

The Stability of Immigration Attitudes: Evidence and Implications

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Abstract

Do voters have stable immigration views? While any account of immigration politics must make an assumption about whether underlying attitudes are stable, the literature has been ambiguous regarding the issue. To remedy this omission, we provide the first comprehensive assessment of the stability and change of immigration attitudes. Theoretically, we develop a framework to explicate the temporal assumptions in previous research and find that most studies assume attitudes are flexible. Empirically, we draw on nine panel data sets to test the stability question and use multiple approaches to account for measurement error. We find that immigration attitudes are remarkably stable over time and robust to major economic and political shocks. Overall, these findings provide more support for theories emphasizing socialization and stable predispositions rather than information or environmental factors. Consequently, scholars should exercise caution in using changing context to explain immigration attitudes or in using immigration attitudes to explain political change.

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Introduction

While a lot is known about what explains the cross-sectional variation in individual immigration attitudes and preferences,¹ the literature has so far been rather ambiguous regarding the reality of their stability or change. It is common to assume that these attitudes are malleable and easily susceptible to information and contextual factors. Some scholars, however, conversely assume that these attitudes are rather fixed. While it may be possible to find empirical support for either of these perspectives under temporal constraints, the question is whether voters actually change their mind on immigration over the long term.²

The previous literature provides a few distinct perspectives on the stability and change of immigration attitudes. As an illustration of this variability, we reviewed an exhaustive list of 97 articles published between 1993 and 2019 (Figure 1). Of these papers, 75.3 percent explicitly or implicitly assume immigration attitudes are flexible, while 24.7 percent assume attitudes are fairly stable. In short, this analysis suggests most research on immigration attitudes assumes it is possible to change a voter’s mind on the issue in a robust way.

The stability of immigration attitudes has critical implications for understanding immigration politics. If these attitudes are flexible, then theories emphasizing the importance of predispositions have little validity. Alternatively, if these attitudes are stable, then arguments centered on information and contextual factors have limited traction. Despite the fact that *any* theory concerning immigration attitudes must make an assumption about their stability, empirical assessments of the issue are surprisingly lacking in the literature. To remedy this omission, we provide the first comprehensive evaluation of immigration attitude stability. Using nine panel surveys from the US and Europe that together cover the 2008 recession, Brexit, and the refugee crisis, we find that individual views toward immigration are remark-

¹While some scholars draw a sharp distinction between (self-reported) attitudes and (revealed) preferences, we follow Druckman and Lupia (2000) and define “preferences” as any rankings derived from comparative evaluations of (or “attitudes” toward) various policies or other objects.

²Despite the complexity of immigration policy and related attitudes, we follow the existing public opinion literature (Hainmueller and Hopkins 2014) and consider voters’ underlying comparative evaluation of immigration as a whole. This paper thus does not address either attitudes towards particular policies or factual (mis)perceptions regarding immigration.

ably stable across time. Consistent with the literature on political socialization, we also find that younger individuals are more likely to change their views toward immigration compared to older adults. Importantly, these results hold under a number of alternative specifications.

Our results do not necessarily discredit theories that assume flexibility. However, they suggest the variation these theories attempt to explain is quite minimal. Specifically, exogenous shocks may change immigration attitudes, but these changes are small and quickly revert back to an individual's long-term equilibrium.³ Thus, our results challenge much of the previous literature on immigration attitudes and cast doubt on the explanatory power of theories emphasizing the role of information and contextual factors.

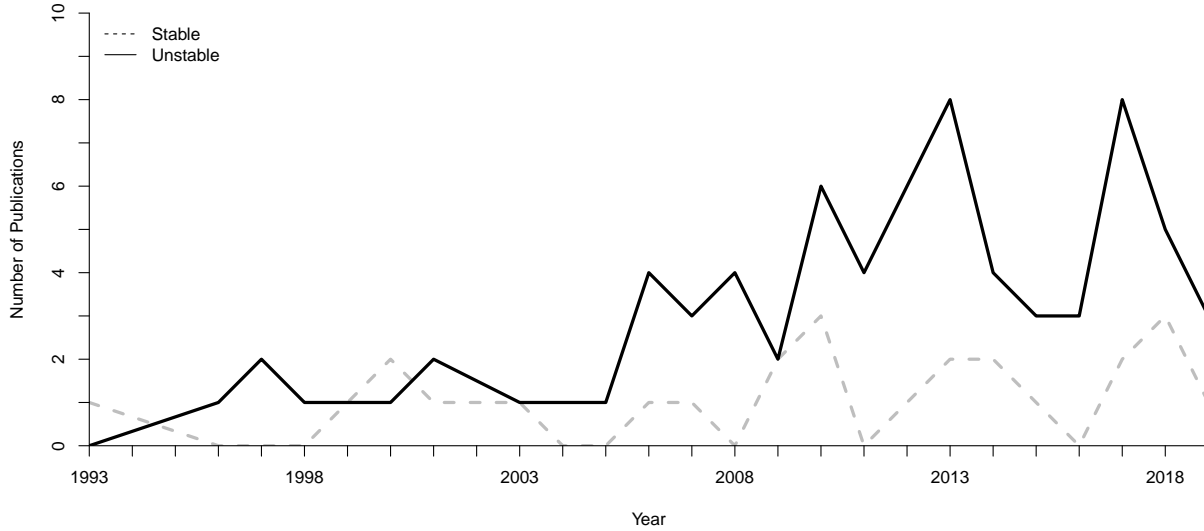
Overall, our study makes several notable contributions. First, it adds important insights and evidence to the burgeoning literature examining public attitudes toward immigration. Theoretically, we explicate the often implicit assumptions concerning the temporal stability of immigration attitudes (as opposed to just issue salience of immigration). Empirically, our findings generalize recent studies that demonstrate information cues (Hopkins et al. 2019), refugee crises (Mader and Schoen 2018), and economic shocks (Goldstein and Peters 2014) do not substantially influence the underlying immigration preferences of the electorate.

Second, and related, this article contributes to the comparative politics literature examining the rise of populism. Our results indicate that changing immigration attitudes cannot explain the recent rise of anti-immigration parties (also see Bonikowski 2017). Rather than changing attitudes toward immigration, exogenous shocks such as a refugee crisis may simply increase the salience and issue importance of immigration to individual voters. In other words, when immigration is a low-salience issue, voters with anti-immigration attitudes may still vote for parties with pro-immigration positions. However, when the salience of immigration increases, it can potentially become a key voting issue (Mader and Schoen 2018).

Third, this article adds new rigorous evidence to the long-standing literature on political socialization (Jennings and Markus 1984; Alwin and Krosnick 1991; Mendelberg et al.

³While theories that assume flexibility certainly vary in the amount of change they expect to occur, previous literature often fails to define this amount in an explicit way.

Figure 1: *Assumptions of stability and change in immigration attitudes literature*



See the Appendix for details on the coding of articles.

2017). The question of immigration attitude stability is closely linked to the broader theoretical discussion concerning whether early experiences persist throughout one's life or whether individuals can consistently update their beliefs in response to contextual factors. In particular, many scholars emphasize the importance of young adulthood in the development of core political and economic beliefs. Consistent with this literature, we find strong evidence that attitudes toward immigration likely develop when individuals are young adults.

Fourth, this article contributes to the broader scholarship that examines the stability of political preferences (Bartels 1993; Gerber and Green 1998). The previous literature often uses panel surveys that include at most five waves and only one survey item to test stability. However, this approach requires unrealistic and untestable modeling assumptions. This article draws on panels that include more than five waves and multiple survey-items, which allow us to empirically test and relax many of these assumptions.

Development and persistence of political attitudes

Central to the question of immigration attitude stability is the literature on political socialization demonstrating the persistence of early life experiences as opposed to the lifelong openness of individuals for belief updating (Alwin 1994; Sears 1983).⁴ On one end of the spectrum, the “persistence” model emphasizes the importance of pre-adult experiences and the enduring nature of political attitudes.⁵ On the other end, the “lifelong openness” model posits that individuals can change their beliefs throughout their lives in response to current events. Alternative models simply vary the probability of attitude change over the course of one’s life. Importantly, previous studies find strong support for the “impressionable years” model, which emphasizes the importance of late adolescence and early adulthood (Alwin and Krosnick 1991).⁶ This period is seen as consequential for change because young adults have limited political experience and are often just beginning to engage with political institutions.⁷

In sum, under the lifelong openness model, political attitudes are expected to be rather flexible, reflecting contextual factors such as economic conditions or media coverage. Alternatively, the persistence model suggests that political attitudes should be highly stable over time. If the impressionable years model is correct, attitudes should be unstable for young individuals but begin to crystallize with age.

The literature on immigration attitudes has developed separately from this discussion. As a result, scholars have not seriously considered the theoretical implications and empirical reality concerning the stability or change of these attitudes. They have not theorized or

⁴Several studies analyze the stability of political attitudes and party attachment (Jennings and Markus 1984; Sears and Funk 2016; Green et al. 2002). Others extend this research to ideology, group evaluations, political interest, and other issue positions (Alwin and Krosnick 1991; Alwin 1994; Prior 2010).

⁵There is a rich literature on how college, school, and family affect the political socialization of individuals (Jennings and Markus 1984; Mendelberg et al. 2017).

⁶Bayesian learning models provide another approach that generates similar predictions to the persistence model when the political system is relatively stable (Bartels 1993; Gerber and Green 1998).

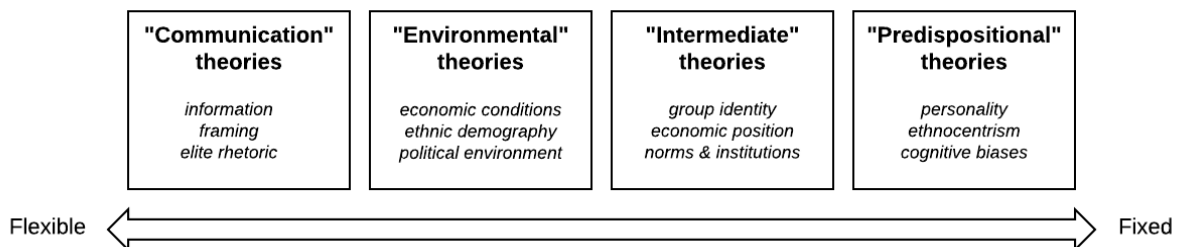
⁷Converse (1964) develops a black-white model that argues a large portion of the public (the politically unsophisticated) do not have stable political attitudes toward major policy issues and instead have “non-attitudes” (Converse 1970). Similarly, Feldman and Zaller (1992) argue that response instability is caused by citizens holding conflicting opinions and answering survey questions with the opinion that is most relevant at the time (Zaller 1992). A key issue with this approach is measurement error (Ansolabehere et al. 2008).

identified when these attitudes are likely to develop and whether they can persist (but see Lancee and Sarrasin 2015; Lindstam et al. 2019).⁸ This is perhaps disconcerting given that every account of immigration attitudes, must make an assumption about their stability.⁹

Change and stability of immigration attitudes

Our analysis of the previous literature suggests that most studies assume that immigration attitudes are at least somewhat flexible. Below, we explicate these often implicit assumptions regarding attitudinal stability. We do so by developing a framework that categorizes the temporal assumptions in previous studies into four groups along a continuum: “communication,” “environmental,” “intermediate,” and “predispositional” theories (see Figure 2). Theories that emphasize framing, elite rhetoric, or media coverage, which we label “communication” theories, assume immigration attitudes are flexible. On the other end of the continuum, “predispositional” theories, which highlight personality, ethnocentrism, and cognitive biases, assume that immigration attitudes are highly stable. Near the left of center is “environmental” theories, which focus on economic conditions, demographics, and the political environment and assume immigration attitudes are somewhat flexible. Finally, “intermediate” theories, located to the right of the center, assume immigration attitudes are fairly stable and emphasize institutions, economic position, and group identity.

Figure 2: *Assumptions of stability and change in theories of immigration attitudes*



⁸Since stability is often a function of the specific attitude (Sears 1983), previous research on other political issues provide little information on the stability of immigration attitudes.

⁹Some theories are interested in the short-term change of immigration attitudes, which may still be important inasmuch it affects the immediate outcomes with long-term consequences (e.g., Goodwin and Milazzo 2017).

Expectations of relative volatility

We categorize studies that emphasize systematic communication and environmental factors as theories that assume immigration attitudes are relatively flexible. First, one obvious source of temporal variation in individual attitudes is related to changes in voters' information. We label this group of studies as "communication" theories, which assume that immigration attitudes can be easily changed depending on information and framing.

To that end, research shows that most people have little knowledge about politics and often misperceive the connection between public policies and their interests (for a review, see Druckman 2014). Likewise, the electorate seems to be ill-informed on the consequences of immigration. For instance, people tend to overestimate the number of immigrants, as well as their impact on national fiscal systems, wages, and employment (Dustmann and Glitz 2005). Would people have different immigration attitudes, had they been better informed? According to the "enlightened preference" literature (e.g., Gilens 2001), the answer should be positive. At the same time, this perspective also implies that, in line with the top-down elite approach (e.g., Lenz 2012), politicians should be able to easily manipulate voters preferences on immigration as on any other issue.

As the growing evidence demonstrates, however, informing voters may not work for immigration issues. Accordingly, Hopkins et al. (2019) find that in seven distinct experiments correcting people's misinformation on immigration numbers does not change their policy attitudes (for similar findings, also see Johnston and Ballard 2016; Alesina et al. 2018). Barrera et al. (2018) provides evidence that fact-checking makes people update their knowledge, but does not change their attitudes or behavior. Of course, there is some evidence of successful change of individual attitudes due to information,¹⁰ but few experimental studies have the capacity to test whether these effects are truly long-lived (over months and years).

A related way to change people's opinion on immigration—where information may not be

¹⁰Grigorieff et al. (2016) and Facchini et al. (2016) find that providing information may slightly improve immigration attitudes for those with already negative attitudes and these effects persist over a few weeks.

sufficient—is to reframe it by highlighting certain concerns that people already care about (Chong and Druckman 2007). There is some indication, for instance, that people are responsive to the appropriate moral arguments (e.g., “equal treatment”), general pragmatism, and the appeals to their national economic interest (Gilliam 2010). Similar to information experiments, however, the longevity of these effects in an “informationally rich” competitive political environment is unclear. When it comes to media effects, for instance, Flores (2018) finds that elite cues can make people who are skeptical of immigration even more negative, but these effects are short-lived and thus require constant repetition.

A second set of theories that assume immigration attitudes are at least somewhat flexible focus on systematic environmental factors, such as economic conditions, demographics, and broader political environment. For example, according to “group threat” accounts people should negatively respond to the increase of an immigrant population. The overall evidence for this idea, however, is mostly observational and rather inconclusive (Pottie-Sherman and Wilkes 2017). One of the most ambitious experiments supportive of group threat with a strong treatment (i.e., repeated exposure to ethnic outgroups on the train) shows that the effects are small and wane greatly after ten days (Enos 2014).¹¹

The literature emphasizing the role of economic conditions also suggests that immigration attitudes can be rather flexible (e.g., Kehrberg 2007; Wilkes et al. 2008). One widely held belief is that recessions tend to cause a spike in resentment toward foreigners. Broadly, as the economy declines (improves), anti-immigration attitudes should increase (decrease). Most of this research, however, focuses on cross-sectional and cross-time differences in *aggregate* public opinion. Using panel data on *individual* attitudes, Goldstein and Peters (2014) demonstrate the lackluster effect of the 2008 financial crisis on US immigration attitudes.

¹¹Hangartner et al. (2018) find that exposure to refugees increases anti-immigration attitudes for natives. However, their identification strategy using a non-longitudinal survey is perhaps rather problematic given that the Greek islands near Turkey have historically been a point of illegal immigration into the EU.

Expectations of relative stability

We define theories that emphasize the role of norms and institutions, economic position and group identity, personality factors and cognitive biases as those that assume immigration attitudes are relatively stable. We categorize these theories into two broad categories: “pre-dispositional” and “intermediate.” First, immigration attitudes should be durable if they are primarily driven by underlying psychological predispositions related to personality (Gallego and Pardos-Prado 2014), ethnocentrism (Kinder and Kam 2010), altruism (Kustov 2019a), and (anti-)egalitarian ideological motivations (Cohrs and Stelzl 2010; Kustov 2019b). Since these factors are likely very stable, immigration attitudes should rarely change.

The second group of intermediate theories cover various explanations, but tend to assume that immigration attitudes are at least somewhat stable. For example, we would expect stability if individual attitudes are driven by identity-protective motivated reasoning in a polarized political environment (Kahan 2016). According to this perspective, informing voters about immigration may do little to change their policy preferences, especially if they perceive that their key political identities are at stake. Given that people rarely change their partisan allegiances, the prospect for attitudinal change regarding immigration without a significant political change are thus rather scant.¹² Immigration attitudes should also be somewhat stable if political economy theories are correct. Most prominently, if labor market competition influences immigration attitudes (Scheve and Slaughter 2001), then attitude change should only occur when individuals (expect to) enter and leave the labor market, change their sector, or acquire skills. Of course, some theories also emphasize the potential interaction effects between stable characteristics and changing contexts such as in the case of ‘authoritarian dynamic’ (Stenner 2005) or developments in individuals’ sectors of employment (Dancygier and Donnelly 2013).¹³

Nonetheless, we should generally expect the underlying attitudes to be stable if the related

¹²For details on the relationship between partisan identification and immigration attitudes, see Discussion.

¹³Such “middle ground” theories are in principle consistent with either perspective on attitude stability depending on the relevant independent variables.

policies and political institutions have not changed. While it is easy to think of prominent examples of crises (e.g., recent influx of refugees into Europe), international migrants have consistently accounted for only 3 percent of the world’s population over the last 100 years. At the same time, ever since the U.S. Chinese Exclusion Act and the introduction of the passport system, national governments have had the capability to legitimately restrict any entry to their territory. Relatedly, we would also expect attitudes to be stable if the underlying social norms have been unchanged (e.g., Tankard and Paluck 2016).¹⁴ Accordingly, despite a few fluctuations and a seeming rise of positive attitudes among some voter groups over the last several years, the Gallup poll shows little change in the aggregate US immigration attitudes since 1966.¹⁵ In line with these perspectives, there is some evidence from panel data that immigration attitudes are robust to receiving education (Lancee and Sarrasin 2015), moving to an urban cosmopolitan environment (Maxwell 2019), as well as economic shocks (Goldstein and Peters 2014) and refugee crises (Mader and Schoen 2018).

Regardless of immigration attitudes themselves, however, important political outcomes may still be dependent on the *salience* of immigration as a political issue (e.g., Hatton 2017). Unlike the case of attitudinal stability, there is substantial evidence linking contextual factors to changes in the salience of immigration attitudes (e.g., Hopkins 2010; Kaufmann 2019).¹⁶ This distinction between the potential volatility of immigration issue salience and the underlying attitudes is especially important for understanding the dynamic of anti-immigration backlash. According to some scholars, for instance, threatening stimuli such as a refugee crisis can only ‘galvanize’ the core anti-immigration constituency (Claassen and McLaren 2019; Stenner 2005). According to others, however, such ‘situational triggers’ can also generate and ‘mobilize’ anti-immigration attitudes above and beyond those with ‘predisposing factors’ (Sniderman et al. 2004; Hetherington and Weiler 2009). While the

¹⁴The comparison to the historical stability and recent change in LGBT attitudes across advanced democracies is quite instructive here. Given the absence of high-quality longitudinal data, however, the examination of norm change is beyond the scope of this paper.

¹⁵For details, see the latest reports from Gallup (2018).

¹⁶While more research is warranted, a systematic examination of individual immigration salience stability is beyond the scope of this article. For a review of aggregate evidence, see Dennison and Geddes (2018).

galvanization account is consistent with the existing evidence on changing issue salience, the mobilization account necessarily assumes a significant degree of attitude malleability which has not been rigorously tested until this study to our knowledge.

In sum, every account of immigration attitudes must make an assumption about their stability. While some scholars are skeptical that voters may even have coherent policy preferences (Converse 1964), there are theoretical reasons to believe that, while being meaningful, immigration attitudes can be more or less stable. Our research aims to resolve this disagreement by providing the most comprehensive empirical assessment of the stability question to date. Having the well-grounded empirical estimates of immigration attitude stability can then provide important leverage to evaluate several key debates within the literature.

Data sources

To analyze the stability of immigration attitudes, we draw on nine high-quality, population-based panel surveys from the United States and Western Europe: the *Netherlands' Longitudinal Internet Studies for the Social Sciences (LISS) panel*, *British Election Study (BES) panel*, *Norwegian Citizen Panel (NCP)*, *The American Panel Survey (TAPS)*, *Ireland National Election Study (INES)*, *Swiss Household Panel (SHP)*, *German Longitudinal Election Study (GLES)*, *Cooperative Congressional Election Study (CCES)*, and *Voter Study Group (VSG)*. We select panels that conduct at least three waves and span at least two years. Table 1 provides a brief description of the panel surveys used and the specific questions. A detailed discussion of each panel survey can be found in the Appendix.

It is important to highlight some of the strengths of the specific panels used in this article. First, several panels cover major shocks, which many theories suggest should cause shifts in public opinion toward immigration. Specifically, the LISS panel, covers the financial crisis in Europe. The BES, NCP, GLES, and LISS panels cover the European refugee crisis. The BES also covers the 2016 referendum on EU membership in the UK, which caused substantial

Table 1: *Data sources*

Panel	Time (Waves)	Questions and Response Categories
LISS (NL) N = 1,730	2008-2017 (9)	1) "In the Netherlands, some people believe that immigrants are entitled to live here while retaining their own culture. Others feel that they should adapt entirely to Dutch culture. Where would you place yourself." 1-5; 1-retain own culture; 5-adapt entirely 2) "It is good if society consists of people from different cultures." 1-5; 1-agree; 5-disagree 3) "It should be made easier to obtain asylum in the Netherlands." 1-5; 1-agree; 5-disagree 4) "Legally residing foreigners should be entitled to the same social security as Dutch citizens." 1-5; 1-agree; 5-disagree 5) "There are too many people of foreign origin or descent in the Netherlands." 1-5; 1-disagree; 5-agree 6) "It does not help a neighborhood if many people of foreign origin or descent move in." 1-5; 1-disagree; 5-agree
BES (GBR) N = 5,315	2/2014-4/2017 (8)	1) "How much do you agree or disagree with the following statements? Immigrants are a burden on the welfare state." 1-5; 1-disagree; 5-agree 2) "Do you think that immigration undermines or enriches Britain's cultural life?" 1-7; 1-enriches; 7-undermines 3) "Do you think immigration is good or bad for Britain's economy?" 1-7; 1-good; 7-bad
CCES (US) N = 9,494	2010-2014 (3)	1) "Grant legal status to all illegal immigrants who have held jobs and paid taxes for at least 3 years, and not been convicted of any felony crimes?" 1-yes; 2-no 2) "Increase the number of border patrols on the US-Mexican border?" 1-no; 2-yes 3) "Allow police to question anyone they think may be in the country illegally." 1-no; 2-yes
VSG (US) N = 2,576	2011-2018 (3)	1) "Do you think illegal immigrants American society or are a drain?" 1-3; 1-contribute; 3-drain 2) "Do you favor or oppose providing a legal way for illegal immigrants already in the United States to become U.S. citizens?" 1-favor; 2-oppose 3) "Do you think it should be easier or harder for foreigners to immigrate to the US legally than it is currently?" 1-5; 1-easier; 5-harder
NCP (NO) N = 538	10/2014-3/2017 (6) 11/2013-3/2017 (8)	1) "In your opinion how great an advantage or disadvantage is it for Norway that immigrants come to live here?" 1-7; 1-advantage; 7-disadvantage 2) "Refugees should have the same rights to social assistance as Norwegians have even if they are not Norwegian citizens." 1-7; 1-agree; 7-disagree
TAPS (US) N = 359	7/2012-7/2016 (11)	1) "On the whole, do you think immigration is a good thing or a bad thing for this country today?" 0-good; 1-bad
INES (IE) N = 411	2002-2007 (5)	1) "There should be very strict limits in the number of immigrants coming to Ireland." 1-7; 1-disagree; 7-agree
SHP (CH) N = 1,455	1999-2011 (11)	1) "Are you in favor of Switzerland offering foreigners the same opportunities as those offered to Swiss citizens, or in favor of Switzerland offering Swiss citizens better opportunities?" 1-3; 1-in favor; 2-neither; 3-Swiss citizens deserve better opportunities
GLS (DE) N = 1,352	06/2013-10/2017 (10)	1) "Do you think laws on immigration of foreigners should be relaxed or made tougher?" 1-7; 1-relax immigration restrictions; 7-make immigration restrictions tougher

The number of observations indicates the number of respondents that completed all waves in the panel.

media coverage and public debate over immigration. If attitudes remain stable through a major economic contraction and inflow of migrants, they are unlikely to change.

Second, several panels include multiple survey items to measure immigration attitudes

and all panels include more than five waves. For example, the LISS panel includes nine waves and six questions that cover various elements of the issue, such as immigration levels and asylum applications. Previous studies that examine the stability of attitudes often only use single questions and rarely use panels that extend more than five waves,¹⁷ which requires unrealistic and untestable modeling assumptions. By increasing the number of survey items and time-periods, we are able to relax and test these assumptions.

One potential issue arises if the time periods covered in the panels have no variation in the key variables identified in “communication” and “environmental” theories. In other words, without variation in these variables, then we should also see stability in immigration attitudes. However, the time period covered by the panels includes substantial variation in these variables due to the global recession, Brexit, and the refugee crisis. For example, during the referendum on EU membership in the United Kingdom, coverage of immigration tripled and was overwhelming negative (Moore and Ramsay 2017).¹⁸ The refugee crisis caused similar patterns in the Netherlands,¹⁹ Norway,²⁰ and Switzerland.²¹ Moreover, Germany received over a million refugees after Angela Merkel opened its borders in 2015. In the Netherlands, there is also substantial variation in the unemployment rate,²² ranging from a low of 2.75 percent in 2008 to a high of 7.41 percent in 2014.²³ The refugee crisis also caused a substantial influx of migrants across Europe. Thus, these events likely provide a hard test for the stability of immigration attitudes. Even for the countries that did not experience the most severe economic turmoil or influx of migrants, these events still had substantial economic and political effects. Further, given the interconnectedness of the European economy and

¹⁷As a notable exception, Prior (2010) uses several panels with 5+ waves to test political interest’s stability.

¹⁸Coverage increased faster than any other political issue and primarily blamed migrants for economic and social problems. It was the focus of 99 front pages compared to 82 front pages concerning economic issues. While the UK Prime Minister David Cameron promised a referendum in 2013 if the Conservatives won the next general election, the attention toward immigration did not increase until much later.

¹⁹See Jacobs et al. (2018) and McAuliffe and Koser (2017, 277-317).

²⁰See IMEX (2018).

²¹See McAuliffe and Koser (2017, 277-317).

²²Based on data from the European Social Survey, there is also substantial variation in the satisfaction with the economy over time in Switzerland and the Netherlands.

²³See FRED (2018).

society, shocks in one country likely spill-over.²⁴

Empirical strategy and results

Our main empirical exercise is to determine whether individuals have the same immigration attitudes over an extended period of time. A critical issue to confront when evaluating absolute individual-level attitude stability is measurement error. When scholars develop theories, they often posit a relationship between abstract concepts. To test these theories, however, they must first specify concrete indicators to measure these concepts, which introduces measurement error. The concept of immigration attitudes is multi-layered and, therefore, selecting a specific question(s) to measure this concept is difficult. For instance, potential questions can capture general immigration attitudes or focus on a specific group, such as skilled immigrants, refugees, or migrants from certain countries. Furthermore, even for a particular question, there is still some flexibility with regard to question wording and the number of response categories. All of these factors will likely always introduce some amount of measurement error. Random variation can also be introduced by respondent inattentiveness or fatigue, the interview context, and simple typographical errors.

Measurement error is especially problematic when evaluating the stability question because it attenuates observed correlations across time toward zero (Ansolabehere et al. 2008). Therefore, to assess stability in a compelling way, it is necessary to isolate true changes in immigration attitudes from this random variation. We account for this random response variation in our analysis in two major ways. First, we leverage the several panels that use multiple survey questions to measure immigration attitudes. By simply averaging these survey items together, we are able to reduce the variance of the measurement error and, thus, are able to better estimate respondents' underlying immigration attitudes (Ansolabehere et al. 2008). Second, we estimate a measurement model (described below), which evaluates the relative stability of immigration attitudes. As Prior (2010) notes, while perfect relative

²⁴The U.S. panels for also cover substantial variation in environmental theories. Specifically, the VSG panel covers President Trump's campaign and two years in office, where immigration was key policy issue.

stability may coincide with absolute instability when all individuals change by the same degree, we alleviate this concern by also demonstrating the stability of immigration attitudes at the aggregate-level (see the Appendix).²⁵

Broadly, we follow a similar strategy as Prior (2010), who studies the stability of political interest. We evaluate the stability of immigration attitudes through three distinct approaches. First, we provide graphical evidence to establish a baseline for the stability of individual-level immigration attitudes. Second, we directly address potential measurement error using the approaches described above. Third, we explore potential variation in the stability of immigration attitudes. To preview our results, we find that immigration attitudes are remarkably stable, even across major political and economic shocks. We also find that young individuals are more likely to change immigration attitudes, which provides evidence for the impressionable years model.

In the Appendix, we provide a number of robustness checks. First, in the spirit of Achen (1975); Feldman (1989), we investigate the nature of response instability. The results are consistent with the random variation in the data being measurement error.²⁶ Second, following Prior (2010), we estimate dynamic panel models to examine if and how fast immigration attitudes revert back to an individual’s long-term equilibrium after a shock. The evidence suggests that immigration attitudes quickly revert back to the long-term equilibrium. Third, we examine potential issues with attrition. The results from additional robustness checks indicate that attrition is not driving our results.

²⁵The additional empirical tests throughout the paper provide further evidence that aggregate trends are likely not driving our results. We avoid using latent growth models for several reasons due to constraints it imposes on the direction of change. Recent studies also demonstrate that aggregate immigration attitudes in 27 countries from 1981 to 2016 are relatively stable (Caughey et al. 2019).

²⁶In the Appendix, we also address conceptual issues from recent literature on the stability of political attitudes (Freeder et al. 2019).

Individual-level stability of immigration attitudes

One straightforward way to measure the stability of immigration attitudes at the individual level is to examine the share of respondents who give the same response at different times.²⁷ The top panel in Figure 3 reports the percentage of respondents who give the same answer in the first wave and in each subsequent wave. The bottom panel in Figure 3 reports the percentage of respondents who change by strictly less than two response categories (one category or less). The solid line reports the percentage for respondents who completed the first wave and one additional subsequent wave.²⁸ Our results are similar to those in Prior (2010). For the top panel, the percentage providing the same response in each subsequent wave as in the initial wave ranges from 32 percent (INES) to 89 percent (TAPS). For the bottom panel, the percentage of respondents who do not change by more than one response category ranges from 71 percent to 94 percent.

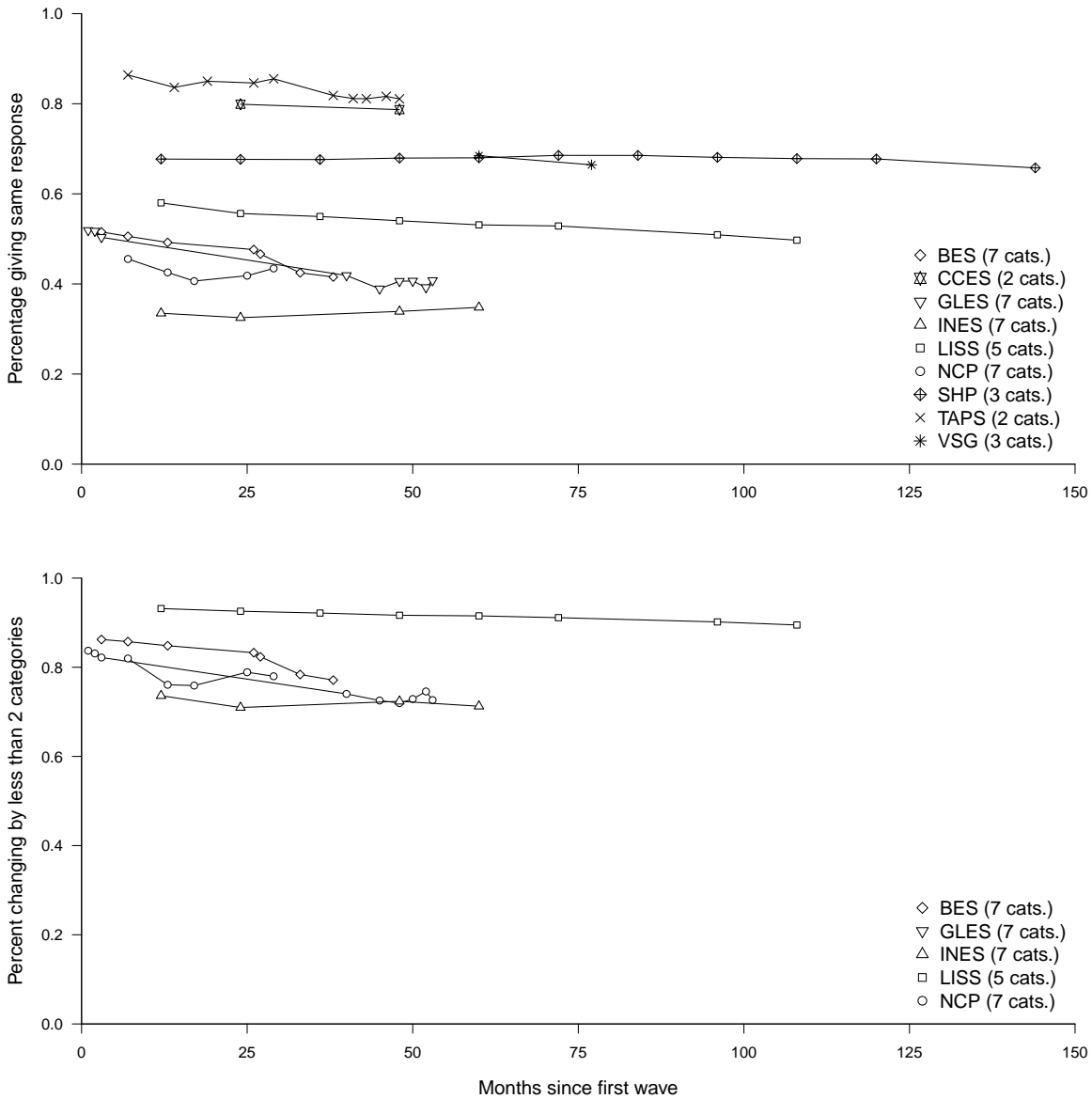
Three points are worth mentioning here.²⁹ First, as the number of categories increase, the stability of immigration attitudes decreases. For example, in the top panel of Figure 3, TAPS, with only two response categories, has the highest percentage of respondents giving the same response in each subsequent wave while the INES, with seven categories, has the lowest percentage. As Prior (2010) notes, it is quite intuitive that the wide range of response categories allow respondents to report smaller changes in (immigration) attitudes. If these attitudes are influenced by the specific context of when the question survey is conducted, a higher number of response categories is able to capture that fluctuation. Though, if a respondent's true immigration attitude is between two categories, she may alternate between the two categories across the waves. This would indicate a change in attitudes; however, this response variation was introduced by the number of response categories and is measurement error (Prior 2010). Alternatively, with a wider range of response of categories, it may be

²⁷The questions used in the BES and VSG panels have different number of categories. We report the median number of categories used.

²⁸There is no substantial difference between respondents who completed all waves and those who completed the first and at least one subsequent wave, which suggests that panel effects do not exist in the data.

²⁹See Prior (2010) for a more in-depth discussion.

Figure 3: *Individual level stability of immigration attitudes*



The top-panel reports the percentage of respondents giving the same response as the first wave. The bottom panel reports the percentage of respondents changing by 1 category or less. Solid-lines are participants that completed the first wave and an additional wave. For panels with multiple-indicators, the average across the survey-items is reported.

harder for respondents to accurately specify their true attitudes. This especially becomes difficult across multiple years. A seven and eight on a ten point scale may represent the same immigration attitude during different years if the specific context changes the meaning of the values. Additionally, respondents who randomly answer survey questions have a higher

probability of selecting the same category when there are fewer options.

Second, as the length of time since the first wave increases, stability in immigration attitudes decreases. However, this decrease is small. The probability of reporting the same answer in the LISS survey in 2008 and 2009 is 0.58. If this represented the true stability of immigration attitudes after one year, it should be expected that the probability of reporting the same attitude after n years is 0.58^n (Prior 2010). Thus, the stability of immigration attitudes between 2008 and 2017 should be $0.58^9 = 0.007$. As Figure 3 clearly illustrates, the empirical probability is much higher (0.50).³⁰

Third, the bottom panel of Figure 3 shows a substantial increase in attitude stability. For the LISS panel, the percentage changing by less than two categories between 2008 and 2009 is 94 percent and this only decreases to 89 percent when comparing 2008 and 2017. This is a drastic improvement in stability when only 58 percent gave the same response in 2008 and 2009.

Immigration attitudes appear to remain stable throughout economic turmoil and the refugee crisis. While measurement error certainly may cause some of the variance in responses, it is also possible that the differences in the specific environment in which the survey question was asked is driving these differences. Nevertheless, the results point to stability around a central tendency. Though, a more rigorous analysis of the stability of immigration attitudes requires explicitly addressing measurement error.

Measurement error and the stability of immigration attitudes

An individual's response to a survey question includes the true score (a latent variable), which is unobservable, and measurement error. To accurately estimate the stability of immigration attitudes it is necessary to isolate true attitude changes from this error. While there are numerous causes of this random response variation, under certain assumptions about the nature of the error, the effect of measurement error on stability estimates can be appro-

³⁰This result does not adjudicate between flexibility or stability in immigration attitudes. Rather it provides evidence that is inconsistent with the broader non-attitudes literature.

Table 2: *Correlations between first and last waves for scales with multiple survey items and average individual items*

Panel	Length of Panel	Number of Items	Correlations Between	
			Scales with Multiple Survey Items	Individual Survey Items (Average)
LISS	2008-2017	6	0.720 (0.749)	0.506 (0.540)
BES	2014-2017	3	0.813 (0.824)	0.712 (0.737)
CCES	2010-2014	3	0.738 (0.738)	0.565 (0.565)
VSG	2011-2018	3	0.760 (0.778)	0.626 (0.667)
NCP	2014-2017	2	0.721 (0.744)	0.630 (0.655)
INES	2002-2007	1		0.363 (0.411)
SHP	1999-2011	1		0.443 (0.472)
TAPS	2012-2016	1		0.587 (0.660)
GLES	2013-2017	1		0.614 (0.619)

Correlations in parentheses are for respondents who completed all waves in the survey.

privately modeled. Our goal in this section is to distinguish the true change in immigration attitudes from variation that is introduced by measurement error. We account for random response variation in our analysis in two ways. First, we follow Ansolabehere et al. (2008) and leverage panel datasets that use multiple survey items to measure immigration attitudes and simply calculate the correlation coefficients between the first and last waves. We are able to reduce the variance in the measurement error and better estimate respondents' true attitudes by simply averaging these survey items together. Second, we estimate latent structural equation models to evaluate the relative stability of immigration attitudes.

First, following Ansolabehere et al. (2008) we examine the stability of immigration attitudes by estimating simple correlations between the first and last waves. For each panel, we construct scales, which are simply the averages between the survey items for each wave. We then calculate the correlations between the first and last waves. Column 4 in Table 2 reports these correlations. In Column 5, we also report the average correlations between the first and last waves when using only a single survey item. Correlations in parentheses are estimates when only using respondents who completed all panel waves.

The correlations when using the scales are much larger compared to the correlations only

using a single survey item. This result is consistent with measurement error being present in the data. Specifically, for the LISS panel, the estimated correlation between 2008 and 2017 when using the scale equals 0.720, while the average correlation when using each question separately is only 0.507. This represents roughly a 42 percent increase in the correlation estimate. Importantly, during this time period, the Netherlands and the EU experienced a significant financial recession and a refugee crisis. The differences between the correlation estimates are smaller for the CCES, BES, NCP, and VSG panels; however, they are still meaningful. The NCP and BES also cover the refugee crisis and, again, the results still provide evidence of relatively high stability. Further, the BES panel spans the referendum on EU membership in the United Kingdom, where immigration played a prominent role.³¹ Overall, these results provide simple and persuasive evidence that immigration attitudes are very stable, even during periods where the previous literature would suggest large changes.

We now move to a more sophisticated analysis of the stability of immigration attitudes by estimating latent structural equation models for the LISS, NCP, and BES panels.³² An individual's response to a survey question is a combination of their true unobservable attitude toward immigration and measurement error. More formally, let $x_{i,t}$ be the respondent's answer to the survey question i at time t and is a function of their latent immigration attitudes (Y_t) and an error term ($\epsilon_{i,t}$),³³

$$x_{i,t} = \alpha_{i,t} * Y_t + \epsilon_{i,t}, \tag{1}$$

which represents the measurement component of the model. The relationship between the latent immigration attitudes at the different values of t is the structural component and is the element of interest in the model. It is modeled as a lag-1 process, which implies that that immigration attitudes at t are a function of the respondent's immigration attitudes at

³¹The VSG also covers President Trump's campaign and initial years in office.

³²We use these panels because they include multiple questions, more than three waves, and span many years.

³³The error term has mean of zero and a variance of $\sigma_{\epsilon_{i,t}}^2$.

$t - 1$ and some disturbance term;

$$Y_t = \beta_{t-1} * Y_{t-1} + \delta_t \quad \text{for } t = 2, 3, \dots, T \quad (2)$$

$$Y_t = \delta_t \quad \text{for } t = 1. \quad (3)$$

After accounting for immigration attitudes at $t - 1$, immigration attitudes at t do not depend on earlier values. By including the disturbance term (δ_t), the model implies that immigration attitudes at time $t - 1$ do not perfectly predict immigration attitudes at time t .³⁴ The β coefficients are the stability estimates and the main quantity of interest. Values closer to one imply a strong relationship between the underlying latent immigration attitudes across waves and values closer to zero imply a weak relationship.

Previous studies analyzing attitude stability often only use three-wave single indicator models developed by Wiley and Wiley (1970). Though, using additional waves and multiple indicators allows us to relax some of the more problematic assumptions. Our approach is superior to much of the previous literature for two reasons. First, the three wave single indicator models are just identified, and thus, need to assume that error variances are constant and not correlated across panels. This assumption is problematic because error variances will decline if respondents become more familiar with the survey question after each wave. Further, errors may be correlated if respondents are consistently confused by the same elements of the question. By extending the number of waves and using multiple indicators we can test and relax these assumptions. Second, since the three wave single indicator model is just identified, it is not able to assess model fit. In contrast, models with more than three waves and multiple indicators are over-identified and can estimate model fit statistics.³⁵

³⁴We assume that the mean of δ_t is zero and estimate its variance σ_δ^2 .

³⁵There are some additional assumptions that we must make. First, we assume that the disturbance terms are uncorrelated, $E[\delta_t, \delta_s] = 0$ for $t \neq s$; second, we assume the disturbance terms are not correlated with latent immigration attitudes in the previous waves, $E[\delta_t, Y_s] = 0$ for $t > s$; third, we assume that the error terms are uncorrelated with latent immigration attitudes, $E[\epsilon_t, Y_t] = 0$; and finally, we assume that the error terms are uncorrelated with the disturbance terms, $E[\epsilon_t, \delta_t] = 0$. In some models we also assume that errors terms within each period and across waves are not correlated; however, we test and relax these assumptions. To estimate the models, we also must constrain one factor loading ($\alpha_{i,t}$) to 1. We constrain the factor with the

Table 3: *Measurement models for stability in immigration attitudes*

	LISS		BES		NCP	
	(1)	(2)	(3)	(4)	(5)	(6)
$\beta_{1,2}$	1.00 (0.02)	0.95 (0.02)	0.97 (0.01)	0.93 (0.01)	1.13 (0.06)	0.95 (0.05)
$\beta_{2,3}$	0.97 (0.02)	0.96 (0.02)	0.99 (0.01)	0.98 (0.01)	0.96 (0.04)	1.01 (0.05)
$\beta_{3,4}$	0.96 (0.02)	0.96 (0.02)	0.98 (0.01)	0.96 (0.01)	1.07 (0.03)	1.04 (0.04)
$\beta_{4,5}$	1.02 (0.02)	1.02 (0.02)	0.98 (0.01)	0.98 (0.01)	0.95 (0.03)	0.93 (0.04)
$\beta_{5,6}$	0.95 (0.02)	0.94 (0.02)	0.99 (0.01)	0.99 (0.01)	0.95 (0.03)	0.92 (0.04)
$\beta_{6,7}$	1.03 (0.02)	1.04 (0.03)	1.00 (0.01)	1.00 (0.01)		
$\beta_{7,8}$	1.00 (0.02)	1.00 (0.02)	0.99 (0.01)	0.98 (0.01)		
$\beta_{8,9}$	0.99 (0.02)	0.99 (0.02)				
χ^2	8001.31	1224.19	8406.42	832.45	1070.66	26.72
df	1369.00	1037.00	245.00	148.00	49.00	20.00
p-value	0.00	0.00	0.00	0.00	0.00	0.14
CFI	0.70	1.00	0.90	0.99	0.83	1.00
TLI	0.69	0.99	0.88	0.99	0.77	0.99
RMSEA	0.10	0.01	0.12	0.03	0.19	0.03
SRMSR	0.08	0.02	0.03	0.01	0.08	0.01
AIC	204602.86	183276.41	374082.68	357217.67	19464.93	18552.11
N	1730	1730	5315	5315	538	538

This table reports the structural coefficients for each panel survey with robust standard errors in parentheses. For columns 1, 3, 5 we make no assumptions about the relationships between error terms for each question. For columns 2, 4, 6 we estimate models that remove the constraints on the relationships between error terms.

We assess model fit through four approaches (Hu and Bentler 1999); the Comparative Fit Index (CFI) and its extension the Tucker and Lewis Index (TLI), where values of 0.95 or higher indicate good model fit; the Standardized Root Mean Square Residual (SRMSR), where values less than 0.08 indicate good model fit; and finally the Root Mean Square Error of Approximation (RMSEA), where values less than 0.06 indicate good fit.

The results are reported in Table 3. In Columns (1), (3), and (5), we estimate models that assume the error terms are independent. The stability coefficients are all near 1.00, indicating high stability from one time period to the next. The fit statistics for the three panels suggest that the models can be improved. None of the models consistently meet highest loading, so all other factors are below 1.

the criteria for the goodness of fit tests. It is likely that the error terms for each question are related across time periods since these questions do not change. If respondents make an error on a specific question during one wave, they will probably make a similar error on the question during other waves. The error terms for the questions within the same time period may also be related. This would be the case if the specific context at the time of the survey influences respondents' answers. We use Modification Indices and Lagrange Multiplier tests to examine potential violations in the samples.³⁶ In Columns (2), (4), and (6), we estimate models removing these constraints. The stability coefficients are all still close to 1.00. Importantly, the fit of the models drastically improve.³⁷ The CFI and TLI values are all 0.99 or higher. Additionally, the RMSEA and SRMSR values are all below 0.03. It appears the models fit the data very well.

Further, measurement models estimate the reliability of individuals' latent immigration attitude, which is the true score variance divided by the total variance in the observed indicator. For all three panels, the reliability estimates are quite high, suggesting internal consistency. Specifically, for the LISS panel the estimates for each wave range from 0.79 to 0.82, for the BES panel the estimates are between 0.87 and 0.93, and for the NCP the estimates are between 0.69 and 0.83.

Overall, the results from the measurement models suggest that immigration attitudes are highly stable. The lowest estimated stability coefficient is only 0.93. Further, of the 40 stability coefficients estimated, only 10 have 95 percent confidence intervals that do not include

³⁶It is worth noting that the Modification Indices and Lagrange Multiplier tests indicate that most of the potential violations are from the errors of a specific question being correlated across waves, which is consistent with measurement error. This is important because if individuals were responding with whatever is on the "top-of-the-head" (Zaller 1992), the error terms within each wave should be correlated.

³⁷As Ansolabehere et al. (2008) note (footnote 2 and 3), it is possible this approach leads to an upward bias in the stability coefficients. This would occur if the average autocorrelation exceeds the correlation between the items. If this were true, the temporal correlations of the latent anti-immigration attitudes would decrease as more items are added. The evidence in Table 2 indicates this is not the case, which suggests that accounting for autocorrelation between the error terms does not cause an upward bias. Indeed, the estimated coefficients decrease once we relax this assumption. While some may argue that relaxing these assumptions is somewhat post-hoc or atheoretical, as outlined above, there are strong theoretical reasons why these error terms may be correlated.

1.00.³⁸ This stability is quite remarkable given the recession and the refugee crisis during this time period. Importantly, the previous literature that emphasizes “communication” and “environmental” variables would suggest that the economic downturn and influx of migrants should cause a change in immigration attitudes. Thus, finding stability in immigration attitudes during this period should strengthen our confidence that attitudes are stable when the economic and political climate are less volatile.

Variation in the stability of immigration attitudes

We examine potential variation in the stability of immigration attitudes using the LISS and BES panels. We focus on two hypotheses derived from the broader public opinion and political socialization literature. We leave other potential heterogeneity in the stability of immigration attitudes to future research. First, a key debate in the literature examining the stability of political attitudes centers on how to conceptualize the random variation in survey responses. While we follow Achen (1975); Ansolabehere et al. (2008) and assume this random variation is measurement error, some scholars suggest that this variation is evidence of non-attitudes or, in other words, respondents randomly answering survey questions (Converse 1964). Converse develops a “black-white” model, which posits that respondents can be divided into two groups: a minority, the politically sophisticated, with stable attitudes, and a large majority, the unsophisticated, with non-attitudes.³⁹

We follow Ansolabehere et al. (2008) and test this hypothesis by examining temporal correlations of immigration attitudes across levels of political sophistication. We measure political sophistication in two ways: education and political knowledge. For education, we divide the population into two groups: a high-education group, which includes individuals with at least a college degree (high sophistication), and a low-education group, which consists

³⁸Measurement models do not always produce estimates near 1.00. See Feldman (1989) and Green (2004).

³⁹The receive-accept-sample (RAS) model developed by Zaller (1992) has similar empirical implications but incorporates competing considerations. Informed voters are more likely to be exposed to elite messages, which are often conflicting. These individuals are more likely to accept a message only if it is consistent with prior attitudes. Less informed voters are exposed to fewer messages but are more likely to accept all of them. As a result, voters with high (low) information should have more (less) stable attitudes.

of those with a high-school degree or less (low sophistication).⁴⁰ For political information, the LISS and BES panels do not include similar measures. The BES panel includes our preferred measure, which is a series of 6 factual questions about the European Union.⁴¹ We divide the respondents into two groups: a high-information group, which consists of respondents who answered at least four questions correctly, and a low-information group, which includes those who correctly answered fewer than four questions.⁴² For the LISS panel we opt for an alternative measure based on self-reported political and news interest.⁴³ The high-information group consists of individuals who indicated they were “very interested” in both the news and political issues and the low-information group includes all other respondents.

The second hypothesis we test is from the political socialization literature. Specifically, the impressionable years hypothesis posits that older adolescents and young adults are developing their core political attitudes. The key empirical implication from this hypothesis is that younger individuals should have lower correlations across time because they are responding to contextual factors. To test this hypothesis we divide the population by age. The older group consists of respondents that are at least 30 years old while the younger group includes respondents that are younger than 30.⁴⁴ The results are reported in Table 4.

There is some evidence of heterogeneity in the stability of immigration attitudes by political sophistication.⁴⁵ The correlations are smaller for respondents in the low education and low political information groups compared to the groups with high education and high political information. Though, these differences are small. The largest differences for the LISS and BES panels are 0.096 and 0.058, respectively. While differences do exist, the

⁴⁰We code individuals who obtained a college education before the final as high sophistication.

⁴¹The BES also includes other factual questions. We opt for these 6 questions to maximize the number of respondents. Further, respondents correctly answered a high percentage of the other questions.

⁴²The mean number of questions answered correctly is 2.94 for all respondents and 3.08 for those who completed at least two waves of immigration questions.

⁴³The question wording for political interest is: “Are you very interested in political topics, fairly interested or not interested?” The question wording for news interest is: “Are you very interested in the news, fairly interested or not interested?”

⁴⁴30 is a conservative cut-off since most studies do not predict attitude change beyond the age of 25 (Alwin and Krosnick 1991).

⁴⁵Importantly, these differences may also be caused by variation in measurement error across groups.

Table 4: *Correlations between first and last waves by education, political information, and age*

LISS	High Educ.	Low Educ.	Diff.	High Info.	Low Info.	Diff.	30 & Older	Below 30	Diff.
Scale	0.727	0.701	0.026	0.778	0.703	0.075	0.748	0.544	0.204
Indiv. Items	0.522	0.479	0.043	0.583	0.487	0.096	0.530	0.363	0.167
Dif	0.205	0.222		0.195	0.216		0.218	0.181	
BES									
Scale	0.809	0.755	0.054	0.838	0.786	0.052	0.814	0.716	0.098
Indiv. Items	0.713	0.655	0.058	0.739	0.683	0.056	0.714	0.613	0.101
Dif	0.096	0.100		0.099	0.103		0.100	0.103	

The table reports the Spearman Rank correlations between the first and last waves of the BES and LISS panels. All respondents who completed the first and last wave are included in the estimated correlations.

correlations are fairly similar across levels of political sophistication. Importantly, it appears that measurement error is a much larger issue. For example, in the LISS panel, the differences between the correlations of the scale and individual survey items are both around 0.20, which is more than two times the difference between the high and low political sophistication groups. The results are similar for the BES panel. Thus, for at least immigration attitudes, there is limited empirical support for Converse’s (1964) “black-white” model.

Finally, we find support for the impressionable years hypothesis. Specifically, respondents below the age of 30 have substantially lower correlations between waves compared to older individuals. The difference between the older and younger group for the LISS panel when using the scale is 0.204. For the BES panel, the difference is 0.098. These differences are similar when using the individual survey items, which suggests the finding is not an artifact of measurement error.

Discussion and conclusion

The previous public opinion literature on immigration has largely ignored the empirical reality and the related theoretical implications of attitude persistence. While most scholars assume that attitudes toward immigration are quite flexible, there has been no comprehensive test of this assumption. In this article, we extensively examined the stability of immigration

attitudes using nine panel surveys and a variety of methodological approaches to account for measurement error. The evidence suggests that immigration attitudes are remarkably persistent and hard to change, even during economic and political crises. Consistent with the political socialization literature, we also find that younger individuals are more likely to change their views toward immigration compared to older adults.

Some scholars may wonder how the stability of attitudes toward immigration compares to that of other political attitudes. Previous research finds that ideology, party identification, political interest, and other basic political preferences are typically highly stable (Achen 1975; Feldman 1989). However, most of these studies use panels that span only a few years (but see Prior 2010). While future research could certainly leverage longer panels to compare the stability of different attitudes, it is outside the scope of this article. Specifically, regardless of whether immigration attitudes are more or less stable compared to other preferences, our main conclusions do not change. To that end, this article also complements recent research demonstrating that immigration attitudes are more stable than party identification in Germany (Mader and Schoen 2018) and that aggregate immigration attitudes are relatively more stable than other economic and social attitudes (Caughey et al. 2018).

Overall, these findings have important implications for a number of theoretical debates in the literature that so far have been largely concerned with cross-sectional rather than temporal variation in immigration attitudes. At the same time, the existing experimental and quasi-experimental research has often focused too narrowly on immediate attitude changes, instead of the enduring effect of a particular shock. Inasmuch as attitudes do not change across time, despite changing economic conditions and demographic context, our results provide more support for explanations that emphasize the role of stable predispositions and political socialization rather than communication or environmental factors. While we do not dispute the validity of previous results on the role of information and ever-changing environment, our results imply that these factors can only explain a small amount of the underlying variation in immigration attitudes. Future research would thus benefit greatly

by explicitly specifying and testing the lasting temporal implications of proposed theories, including those focusing on economic and non-economic variables.⁴⁶

Furthermore, the results also provide support to a broader literature emphasizing the importance of early life experiences in the development of attitudes. Consistent with the “persistence” and impressionable years models, we find evidence that younger individuals experience substantially more response variation in immigration attitudes. If these attitudes begin to crystallize when individuals are young, scholars would benefit from specifying the conditions during this period that influence the attitude development (e.g., Laaker 2019). While our data indicates that young people are more susceptible to change, future research needs to more rigorously explore the specific period when these attitudes begin to develop.

Finally, our results indicate that the recent rise of “populist” parties cannot be explained by alluding to the change of immigration attitudes (also see Bonikowski 2017). Consequently, political behavior scholars can benefit from explicitly differentiating between the role of individual immigration attitudes and issue salience as independent factors (e.g., see Dennison and Geddes 2018). At the same time, our results are also more in line with anti-immigration backlash theories that emphasize the mere ‘galvanizing’ rather than the broader ‘mobilizing’ potential of changing demographics and other contextual shocks (also see Claassen and McLaren 2019). In this respect, while it is possible that successful government efforts to curb international labor mobility may shift voter concerns to other issues, our results suggest that simply reducing immigration does not necessarily improve the attitudes of those who already oppose it and vote for populist parties.

Of course, our research is not without limitations. First, our conclusions on the stability of immigration attitudes after correcting for measurement error are potentially challenged by questions concerning the source and meaning of random error (Zaller 1992; Feldman and Zaller 1992).⁴⁷ Nonetheless, we provide strong evidence that the existing random variation

⁴⁶Much of the public opinion literature in international relations and comparative politics has ignored the extensive debates on the nature of public opinion.

⁴⁷Response instability may arise because individuals are influenced by the contextual factors at the time of the survey. Individuals may have an underlying distribution of potential answers that they draw from when

is in fact measurement error by showing that the stability of immigration attitudes increases when using multiple survey items. Moreover, this variation is rather small, suggesting that whether we call this random component “measurement error” or “meaningful variation” does not affect the conclusion of stability.

Furthermore, our work does not examine other changes that may be occurring at the individual level such as partisanship. As political parties’ stake out divergent positions on immigration, the impact of new policy stances may lead to shifts in individual party affiliation similar to how in the U.S. changing positions on civil rights led many whites to defect from the Democratic party (e.g., Carmines and Stimson 1990). Most prominently, Abrajano and Hajnal (2015) argue that changing immigration and ethnic contexts cause anti-immigration voters to defect from the Democratic to the Republican party (for counter-evidence, see Hill et al. 2019).⁴⁸ While our results run counter to theories emphasizing the role elite cues play in influencing the attitudes among the mass public (Lenz 2012), it is possible that some loyal partisans can adopt a new immigration position from their party if they do not feel strongly about the issue (for the general evidence of this dynamic, see Carsey and Layman 2006). But while some research exists, further examination of how enduring opinions can relate to partisan change may be warranted.

Finally, the available data do not allow differentiating between (self-reported) attitudes and the underlying social norms.⁴⁹ For instance, stability may be a result of the constant legal environment regarding immigration in most countries (Tankard and Paluck 2016). While many of the shocks examined in the literature do not seem to have a lasting effect on immigration views, this may not apply to truly systemic changes such as related to major wars, regime changes, and political realignments. Therefore, our results do not at all imply that immigration attitudes cannot be changed in principle or under alternative policies and

responding to survey questions. Under this model, all respondents have some central tendency in their response, but also have variance. While measurement models treat this variance as random error, Feldman and Zaller (1992) argue that it is substantively important variation that should not be ignored.

⁴⁸For a related argument in the context of Germany after the refugee crisis, see Mader and Schoen (2018).

⁴⁹While our empirical analysis is based on the best available data, one may argue that even a 12-year panel may be too short to study long-term change.

institutions (e.g., Kustov 2019a; Caplan 2019). To that end, there is some recent evidence of the attitudinal change (counter-intuitively positive) over the last few years in the US (Caplan 2019) and the UK (Schwartz et al. 2020), although it is still unclear how robust these shifts are. Similar to our analysis of the stability across age groups, there is also a possibility of heterogeneity among other groups of voters. For example, Lindstam et al. (2019) argue that those with a mixed conception of national identity have more malleable immigration attitudes due to their greater sensitivity to framing and contextual factors.

All these limitations notwithstanding, the study provides the most comprehensive evidence of the attitudinal stability on immigration with important implications for the literature. Most prominently, our findings imply that scholars should exercise caution in using communication and environmental factors (such as information or economic conditions) to explain immigration attitudes or using immigration attitudes to explain political change (such as the rise of populist parties). More broadly, our research suggests that public opinion and immigration scholars alike would benefit from examining the long-term temporal variation of individual attitudes.

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Online Appendix

The Stability of Immigration Attitudes: Evidence and Implications

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Appendix A Data descriptions

A.1 Description of coding procedure for Figure 1

We collected articles from the past 25 years that covered the issue of public opinion and immigration views. The articles were from journals in the field of political science, economics, and sociology. They were selected by examining highly cited articles in the field of immigration, as well as recently cited articles from journals such the Annual Review of Political Science. Articles were coded as flexible if they emphasized that immigration views were easily malleable and could be shifted by interventions that were not attributed to relatively stable identities. For example, if a media prime could change an individual's view of immigration this would mean that immigration views are flexible. Articles were coded as stable if they suggested that immigration attitudes were determined by deeply held predispositions or identities. For example, articles that emphasize the role of partisan identity or one's social/economic class are coded as stable.

A.2 Description of panel surveys

*Netherlands' Longitudinal Internet Studies for the Social Sciences (LISS) panel, 2008-2017.*¹

The LISS panel is a nationally representative sample of Dutch individuals (16 years or older). It consists of 4,500 households and 7,000 individuals. There are nine waves. For our purposes, 6,690 respondents answered the immigration questions in the first wave. Of those respondents, 1,730 completed all of the following waves used in this study while 1,970 respondents completed only the first wave. The LISS panel asks six questions that measure immigration attitudes each with five response categories.² The questions cover a variety of issues such as immigration levels and access to welfare benefits.

British Election Study (BES) panel, February 2014 - April 2017. The BES panel is a nationally representative survey that includes eight waves (18 years or older). For our purposes, 27,937 respondents answered the immigration questions in the first wave. Of those respondents, 5,315 completed all of the following waves used in this study while 1,970 respondents completed only the first wave. Three survey items measure immigration attitudes that concern the effect of immigration on the economy, culture, and the welfare system. While the panel is relatively short, it does encompass the 2015 refugee crisis and the 2016 referendum on EU membership, which caused substantial media coverage and public debate over immigration. Furthermore, it provides multiple waves each year with a large sample size, which allows for a more fine-grained analysis.

*Swiss Household Panel (SHP), 1999-2011.*³ The SHP is an annual nationally representative survey of Swiss citizens (13 years or older). For our purposes, 7,460 respondents answered the immigration question in the first wave. Of those respondents, 1,455 completed

¹The survey started in late 2007 and early 2008. The respondents were not asked questions concerning immigration in 2015.

²The panel also asks three other questions related to immigration attitudes; however, we exclude these because they indicate second-order attitudes (how others perceive foreigners). The specific question wordings that are excluded are 1) "It is difficult for a foreigner to be accepted in the Netherlands while retaining his/her own culture." 2) "People of foreign origin or descent are not accepted in the Netherlands." 3) "Some sectors of the economy can only continue to function because people of foreign origin or descent work there."

³The question was not fielded in 2010.

all of the following waves used in this study while 978 respondents completed only the first wave. There are twelve waves that contain a single question concerning the opportunities immigrants should be given compared to Swiss citizens.

*Ireland National Election Study (INES), 2002-2007.*⁴ The INES panel was an annual nationally representative survey (18 years or older) consisting of five waves. The panel encompasses the 2002 and 2007 general elections in Ireland and the 2004 European Parliament elections. For our purposes, 2,680 respondents answered the immigration question in the first wave. Of those respondents, 411 completed all of the following waves used in this study while 881 respondents completed only the first wave. It includes one questions with seven response categories concerning immigration levels.

Norwegian Citizen Panel (NCP), October 2014 - March 2017. The NCP is an online nationally representative survey (18 years or older). We use six waves that include two questions related to immigration.⁵ The questions measure attitudes concerning the general effect of immigrants on the country and the rights of refugees. For our purposes, 1,673 respondents answered the immigration questions in the first wave. Of those respondents, 538 completed all of the following waves used in this study while 319 respondents completed only the first wave.

The American Panel Survey (TAPS), July 2012 - July 2016. TAPS is a monthly online survey of a national probability sample of about 2,000 respondents in the United States (18 years or older). The panel asks one question concerning the general effect of immigration in eleven waves. For our purposes, 1,135 respondents answered the immigration question in the first wave. Of those respondents, 359 completed all of the following waves used in this study while 108 respondents completed only the first wave.

The German Longitudinal Election Survey (GLES), June 2013 - October 2017. Respondents were initially drawn from a pre-recruited online panel using a quota scheme for age,

⁴The panel was not administered in 2005.

⁵While the panel began in November 2013, our analysis starts in October 2014. First, one of the questions was not used until this wave. Second, the panel recruited additional respondents to address attrition issues.

sex, and education. For our purposes, 5,222 respondents answered the immigration questions in the first wave. Of those respondents, 1,352 completed all of the following waves used in this study while 454 respondents completed only the first wave. The panel asks one question about whether immigration laws should be relaxed or made tougher.

The Cooperative Congressional Election Study (CCES), 2010 - 2014. The CCES is nationally-representative 3-wave panel conducted over the Internet by YouGov. The panel includes a subset of 9,497 respondents from the larger cross-sectional survey. As the CCES Guide describes, attrition was not a substantial issue. While non-voters and minority respondents were less likely to be re-interviewed, the large sample size reduces the potential issues. The CCES includes three questions on immigration attitudes.

The Voter Study Group (VSG), 2011 - 2018. The VSG is nationally-representative 3-wave panel. For our purposes, 5,730 respondents answered the immigration questions in the first wave. Of those respondents, 2,576 completed all of the following waves used in this study while 541 respondents completed only the first wave. The VSG panel includes three questions on immigration attitudes.

A.3 Description of cross-sectional surveys

American National Election Studies (ANES), 1992-2012. The specific question wording used in the ANES is “Do you think the number of immigrants from foreign countries who are permitted to come to the United States to live should be [increased a lot, increased a little, left the same as it is now, decreased a little, or decreased a lot / decreased a lot, decreased a little, left the same as it is now, increased a little, or increased a lot]?”

European Social Survey (ESS), 2002-2014. The ESS asks six questions. We create an index that is the average score across the six questions. The Cronbach’s Alpha coefficient is 0.88, which suggests that the questions are measuring the same underlying concept. The question wordings are “1) To what extent do you think [country] should allow people of the same race or ethnic group as most [country] people to come and live here?” “2) To what extent do you think [country] should allow people of a different race or ethnic group from most [country] people?” “3) To what extent do you think [country] should allow people from the poorer countries outside Europe?” “4) “Would you say it is generally bad or good for [country]’s economy that people come to live here from other countries?” “5) Would you say that [country]’s cultural life is generally undermined/enriched by people coming to live here from other countries?” “6) Is [country] made a worse/better place to live by people coming to live here from other countries?” For questions 1-3, respondents could select from four options: allow many, allow some, allow a few, and allow none. For questions 4-6, there were originally 11 categories. We report the aggregate mean, but the results for the each country are similar. We include Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, the Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Switzerland, and the United Kingdom.

Appendix B Alternative tests of stability

B.1 Aggregate-level stability of immigration attitudes

There is some previous evidence suggesting that immigration attitudes are generally stable at the aggregate level (e.g., Hainmueller et al. 2015). In Figure B1, we provide the most comprehensive evidence of this stability by simply calculating the overall mean of immigration attitudes across the different time-periods. In addition to the panel surveys described above, we also use data from two cross-sectional surveys: the American National Election Study (ANES) and the European Social Survey (ESS). We transform all datasets to have an interval from zero to one.⁶ The dashed-lines are results when using all respondents in each cross-section. The solid-lines report the results when the sample is restricted to participants that completed all waves. The differences between aggregate immigration attitudes for those who completed all panels and the cross-sectional estimates are quite small and have similar fluctuations, which suggest that panel effects are likely not an issue.

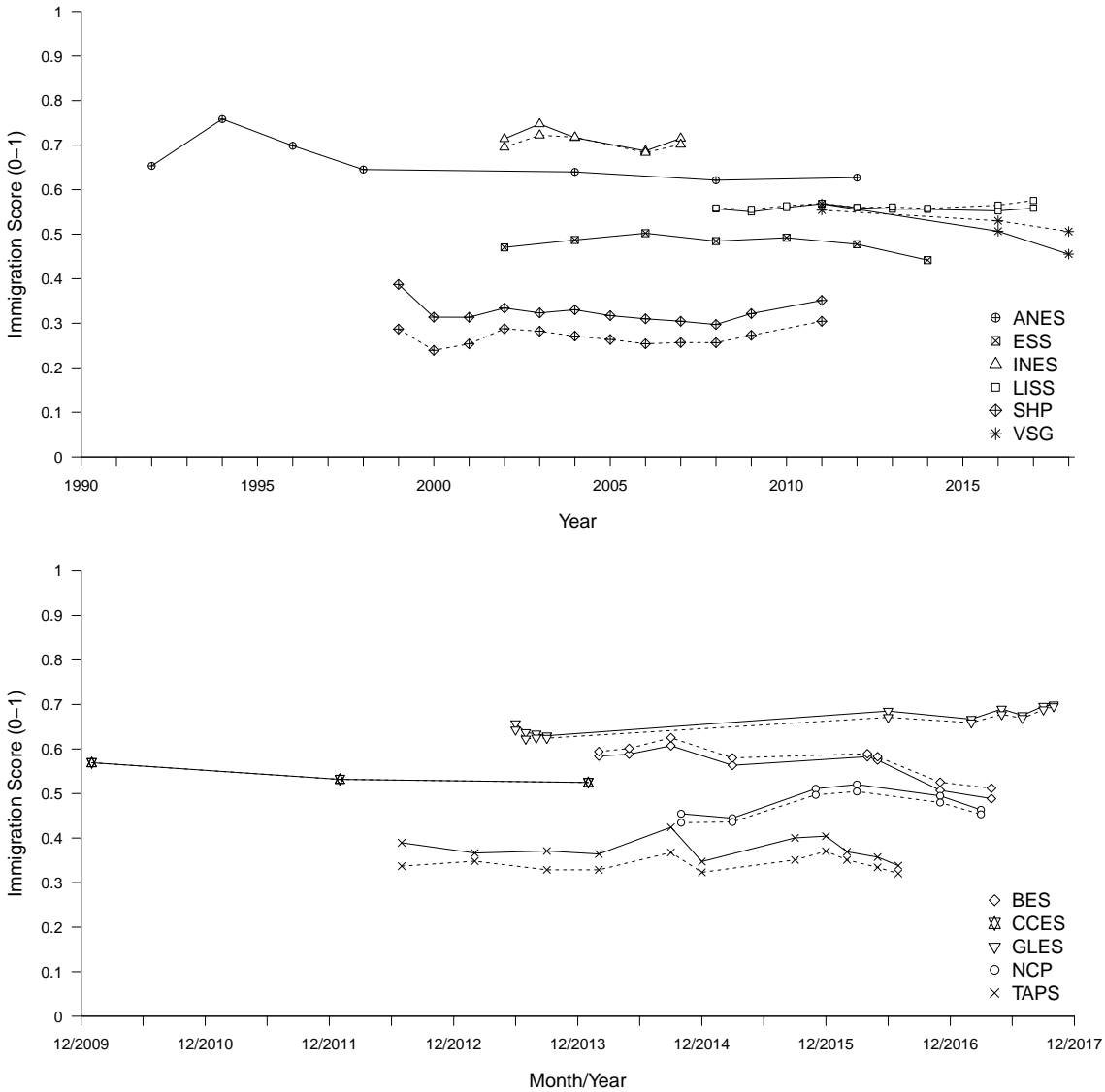
In the top panel, the ANES is the only survey that shows any large shift at the aggregate level. Though, the only substantial shift is when the immigration score jumps from 0.65 in 1992 to 0.76 in 1994. Otherwise, the score ranges from 0.62 (2008) to 0.70 (1996). For the SHP, the immigration score for respondents that completed all waves is consistently about 0.10 lower than the the score for each independent cross-section. However, the overall fluctuation patterns are quite similar, which suggests that there is no substantial difference in stability. The difference between the minimum and maximum score is 0.06 for participants who completed all of the waves and 0.09 for the independent cross-sections.

In the top panel, immigration attitudes also appear to be quite stable with no major fluctuations in any of the panels at the aggregate level. Additionally, there is no evidence of panel effects given the estimates of the immigration scores when restricting the sample to

⁶Weights are used for the cross-sectional surveys. Not all of the panels provide survey weights. However, the results are similar when weights are used for the panels that provide them.

respondents who completed all waves and the independent cross-sections are quite similar. Overall, at the aggregate level, immigration attitudes are quite stable across the panels.

Figure B1: *Aggregate Level Stability of Immigration Attitudes in the United States and Europe*

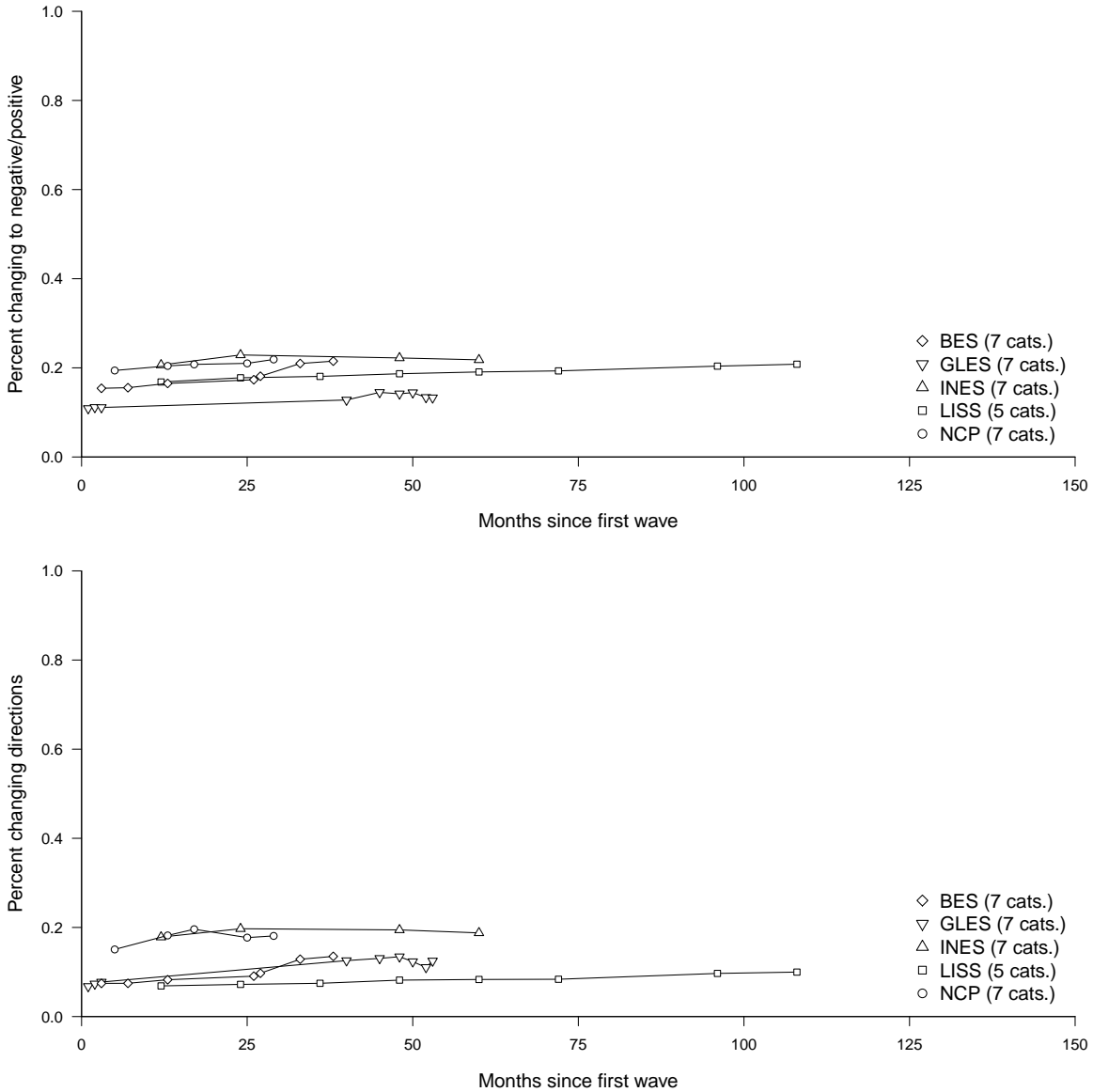


Solid-lines are participants that completed every wave of the panel. Dashed-lines are cross-sectional estimates that include all respondents.

B.2 Percentage of respondents changing directions

In the main text, we report the percentage of respondents who give the same answer in the first wave and in each subsequent wave and the percentage of respondents who change by 1 category or less. In this section, we report the percentage of respondents who have gone through a more significant change in the *direction* of their immigration attitudes. The top panel in Figure B2 reports the percentage of respondents who change from holding positive/negative attitude to holding positive/negative attitude toward immigration (including individuals who provide the median response category). In the bottom panel of Figure B2 we ignore individuals who provide the median response category and simply look at respondents who change from holding a positive to negative attitude or negative to positive attitude. Given the relatively low incidence of observed shifts across panels, the substantive conclusions are similar to those derived from Figure 3 in the main text.

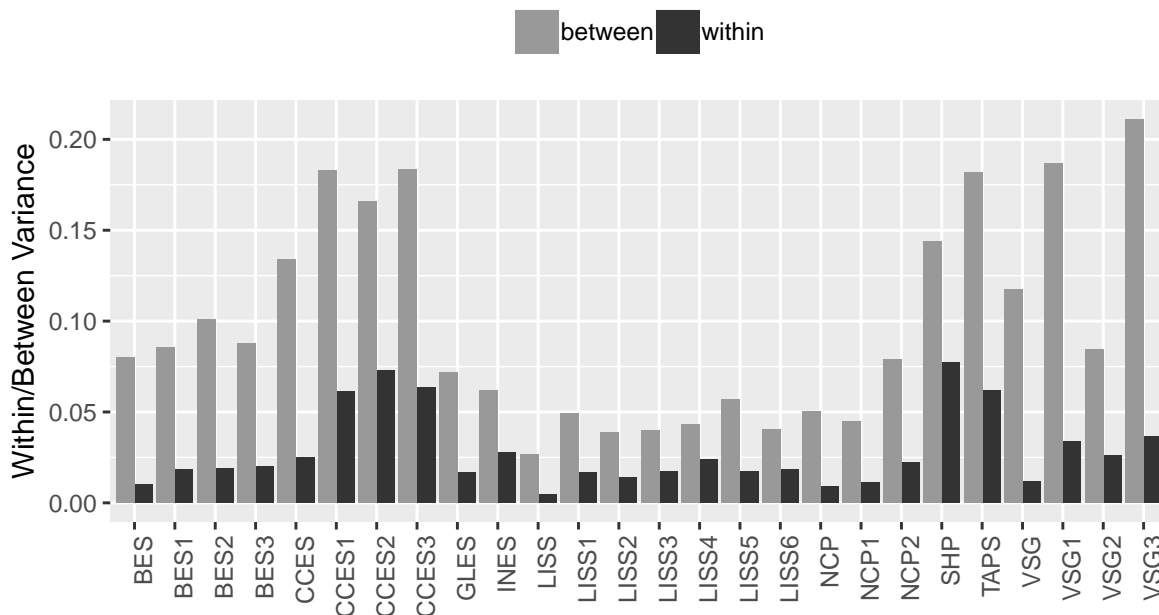
Figure B2: *Major Individual Shifts of Immigration Attitudes in the United States and Europe*



The panel reports the average percentage of respondents that switch to either negative or positive immigration attitude accounting for individuals giving the median response category. The bottom panel reports the percentage of respondents who change from positive to negative or negative to positive and ignores individuals who give the median response category. For panels with multiple-indicators, the average across the survey-items is reported.

B.3 Examining between and within variation

Figure B3: *Within Variation Across Questions and Panels*



All variables are scaled to have a range from 0 to 1.

An alternative way to examine the stability of immigration attitudes is to examine the variance of immigration attitudes within each respondent's answers.⁷ On the one hand, theories emphasizing the role of the mass media or economic conditions indicate there should be a significant amount of within-person variance. On the other hand, theories that emphasize early socialization or predispositions suggest larger between variation and minimal within variation. Figure B3 illustrates the average within and between variation of respondents' answers across questions for each panel.⁸ The original survey questions are scaled to have a range from 0 to 1 for easier interpretation. A few points are worth emphasizing. First, on average, the within variation across questions and panels is small. No question has a within respondent variation that exceeds 0.08. These values also decrease when using the

⁷This is a similar exercise to examining the response stability estimates.

⁸These were calculated using the xtsum command in stata.

scale constructs. This suggests that respondents' individual answers do not vary across the different waves. Second, the between variation is substantially larger compared to the within variation. For example, for the BES scale, the between variation is about 8 times larger than the within variation. This suggests that that most of the variation in immigration attitudes is across respondents rather than within respondents' own individual attitudes. Overall, this provides further evidence that there is little variation to explain within respondents' immigration attitudes overtime.

B.4 Dynamic panel models

We follow Prior (2010) and also estimate dynamic panel models. A dynamic model allows respondent i 's immigration attitudes in year t ($Y_{i,t}$) to be a function of their immigration attitudes in the previous year ($Y_{i,t-1}$), an individual specific mean (α_i), yearly deviations that affect all respondents (μ_t), and an error term⁹ ($\epsilon_{i,t}$):

$$Y_{i,t} = \lambda * Y_{i,t-1} + \alpha_i + \mu_t + \epsilon_{i,t} \quad (1)$$

The long-term equilibrium of immigration attitudes is $\alpha/(1 - \lambda)$, where λ represents the length of time a deviation from the equilibrium persists. When λ is close to zero, it suggests that respondents' immigration attitudes in the previous year ($Y_{i,t-1}$) have little to no effect on current immigration attitudes after accounting for respondents' long-term immigration attitudes and the disturbance term from that year. In other words, when a shock occurs that increases anti-immigration attitudes and λ is 0, the effect of the shock disappears within the year. When the absolute value of λ is greater than zero, it suggests that shocks in the previous year have a lasting effect on current immigration attitudes. When λ is close to 1, it implies respondents will never return to their mean level of immigration attitudes. Thus, if immigration attitudes are stable, we should expect that λ is near zero.

Importantly, these models allow us to examine the long-term stability rather than short-term stability. The measurement models in the main analysis estimate the relative stability of immigration attitudes directly between consecutive survey-waves. Essentially, dynamic panel models assess if and how fast immigration attitudes return to a person's long-term equilibrium after a shock occurs. We estimate these models using a generalized methods-of-moments (GMM) estimator developed by Arellano and Bond (1991). This approach removes unobserved heterogeneity by differencing equation (1), which eliminates the individual inter-

⁹It is assumed that the error term is randomly distributed with a mean equal to zero and not serially correlated.

Table B1: *Dynamic Panel Models for Immigration Attitudes (Arellano-Bond GMM Estimator)*

	LISS		BES	
	(1)	(2)	(3)	(4)
λ	0.033 (0.019)	0.021 (0.023)	0.034 (0.016)	0.042 (0.018)
Autocorrelation Tests				
1st-Order	-22.200 (0.000)	-20.000 (0.000)	-29.710 (0.000)	-27.770 (0.000)
2nd-Order	-0.730 (0.466)	-1.330 (0.183)	-0.530 (0.599)	-0.130 (0.898)
Hansen Test	20.06 (0.454)	13.35 (0.205)	18.440 (0.187)	11.750 (0.175)
Observations	12110	12110	31890	31890
Respondents	1730	1730	5315	5315

cept (α_i). Further, it instruments ΔY with lagged values of Y to account for any correlation between the $\Delta Y_{i,t-1}$ and $\Delta \epsilon_{i,t}$.

The estimates of λ are reported in Table B1. In Columns (1) and (3), we estimate models that allow all lagged values as instruments, and in columns (2) and (4), we only allow a maximum of three lagged values as instruments. If $\epsilon_{i,t}$ are not serially correlated, then the errors in the differenced model should have a negative first-order autocorrelation, but not second-order (AR 2) autocorrelation. This is true for both the LISS and BES panels. We also use the Hansen test, which tests whether the overidentifying restrictions of the models are valid and robust to heteroskedasticity. The results across the models suggest that autocorrelation in the error term is not an issue. There is a possibility of a specification violation in the Hansen test if there are too many instruments. However, the results are robust when limiting the number of instruments to only three lagged values.

The estimates for λ suggest that immigration attitudes are stable in the long-term. None of the estimated coefficients are significant for the LISS panel and all are near zero. For the BES panel, both coefficients are significant at the $p < 0.05$ level. However, the estimated

coefficients are quite small and still indicate that immigration attitudes are highly stable in the long-term. Specifically, the largest deviation (μ_t) from a single wave in the BES panel is 0.74 (Wave 8). Estimates of λ suggest that the effect of this shock is less than 0.03 after the next wave.

Appendix C Methodological and theoretical concerns

C.1 Internal consistency and PCA of multi-item scales

A potential concern is whether each of the separate questions in the multi-item scales are measuring the same underlying concept (or whether they are internally consistent). In this section, we provide additional evidence to demonstrate the measures using multiple items have high internal consistency. Specifically, we use two standard tests to evaluate the internal consistency of the measures: corrected total-item correlations and the Cronbach's Alpha. The results are reported in Table C2. The top panel reports the total-item correlations for each wave, which is the average correlation between each item and the total score corrected for overlap and scale reliability. While there is no definitive threshold, the correlations should be larger than 0.50. Across the waves and panels, the average correlations are greater than 0.60. The bottom panel reports the Cronbach's Alpha for each wave. The measure incorporates the correlation between each item and the total score and then compares that to the variance for all individual item scores. Again, while cut-offs are largely arbitrary, scholars suggest values larger than 0.70 are acceptable. 26 of the 29 estimates are larger than or equal to 0.70, and the three values are relatively close 0.70. Overall, the evidence suggests that the multi-item scales are internally consistent.

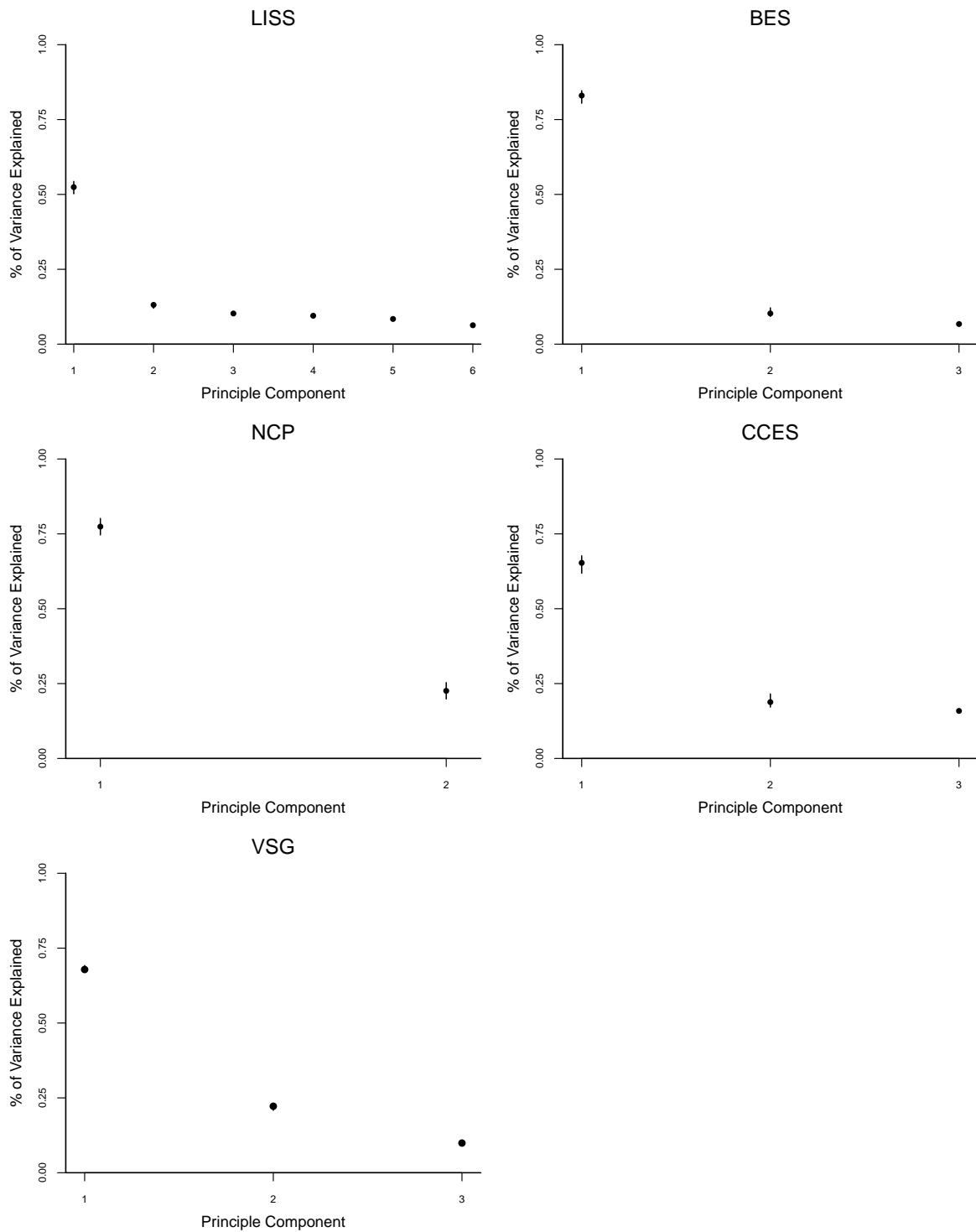
Finally, to further demonstrate that the items are best captured by a single latent component, we use principle component analysis (PCA) on the items for each wave. Figure C4 plots the mean percentage of the total variance explained by each component across the panel surveys. The lines are the minimum and maximum values. Across the panels, it is clear that the first component explains substantially more of the total variance than the other components. For instance, for the BES, the first component, on average, explains 83% of the total variance across the waves while the second and third component only explain 10% and 7%, respectively.

Table C2: *Internal Consistency*

Item-Total Correlations					
Wave	LISS	BES	NCP	CCES	VSG
Number of Items	6	3	2	3	3
Wave 1	0.62	0.854	0.64	0.61	0.68
Wave 2	0.64	0.855	0.61	0.66	0.68
Wave 3	0.64	0.861	0.69	0.68	0.70
Wave 4	0.64	0.846	0.70		
Wave 5	0.64	0.856	0.64		
Wave 6	0.64	0.846	0.64		
Wave 7	0.64	0.820			
Wave 8	0.66	0.828			
Wave 9	0.64				
Cronbach's Alpha					
Wave 1	0.80	0.905	0.70	0.69	0.75
Wave 2	0.81	0.906	0.66	0.75	0.75
Wave 3	0.81	0.910	0.75	0.76	0.77
Wave 4	0.82	0.899	0.75		
Wave 5	0.81	0.907	0.69		
Wave 6	0.81	0.899	0.70		
Wave 7	0.81	0.879			
Wave 8	0.83	0.886			
Wave 9	0.82				

The top panel reports the corrected Item-total correlations for each wave. The bottom panel reports the Cronbach's Alpha for each wave.

Figure C4: *Principle Component Analysis for Multi-Item Scales.*



The figure shows the percent of the total variance explained by each component averaged across the waves.

C.2 Nature of variation in the stability of immigration attitudes

An extensive literature in American politics suggests that respondents may not hold meaningful opinions and rather have “non-attitudes” on major policy issues (see Converse 1964; Feldman and Zaller 1992; Zaller 1992).

An important critique of the non-attitudes argument takes issue with Converse’s implicit assumption that there is no measurement error in survey responses. Under this view, individuals have stable and coherent attitudes, but confusing survey questions, ambiguous response categories, respondent inattentiveness, the interview context, or simple typographical errors introduce measurement error which attenuates correlation estimates toward zero. Several methods such as measurement models¹⁰ and multiple survey items (Ansolabehere et al. 2008) have been used to account for this random variation and often find that attitudes are stable. As Feldman (1989) notes, the results from these measurement models are consistent with Converse’s argument. Both results demonstrate that there are minimal real attitude changes and a large random error component. The conclusions one draws depend on the assumptions about the nature of this random error component.¹¹

The structural equation models in the main analysis assume that the random variation in the data is measurement error; however, other scholars attribute this random component to non-attitudes (Converse and Pierce 1986). We explore this possibility by examining the nature of the variation in the stability of immigration attitudes. Our goal is distinguish between these competing explanations by attempting to directly model this random error component. In other words, are we able to explain the variation in response instability? We limit our analysis to the LISS and BES panels because they include the necessary predictor

¹⁰For instance, see Heise (1969); Wiley and Wiley (1970); Achen (1975); Erikson (1978, 1979); Jackson (1983).

¹¹Further tests developed to differentiate these conclusions find minimal if no support for the non-attitudes explanation (Achen 1975; Ansolabehere et al. 2008; Erikson 1979; Feldman 1989; Zaller 1990; Kinder and Kalmoe 2017). Not all findings, however, are consistent with measurement error. For instance, some scholars find that elites exhibit much more stability than the general public (also see Converse and Pierce 1986; Jennings 1992; Hill and Kriesi 2001; Hill 2001).

variables.¹²

Following Feldman (1989); Erikson (1979), we derive an estimate of response instability by computing the variance of the responses for each individual.¹³ We model this variation directly by regressing response instability on a series of predictor variables.¹⁴ The black-and-white model proposed by Converse posits that respondents can be divided into two groups: a minority with stable attitudes and a large majority with non-attitudes. Converse proposes a few ways to divide the population into these two groups, such as political sophistication¹⁵ or salience/centrality of the issue. While the BES and LISS panels do not include identical questions, both provide adequate measures to test Converse’s arguments.

For the BES panel, we include four variables to test the black-and-white model. First, we construct a variable to test Converse’s claim that instability is a function of issue salience. During four waves, respondents were asked to indicate the most important issue facing the country at the time. The variable equals one if the respondent indicated that immigration is the most important issue for all four waves. Next, we create a variable to measure political knowledge. The BES asks respondents to answer six factual questions about the European Union. To construct the variable we simply sum the number of correct answers for each respondent. We rescale the variable to have a range from zero to one. We also included variables to measure respondents’ education and political attention. Education has three categories (0 = did not finish HS, 0.5 = HS grad, 1 = college grad) and political attention ranges from zero (min. interest) to one (max. interest) with eleven response categories.

For the LISS panel, we include several variables to measure interest and attention to

¹²Further, for this analysis, we only exclude respondents if they are missing more than five (four) waves for the LISS (BES) panels. This yields a larger N and arguably reduces potential issues caused by panel attrition.

¹³An alternative technique is to derive an estimate directly from the measurement model by using the error variance from the residuals of the true scores (Achen 1975; Feldman 1989). When the measurement model is correctly specified, this strategy produces an unbiased estimator of the error variance, but is noisy since it relies on the residuals. Since we find no evidence of attitude instability, we rely on the variance in responses because it produces a more reliable estimate of the response instability Feldman (1989).

¹⁴Since many of these variables are measured during each wave, we take the mean response for each respondent. This helps to ensure any null results are not caused by measurement error.

¹⁵Previous analyses have operationalized political sophistication in various ways, such as education, knowledge, political interest/attention, and/or political involvement.

Table C3: Distribution of Response Instability Estimates

LISS Panel	Mean	SD	Min.	Max.	80th	90th
Scale	0.080	0.080	0.000	1.050	0.120	0.170
Adapt to Culture	0.300	0.280	0.000	2.670	0.470	0.670
Cultural Diversity	0.250	0.250	0.000	2.620	0.400	0.540
Asylum	0.310	0.340	0.000	3.280	0.470	0.690
Welfare Access	0.430	0.450	0.000	3.560	0.690	1.000
Too Many Foreigners	0.320	0.350	0.000	3.920	0.470	0.670
Neighbor Diversity	0.330	0.350	0.000	3.920	0.480	0.690
BES Panel	Mean	SD	Min.	Max.	80th	90th
Scale	0.410	0.480	0.000	6.670	0.600	0.890
Cultural Effect	0.780	0.960	0.000	9.000	1.230	1.890
Economic Effect	0.770	0.930	0.000	9.000	1.200	1.840
Welfare Effect	0.730	0.860	0.000	7.530	1.090	1.600

Calculations include respondents who are not missing more than five (four) waves for the LISS (BES) panel.

politics; respondents' interest in the news (0 = min interest, 1 = max interest, 3 categories); interest in politics (0 = min interest, 1 = max interest, 3 categories); whether they read domestic and international news articles (0 = min read, 1 = max read, 8 categories); and whether they are comfortable discussing politics (0 = min comfortable, 1 = max comfortable, 3 categories). We also include a variable to measure whether the respondent completed higher education (0 = no higher education, 1 = completed higher education).

Finally, for both panels, we also include several other variables: gender (female), a linear and quadratic term for age, mean immigration score, and ideology. We rescale ideology and the immigration score to have a range from zero to one. For the BES panel we also include a variable to measure the ethnicity of the respondent, which equals one if the respondent is white and British and zero otherwise.¹⁶

¹⁶As Feldman (1989) notes, it is likely that the stability of some attitude is a function of the degree of extremity in the respondent's answers. Specifically, extreme positions may indicate a more developed or strongly held belief. We do not include these as predictor variables because they are post-treatment and will likely bias the coefficients of interest. In fact, Feldman argues that the political sophistication and salience variables operate indirectly through extremity. Further, the relationship of extreme positions and stability may result from various other measurement error issues (ibid).

Table C3 reports the distributions of the instability estimates for each separate question and the scales from the BES and LISS panels. For each measure, there are respondents who give completely consistent answers across the waves and for two items in the BES panel at least one individual produced the highest possible variance, which would occur if a respondent alternated between the opposite ends of the survey scale. Three points are worth emphasizing. First, the averages of the response instability estimates are substantially lower across each of the questions than what would be expected if a large majority of the population were answering randomly. Specifically, if the black-white model were correct, the average instability estimates should be near 2.00 and (4.00) for the LISS (BES) panel. The averages of the response instability estimates are substantially lower across each of the questions. For the measures included in the LISS panel, 80 percent of the respondents have instability estimates below 0.69; and for all but one question, the estimates are below 0.50. Finally, these summary statistics also suggest that the amount of variation in respondents' answers is rather limited. This is important because even if all of this variation is not entirely caused by measurement error, there is still a relatively high amount of stability in immigration attitudes.

The main results for the LISS and BES panels are reported in Tables A2 and A3, respectively. Across the models we are unable to explain much of the variation in the instability estimates, which provides support for the measurement error model. There are several general patterns worth mentioning. First, in both panels the results provide limited support for the black-and-white model proposed by Converse. For the LISS panel, none of the political sophistication variables explain a substantial amount of variation in response instability. Specifically, political interest, news interest, and reading the news are statistically significant in some models, but are usually in the opposite direction. The results for willingness to discuss politics are consistently significant and negative, though the estimates are never substantial. For model 1 (scale), a one standard deviation increase in willingness to discuss politics decreases response instability by less than one tenth of a standard deviation.

Education is only significant in some of the models.

The results are similar for the BES panel. Political attention is consistently significant across the models, but is in the wrong direction. Political knowledge and education are consistently negative and statistically significant. Though, the estimated effects are small. For model 1 (scale), being a college graduate decreases response instability only by one-fourth of a standard deviation. A standard deviation shift in political knowledge only causes less than a one-tenth of a standard deviation decrease in response instability. A standard deviation shift in political knowledge only causes less than a one-tenth of a standard deviation decrease in response instability. Issue salience is negative and significant across the models. Indicating immigration is the most important issue facing the country for all four waves reduces response instability by about one-third of a standard deviation. It is important to emphasize only 2.7 percent of respondents selected immigration as the most important issue for all four waves. Overall, these results provide limited support for the black-and-white model proposed by Converse. While many of the variables may be significant, they do not explain much of the variation in response instability, which suggests a lack of explanatory power for the black-and-white model.

Second, the results for the mean immigration score are somewhat mixed. For seven of the eleven models, the score is positively correlated with the instability estimates, which suggests that those with higher levels of anti-immigration attitudes have higher instability estimates. However, for four of the models the relationship is either reversed or the coefficient is insignificant. Perhaps the most reasonable explanation for these divergent results is that supporters and opponents of immigration understand different aspects of the issue better and, thus, either have a better understanding of the specific question or have more crystallized views on the specific issue. Importantly, the estimated effects are not substantial. Though, for both scales, the estimated coefficients are consistently significant and positive, suggesting in general those with anti-immigration attitudes have higher variation in responses.

Third, an individual's age is also important in predicting variation in the response insta-

Table C4: Results for Response Instability Models (LISS Panel)

	(1) Scale	(2) Adapt to Culture	(3) Cultural Diversity	(4) Asylum	(5) Welfare Access	(6) Too Many Foreigners	(7) Neighbor Diversity
Immig. Score	0.080* (0.011)	-0.387* (0.037)	0.578* (0.031)	-0.176* (0.045)	1.073* (0.055)	0.163* (0.045)	-0.122* (0.047)
Pol. Int.	0.011 (0.011)	0.013 (0.038)	0.052+ (0.032)	0.051 (0.046)	0.127* (0.056)	-0.011 (0.046)	0.046 (0.049)
News Int.	0.016 (0.011)	-0.004 (0.038)	0.015 (0.032)	0.079+ (0.046)	0.093+ (0.056)	0.142* (0.046)	0.071 (0.049)
Read News	0.001 (0.010)	0.004 (0.035)	0.012 (0.029)	-0.046 (0.042)	-0.007 (0.051)	-0.008 (0.042)	0.005 (0.045)
Discussion	-0.031* (0.008)	-0.128* (0.028)	-0.055* (0.023)	-0.132* (0.034)	-0.119* (0.041)	-0.084* (0.034)	-0.123* (0.036)
Education	-0.001 (0.003)	-0.020* (0.010)	-0.012 (0.008)	-0.029* (0.012)	0.014 (0.015)	0.003 (0.012)	0.001 (0.013)
Ideology	-0.024* (0.009)	0.009 (0.029)	-0.080* (0.025)	0.010 (0.036)	-0.104* (0.044)	-0.038 (0.036)	-0.051 (0.038)
Age	-0.324* (0.053)	-0.435* (0.180)	-0.761* (0.151)	-0.781* (0.220)	-0.692* (0.269)	-1.091* (0.219)	-0.481* (0.233)
Age ²	0.236* (0.051)	0.454* (0.175)	0.591* (0.146)	0.748* (0.213)	0.356 (0.261)	0.962* (0.213)	0.326 (0.226)
Female	-0.005+ (0.003)	-0.024* (0.010)	-0.034* (0.008)	-0.018 (0.012)	-0.041* (0.015)	-0.026* (0.012)	-0.031* (0.013)
Observations	3,322	3,322	3,322	3,322	3,322	3,322	3,322
Adjusted R ²	0.054	0.049	0.141	0.014	0.150	0.019	0.013

The table reports the results for the response instability estimates. Response instability is the variance in a respondent's answers. The respondent's age is divided by 100 for easier interpretation.
⁺ $p < 0.10$; * $p < 0.05$

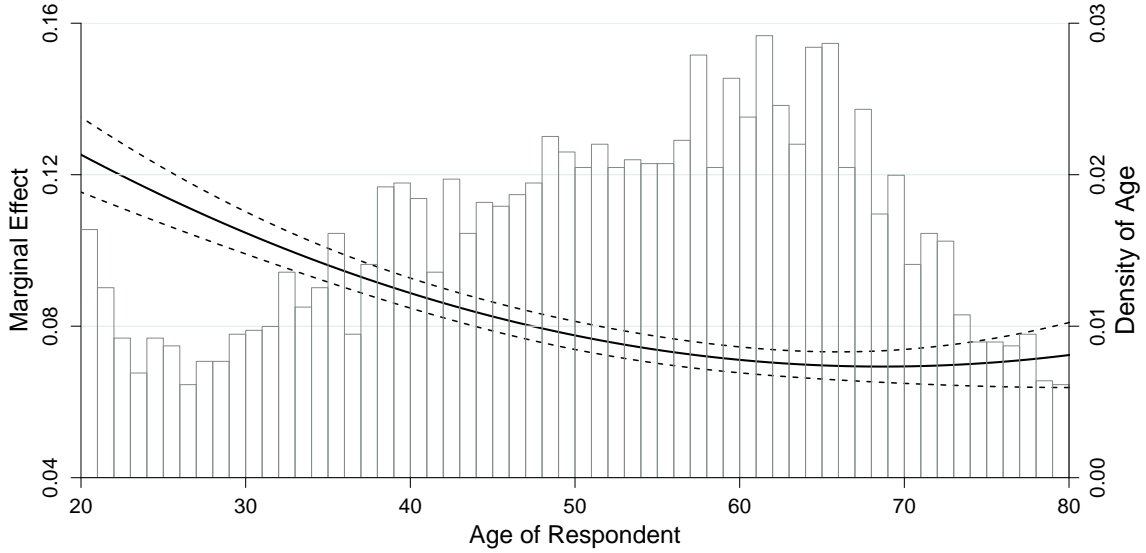
Table C5: *Results for Response Instability Models (BES Panel)*

	(1) Scale	(2) Cultural Effect	(3) Economic Effect	(4) Welfare Effect
Immig. Score	0.146* (0.023)	0.095* (0.045)	0.652* (0.043)	-0.055 (0.042)
Pol. Atten.	0.054+ (0.031)	0.005 (0.060)	0.211* (0.056)	0.105+ (0.055)
Salience	-0.144* (0.019)	-0.302* (0.036)	-0.216* (0.034)	-0.167* (0.033)
Knowledge	-0.083* (0.021)	-0.112* (0.041)	-0.172* (0.039)	-0.028 (0.038)
Education	-0.113* (0.015)	-0.217* (0.030)	-0.223* (0.028)	-0.127* (0.028)
Ideology	0.055 (0.247)	0.907+ (0.481)	0.839+ (0.454)	1.213* (0.442)
Age	-0.493* (0.229)	-0.363 (0.446)	-1.162* (0.421)	-0.782+ (0.409)
Age ²	0.412+ (0.221)	0.496 (0.430)	1.044* (0.406)	0.456 (0.395)
Female	-0.002 (0.010)	0.008 (0.019)	-0.019 (0.018)	-0.019 (0.018)
Ethnicity	0.010 (0.017)	-0.018 (0.033)	0.008 (0.031)	-0.041 (0.030)
Income	-0.003* (0.001)	-0.005* (0.002)	-0.006* (0.002)	-0.001 (0.002)
Observations	9,783	9,783	9,783	9,783
Adjusted R ²	0.021	0.017	0.060	0.007

The table reports the results for the response instability estimates. Response instability is the variance in a respondent's answers. The respondent's age is divided by 100 for easier interpretation.

+ $p < 0.10$; * $p < 0.05$

Figure C5: *Response instability in immigration attitudes by age (LISS panel)*



The marginal effect of age on response instability for the LISS panel (Column 1).

bility estimates. Across the different questions, the results suggest that young individuals are more likely to have higher response instability.¹⁷ For easier interpretation, Figure C5 presents the marginal effects from column (1) in the LISS panel. As the age of the respondent increases, instability decreases until around age 60 when it slowly begins to increase. The results are similar across the models in both panels. This effect is also substantial, moving from age 20 to age 30 decreases response instability by about one-fourth of a standard deviation. This difference increases to half of a standard deviation when moving from age 20 to age 50. The results strongly suggests that the age of the individual is very important in explaining variation in response instability. Theoretically, this finding speaks to the large literature examining when individuals begin to form their core political attitudes and beliefs. The impressionable years model suggests that young adults are beginning to form their core attitudes. Since young adults do not have extensive political experiences they are susceptible to external shocks and should have higher response instability.

Overall, the results provide limited support for the black-and-white model proposed by

¹⁷We divide age by 100 to rescale the estimated coefficients in both the BES and LISS panels.

Converse. First, the level of response instability is significantly lower than what would be expected if non-attitudes existed in a large majority of the population. Further, for both the BES and LISS panels, we are only able to explain a small amount of the variation in the response instability estimates, which suggests that assuming at least most of the random variation in the data is measurement error is appropriate. Thus, these results provide additional evidence that immigration attitudes are remarkably stable, even across financial and refugee crises.

C.3 Recent evidence on the stability of political attitudes

Some recent literature on the stability of political attitudes argues that measurement error is not the main source of the random variation in survey responses. Specifically, Freeder et al. (2019), similar to Converse, suggest that stability of political attitudes depends on knowledge about which issue positions ideologically go together or knowing “what goes with what.” In essence, individuals are more likely to hold stable attitudes when they possess this knowledge and agree with their party. According to this operationalization, only 20 to 40 percent of the public hold stable views on many issues (ibid). In this section, we suggest that this interpretation of the results is dependent on a few non-trivial assumptions.

Figure C6: *Example of placement knowledge questions from 1992-1997 BES panel*

Unemployment and Inflation

Tick the box you think comes closest to **your own** views

Getting people back to work should be the government's top priority	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Keeping prices down should be the government's top priority
	A B C D E F G H I J K	

Tick the box you think comes closest to the **Conservative Party's** views

Getting people back to work should be the government's top priority	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Keeping prices down should be the government's top priority
	A B C D E F G H I J K	

Tick the box you think comes closest to the **Labour Party's** views

Getting people back to work should be the government's top priority	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Keeping prices down should be the government's top priority
	A B C D E F G H I J K	

The key issue is that the questions used to measure individual level stability of a specific policy issue and knowledge of the positions of the parties/candidates are nearly identical. Figure C6 provides an example of a question from the 1992-1997 BES panel about unemployment and inflation. The only difference is whether the question is about “your own,” “the Conservative Party’s,” or “the Labour Party’s” views. Freeder et al. (2019) assume that the error terms between these questions are unrelated, which is unlikely given their

similarity. Statistically, the correlation between the error terms in the dependent variable (attitude crystallization) and the independent variable (placement knowledge) is likely driving their results. In other words, it is quite intuitive that if a respondent does not understand the question about self-placement, they are not likely to understand the question about the position of the parties or certain candidates, which indicates they are more likely to demonstrate measurement error. Consequently, an equally plausible alternative interpretation of the evidence the authors present is that they are simply isolating respondents that display measurement error from respondents without measurement error. In this respect, their solution to address measurement error is unfounded, because it assumes that measurement error does not vary across the two groups despite the likely correlation between the error terms.

C.4 Testing for panel effects and attrition bias

In this section we report the results from several robustness checks to ensure our findings are not driven by panel effects such as related to attrition bias. Panel effects would emerge if individuals who are more likely to remain in the panel have a higher level of stability in immigration attitudes. First, as Figure B1 demonstrates, the differences between aggregate immigration attitudes for those who completed all panels and the cross-sectional estimates are quite small and have similar fluctuations, which suggest that panel effects are likely not an issue. The results are similar for the individual-level estimates. Second, Table 2 in the main text shows that the differences between the correlation coefficients for those who completed all panels and respondents who completed at least the first and last waves are relatively minimal. This provides additional evidence that panel effects are not critical.

Table C6: *Differences between Stability Correlations of Complete and Incomplete Panelists*

Panel	Average Absolute Difference	Average Signed Difference	Largest Difference	Number of Correlations
LISS	0.06	-0.05	0.14	216
BES	0.04	-0.04	0.08	84
NCP	0.03	-0.01	0.08	30
INES	0.10	-0.10	0.21	10
SHP	0.09	-0.09	0.17	66
GLES	0.03	-0.03	0.07	45
TAPS	0.12	-0.12	0.25	55
VSG	0.09	-0.09	0.19	9

Negative signed differences indicate that respondents who completed all panels waves have higher correlations, on average, compared to respondents who did not complete all waves.

Next, we compare the Spearman Rank correlation coefficients between pairs of panel waves for respondents who did not complete all waves with the correlations of those who completed every wave. The average differences across the waves for each panel are summarized in Table C6. We should expect the differences to be systematically in one direction. However, the average signed difference is smaller than the average absolute difference for several of the panels, which suggests that in some cases the correlations for the respondents

who did not complete all of the waves are higher than the correlations for those who completed all waves. Specifically, for the NCP, the average absolute difference is 0.03 while the signed difference is -0.001. While some of the panels exhibit systematic differences, these are on average small, which should alleviate concerns that panel effects are causing the stability estimates to be high.¹⁸

Addressing Attrition with Inverse Probability Weighting

The top panel in Table C7 reports the standardized mean differences between respondents who completed all waves and those who did not. Ideally, the differences would be below 0.10, which would indicate there are no systematic difference. For the BES and LISS panel, the top panel suggests that there are minimal differences between respondents who complete all waves and those who do not. Though, younger individuals are less likely to complete all waves of the panel. Specifically, for the LISS panel, the average age is about 51 for individuals who completed all waves and 44 for those with missing waves. This is perhaps problematic considering we find strong evidence that young individuals have less stable immigration attitudes. However, while this may lower the general level of stability of the general population, it provides even stronger evidence for the political socialization finding. In other words, these results are consistent with the conclusions in the main article.

To further alleviate any concerns that attrition is driving our results, we use inverse probability weighting (Wooldridge 2010). Similar to the intuition behind survey weights, this two-step estimator models the probability that a respondent completes all the waves and uses the inverse of the propensity score as weights in subsequent analyses. Weighting works to address attrition because, under certain assumptions, it ensures the sample of respondents that completed all waves is similar to the general population of respondents.¹⁹ For the first step, we use probit regression to estimate the likelihood that a respondent

¹⁸Further, the INES and TAPS, which have the highest systematic differences, have substantial attrition problems.

¹⁹This method provides unbiased estimates if the data is missing at random (MAR) conditional on some set of covariates.

Table C7: *Differences between respondents who completed all waves and those who did not.*

Variable	Missing	Not Missing	SMD
LISS			
Immigration	3.19 (0.68)	3.22 (0.70)	0.039
News Interest	0.65 (0.26)	0.68 (0.26)	0.122
Age	44.64 (16.12)	50.81 (13.64)	0.413
Econ. Confi.	0.63 (0.15)	0.64 (0.14)	0.056
Econ. Satis.	0.62 (0.15)	0.63 (0.14)	0.057
Pol. Interest	0.51 (0.27)	0.54 (0.27)	0.120
Ideology	0.52 (0.21)	0.52 (0.21)	0.007
Female	0.53 (0.50)	0.46 (0.50)	0.156
Education	0.38 (0.49)	0.42 (0.49)	0.085
BES			
Immigration	4.25 (1.79)	4.36 (1.84)	0.060
Political Attention	0.74 (0.20)	0.74 (0.19)	0.035
Age	52.12 (15.69)	55.70 (12.65)	0.251
Self Econ	0.41 (0.24)	0.41 (0.23)	0.013
General Econ	0.49 (0.28)	0.50 (0.28)	0.034
Ideology	0.49 (0.24)	0.49 (0.24)	0.020
Female	0.47 (0.50)	0.41 (0.49)	0.107
Income	9.00 (5.13)	8.52 (4.93)	0.097
Ethnicity	0.89 (0.31)	0.91 (0.28)	0.070
Education	0.68 (0.34)	0.68 (0.34)	0.021
Variable	Missing	Not Missing	SMD
LISS			
Immigration	3.19 (0.67)	3.24 (0.70)	0.077
News Interest	0.66 (0.26)	0.66 (0.26)	0.011
Age	46.49 (15.71)	45.79 (16.18)	0.044
Econ. Confi.	0.63 (0.14)	0.64 (0.14)	0.010
Econ. Satis.	0.62 (0.15)	0.62 (0.14)	0.005
Pol. Interest	0.52 (0.27)	0.51 (0.28)	0.017
Ideology	0.52 (0.21)	0.52 (0.21)	0.011
Female	0.51 (0.50)	0.52 (0.50)	0.012
Education	0.39 (0.49)	0.38 (0.49)	0.016
BES			
Immigration	4.27 (1.79)	4.28 (1.85)	0.006
Political Attention	0.74 (0.20)	0.74 (0.20)	0.007
Age	52.84 (15.18)	52.80 (15.11)	0.003
Self Econ	0.41 (0.24)	0.41 (0.23)	0.003
General Econ	0.49 (0.28)	0.49 (0.28)	0.006
Ideology	0.49 (0.24)	0.49 (0.24)	0.003
Female	0.46 (0.50)	0.45 (0.50)	0.013
Income	8.91 (5.10)	8.99 (5.07)	0.017
Ethnicity	0.90 (0.31)	0.90 (0.30)	0.007
Education	0.68 (0.34)	0.69 (0.34)	0.011

Standard deviations are in parentheses. The second column reports the mean for respondents who are missing one wave or more and the third column reports the mean for respondents who completed all waves. The fourth column reports the standardized mean differences. The top panel is unweighted and the bottom uses inverse probability weights. Variables are from the first wave of the panel.

Table C8: *Measurement models for stability in immigration attitudes*

	LISS		BES	
	(1)	(2)	(3)	(4)
$\beta_{1,2}$	1.01 (0.04)	0.97 (0.04)	0.97 (0.01)	0.93 (0.01)
$\beta_{2,3}$	0.96 (0.02)	0.95 (0.03)	0.99 (0.01)	0.99 (0.01)
$\beta_{3,4}$	0.93 (0.03)	0.93 (0.03)	0.98 (0.01)	0.96 (0.01)
$\beta_{4,5}$	1.02 (0.03)	1.03 (0.03)	0.97 (0.01)	0.97 (0.01)
$\beta_{5,6}$	0.93 (0.03)	0.91 (0.03)	0.99 (0.01)	0.98 (0.01)
$\beta_{6,7}$	1.05 (0.03)	1.06 (0.03)	1.00 (0.01)	1.00 (0.01)
$\beta_{7,8}$	0.98 (0.03)	0.98 (0.03)	0.98 (0.01)	0.98 (0.01)
$\beta_{8,9}$	1.00 (0.02)	0.99 (0.03)		
χ^2	12692.57	1129.28	7929.28	512.50
df	1369.00	1037.00	245.00	148.00
p-value	0.00	0.02	0.00	0.00
CFI	0.69	0.99	0.89	0.99
TLI	0.68	0.98	0.88	0.99
RMSEA	0.10	0.02	0.12	0.03
SRMSR	0.08	0.02	0.03	0.01
AIC	172407.57	154619.19	269445.72	257104.51
N	1451	1451	3767	3767

This table replicates the analysis from Table 3 in the main text when using IPW weights for the LISS and BES panels. The IPW weights are the inverse of the probability that the respondent completed all waves. For columns 1 and 3, we make no assumptions about the relationships between error terms for each question. For columns 2 and 4, we estimate models that remove the constraints on the relationships between error terms.

completed all waves. For the LISS panel we use age, age squared, political interest, news interest, confidence in the economy, satisfaction with the economy, ideology, gender, and education as the baseline covariates. For the BES panel, we use political attention, age, age squared, self satisfaction with the economy, general satisfaction with the economy, ideology, gender, income, ethnicity, and education.

We then construct weights using the inverse of the propensity score from these models. To demonstrate that weighting reduces the systematic differences between the two samples, the bottom panel in Table C7 reports the weighted standardize mean differences between respondents who completed all waves and those who did not. Using these weights, we

replicate the analyses from Table 3 in the main text for the LISS and BES panels. The results are reported in Table C8. The estimated stability coefficients are similar to those reported in the main text, which provides further evidence that attrition is not driving our results.

As a robustness check, we also use an alternative operationalization. Specifically, we compare the differences between respondents who completed at least 1 wave and those who completed more than wave. The top panel of Table C9 reports the standardized mean differences for this alternative comparison. For the LISS panel, the results are roughly the same with minimal differences, except for age. For the BES, a few additional differences emerge (political attention, gender, and ethnicity).

We use a similar strategy as before except model the likelihood that a respondent completed more than 1 wave. The bottom panel of Table C9 reports the weighted standardized mean differences. Weight appears to minimize these differences. Again, using these weights, we replicate the analyses from Table 3 in the main text. The results are reported in Table C10. The estimated stability coefficients are similar to those reported in the main text, which suggests attrition does not alter the substantive conclusions.

Table C9: Respondents who completed only 1 wave and those who completed more than 1 wave.

Variable	Completed 1 Wave	> 1 Wave	SMD
LISS			
Immigration	3.19 (0.68)	3.22 (0.70)	0.038
News Interest	0.67 (0.28)	0.68 (0.26)	0.058
Age	45.06 (15.24)	50.81 (13.64)	0.398
Econ. Confi.	0.64 (0.14)	0.64 (0.14)	0.026
Econ. Satis.	0.62 (0.14)	0.63 (0.14)	0.049
Pol. Interest	0.52 (0.28)	0.54 (0.27)	0.069
Ideology	0.52 (0.21)	0.52 (0.21)	0.010
Female	0.50 (0.50)	0.46 (0.50)	0.092
Education	0.37 (0.48)	0.42 (0.49)	0.103
BES			
Immigration	4.13 (1.74)	4.28 (1.80)	0.086
Political Attention	0.69 (0.23)	0.74 (0.20)	0.237
Age	43.80 (17.20)	53.44 (14.86)	0.600
Self Econ	0.41 (0.24)	0.41 (0.24)	0.023
General Econ	0.47 (0.29)	0.49 (0.28)	0.058
Ideology	0.48 (0.24)	0.49 (0.24)	0.043
Female	0.51 (0.50)	0.45 (0.50)	0.110
Income	8.64 (5.19)	8.92 (5.09)	0.055
Ethnicity	0.83 (0.38)	0.90 (0.30)	0.210
Education	0.66 (0.34)	0.68 (0.34)	0.080
Variable	Completed 1 Wave	> 1 Wave	SMD
LISS			
Immigration	3.21 (0.67)	3.23 (0.70)	0.031
News Interest	0.68 (0.28)	0.68 (0.26)	0.004
Age	49.05 (14.67)	49.08 (14.47)	0.002
Econ. Confi.	0.64 (0.14)	0.64 (0.14)	0.006
Econ. Satis.	0.63 (0.14)	0.63 (0.14)	0.001
Pol. Interest	0.53 (0.27)	0.54 (0.28)	0.008
Ideology	0.52 (0.21)	0.52 (0.21)	0.004
Female	0.47 (0.50)	0.47 (0.50)	0.008
Education	0.40 (0.49)	0.41 (0.49)	0.005
BES			
Immigration	4.28 (1.73)	4.28 (1.80)	0.005
Political Attention	0.74 (0.21)	0.74 (0.20)	0.019
Age	52.98 (15.19)	52.86 (15.19)	0.008
Self Econ	0.41 (0.24)	0.41 (0.24)	0.013
General Econ	0.48 (0.29)	0.49 (0.28)	0.018
Ideology	0.49 (0.24)	0.49 (0.24)	0.015
Female	0.46 (0.50)	0.46 (0.50)	0.001
Income	8.83 (5.17)	8.90 (5.09)	0.014
Ethnicity	0.90 (0.30)	0.90 (0.31)	0.015
Education	0.69 (0.34)	0.68 (0.34)	0.013

Standard deviations are in parentheses. The second column reports the mean for respondents who only completed 1 wave and the third column is the mean for respondents who completed more than 1 wave. The fourth column reports the standardized mean differences. The top panel is unweighted and the bottom uses inverse probability weights. Variables are from the first wave of the panel.

Table C10: *Measurement models for stability in immigration attitudes*

	LISS		BES	
	(1)	(2)	(3)	(4)
$\beta_{1,2}$	1.01 (0.04)	0.97 (0.04)	0.97 (0.01)	0.93 (0.01)
$\beta_{2,3}$	0.96 (0.02)	0.95 (0.03)	0.99 (0.01)	0.99 (0.01)
$\beta_{3,4}$	0.93 (0.03)	0.93 (0.03)	0.98 (0.01)	0.96 (0.01)
$\beta_{4,5}$	1.02 (0.03)	1.03 (0.03)	0.97 (0.01)	0.97 (0.01)
$\beta_{5,6}$	0.93 (0.03)	0.91 (0.03)	0.99 (0.01)	0.98 (0.01)
$\beta_{6,7}$	1.05 (0.03)	1.06 (0.03)	1.00 (0.01)	1.00 (0.01)
$\beta_{7,8}$	0.98 (0.03)	0.98 (0.03)	0.98 (0.01)	0.98 (0.01)
$\beta_{8,9}$	1.00 (0.02)	0.99 (0.03)		
χ^2	12692.57	1129.28	7929.28	512.50
df	1369.00	1037.00	245.00	148.00
p-value	0.00	0.02	0.00	0.00
CFI	0.69	0.99	0.89	0.99
TLI	0.68	0.98	0.88	0.99
RMSEA	0.10	0.02	0.12	0.03
SRMSR	0.08	0.02	0.03	0.01
AIC	172407.57	154619.19	269445.72	257104.51
N	1451	1451	3767	3767

This table replicates the analysis from Table 3 in the main text when using IPW weights for the LISS and BES panels. The IPW weights are the inverse of the probability that the respondent completed more than 1 wave. For columns 1 and 3, we make no assumptions about the relationships between error terms for each question. For columns 2 and 4, we estimate models that remove the constraints on the relationships between error terms.

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