Does Immigration Produce a Public Backlash or Public Acceptance? Time-Series, Cross-Sectional Evidence from 30 European Democracies

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Abstract

After decades of relatively high inflows of foreign nationals, immigration is now at the center of substantial political divisions in most European countries and has been implicated in one of the most vexing developments in European politics, the rise of the xenophobic right. However, it is not clear whether high levels of immigration actually do cause a public backlash, or whether publics become habituated to, and supportive of, immigration. We test these backlash and habituation theories using novel measures of immigration mood and immigration concern that we produce by combining over 4,000 opinion datapoints across 29 years and 30 countries. We find evidence for a public backlash in the short to medium run, where mood turns negative and concern with immigration rises. Yet we also find evidence for a longer-run process of habituation that cancels out the backlash effect within one (concern) to three (mood) decades.

Keywords: immigration, immigration mood, public opinion, demographic change

Words: 10,117
Introduction

The past few decades have been a period of high immigration to West European states. Since 1990, eight immigrants have arrived per year, on average, for every thousand of their residents. By 2017, foreign nationals comprised more than ten percent of their populations.¹ These demographic shifts have had dramatic effects on European societies and economies (see, e.g., Geddes and Scholten 2016). They have also had powerful and controversial effects on public opinion and political behavior. On the one hand, many scholars argue that high levels of immigration create a public backlash (Abrajano and Hajnal 2017; Kaufmann 2014; Norris and Inglehart 2019; Scheepers, Gijbsbers, and Coenders 2002; Strabac and Listhaug 2008) due to the economic and cultural threats that immigration poses for native citizens. One needs to look no further than the rise of anti-immigrant, radical right parties for apparent evidence of this effect (e.g., Ivarsflaten 2008; Lucassen and Lubbers 2012; Norris 2005; Rydgren 2008).

Yet countervailing forces also exist which might lead natives to support immigration even when immigration rates are high. These include immediate contact between natives and immigrants (e.g., McLaren 2003; Wagner et al. 2003), the potential economic gains from immigration (e.g., Dancygier and Donnelly 2013), and socialization in multicultural societies (e.g., Bloemraad and Wright 2014). Whatever the mechanism, evidence for such habituation effects can also be readily found. Support for immigration in countries like Germany and the United Kingdom is at historically high levels (as this paper later demonstrates) and major European metropolitan areas are now both diverse in demography and cosmopolitan in orientation (Maxwell 2019). Indeed, some studies find that immigration actually raises public support (Van Hauwaert and English 2019).

The purpose of this paper is to test these competing theories of public backlash and habituation.

¹These figures are drawn from our dataset of immigration inflows which incorporates indicators from Eurostat, OCED, and DEMIG; see the “Measuring immigration flows” section below for further details.
uation in response to mass immigration. Specifically, we examine whether higher inflows of immigrants produce lower public support and greater public concern about immigration, or whether these inflows lead to higher support and less concern. There is now considerable research on the link between immigrant numbers and immigration opinion (e.g., Hopkins 2010; Kaufmann 2014; Meuleman, Davidov, and Billiet 2009; Quillian 1995; Scheepers, Gijsberts, and Coenders 2002; Strabac and Listhaug 2008). However, four obstacles have prevented researchers from reaching definitive conclusions. First, in contrast to their static treatment in extant research, backlash and habituation are dynamic processes: their effects unfold over time and perhaps at different rates. Second, many existing studies are cross-sectional in design; these are unable to separate the effects of immigration on subsequent opinion from the reverse effects of opinion on subsequent flows of immigration (e.g., via political pressure and policy changes). Third, cross-sectional designs are also not able to deal adequately with possible country-specific confounds, such as national experiences with immigration that date back at least to the mid-twentieth century (e.g., Castles, de Haas, and Miller 2014; Hiers, Soehl, and Wimmer 2017). Finally, there are two quite distinct forms of immigration opinion which must be considered: positive or negative perceptions of, or orientations to, immigration and the relative salience of the issue (Dennison and Geddes 2019; Jennings 2009); existing research has focused exclusively on one or the other.

To address these obstacles, we produce two new time-series, cross-sectional (TSCS) measures of national immigration opinion by combining up to 29 years’ worth of fractured public opinion items using a dynamic Bayesian latent variable model (Claassen 2019). To measure national immigration mood, we combine survey data on immigration perceptions from 808 nationally-representative public opinion surveys fielded in 43 European countries (plus Turkey) from as early as 1988 to 2017. We also measure national immigration concern by integrating various survey measures of the salience of immigration as a political issue from 469 nationally-representative public opinion surveys fielded in 34 European countries between 2002 and 2018. Our two new measures allow us to tackle all four obstacles which have hindered understanding of the link between immigration inflows and immigration opinion, thereby providing definitive tests of the backlash and
habituation hypotheses.

Using dynamic fixed effects models and simulations, we find evidence that immigration exerts both backlash and habituation effects on national immigration opinion. Increases in immigration rates lead to backlashes in European public opinion, increasing concern about immigration and producing a more hostile immigration mood. However, these backlash effects are less pronounced the greater the number of immigrants already resident in a country. They also fade over time as publics become habituated to immigration.

Our findings will be of interest to other scholars studying the effects of immigration and diversity on immigration opinions, as well as to policymakers concerned with this relationship. Our findings also have wider implications, particularly for research on the impact of diversity on social capital. Social capital – e.g., interpersonal trust and participation in communities – is thought to be a crucial societal resource that ensures the effective functioning of democracy and contributes to economic development, and physical and mental health (as well as having many other benefits). Rather ominously, seminal research by Alesina and Ferrara (2000; 2002) and Putnam (2007) suggested that increased diversity could exert powerful negative effects on this vital resource. This has prompted a vast interdisciplinary literature – with results that are similarly mixed to those found in the immigration numbers-opinion literature (see the review and meta-analysis by van der Meer and Tolsma 2014). However, this body of research suffers from similar shortcomings to those found in the immigration numbers-opinion literature: limited consideration of both short- and longer-term effects of diversity while simultaneously incorporating country contexts. Our findings here suggest that – at least in the European context – any apparent negative effects of immigration-related diversity on social capital may be short-lived, and that at the very least, short- and long-term effects must both be considered.

**Backlash and Habituation in Existing Literature**

The question of whether immigrant numbers are linked to public hostility to immigrants and immigration has been the focus of academic research since the advent of cross-national survey measures
of attitudes to immigrants and immigration in the late 1980s. Backlash theories have largely dominated this area of research. These theories have drawn on the concepts of economic and symbolic threat developed by scholars of racial prejudice in the United States (e.g., Blumer 1958) to argue that the larger the population of immigrants, the greater the hostility from the native population and the stronger their preference for more restrictive immigration policies.

In the European context, since the work of Quillian (1995), scholars have tended to investigate these backlash theories using multilevel, cross-sectional research designs, with thousands of survey respondents nested within 12 to 30 European societies. They have generally found that – as predicted by backlash theories – larger populations of immigrants are associated with greater animosity (Quillian 1995; Scheepers, Gijsberts, and Coenders 2002; Strabac and Listhaug 2008). A key assumption in this literature is that increases in immigration will continue to produce anti-immigration hostility over the long-term due to the continued pressure of economic and cultural threats. Using our longitudinal (and cross-sectional) data, this paper is able to test the backlash hypothesis, both in the short- and longer-term.

**Hypothesis 1:** *Higher immigration inflows are associated with subsequently more negative immigration mood and an increase in concern about immigration.*

However, even if backlash effects are evident in the short run, we might expect that they diminish in the longer run. First, although some evidence exists for the backlash effect (as described above), there is also a growing body of contradictory evidence. In some cases, no relationship appears to exist between immigrant numbers and immigration opinion (Evans and Need 2002). In other cases, a positive relationship is evident, i.e., higher immigrant numbers coincide with more positive immigration opinions, directly countering the backlash hypothesis (Sides and Citrin 2007; Van Hauwaert and English 2019). These findings point to the possibility that backlash effects found in earlier research may now be changing drastically as European countries adapt to being destinations for migrants. This may be due, for example, to the economic gains from immigration (Dancygier and Donnelly 2013) or the habituating influences of multiculturalist policies (Bloemraad and Wright 2014).
Second, there is persistent evidence of micro-level contact effects (Hewstone and Swart 2011; Stein, Post, and Rinden 2000; Wagner et al. 2003; Weber 2019). Contact with immigrant-origin minorities, especially in the form of friendships, produces more positive attitudes to these groups. As domestic populations gain increased opportunities for this type of contact, it might be expected that, with the passage of time, immigrants and immigration tend to become a more accepted part of society.²

Third, a small body of scholarly work specifically contends that, over time, societies appear to become habituated to, and more accepting of, groups of immigrants who migrated decades previously. For instance, even in the short time span between 1983 and 1996, Ford (2011) shows the British population to have become more accepting of earlier-arriving groups of immigrants, e.g., from the West Indies and South Asia (see also Kaufmann 2014). Recent work by Gorodzeisky and Semyonov (2018; discussed further below) also suggests the potential for habituation.

In short, immigration numbers and public opinion likely have a complex, interactive relationship that unfolds over time: numbers at one point in time may trigger subsequent public opposition, which then leads to an immigration clampdown and reduced numbers at some future point in time (e.g., Jennings 2009). With only one time point, cross-sectional designs cannot begin to address such complexities. While some studies do examine data on immigration numbers and opinions which includes a longitudinal aspect (e.g., Kaufmann 2014; Meuleman, Davidov, and Billiet 2009; Semyonov, Raijman, and Gorodzeisky 2006; Van Hauwaert and English 2019), the authors do not use dynamic models to examine these data, thereby missing an opportunity to gain leverage on this issue. In the short-term, immigration may have a backlash effect that increases public opposition (Coenders and Scheepers 2008; Duffy 2014; Hopkins 2010; Kaufmann 2014; Meuleman, Davidov, and Billiet 2009), while in the long-term, a habituation effect that reduces public antipathy may come into play (Stein, Post, and Rinden 2000; Van Hauwaert and English 2019).

²Note that because of our aggregate level TSCS perspective, we do not directly test the contact hypothesis in this paper. We contend that contact effects are likely based on findings of existing research.
Our second hypothesis is, therefore:

**Hypothesis 2:** Higher immigration inflows are associated with less negative immigration mood and reduced concern about immigration in the long run.

The “long run” is admittedly a fairly imprecise concept. Yet the lack of research on the long-term effects of immigration on public opinion makes greater precision difficult. Nevertheless, some research from the UK suggests that habituation to new immigration-origin diversity may occur within a decade (Ford 2011; Kaufmann 2014). Our analyses will allow us to investigate this possibility cross-nationally and to produce more precise estimates of when, if at all, a habituation effect becomes visible.

**The Importance of the Dynamic National Immigration Context**

Cross-national differences in post-World-War-Two migration to Europe are also relevant to understanding how European publics react to new immigration. In countries like Austria, Belgium, Germany, Sweden, Switzerland and the UK, immigrant labor was seen as crucial to early post-war development (Castles, de Haas, and Miller 2014). Though the expectation in Austria, Germany and Switzerland was that “guestworkers” would return home, by the 1980s this expectation bore little resemblance to reality. By the 1990s approximately 10 percent of the population in these three countries (as well as Belgium, Sweden and the UK) was estimated to be of foreign origin.

Countries like Spain, Ireland, and Norway provide an illuminating contrast. Here, levels of immigration were relatively low even by the late 1990s: in 1998, the percentage of residents of each country who were not citizens was 1.6, 2.8, and 3.6 percent respectively. Yet twenty years later, these countries had among the highest immigrant numbers in Europe: 9.8 percent of residents of Spain in 2018 were not citizens, 12.2 percent of Irish residents, and 10.7 percent of Norwegian. In Eastern Europe, the situation is different still. For example, in Hungary and

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Slovakia low proportions of non-citizens (1.4 and 0.5 percent respectively) in 1998 had risen only slightly by 2018 (to 1.7 and 1.3 percent).

More than mere numbers, these differences represent significant differences in the history of, and experience with, immigration at any given point in time. In countries like Austria, Belgium, Germany, Sweden, Switzerland and the UK, newcomers arriving at the turn of this century would be arriving to contexts in which there were already substantial, well-established immigrant-origin minorities and where non-immigrant-origin domestic populations are likely to have become more habituated to the presence of these minorities compared to the newer countries of immigration. In such contexts, increases or decreases in numbers of newcomers may not have much impact on public mood regarding immigration. Even if media reports on immigration are rising (or falling) in these countries in response to fluctuations in numbers, this does not necessarily result in a more negative public mood (see Boomgaarden and Vliegenthart 2009 for the case of Germany). In effect, increases in immigrant-origin minorities are hardly likely to be noticed, and even media-reported numbers are likely to be competing with other factors such as personal contact experience and socialization in determining how individuals perceive immigration.

Indeed, a recent analysis of 2002-2014 European Social Survey data by Gorodzeisky and Semyonov (2018) suggest a differential impact of influxes of immigration: in newer countries of immigration, increased immigration levels produce significant rises in anti-immigrant hostility, but in the older countries of immigration, new immigration “hardly exerts any effect on anti-immigrant attitudes” (40). Their findings also suggest that while some birth cohorts are impacted more heavily by the sudden switch to becoming a country of immigration, adaptation occurs in subsequent cohorts. Findings from a cross-sectional analysis of British immigration opinion similarly indicate that “whites in more diverse wards are more tolerant of immigration” (Kaufmann 2014, 270), leading the author to contend that habituation of the domestic population to immigrant-origin diversity over a relatively short period of time is very likely. These findings imply that in places and times in which immigration and immigrant-origin minorities were not overly prominent – e.g., Southern Europe, Ireland, and Central and East European countries in the late 1980s/early 1990s – sudden
large numbers of newcomers are likely to prompt a backlash.

The habituation perspective, therefore, implies an interactive effect between size of the existing immigrant-origin population and numbers of new migrants entering the country at any given timepoint. To the best of our knowledge, until now systematically investigating this habituation hypothesis has been impossible due to limited cross-time immigration opinion data. The hypotheses we test are:

**Hypothesis 3a:** The existing numbers of immigrants moderates the effects of immigrant inflows on immigration mood, i.e., any decrease in mood following an increase in immigration will be moderated by the number of migrants already in the country at the time.

**Hypothesis 3b:** The existing numbers of immigrants moderates the effects of immigrant inflows on immigration concern, i.e., any increase in concern following an increase in immigration will be moderated by the number of migrants already in the country at the time.

**Measuring Immigration Mood**

Immigration mood measures the extent to which national European publics regard immigrants favorably, immigration as desirable, and prefer a relatively more open immigration policy. It taps general preferences regarding the overall direction of immigration policy as well as more specific beliefs regarding the social benefits and costs of immigration. It does not measure attitudes towards ethnic or religious outgroups per se. (See the Online Supplementary Materials for further details regarding the specific survey items.)

Existing survey measures of immigration mood are fragmented across numerous public opinion projects, often using very different survey questions and suffering from sporadic coverage over time. There have been several attempts to pull such disparate cross-national opinion data

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4We follow Jennings (2009) in using Stimson’s (1991) concept of “mood” to describe macro-opinion towards immigration (see also Claassen 2020; Kellstedt 2000; Wlezien 1995).
together in a coherent fashion. Van Hauwaert and English (2019) use Stimson’s dyadic ratios algorithm to create longitudinal measures of immigration mood in the subnational regions of three European countries. Jennings (2009) employs the same method to estimate a mood time-series in single country, the UK. Closer to our ambitions is the “immigration ideology” measure developed by Caughey, O’Grady, and Warshaw (2019), which covers most European countries from 1990 to 2015. However, this measure does not account for the cross-national nature of the underlying survey data as it relies on the model of Caughey and Warshaw (2015), which is designed for estimating sub-national rather than cross-national panels of opinion. We therefore created a new measure of immigration mood using Claassen’s (2019) dynamic Bayesian latent variable model, which is developed specifically for cross-national opinion data and is more accurate in such contexts.\(^5\)

We collected a dataset of 4,030 nationally-aggregated survey measures of immigration mood, from 45 countries in Europe and its periphery (e.g., Russia and Turkey). These survey responses were gathered by six survey projects: The Eurobarometer, European Social Survey, European Values Study, World Values Survey, Pew Global Attitudes Survey, and the International Social Survey Programme. In total, our data were gathered by 812 nationally-representative surveys using as many as 44 different survey items, and constituting the aggregate opinions over more than a million people.

After dropping countries that were surveyed less than three times, we have data for 43 countries and up to 29 years (between 1988 and 2017).\(^6\) We dropped a further 13, mostly Eastern European, countries from our dataset because of short opinion time-series and lack of data on

\(^5\)See Claassen (2019) for discussion and a test of the two approaches.

\(^6\)Note that our focus in this paper is on cross-time, within country trends in immigration opinion rather than, for instance, sub-national or other subgroup comparison. Though these additional levels of analysis could provide interesting insights into the evolution of public opinion regarding immigration, our aim here is to speak to trends at the national level, especially given that in most European countries, immigration policy (and immigrant policy) is set at the national level, and that
immigration flows.\textsuperscript{7} We are left with 30 cases. In addition to all West European states, our sample includes the Eastern European states of Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia, which have begun receiving heightened flows of immigrants in recent years, making them particularly useful for understanding the effects of new immigration when immigrant numbers are relatively low.\textsuperscript{8} The dynamic Bayesian latent variable model was then applied to this dataset to estimate national mood.

Figure 1 shows the cross-national trends in immigration mood. Among the countries that have had longer experience with high immigration numbers and relatively large immigrant-origin populations, immigration mood tends to be more positive, on average, when compared to most of the countries with smaller immigrant-origin populations. In many of the former group of countries, immigration mood is relatively positive in the late 1980s before dipping in the early 1990s (e.g., Belgium, Denmark, Germany, France, Luxembourg, and Netherlands). For most of these countries, there is, however, gradual movement towards more positive mood around the late 1990s, with some fluctuation. Our data for Austria and Switzerland are more limited, but there appears to be slight movement towards more positive mood in both countries after the late 1990s, though with a turn toward more negative mood again by 2017 in Switzerland. Like many of the more experienced countries of immigration, the UK appears to experience a similar drop in immigration mood in national level historical experiences have been shown to be important in determining immigration opinions (Hiers, Soehl, and Wimmer 2017). It is also likely that the most relevant sub-national level itself varies by country (see Kaufmann and Goodwin 2018).

\textsuperscript{7}These countries are Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Macedonia, Moldova, Montenegro, Russia, Turkey, Serbia, and Ukraine.

\textsuperscript{8}The national time-series of immigration mood extend back from 2017 to as early as 1988, and the time-series of immigration concern extend back from 2017 to 2002. However, the length of both sets of national time-series vary by country due to the availability of survey data. Figure 1 shows the lengths of each time-series for each of our 30 countries.
Figure 1. National time-serial estimates of immigration mood and concern

These plots show the national time-serial estimates of immigration mood and immigration concern. Both are standardized to have a mean of zero and variance of one. Higher levels of immigration mood indicate the extent to which publics regard immigrants favorably, immigration as desirable, and prefer a relatively more open immigration policy. Higher levels of immigration concern indicate greater concern about the issue of immigration relative to all other issues.
the early part of our series, but unlike the older countries of immigration, immigration mood only started to become more positive after around 2010.

These trends can be contrasted with those in many of the CEE countries, where immigration has been relatively low until recently. For instance, in Czechia, Hungary, Latvia, and Slovakia, immigration mood is generally relatively negative, and became even more so around the time of the 2015 refugee crisis. In Poland, immigration mood was relatively neutral in the late 1990s, becoming more positive between 2005-2010, followed by a gradual decline again in 2015. In Romania, Lithuania, and Slovenia, immigration mood also starts relatively negative but became more positive (with fluctuation) – again, with some turn towards a negative mood around the time of the 2015 refugee crisis.

The publics of Southern Europe, Ireland and the Nordic countries are all generally more positive about immigration than other countries (again, on average) – apart from Greece and Italy, where immigration mood has become increasingly negative over time (with some fluctuation). As with the countries with more extensive experience with post-war migration, mood became relatively more negative in the early 1990s before shifting towards a significantly more positive direction. Similar patterns can be found in the Nordic countries (apart from Denmark, discussed above).

The patterns in immigration mood described above are largely consistent with existing cross-national research on immigration opinions. For example, our estimates of immigration mood in Belgium, Denmark, Germany, France, Luxembourg, and Netherlands echo the findings of Semyonov, Raijman, and Gorodzeisky (2006) regarding an increase in ethnic prejudice between 1988 and 1992, as well as those of Coenders and Scheepers (1998) showing a rise in support for ethnic discrimination in the Netherlands in the mid-1990s. The wider European analyses of Meuleman, Davidov, and Billiet (2009) and Bohman and Hjerm (2016), covering the 2002-2007 and 2002-2012 periods, respectively, find that the most negative attitudes to immigration were in Hungary, Austria, Portugal and Poland (although Bohman and Hjerm’s analyses show more positive attitudes in Poland towards the end of their time period, i.e., between 2006-2012); the most positive
attitudes in these two studies were found in Sweden, Switzerland, Denmark and Norway, which is also consistent with our estimates. Meuleman, Davidov, and Billiet (2009) further note that it was Southern and Eastern European countries, i.e., those that had started to experience sizable immigration at the start of their series, that exhibited the lowest support for immigration in the 2002-2007 period; some of the findings in Bohman and Hjerm (2016) are similar, with especially high levels of anti-immigration attitudes in Portugal and high levels of nativist opposition towards immigration in both Portugal and Spain for the 2002-2012 period. Our results over the same period are consistent. Finally, the trends in anti-immigrant sentiment from 2002 to 2014 which are depicted in Gorodzeisky and Semyonov (2018) mirror those shown here, with anti-immigrant attitudes relatively high in Great Britain, Portugal, France, Austria and Belgium and relatively low in Sweden, Finland, Switzerland plus Denmark for their period of study (see also Bohman and Hjerm 2016).

**Measuring Immigration Concern**

Immigration concern measures the importance with which national publics regard immigration, relative to other political issues. Immigration concern rises at times when immigration moves on to the agenda, and falls when other issues become more pressing in the public eye. Thus, while immigration mood captures the general orientation to immigrants and immigration, concern captures the degree to which these public preferences are likely to produce pressure on political actors (e.g., Dennison and Geddes 2019).

Since immigration concern has been measured annually by the Eurobarometer, there are fewer hurdles in assembling a TSCS dataset of concern than there are in constructing a TSCS dataset of immigration mood. (See Böhmelt, Bove, and Nussio 2020 for a recent example of the former.) Yet the Eurobarometer has in fact adjusted the response set for its “most important issue” question at several points in time, meaning that there are still benefits in applying Claassen’s (2019) dynamic latent variable model. Specifically, the model allows us to estimate – and separate out – the item bias that results from such changes in response sets. It further allows this item bias to
vary by country, capturing any cross-national error caused by lack of equivalence of items across countries. We therefore estimated immigration concern using our latent variable model applied to all the nationally-aggregated Eurobarometer measures of immigration as the most important political issue. Data are available for 34 countries and 16 years (ranging from 2002 until 2017) and are collected by 931 nationally-representative Eurobarometer surveys. The response set changed twice during the period, in 2006 and again in 2012; we treat the three response sets as separate items. After integrating our concern estimates with our mood estimates, 28 countries remain, with the non-EU states of Norway and Switzerland being the two cases with estimates of mood but not concern.

Figure 1 illustrates the cross national, cross-time differences in immigration concern. The fluctuations which are evident emphasize the importance of considering both mood and concern. In some countries, the two indicators appear to track one another fairly closely but in the opposite direction than might be expected (e.g., Belgium, Croatia, Cyprus, and possibly Germany, Ireland, and Sweden to some extent). That is, a more positive mood appears to be associated with more concern about immigration. In other countries (e.g., Czechia, Estonia, Greece, Hungary, Poland, Romania, Spain, and the UK), a rise in concern appears to be associated with more negative mood, as is often assumed in analyses that use the former to measure the latter (e.g., Boomgaarden and Vliegenthart 2009; McLaren, Boomgaarden, and Vliegenthart 2018). However, in many of the other countries, fluctuations in these two opinion series diverge; it is therefore not clear that the public are responding to similar factors (e.g., immigration levels) across the two indicators.

**Measuring Immigration Flows**

We employ two main measures of migration flows. First is immigration inflows, the number of immigrants arriving in a given country each year as a percentage of the receiving-country population; second is net migration, the number of arrivals less the number of people (immigrants and citizens) departing each year, again measured as a percentage of the receiving-country population. There are subtle differences in interpretation. While immigration inflows focus only on immigration, net mi-
migration also factors in the emigration of citizens, therefore measuring the change in population that
is due to migration flows in both directions.\textsuperscript{9} Data for immigration inflows and net migration are
drawn from three sources: the OECD, Eurostat, and the Determinants of International Migration
(DEMIG) project.\textsuperscript{10} There was substantial overlap in these datasets, with many of the estimates
being identical for particular country-years. Multilevel linear models with country-varying inter-
cepts and slopes were used to combine these data where there were missing values in one or two
of the sources.\textsuperscript{11}

To measure stocks of residents with an immigrant background, we use a measure of the
percent of each national population who were not citizens in a given year. Data were obtained from

\textsuperscript{9}Some analyses indicate that the composition of newcomers is relevant to understanding pub-
lic perceptions (Hopkins 2010; Kaufmann 2014; Kaufmann and Harris 2015), with immigrants
from Muslim countries being perceived as especially threatening (Adida, Laitin, and Valfort 2016;
Azrout and Wojcieszak 2017; Kentmen-Cin and Erisen 2017; Helbing and Traunmüller 2020; Snider-
man and Hagendoorn 2009; Strabac and Listhaug 2008). In the supplementary materials we
consider the effects of inflows of immigrants from Muslim-majority countries. The findings from
these analyses are similar to those presented in the next section.

\textsuperscript{10}OECD data is obtained from the OECD website (https://www.oecd.org/migration/mig/
oecdmigrationdatabases.htm), Eurostat measures of net migration were obtained from the
DEMIG data were obtained from the International Migration Institute (https://www.
migrationinstitute.org/data/demig-data).

\textsuperscript{11}Both these immigration measures are relative to the total population in each country and year.
They are thus are able to capture the relative size of flows. This makes it possible to test H3a and
H3b regarding the impact of new migration \textit{vis-à-vis} the size of the existing immigrant population.
Also, we investigate our hypotheses using both lagged levels of, and changes in, migration flows,
as discussed further below.
the OECD and Eurostat and were combined using multilevel linear models. Linear interpolation was used to interpolate missing values in one national case (France).

**Empirical Strategy**

How are we to model the effects of immigration on public opinion? Since the backlash effect may depend on the existing stock of immigrants (i.e., as spelled out in hypotheses 3a and 3b, above), we allow stocks to moderate the effects of flows, i.e., we specify an interaction term between these variables. In a departure from previous analyses, we examine the effects of flows (as moderated by stocks) on two dependent variables: immigration mood and concern about immigration. We also use a fully time-series, cross-sectional design, which includes lagged dependent variables, lags and first differences of immigration inflows, and country fixed effects. These features allow us to: model both the transient short run, and enduring, long-run effects of immigration; tackle the possibility of reverse causation; and deal with the potential existence of country-specific confounding factors. (We discuss each of these features in more detail in the online supplementary materials.)

The model is as follows (for $i$ countries, $t$ years and $k$ control variables, where $s$ is immigrant stock and $f$ is immigration flows):

$$y_{it} = \phi_1 y_{it-1} + \phi_2 y_{it-2} + \beta_1 f_{it-1} + \beta_2 \Delta f_{it} + \beta_3 s_{it-1} + \beta_4 f_{it-1} s_{it-1} + \beta_5 \Delta f_{it} s_{it-1} + \sum_{k=1}^{K} \gamma_k x_{kit-1} + \nu_i + \epsilon_{it}$$

With country fixed effects $\nu_i$ removing the influence of all time-invariant, country-varying factors, we include a set of control variables $x_{kit}$ that vary across country and time and plausibly affect immigration inflows and immigration opinion. First, periods of economic expansion likely attract higher numbers of immigrants but also lead to less restrictive immigration attitudes (Gorodzeisky and Semyonov 2016). We include *growth in GDP per person* and the *national unemployment rate* to control for such processes. Second, far right parties may prompt greater anti-immigration hostility and concern by legitimizing anti-immigration attitudes and signaling that immigration is an important issue (Bohman and Hjerm 2016). We include the *percent of seats*
held by far right parties in the year in question (we use the PopuList 2.0 definition of far right parties (Rooduijn et al. 2019), and link this to parties’ seat shares from ParlGov (Döring and Manow 2019). We further include two time-varying measures of immigration policy which capture the restrictiveness of immigration entry policy and immigrant integration policy. Both are estimated by Rayp, Ruyssen, and Standaert (2017) using a Bayesian latent variable model applied to existing immigration policy measures (e.g., MPI, MIPEX).

Our model posits rather complex effects of migration flows on public opinion, which depend on existing stocks of immigrants, unfold over time, and potentially also change future stocks of immigrants. In addition to reporting the direct parameter estimates of this model, we also use simulations to show how the effects unfold and accumulate (or dissipate) over time. These simulations follow the method laid out by Williams and Whitten (2012) for simulating long run effects from TSCS models. We begin by setting all independent variables to zero (which is the country mean given the use of fixed effects), with the non-citizen stock variable being set at a low level (−5). These values are plugged into each model to produce predicted effects of opinion change in the next period. Allowing for these predicted effects to feed into the next period’s equation via the lagged dependent variable, this system of equations is run for 100 years. To examine the effects of an increase in immigration, we then increase the relevant variable (i.e., immigration inflows or net migration) by one standard deviation and allow the equations to run for 30 further years (again ensuring that predicted effects feed forward to the subsequent periods via the lagged dependent variables). Given that increases in immigration mechanically produce increases in the stock of non-citizens, we further allow the latter to rise each year based on estimates obtained from a simple dynamic demographic model (see online supplementary materials for results of this model). To incorporate uncertainty, we repeat this method 10,000 times, with each iteration being based on an independent draw from a multivariate normal distribution with the expectation being the vector of model coefficients and variance being the robust covariance matrix. We therefore include only the uncertainty associated with the model coefficients, which is appropriate for the in-sample counterfactual prediction we make here. Because we are also forecasting future values of demo-
graphics based on current values of immigration change, we additionally include the out-of-sample uncertainty for these demographic models; specifically, we add uncertainty based on the regression standard error for the demographic model.

Findings

Immigration mood

We begin our discussion of the results by focusing on immigration mood. Table 1 shows the results of our dynamic fixed effects models of annual changes in immigration mood. Both models include lagged and first-differenced measures of migration flows. The former captures any enduring effects of migration flows; the latter, any immediate, transient effects. The coefficients of both of these are allowed to vary by the size of the immigrant community to test the backlash versus habituation theories. The two models vary only in the measure of migration flows which are included: Model 1.1 uses net migration, while Model 1.2 uses immigration inflows.

We can see from the results in Table 1 that there are no significant effects of the first-differenced measures of either net migration or immigration inflows, suggesting no immediate effects of migration flows on immigration mood. The longer-run effects of migration flows on subsequent immigration mood then depend somewhat on which measure is used. Lagged net migration shows a negative and significant coefficient (Model 1.1), indicating a potentially substantial long run backlash effect. The effect of lagged immigration inflows is also negative, but insignificant (Model 1.2). We therefore find mixed support for the standard threat hypothesis outlined above (H1), i.e., that higher immigration numbers will be associated with subsequently more negative immigration opinions. However, both of these lagged measures of migration flows show positive interaction effects with existing immigrant stocks. This indicates that any long-run negative effects of immigration on mood should diminish as the number of immigrants increases, consistent with hypothesis 3a.

To unpack these rather complex effects we turn to our dynamic simulations (Figure 2).
Table 1. Drivers of change in public immigration mood

<table>
<thead>
<tr>
<th></th>
<th>Model 1.1</th>
<th>Model 1.2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Net immigration inflows</td>
<td>Immigration inflows</td>
</tr>
<tr>
<td>Net migration, % of pop. (t-1)</td>
<td>(-0.105 (0.032)^*)</td>
<td>(-0.037 (0.025))</td>
</tr>
<tr>
<td>Δ Net migration</td>
<td>(-0.025 (0.051))</td>
<td>(-0.009 (0.042))</td>
</tr>
<tr>
<td>Net migration × non-citizen stock</td>
<td>(0.006 (0.003)^*)</td>
<td>(0.005 (0.002)^*)</td>
</tr>
<tr>
<td>Δ Net migration × non-citizen stock</td>
<td>(0.005 (0.005))</td>
<td>(-0.000 (0.005))</td>
</tr>
<tr>
<td>Immigration inflows, % of pop. (t-1)</td>
<td>(0.853 (0.392)^*)</td>
<td>(0.834 (0.401)^*)</td>
</tr>
<tr>
<td>Δ Immigration inflows</td>
<td>(-0.024 (0.447))</td>
<td>(0.392 (0.370))</td>
</tr>
<tr>
<td>Immigration inflows × non-citizen stock</td>
<td>(-0.076 (0.128))</td>
<td>(-0.062 (0.124))</td>
</tr>
<tr>
<td>Δ Immigration inflows × non-citizen stock</td>
<td>(0.097 (0.058))</td>
<td>(0.096 (0.060))</td>
</tr>
<tr>
<td>GDP growth per capita (t-1)</td>
<td>(0.072 (0.033)^*)</td>
<td>(0.078 (0.033)^*)</td>
</tr>
<tr>
<td>Unemployment rate (t-1)</td>
<td>(0.052 (0.071))</td>
<td>(0.053 (0.074))</td>
</tr>
<tr>
<td>Far right seat share (t-1)</td>
<td>(-0.239 (0.063)^*)</td>
<td>(-0.259 (0.061)^*)</td>
</tr>
<tr>
<td>Immigrant integration policy index (t-1)</td>
<td>(0.024 (0.447))</td>
<td>(0.392 (0.370))</td>
</tr>
<tr>
<td>Immigrant entry policy index (t-1)</td>
<td>(0.052 (0.071))</td>
<td>(0.053 (0.074))</td>
</tr>
<tr>
<td>Immigration mood (t-1)</td>
<td>(-0.239 (0.063)^*)</td>
<td>(-0.259 (0.061)^*)</td>
</tr>
<tr>
<td>Immigration mood (t-2)</td>
<td>(0.024 (0.447))</td>
<td>(0.392 (0.370))</td>
</tr>
</tbody>
</table>

Country fixed effects | ✓ | ✓ |

\(N\): 551
\(N\) countries: 30
Regression standard error: .222
Wooldridge AR(1) test p-value: .967

\(^*p < .05\). Coefficient estimates from dynamic fixed effects models with Driscoll-Kraay robust standard errors in parentheses. The dependent variable is the annual change in national immigration mood.

(In the online supplementary materials, we also include and discuss the static marginal effects of the migration flows by immigrant stocks interaction.) These simulations show how the short-run effects of migration flows (reported in Table 1) accumulate over time. They also factor in the effects of long-run migration inflows on the total stock of immigrants in each society. The top row shows the long-run effects when immigrant stocks begin at a very low level (five percentage points below the country average). The bottom row shows the long-run effects when the stock of immigrants begins at each country’s average level. Both sets of simulations explicitly model the impact of
immigration on the current stock of immigrants. The magnitude of this effect is, unsurprisingly, very large. This allows immigration to shape opinion both through a direct channel, as shown in the results in Table 1, as well as an indirect channel, by increasing the stock of immigrants. Stock then creates a more positive immigration mood through the ameliorating effects of the flows by stock interaction terms, which are positive and significant in both Models 1.1 and 1.2. This total effect of immigrant stock is more pronounced when we measure migrations flows using net migration (Model 1) because the main effect of immigrant stock is also positive in this model (1.1), albeit insignificantly so.

As can be seen in Figure 2, when we model both the direct and indirect effects of immigration, the negative effect of an increase in the rate of net migration on mood is somewhat transient. When existing immigrant stocks are low (top row), an initial backlash is followed by a habituation effect which ultimately restores mood. Some 20 to 30 years after the initial increase, opinion returns to baseline levels. The backlash effect is estimated to be much weaker when we use immigration inflows as the measure of migration flow, which is consistent with the smaller and insignificant effect reported in Table 1.

In sum, when we model both the direct, long-run effects of immigration, as well as the indirect long run effects, we see evidence for both the backlash and the habituation theories. The question which remains is whether immigration concern, the other major form of immigration opinion, responds to immigration flows in the a backlash-followed-by-habituation fashion, or whether it follows a different logic entirely.

**Immigration concern**

Table 2 reports the results of dynamic fixed effects models of immigration concern. These models are specified exactly as the corresponding models of immigration mood were. Model 2.1 uses net

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12For every 100 immigrants who arrive in a given year, we estimate that the stock of immigrants increases in the next year by approximately 83. The relevant ratio for net migration is 56. These models are included in the online supplementary material.
Figure 2. Simulated effects of changes in net migration and immigration flows on long-run changes in immigration mood

The plots show the simulated within-sample effects of permanent, within-country, two standard deviation increases in net migration (+/-0.8 percentage points; left plots) and immigration flows (+/-0.6 percentage points; right plots) when existing immigration stocks are either low (top row; five percentage points below the country average) or average (bottom row; country average). These simulations rely on parameter and variance-covariance estimates obtained from the dynamic fixed effects models reported in Table 1, but also include the predicted effects of net migration on immigrant stock, using parameter estimates and model uncertainty obtained from a dedicated model of immigrant stock accumulation. The solid lines indicate the mean simulated effect; the shaded regions indicate the 95% confidence intervals of these effects.
Table 2. Drivers of change in public immigration concern

<table>
<thead>
<tr>
<th></th>
<th>Model 2.1 (Net migration)</th>
<th>Model 2.2 (Immigration inflows)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-citizen stock, % of pop. t-1</td>
<td>-.014 (.008)</td>
<td>-.022 (.007)*</td>
</tr>
<tr>
<td>Net migration, % of pop. t-1</td>
<td>.079 (.050)</td>
<td></td>
</tr>
<tr>
<td>Δ Net migration</td>
<td>.046 (.048)</td>
<td></td>
</tr>
<tr>
<td>Net migration × non-citizen stock</td>
<td>.001 (.004)</td>
<td></td>
</tr>
<tr>
<td>Δ Net migration × non-citizen stock</td>
<td>.010 (.005)*</td>
<td></td>
</tr>
<tr>
<td>Immigration inflows, % of pop. t-1</td>
<td></td>
<td>.000 (.047)</td>
</tr>
<tr>
<td>Δ Immigration inflows</td>
<td>.223 (.099)*</td>
<td></td>
</tr>
<tr>
<td>Immigration inflows × non-citizen stock</td>
<td></td>
<td>.003 (.002)</td>
</tr>
<tr>
<td>Δ Immigration inflows × non-citizen stock</td>
<td></td>
<td>.005 (.006)</td>
</tr>
<tr>
<td>GDP growth per capita t-1</td>
<td>-1.180 (.348)*</td>
<td>-1.198 (.317)*</td>
</tr>
<tr>
<td>Unemployment rate t-1</td>
<td>.608 (.410)</td>
<td>.341 (.273)</td>
</tr>
<tr>
<td>Far right seat share t-1</td>
<td>.256 (.153)</td>
<td>.253 (.155)</td>
</tr>
<tr>
<td>Immigrant integration policy index t-1</td>
<td>-.015 (.050)</td>
<td>.012 (.047)</td>
</tr>
<tr>
<td>Immigrant entry policy index t-1</td>
<td>-.063 (.054)</td>
<td>-.071 (.057)</td>
</tr>
<tr>
<td>Immigration concern t-1</td>
<td>.501 (.069)*</td>
<td>.482 (.067)*</td>
</tr>
<tr>
<td>Immigration concern t-2</td>
<td>-.756 (.085)*</td>
<td>-.725 (.084)*</td>
</tr>
</tbody>
</table>

Country fixed effects ✓ ✓

<table>
<thead>
<tr>
<th></th>
<th>350</th>
<th>349</th>
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<tbody>
<tr>
<td>N</td>
<td>28</td>
<td>28</td>
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<tr>
<td>N countries</td>
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<tr>
<td>Regression standard error</td>
<td>.210</td>
<td>.210</td>
</tr>
<tr>
<td>Wooldridge AR(1) test p-value</td>
<td>.162</td>
<td>.195</td>
</tr>
</tbody>
</table>

*p < .05. Coefficient estimates from dynamic fixed effects models with Driscoll-Kraay robust standard errors in parentheses. The dependent variable is the annual change in national immigration concern.

On the face of it, the results appear quite different to those obtained for immigration mood. The lag of migration inflows is insignificant in both models (although fairly large in magnitude for net migration). Neither is there a significant or even substantial interaction effect. A positive effect of the change in the rate of immigration inflows is apparent in Model 2.2, which indicates an immediate backlash effect of increases in immigration inflows; however the corresponding effect
is smaller and insignificant in Model 2.1.\textsuperscript{13}

With interaction terms and lagged dependent variables included in these models, as well as the indirect effects of immigration on higher immigrant stocks to factor in, it should be more insightful to examine the long-run simulated effects, which are displayed in Figure 3. These simulated effects again include the predicted effects of migration flows on immigrant stocks. The top row of plots show the effects of immigration on concern when the existing level of immigrant stocks is low, with the bottom row showing these effects when stocks are at country averages. In a pattern that we saw previously in Figure 2, an increase in migration flows produces both a backlash effect (i.e., increased concern) in the short term and a habituation effect (i.e., decreased concern) in the medium to long term. The shift in opinion is even more dramatic for concern than it was for mood. The net migration model suggests that a steep rise in concern occurs a few years after an increase in immigration. This subsequently fades in a similarly rapid fashion, with opinion returning to baseline levels within a decade. The immigration inflows model implies a briefer and less pronounced backlash effect. But it implies a stronger and more rapidly-manifesting habituation effect, where, a decade after a large increase in immigration, public concern is expected to drop below the baseline level and continue to fall over the ensuing years as immigrants become more established in that society.

Once again, both the backlash and habituation effects are dampened when we consider a situation where average levels of existing immigrant stock are coupled with of increasing rates of

\textsuperscript{13}Including lagged dependent variables along with fixed effects produces bias that decreases as $T$ increases (Nickell 1981). Monte-Carlo experiments show that this bias is substantially reduced when $T = 20$, and mostly eliminated when $T = 30$ (Judson and Owen 1999). We note that we have somewhat shorter time-series for concern (8-16 years) than we have for immigration mood (14-30 years), which suggests that our results regarding immigration mood are more reliable than those regarding immigration concern. The general pattern of results is the same across dependent variables however.
Figure 3. Simulated effects of changes in net migration and immigration flows on long-run changes in immigration concern

The plots show the simulated within-sample effects of permanent, within-country, two standard deviation increases in net migration (+/-0.8 percentage points; left plots) and immigration flows (+/-0.6 percentage points; right plots) when existing immigration stocks are either low (top row; five percentage points below the country average) or average (bottom row; country average). These simulations rely on parameter and variance-covariance estimates obtained from the dynamic fixed effects models reported in Table 2, but also include the predicted effects of net migration on immigrant stock, using parameter estimates and model uncertainty obtained from a dedicated model of immigrant stock accumulation. The solid lines indicate the mean simulated effect; the shaded regions indicate the 95% confidence intervals of these effects.
immigration. These results (bottom row) show a weaker backlash effect when there is an increase in net migration, and no backlash effect at all following an increase in immigration inflows.

In sum, immigration turns out to have broadly similar effects on both immigration mood and immigration concern. These effects are generally consistent across the two measures of migration flows we have examined, net migration and immigration inflows. To further test the robustness of our results, we employ four additional specifications: (1) including two-way fixed effects; (2) limiting the sample to Western Europe; (3) using immigration inflows from Muslim-majority countries as the measure of migration flows; and (4) estimating immigration mood using only respondents who identify as citizens or nationals of their countries of residence. Results (available in online supplementary materials) are largely similar to those reported above. Across these various measures and models, we find evidence for a public backlash in the short to medium run, in which mood turns negative, and concern with immigration rises. There is also evidence, however, that the public becomes habituated to greater numbers of immigrants and higher rates of immigration: the backlash effect reverses within one (concern) to three (mood) decades. These effects are particularly pronounced in situations where immigrants are few; where the stock of immigrants is higher, the backlash effect is reduced.

**Conclusion**

This paper set out to analyze one of the most important questions currently facing Western democracies: what are the likely consequences of continued migration for public opinion and the broader political landscapes in these countries? Will immigration continue to be a source of major division within these societies, for instance? Or is it possible that Western societies are adapting to, and perhaps even embracing, modern large-scale immigration?

Our ability to answer such questions has been limited by a lack of cross-time and cross-national public opinion data, and by a focus on only one of the two major forms of immigration opinion: concern (i.e., salience) or mood (i.e., of the positive and negative aspects of immigration and/or preferred immigration levels). Our TSCS measures of both immigration concern and im-
mood allow us to address the issues which have hindered research into this question: that immigration inflows likely have enduring, long-run effects on opinion; that opinion is as likely to affect future numbers as numbers are to affect future opinion; and that time-invariant historical, cultural, and institutional factors likely confound any observed cross-sectional relationship between numbers and opinions.

We find evidence for both the more pessimistic backlash as well as the more optimistic habituation theories. In places and at times when there are relatively few immigrants already in the country, there is some evidence that the short-term public reaction to new immigration is negative – whether expressed as a growing disapproval of immigration or as a heightened concern about immigration as a political issue. Yet as a country develops more extensive experience with immigration, citizens appear to become habituated to the existence of immigrant-origin minorities and the short-term backlash recedes and becomes insignificant, even if inflows of immigrants remain high. The implication, therefore, is that – in time – immigration may no longer be the major source of contention that it currently is in many countries.

Our findings make a significant contribution to a body of research that has struggled to understand whether mass publics react negatively to growing numbers (and percentages) of immigrant-origin minorities or not. We have argued that any definitive answer to this question requires a dynamic approach that can incorporate both short- and long-term responses as well as cross-national historical contexts.

The paper’s findings are relevant not only to research on immigration attitudes, but also to research on social capital and cohesion, which has struggled to definitively address the widely publicized concern raised by Robert Putnam (2007) that diversity appeared to undermine social capital and cohesion (see also van der Meer and Tolsma 2014). Our findings suggest that the relationship between diversity and cohesion requires dynamic modeling to understand both the short- and long-term effects of diversity and that if mass publics do indeed adapt to diversity, Putnam’s pessimistic conclusions may only apply in the short-term.

Our data and findings present several avenues for future research. First and foremost, it
will be important to continue to monitor the dynamic relationships we have identified in this paper by extending the immigration opinion series as future public opinion data become available. The long-term habituation we have identified implies that immigration opinions (especially concern about immigration) may become increasingly supportive of immigration over time, but data will be required to investigate this possibility. Future research should also analyze the extent to which becoming countries of immigration in places like Czechia, Hungary, and Romania changes public mood toward immigration and immigrants, as would be predicted from this paper’s findings, or whether the anti-immigration rhetoric of current governing parties in some of these countries makes habituation less likely.

Similarly, the relationship between immigration preferences and concern on the one hand, and immigration-related policies on the other, is also likely to be a dynamic one which has thus far been studied only statically (e.g., Levy, Wright, and Citrin 2016; Weldon 2006). Our estimates of mood and concern provide the opportunity to analyze how immigration and immigrant policy and opinion influence one another in more dynamic ways than has been possible until now. Thus, in addition to allowing us to investigate the dynamic relationship between immigration numbers and opinions, our research has produced a valuable dataset of two different forms of immigration opinion that will also facilitate analysis of important questions like these.

Acknowledgements

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Data Availability Statement

Replication data for this paper can be found at https://doi.org/10.7910/DVN/9F06LD.
Supplementary Material

A supplementary material document entitled “Does Immigration Produce a Public Backlash or Public Acceptance? Time-Series, Cross-Sectional Evidence from 30 European Democracies: Online Supplementary Materials” is available on the Cambridge University Press platform alongside the article.

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