) into the "long" regression (1) yields the "short" regression (2), that is $a_1 + a_2c_1 + a_3d_1 = b_1$. However, in contrast to the simple comparison of (1) and (2), estimating both (1) and (3a), (3b), permits to decompose the indirect attitude-ideology dependence (the "short" vs. "long" gap) into an economy-related component, a_2c_1, and a culture-related component, a_3d_1..

[12] Angrist and Pischke (2009) discuss the multivariate generalization of the OVB formula, which is relevant in the present application.

To fully exploit the potential of the OVB formula, we will estimate the above regressions using OLS.[13]

3.2 Main Estimation Results

3.2.1 Immigration Attitudes

Table 3 displays the estimation results for the attitude equations, differentiating between "long" regressions (equation (1)) and "short" regressions (equation (2)). The top and bottom panels refer to 2014 and 2016, respectively.

With respect to the explanatory power (R^2) of the long regressions we find it to be greater in the case of IA-Diff and IA-Poor than in the case of IA-Same. Attitudes towards immigration are thus more "noisy" with respect to immigrants of the same race or ethnicity as the majority than with respect to the other groups of immigrants. Moreover, R^2 has decreased from 2014 to 2016 for all three groups of immigrants.

With respect to the socio-demographic controls, the results are consistent with previous findings for many countries (e.g. Hainmueller and Hiscox 2007).[14] Robustness checks, to be discussed below, include immigrant status of the respondents as an additional control. This has no appreciable effect on any of the results.

Turning to the variables of main interest in the "long" specifications, it is seen that all qualitative results correspond to expectation: anti-immigration attitudes are significantly

[13] Our regressions involve ordinal limited dependent variables. While econometrics textbooks have traditionally advocated using ordered Logit or Probit models, Angrist and Pischke (2009, section 3.4.2) have shown that OLS and Probit and Logit models yield very similar marginal effects in such cases.

[14] Keeping in mind that due to the coding of the variables (section 2.1) the dependent variables actually measure *anti*-immigration attitudes, we find anti-immigration attitudes to be significantly negatively related to income. Anti-immigration sentiment is significantly decreasing in age in the case of IA-Same and significantly increasing in age with respect to IA-Diff and IA-Poor. There is no significant relationship with gender except for IA-Poor in 2014 (negative relationship at 5 percent of significance) and with unemployed status except for IA-Same 2016 (significantly positive relationship). A higher level of education is significantly negatively related to anti-immigration sentiment in the case of IA-Same in both years and to IA-Diff in 2016.

negatively related to the perception of favorable economic and cultural impacts of immigration and significantly positively related to a more right-leaning ideological position.

Comparing economic and cultural impacts, it is seen that in 2016 cultural concerns are more important than economic concerns with respect to all groups of immigrants whereas the year 2014 saw a slight dominance of economic over cultural concerns in the case of IA-Same.

While the coefficients on both types of impact are of similar magnitude for the various types of immigrants, this is different with respect to the coefficients on ideological position. Comparing the different groups of immigrants, ideology is at least twice more important with respect to IA-Diff and IA-Poor than with respect to IA-Same. In the case of IA-Same 2016, ideological position is even insignificant

Since the ideological position and perceived impacts are both measured on an 11-point scale, it is possible to make a preliminary comparison of the magnitudes involved (see below for more detailed quantifications). With respect to all groups of immigrants and in both years, the coefficients on ideological position are of a much smaller magnitude than those on the perceived impacts. However, the difference in magnitudes is much larger with respect to IA-Same than with respect to IA-Diff and IA-Poor. Relative to utilitarian factors, ideological factors are thus more important with respect to immigrants of a different race or ethnic group and immigrants from poorer countries outside Europe than with respect to immigrants of the same race or ethnic group as the majority.

The discussion up to this point has focused on the "long" specifications. As discussed in section 3.1, the coefficients on the ideological position in these specifications capture ideology's direct effect, taking perceptions of immigration's impacts as given. They thus disregard the possibility that ideology may affect perceptions of immigration's economic and cultural impacts. As a first step towards addressing this possibility, we consider the "short" versions of the various regressions, that is, those that omit perceived economic and cultural impacts. When comparing the respective "long" and "short" regressions, it is seen that the

coefficients on ideological position are much larger in the "short" than in the "long" regressions, the difference amounting to 80 to 100 percent. This is a first indication that the "total" effect of ideology, which includes ideology-dependence of perceived impacts, may be larger than ideology's "direct" effect, which takes perceptions as given.

The next subsection studies the ideology-perception channel in more detail.

3.2.2 Perceptions of Consequences

While the omitted-variable bias formula (Angrist and Pischke 2009) permits to quantify the indirect linkage between ideology and immigration attitudes as the difference between the coefficients in the respective "long" and "short" regressions, it does not permit to differentiate the indirect channel with respect to the economic as opposed to cultural impacts. This subsection decomposes the overall indirect effect stated in the preceding subsection into the two partial effects.

As discussed in subsection 3.1, the "long" vs. "short" gap can be decomposed by means of regressions of perceptions on ideology (using the same control variables as in the attitude regressions). The results of these regressions are displayed in Table 4.

With respect to the control variables, better educated and wealthier people hold significantly more positive views of immigration's economic and cultural impacts than less educated and less wealthy individuals. In addition, women and unemployed persons hold significantly more negative views of economic impacts than men and people in employment.[15]

Controlling for the socio-demographic factors, favorable perceptions of both economic and cultural impacts of immigration are significantly negatively related to a more right-leaning ideological orientation. The magnitude of the ideology-perceptions relationship is far greater with respect to cultural than economic impacts and it is larger in 2016 than in 2014.

[15] The results concerning economic impacts are consistent with the idea that less educated and less wealthy as well as unemployed individuals feel more exposed to labor market competition by immigrants.

3.2.3. Alternative Ideology Indicator

With respect to ideological position, there is some consensus in political science that the left-right scale involves two domains of norms and values: economic and cultural (for a recent account, see Lachat 2018). Specifically, it involves endorsement of equity and solidarity norms (playing an important role on the left) and identity and homogeneity norms (playing an important role on the right).[16] This subsection addresses the question whether the importance attached to equity/solidarity affects immigration attitudes differently than the position on the overall left-right scale, and what this may imply with respect to the role of identity/homogeneity.

Endorsement of equity and solidarity can be captured by the following item from the ESS: *The government should take measures to reduce differences in income levels. Agree strongly = 1, 2, 3, 4, Disagree strongly = 5*. We refer to this variable as IP-NoRedist. It is a measure of economic, as opposed to cultural, conservatism. IP-NoRedist is correlated with IP-Right at r = 0.166 (2014) and 0.129 (2016), see Table 2. The overall left-right position is thus moderately related to economic conservatism, and the strength of the relationship has decreased.

Table 5 reports versions of the benchmark regressions from Table 3 in which IP-Right is replaced with IP-NoRedist. In 2014, IP-NoRedist attracts negative coefficients for IA-Same and IA-Diff which are significant at the 5 and 10 percent levels, respectively; the coefficient for IA-Poor is insignificant. In 2016, IP-NoRedist attracts a positive coefficient for IA-Poor which is significant at 5 percent whereas the coefficients for IA-Same and IA-Diff are insignificant. Taking an insignificant coefficient as indicating a neutral attitude, there was thus

[16] The emphasis (or lack of emphasis) placed on (economic) norms of equity/solidarity on the one hand and (cultural) norms of identity/homogeneity on the other defines a two-dimensional ideological space (Bornschier 2010). The ideological left is characterized by great emphasis on the former (joint with a preference for state intervention over free markets) whereas the right is characterized by great emphasis placed on the latter.

a remarkable change in the relationship between immigration attitudes and ideological position in the equity/solidarity domain: while economic conservatism was associated with a positive (IA-Same, IA-Diff) or neutral (IA-Poor) attitude towards immigration in 2014, the relationship changed to neutral and negative, respectively, in 2016. The converse applies to those holding "progressive" values of equity/solidarity: for them the attitude towards immigration became more favorable, changing from negative to neutral (IA-Same, IA-Diff) and from neutral to positive (IA-Poor). This change in the ideology-attitude relationship is consistent with the emergence of what has been dubbed a "culture of welcome" (*Willkommenskultur*) in response to the refugee crisis in the equity/solidarity embracing portion of the population whereas people attaching less value to these norms adopted a less favorable attitude towards immigration. The change in the relationship may explain why attitudes towards immigrants from poorer countries outside Europe were more positive in 2016 than 2014 (as noted in subsection 2.2).

In comparing the regressions involving the overall left-right position (Table 3) to those involving only the economic domain of ideological position, it can be noted that the former exhibits highly significant relationships to immigration attitudes throughout whereas the relationships between economic ideological orientation and immigration attitudes are unstable and at best weakly significant. Moreover, even in the cases where relationships are (weakly) significant, the relationships are of a small magnitude. For instance, while an increase in IP-NoRedist by one standard deviation (SD) is associated with an increase in IA-Poor (2016) by 0.04 SD, a 1-SD change in IP-Right is associated with an increase in IA-Poor (2016) by 0.14 SD.

Overall, on the presumption that the left-right scale involves economy-related and culture-related norms, it is thus mainly the cultural element of the left-right position (relating to identity and homogeneity) that shapes attitudes towards immigration.

3.3 Further Robustness Checks

Robustness checks were conducted with respect to an additional indicator of immigration's perceived consequences (3.3.1) and the role of non-native respondents (3.3.2).

3.3.1 Additional Effect Indicator

The main specifications considered above include indicators of immigration's perceived economic and cultural consequences. The results for these specifications indicate a significant role for perceived consequences and a comparatively small, yet non-negligible direct effect of ideology, particularly so with respect to immigrants of a different race or ethnic group and from poorer countries outside of Europe. This subsection checks the robustness of these findings to including an additional indicator of the perceived consequences of immigration.

The variables PC-Econ and PC-Cult considered up to this point explicitly refer to economic, as opposed to cultural consequences of immigration. This way, the analysis explicitly ties in with the classification of impacts used in previous research (e.g. Card et al. 2012). However, the ESS includes a third variable for perceived consequences that is more ambiguous with respect to whether it captures economic or cultural aspects. The underlying question reads as follows: *Is Germany made a worse or a better place to live by people coming to live here from other countries? Worse place to live = 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, Better place to live = 10.* We refer to this variable as *PC-Life*.

From the wording of the question the substantive content of the variable *PC-Life* is not immediately clear. Considering correlations with the other impact indicators (Table 2) suggests that *PC-Life* captures both economic and cultural factors: *PC-Life* is correlated with PC-Econ at r = 0.614 (2014) to 0.630 (2016) and to PC-Cult at r = 0.681 (2014) to 0.727 (2016). This suggests that what people consider a good place to live is related somewhat more strongly to cultural than to economic factors. In addition to economic and cultural factors, perceptions as to the impact of immigration on the quality of life may involve considerations of crime and

public security, as suggested by heated debates over an alleged immigration-crime nexus that emerged after the refugee crisis.

Table 6 displays the results of versions of the attitude regressions shown in Table 3 that include PC-Life as an additional variable. Inclusion of this variable raises the explanatory power of the regressions by 5 (IA-Same 2014) to 13 percent (IA-Poor 2016). The variable *PC-Life* attracts significantly negative coefficients with respect to all three attitude variables in both years. While the coefficient in the IA-Same and IA-Diff regressions do not differ appreciably between the two years, the coefficient in the IA-Poor regression is larger in 2016 than in 2014. Since the category "immigrants from poorer countries outside Europe" likely captures refuges who came to Germany in 2015, the increase in the coefficient on PC-Life is consistent with the idea of an increased concern over public security issues being captured by this variable. The coefficients on PC-Econ and PC-Cult drop somewhat in comparison to the counterpart regressions in Table 3. Inclusion of the additional impact variable PC-Life does not, however, have any appreciable effect on the coefficients of the ideology variable, IP-Right. This supports the relevance of ideological norms and values in shaping attitudes towards immigration.

3.3.2 Non-Native Respondents

A further robustness check extends the baseline regressions shown in Table 3 to include a dummy variable for immigrants, that is, individuals who are not German citizens. Their proportion amounts to 6.0 percent in 2014 and 5.9 percent in 2016. Results are displayed in Table 7. Comparing Table 7 to Table 3 shows that all of the previous results are preserved: Anti-immigration attitudes are significantly positively related to a more right leaning position and significantly negatively related to perceptions of immigration being good for the economy and cultural life. The magnitudes of the respective coefficients are practically unaffected by the inclusion of the immigrant variable. The immigrant variable is insignificant except for the IA-

Same regression in 2016, where it attracts a significant negative coefficients, that is, immigrants are more pro-immigration in this case.

3.4. Magnitudes and Main Findings

Table 8 provides an overview of the quantitative relationships between attitudes towards immigration and the perceived impacts of immigration (utilitarian factors) on the one hand and the position on the left-right scale (ideological factor) on the other. The dependence of immigration attitudes (coded as anti-immigration attitude) on perceived impacts is differentiated into impacts on the economy and impacts on cultural life. The dependence of immigration attitudes on the ideological position is differentiated into a direct channel, which involves compatibility/incompatibility of immigration with ideology-specific norms and values, and an indirect channel, which involves the dependence of perceived impacts on ideological position.

The entries in Table 8 are based on the estimation results presented in Tables 3 and 4. The (unstandardized) coefficients in Tables 3 and 4 were converted to standardized coefficients by multiplication with the standard deviation (SD) of the respective independent variables and division by the SD of the dependent variables. The entries of Table 8 thus show by how many SD a dependent variable changes if an independent variable increases by one SD. All qualitative findings discussed in what follows are unaffected by considering the unstandardized coefficients instead.

3.4.1 Utilitarian vs. Ideological Factors

Attitudes towards immigration are more strongly related to immigration's perceived impacts than to ideological position on the left-right scale, even accounting for dependence of perceptions on ideology. This is particularly so for immigrants of the same race or ethnic group (IA-Same). For them, anti-immigration attitude drops by 0.22 to 0.28 SD for a 1-SD increase

in the perception of positive impacts (rows 1 and 2) whereas it rises by 0.089 to 0.122 SD for a 1-SD increase in ideological orientation towards the right (row 10). For immigrants of a different race or ethnic group (IA-Diff) and immigrants from poorer countries outside Europe (IA-Poor), the dominance of utilitarian concerns over ideological position is weaker, amounting to 0.22 to 0.33 SD (rows 1 and 2) vs. 0.196 to 0.244 (row 10).

3.4.2 Utilitarian Factors

With respect to immigration's perceived consequences, the following findings stand out:

- Type of impact: With respect to IA-Same, there is a stronger role for perceived economic impacts (PEI), amounting to -0.28 (row 1,) than for perceived cultural impacts (PCI), amounting to -0.23 (row 2), in 2014 In 2016, the importance of economic concerns is considerably smaller than in 2014, amounting to -0.22, whereas the importance of cultural concerns increased slightly to -0.24. With respect to IA-Diff, PEI are less important than PCI in both years (-0.25 to -0.28 vs. -0.31 to 0.33). For IA-Poor, and PEI and PCI are of similar importance in 2014 (-0.31 vs. -0.29, whereas PEI was less important than PCI in 2016 (-0.22 vs. -0.29; rows 1 and 2).
- Type of immigrant: There is a stronger role for PCI with respect to IA-Diff and IA-Poor (-0.29 to –0.33) than with respect to IA-Same (-0.23 to -0.24). The role of PEI displays less dispersion across the three groups of immigrants (-0.28 to -0.31 in 2014 and -0.22 to 0.25 in 2016).
- Year of observation: The role of PEI was smaller in 2016 (-0.22 to -0.25) than in 2014 (-0.28 to -0.31), whereas the role of PCI does not differ systematically between the two years.

3.4.3 Ideological Factors

With respect to the ideological factors, the following findings stand out.

- Channel of influence: The direct ideology-attitude channel was less important than the indirect channel with respect to IA-Same in 2014 (0.05 vs. 0.07) and insignificant in 2016, whereas it was more important than the indirect channel with respect to IA-Diff and IA-Poor (0.11 to 0.14 vs. 0.09 to 0.11).
- Indirect channel: The indirect channel via PCI is more important than the indirect channel via PEC (0.04 to 0.08 vs. 0.03 to 0.04), particularly so with respect to IA-Diff and IA-Poor (0.05 to 0.08 vs. 0.03 to 0.04).
- Type of immigrant: The role of ideological orientation (row 10) is stronger with respect to IA-Diff and IA-Poor (0.20 to 0.24) than with respect to IA-Same (0.09 to 0.12). This applies to both the direct (0.11 to 0.14 vs. 0.00 to 0.05) and indirect (0.09 to 0.11 vs. 0.07 to 0.09) ideology-attitude nexus. The role of the indirect channel via PEI does not differ much across the types of immigrants, whereas the role of the indirect channel via PCI is larger with respect to IA-Diff and IA-Poor (0.05 to 0.08) than with respect to IA-Same (0.04 to 0.06).
- Year of observation: The direct attitude-ideology nexus does not differ systematically between 2014 and 2016, whereas the indirect channel was more important in 2016 (0.09 to 0.11) than in 2014 (0.07 to 0.09). The latter is true in particular with respect to the indirect channel via PCI (0.04 to 0.06 vs. 0.06 to 0.08) whereas the indirect channel via PEI does not vary systematically between the two years.

The main qualitative findings are robust to including an additional indicator of immigration's perceived consequences and to whether respondents' immigrant status is included or not.

4. Discussion and Conclusions

Previous literature has looked at people's attitudes towards immigration from two perspectives. While economists have taken a utilitarian perspective, focusing on immigration's (perceived) impacts and consequences, political scientists have looked at immigration attitudes from the

point of view of people's ideological orientation, focusing on compatibility/incompatibility of immigration with fundamental norms and values. The utilitarian approach (e.g. Card et al. 2012) has differentiated between economic impacts (on the labor market and public finance and welfare) and cultural impacts (on compositional amenities), and the pertinent literature found perceptions of both economic and cultural impacts to play a role in shaping immigration attitudes (with more positive perceptions of impacts being associated with more positive attitudes). The ideology approach (e.g. Bornschier 2010, Lachat 2018) has differentiated between norms of equity and solidarity (emphasized on the left side of the ideological spectrum) and identity and homogeneity (emphasized on the right), and the literature found an inclination towards the left (right) to be associated with more positive (more negative) attitudes towards immigration.

While the utilitarian and ideology approaches have typically been studied separately, this paper has undertaken a comparative assessment of the importance of the two types of determinants of immigration attitudes. In addition, the paper has studied interconnections between ideological position and the perception of consequences. Specifically, based on the theory of cognitive dissonance, it was studied whether an ideological position that enhances pro-immigration (anti-immigration) attitudes is associated with more positive (more negative) perceptions of immigration's impacts. The analysis has focused on Germany before and after the so-called refugee crisis of 2015 because the inflow of a large number of refugees has triggered heated debates on immigration that may have changed the way immigration attitudes are shaped by utilitarian and ideology concerns.

Consistent with expectations, it was found that more positive perceptions of immigration's impacts go with more positive attitudes towards it and that a more right-leaning ideological position goes with more negative immigration attitudes. Comparing the two categories of explanations, a key finding of the analysis is that perceptions of economic and cultural impacts of immigration are each more important in explaining attitudes towards

immigration than is ideological orientation. However, the importance of ideological position relative to perceived immigration impacts has increased from 2014 to 2016. Moreover, perceived impacts (in particular, cultural impacts) were found to depend on ideological position, a more left-leaning (right-leaning) position being associated with more positive (more negative) perceptions of impacts.

With respect to economic concerns, it was found that their importance does not differ systematically by whether immigrants are of the same or a different race or ethnic group than the majority, nor by whether immigrants come from poor countries or not. Considering that immigrants of the same ethnicity, coming from more developed countries with better education systems, may be viewed as competitors in the labor market whereas immigrants of a different ethnicity, coming from poorer countries, may be viewed as a burden on the welfare system, this finding is consistent with the idea that, on average, people's immigration-related economic concerns relate to a similar extent to impacts on the labor market and the welfare state.

In contrast to economic concerns, the importance of cultural concerns differs significantly by type of immigrant, being particularly large in the case of immigrants of a different race or ethnic group and somewhat smaller in the case of immigrants from poorer countries outside Europe, while being less important in the case of immigrants of the same race or ethnic group.

Comparing the importance of economic and cultural concerns over time, the importance of the latter relative to the former has increased. In addition, the perception of cultural impacts increasingly depended on ideological position, whereas the ideology-dependence of perceived economic impacts did not change systematically from 2014 to 2016.

Overall, we thus found an increasing role of perceived cultural impacts of immigration relative to perceived economic impacts and an increasing dependence of perceived cultural impacts on ideological position. Consistent with the increasing importance of cultural relative to economic impacts, results suggest that it is mainly the identity/homogeneity dimension of

ideological position that shapes Germans' attitudes towards immigration. The equity/solidarity dimension plays a lesser role. Nevertheless, activation of norms of equity and solidarity may explain why attitudes towards immigrants from poor countries outside Europe were more positive after the crisis than before it, whereas attitudes towards other groups of immigrants became more negative.

From the point of view of policy implications, the dominance of utilitarian over ideological factors in shaping attitudes towards immigration suggests that a rational discourse on the advantages and disadvantages of immigration may be an important element of immigration policy. Such a discourse should, however, not be limited to whether immigration is good or bad for the economy, but should encompass compositional amenities as well. By providing credible information on the real-world consequences of immigration, ideology-driven perceptions of immigration's consequences should be countervailed.

Methodologically, this paper is based on the assumption that individuals' choice-relevant attitudes ("How many immigrants should be allowed to come?") are driven by (i) their perceptions as to the consequences of those choices, and (ii) compatibility with their general political worldviews. These assumptions rely on accepted choice-theoretic principles on the one hand and the insight that broad ideological positions (norms and values) are stable elements of an individual's mindset on the other. Perceived consequences of choices and ideological positions thus shape choice-relevant attitudes, rather than the other way round.

This paper has focused on Germany as a case study because this country has experienced an unprecedented level of immigration within the time period studied. Future work may take a comparative perspective by studying the role of utilitarian and ideological factors in attitudes towards immigration in other countries.

References

Angrist, J.D., Pischke, J.-S. (2009), *Mostly Harmless Econometrics: An Empiricist's Companion*, Princeton: Princeton University Press.

Arzheimer, K. (2009), Contextual Factors and the Extreme Right Vote in Western Europe, 1980-2002, *American Journal of Political Science* 53, 259-275).

Benoit, K., Laver, M. (2006), *Party Policy in Modern Democracies*. London: Routledge

Borjas, George J. (1999). "The Economic Analysis of Immigration." In *Handbook of Labor Economics, Volume 3B*, edited by Orley Ashenfelter and David Card. Elsevier, Amsterdam, pp. 1697–1760.

Borjas, G.J. (2014), *Immigration Economics*, Harvard University Press.

Bornschier, S. (2010), The New Cultural Divide and the Two-Dimensional Political Space in Western Europe, *West European Politics* 33, 419-444.

Bundeszentrale für politische Bildung (2018), Zahlen zu Asyl in Deutschland, Bonn 2018 (https://www.bpb.de/gesellschaft/migration/flucht/218788/zahlen-zu-asyl-in-deutschland).

Card, D., Dustmann, C., Preston, I. (2012), Immigration, Wages, and Compositional Amenities, *Journal of the European Economic Association* 10, 78-119.

Dalton, R. J. (2010), Left–Right Orientations, Context, and Voting Choices. In Russell J. Dalton and Christopher J. Anderson (eds.) *Citizens, Context and Choice: How Context Shapes Citizens' Electoral Choices*. Oxford: Oxford University Press, 103–125.

Dancygier, R.M. (2010), *Immigration and Conflict in Europe*. Princeton, NJ: Princeton Univ. Press.

Dustmann, C., Preston, I. (2007), Racial and economic factors in attitudes to immigration, *The B.E. Journal of Economic Analysis & Policy*, 7(1), 62.

Festinger, L. (1957), *A Theory of Cognitive Dissonance*, Stanford University Press.

Georgiadou, V., Rori, L., Roumanias, C. (2018), Mapping the European Far Right in the 21st Century: A Meso-Level Analysis, *Electoral Studies* 54, 103-115.

Goerres, A., Spies, D.C., Kumlin, S. (2018), The Electoral Supporter Base of the Alternative for Germany, *Swiss Political Science Review* 24, 246-269.

Haidt, J. (2012), *The Righteous Mind: Why Good People are Divided by Politics and Religion*, Penguin Books.

Hainmueller, J., Hiscox, M. (2007), Educated Preferences: Explaining Attitudes toward Immigration in Europe, *International Organization* 61, 399-442.

Hainmueller, J., Hiscox, M. (2010), Attitudes toward highly skilled and low-skilled immigration: Evidence from a survey experiment, *American Political Science Review*, 104(1), 61-84.

Hainmueller, J., Hopkins, D. J. (2014), Public Attitudes toward Immigration, *Annual Review of Political Science* 17, 225-249.

Hanson, G., Scheve, K., Slaughter, M.J. (2007), Public Finance and Individual Preferences over Globalization Strategies, *Economics and Politics* 19, 1–33.

Lachat, R. (2018), Which Way from Left to Right? On the Relation between Voters' Issue Preferences and Left-Right Orientation in West-European Democracies, *International Political Science Review* 39, 419-435.

MaCurdy, T., Nechyba, T., Bhattacharya, J. (1998), An Economic Framework for Assessing the Fiscal Impacts of Immigration. In *The Immigration Debate: Studies on the Economic, Demographic and Fiscal Effects of Immigration*, edited by James P. Smith and Barry Edmonston, National Academies Press, Washington, DC.

Mayda, A. (2006), Who is against immigration? A cross-country investigation of individual attitudes toward immigrants, *Review of Economics and Statistics* 88(3), 510{530.

Müller, T., Tai, S.H.T. (2016), Individual Attitudes towards Migration: Reconciling Opposing Views, Geneva School of Economics and Management, Working Paper 16-02-01.

Kriesi, H., Grande, E., Lachat, R. (2008) *West European Politics in the Age of Globalization*. Cambridge: Cambridge University Press

O'Connell, M. (2011), How do high-skilled natives view high-skilled immigrants? A test of trade theory predictions, *European Journal of Political Economy* 27(2), 230-240.

Pariser, E. (2011), Beware of Online "Filter Bubbles". TED Talk. Retrieved from http://www.ted.com/talks/eli_pariser_beware_online_filter_bubbles.

Scheve, K., Slaughter, M. (2001), Labor market competition and individual preferences over immigration policy, *Review of Economics and Statistics* 83(1), 133-145.

Schwarz, N., Newman, E.J. (2017), How Does the Gut Know Truth? The Psychology of "Truthiness", *APA Science Brief* 8/25/2017.

Van der Brug W., Fennema, M, Tillie, J.N. (2000), Anti-Immigrant Parties in Europe: Ideological or Protest Vote?, *European Journal of Political Research* 37, 77–102.

Van der Brug, W., Van Spanje, J. (2009) Immigration, Europe and the 'New' Cultural Dimension, *European Journal of Political Research* 48(3), 309–334.

Table 1: Sample Characteristics (Percentage Distributions and Summary Statistics)

	IA-Same		IA-Diff		IA-Poor	
	2014	2016	2014	2016	2014	2016
Allow many	42.5	41.3	23.1	21.9	19.7	21.3
Allow some	47.1	49.3	51.5	49.4	44.8	46.8
Allow a few	8.9	8.3	21.3	24.3	28.1	26.1
Allow none	1.5	1.2	4.1	4.4	7.4	5.7
Mean	1.69	1.69	2.06	2.11	2.23	2.16
Min	1	1	1	1	1	1
Max	4	4	4	4	4	4
SD	0.69	0.67	0.78	0.79	0.85	0.82

	PC-Econ		PC-Cult		IP-Right	
	2014	2016	2014	2016	2014	2016
Code	Immigration bad for the economy (=0)		Cultural life undermined by immigrants (=0)		Left (=0)	
0	3.5	3.0	2.6	2.9	3.6	3.8
1	1.7	1.6	1.6	2.4	2.2	2.1
2	4.5	4.0	3.5	4.2	6.7	7.7
3	8.0	7.1	6.2	7.0	13.5	14.2
4	7.9	7.6	7.4	7.8	12.3	13.0
5	22.2	21.8	19.0	18.7	38.2	38.2
6	12.6	12.1	10.2	11.9	10.8	8.4
7	15.9	17.4	16.9	15.4	6.7	7.4
8	15.3	15.4	18.1	16.0	3.3	3.6
9	3.8	4.7	6.8	5.4	1.0	0.6
10	4.7	5.3	7.7	8.4	1.7	1.0
	Immigration good for the economy (=10)		Cultural life enriched by immigrants (=10)		Right (=10)	
Mean	5.67	5.83	6.14	5.96	4.60	4.49
Min	0	0	0	0	0	0
Max	10	10	10	10	10	10
SD	2.33	2.31	2.38	2.46	1.90	1.86

Table 2: Correlations

		IA-Same	IA-Diff	IA-Poor	PC-Econ	PC-Cult	PC-Life	IP-Right
IA-Diff	2014	0.664						
	2016	0.617						
IA-Poor	2014	0.505	0.702					
	2016	0.481	0.696					
PC-Econ	2014	-0.454	-0.504	-0.497				
	2016	-0.394	-0.468	-0.405				
PC-Cult	2014	-0.417	-0.532	-0.498	0.573			
	2016	-0.394	-0.504	-0.457	0.591			
PC-Life	2014	-0.432	-0.568	-0.532	0.614	0.681		
	2016	-0.405	-0.547	-0.509	0.630	0.727		
IP-Right	2014	0.105	0.205	0.196	-0.095	-0.197	-0.169	
	2016	0.124	0.244	0.266	-0.154	-0.259	-0.237	
IP-	2014	-0.099	-0.079	-0.025#	0.089	0.023#	0.058	0.166
NoRedist	2016	0.007#	0.028#	0.037#	-0.054	-0.046#	-0.018#	0.129

not significant. All other correlation coefficients significant at $p < 0.01$.

Table 3: Main Regression Results for Immigration Attitudes.

2014	IA-Same		IA-Diff		IA-Poor	
IP-Right	0.02***	0.04***	0.04***	0.08***	0.05***	0.09***
	(2.62)	(6.14)	(6.48)	(10.27)	(6.69)	(10.25)
PC-Econ	-0.08***		-0.09***		-0.11***	
	(12.63)		(14.11)		(15.10)	
PC-Cult	-0.07***		-0.11***		-0.11***	
	(10.73)		(16.51)		(14.41)	
Female	-0.01	0.02	0.00	0.03	-0.06**	-0.02
	(0.39)	(0.65)	(0.06)	(1.10)	(1.99)	(0.54)
Age	-0.00***	-0.00***	0.00***	0.00***	0.00***	0.00***
	(3.03)	(3.64)	(3.61)	(2.57)	(5.74)	(3.97)
Education	-0.00***	-0.00***	-0.00	-0.00***	-0.00	-0.00***
	(2.53)	(7.86)	(1.34)	(7.99)	(0.54)	(7.16)
Income	-0.02***	-0.03***	-0.02***	-0.04***	-0.02***	-0.04***
	(4.39)	(6.76)	(3.95)	(6.60)	(3.49)	(6.27)
Unemployed	0.07	0.14*	0.09	0.17**	0.01	0.10
	(1.16)	(1.93)	(1.34)	(2.13)	(0.13)	(1.14)
Constant	2.80	2.05	3.09	2.05	3.32	2.20
N	2513	2548	2503	2538	2503	2538
Adj. R^2	0.249	0.074	0.362	0.103	0.342	0.09 6

2016	IA-Same		IA-Diff		IA-Poor	
IP-Right	0.01	0.04***	0.04***	0.09***	0.06***	0.11***
	(0.98)	(5.63)	(6.20)	(11.66)	(7.67)	(12.44)
PC-Econ	-0.06***		-0.09***		-0.08***	
	(9.73)		(12.26)		(10.38)	
PC-Cult	-0.07***		-0.10***		-0.10***	
	(10.47)		(14.84)		(13.20)	
Female	0.02	0.03	0.01	0.02	-0.04	-0.04
	(0.66)	(1.20)	(0.46)	(0.81)	(1.55)	(1.17)
Age	-0.00*	-0.00	0.00***	0.00***	0.01***	0.01***
	(1.95)	(1.46)	(5.04)	(4.65)	(6.85)	(6.21)
Education	-0.00***	-0.00***	-0.00***	-0.00***	0.00	-0.00***
	(3.39)	(6.30)	(2.97)	(6.48)	(1.15)	(2.32)
Income	-0.02***	-0.02***	-0.03***	-0.03***	-0.02***	-0.02***
	(4.28)	(4.74)	(5.24)	(5.84)	(3.30)	(3.88)
Unemployed	0.16***	0.24***	0.04	0.20***	-0.10	0.03
	(2.19)	(3.19)	(0.48)	(2.33)	(1.24)	(0.38)
Constant	2.67	1.85	3.06	1.90	2.80	1.72
N	2403	2435	2398	2430	2397	2433
Adj. R^2	0.208	0.057	0.341	0.115	0.254	0.094

Note: t-statistics in parentheses. *p<0.1, **p<0.05. ***p<0.01

Table 4: Perceptions of Immigration's Consequences and Ideological Position

	2014		2016	
	PC-Econ	PC-Cult	PC-Econ	PC-Cult
IP-Right	-0.13*** (5.66)	-0.22*** (9.62)	-0.17*** (7.13)	-0.33*** (13.06)
Female	-0.45*** (5.11)	0.09 (1.01)	-0.23*** (2.56)	0.07 (0.72)
Age	0.01*** (2.54)	-0.00 ((0.56)	0.00 (0.36)	-0.00 (1.03)
Education	0.00*** (11.56)	0.00*** (10.74)	0.00*** (6.20)	0.00*** (7.04)
Income	0.12*** (7.13)	0.07*** (3.96)	0.03* (1.89)	0.03* (1.78)
Unemployed	-0.44* (1.91)	-0.37 (1.58)	-1.14*** (4.49)	-0.60** (2.16)
Constant	4.69	5.60	6.04	6.44
N	2538	2551	2428	2433
Adj. R^2	0.120	0.098	0.056	0.098

Note: t-statistics in parentheses. *p<0.1, **p<0.05. ***p<0.01

Table 5: Alternative Ideology Indicator

	2014			2016		
	IA-Same	IA-Diff	IA-Poor	IA-Same	IA-Diff	IA-Poor
IP-NoRedist	-0.03** (2.37)	-0.02* (1.75)	0.02 (1.43)	-0.01 (0.49)	0.02 (1.40)	0.03** (2.15)
PC-Econ	-0.08*** (12.95)	-0.09*** (14.10)	-0.11*** (15.22)	-0.07*** (10.12)	-0.09*** (12.37)	-0.08*** (10.17)
PC-Cult	-0.07*** (11.84)	-.0.12*** (18.32)	-0.11*** (15.64)	-0.07*** (11.22)	-0.11*** (16.60)	-0.11*** (1481)
Demographics	Yes	Yes	Yes	Yes	Yes	Yes
Constant	2.95	3.37	3.52	2.70	3.27	3.05
N	2599	2589	2588	2460	2455	2456
Adj. R^2	0.258	0.358	0.332	0.214	0.332	0.262

Note: Demographic controls included are gender, age, education level, income, and unemployed status. t-statistics in parentheses. *p<0.1, **p<0.05. ***p<0.01.

Table 6: Additional Indicator of Immigration's Perceived Consequences

	2014			2016		
	IA-Same	IA-Diff	IA-Poor	IA-Same	IA-Diff	IA-Poor
IP-Right	0.02** (2.40)	0.04*** (6.13)	0.05*** (6.38)	0.00 (0.30)	0.04*** (5.62)	0.06*** (7.22)
PC-Econ	-0.07*** (9.50)	-0.06*** (9.16)	-0.08*** (10.72)	-0.05*** (6.96)	0.06*** (7.65)	-0.05*** (5.92)
PC-Cult	-0.04*** (6.18)	-0.07*** (9.05)	-0.06*** (7.80)	-0.04*** (5.15)	-0.05*** (6.32)	-0.04*** (5.04)
PC-Life	-0.05*** (6.58)	-0.10*** (11.85)	-0.09*** (10.20)	-0.05*** (6.23)	-0.10*** (11.07)	-0.11*** (11.02)
Demographics	Yes	Yes	Yes	Yes	Yes	Yes
Constant	2.87	3.22	3.45	2.73	3.16	2.90
N	2501	2491	2491	2391	2386	2385
Adj. R^2	0.262	0.397	0.368	0.222	0.373	0.321

Note: Demographic controls included are gender, age, education level, income, and unemployed status. t-statistics in parentheses. *p<0.1, **p<0.05. ***p<0.01.

Table 7: Controlling for Immigrant Status

	2014			2016		
	IA-Same	IA-Diff	IA-Poor	IA-Same	IA-Diff	IA-Poor
IP-Right	0.02*** (2.58)	0.04*** (6.43)	0.05*** (6.69)	0.01 (1.11)	0.04*** (6.15)	0.06*** (7.62)
PC-Econ	-0.08*** (12.62)	-0.09*** (14.10)	-0.11*** (15.10)	-0.06*** (9.76)	-0.09*** (12.25)	-0.08*** (10.37)
PC-Cult	-0.07*** (10.77)	-0.11*** (1656)	-0.11*** (14.39)	-0.06*** (10.30)	-0.10*** (14.88)	-0.10*** (13.23)
Immigrant	0.07 (1.29)	0.08 (1.56)	-0.01 (0.19)	-0.15*** (3.00)	0.05 (1.00)	0.06 (0.93)
Demographics	Yes	Yes	Yes	Yes	Yes	Yes
Constant	2.73	2.99	3.34	2.85	2.99	2.73
N	2513	2503	2503	2403	2398	2397
Adj. R^2	0.250	0.362	0.342	0.211	0.341	0.284

Note: Demographic controls included are gender, age, education level, income, and unemployed status. t-statistics in parentheses. *p<0.1, **p<0.05. ***p<0.01.

Table 8: Overview of Quantitative Results

	2014			2016		
	IA-Same	IA-Diff	IA-Poor	IA-Same	IA-Diff	IA-Poor
Utilitarian						
1 Perceived Economic Impacts (PEI)	-0.29	-0.30	-0.28	-0.26	-0.28	-0.27
2 Perceived Cultural Impacts (PCI)	-0.24	-0.30	-0.29	-0.24	-0.33	-0.32
3 PEI/PCI	1.21	1.00	0.97	1.08	0.85	0.84
Ideological						
4 Direct	0.02	0.11	0.12	0.02	0.10	0.11
5 Indirect via PEI	0.023	0.024	0.022	0.026	0.028	0.027
6 Indirect via PCI	0.029	0.036	0.035	0.034	0.046	0.045
7 Indirect via PEI / Indirect via PCI	0.79	0.67	0.63	0.76	0.61	0.60
8 Indirect = Indirect via PEI + Indirect via PCI	0.052	0.060	0.057	0.060	0.074	0.072
9 Direct / Indirect	0.38	1.83	2.11	0.33	1.35	1.53
10 Ideology = Direct + Indirect	0.072	0.178	0.177	0.080	0.174	0.182

Note: Entries show by how many standard deviations (SD) immigration attitudes (coded as anti-immigration attitude) change when perceptions of immigration's positive economic impacts, cultural impacts and ideological inclination towards the right rises by 1 SD. Entries are based on Tables 3 and 4.

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