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Era of mass migration: measuring immigration policy and re-examining thermostatic responsiveness

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ABSTRACT

To what extent does a change in public opinion towards immigrants create a thermostatic response in legislative activity on immigration? In turn, how does legislative activity on immigration change public opinion? The policy responsiveness literature suggests that as public opinion shifts on a certain policy domain, the government responds accordingly. Specific work on immigration policy in the European context finds evidence of this thermostatic response, yet utilizes proxies for immigration policy – such as inflow of asylum seekers. Rather than immigration inflows, does legislative activity on immigration shape public opinion in a similar fashion? Consistent with the thermostatic responsiveness literature, I hypothesize that an increase in *supportive* legislative activity on immigration results in an increase in *negative* public attitudes towards immigration. Moreover, as restrictive public opinion towards immigration increases, I expect legislative activity on immigration to follow in the same direction. Utilizing public attitudes towards immigrants and the Comparative Agendas Project (CAP) bills data, I develop a novel dataset that individually codes directionality of *proposed* immigration legislation across four European countries: Belgium, Denmark, Germany, and the Netherlands. I find little evidence for negative public opinion responsiveness, but find weak support for immigration legislative activity responsiveness.

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KEYWORDS Immigration; public opinion; responsiveness; representation; legislative activity

Introduction

Responsiveness by policymakers to the public's wishes is crucial for meeting core democratic ideals in today's world. However, despite expansive public opinion surveys, little is still known surrounding certain policy domains: in particular, immigration. Our global, modernizing world is currently experiencing international migration at an unprecedented rate – only to rapidly

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increase in the future with climate refugees. The World Migration Report estimated in 2022 that the 281 million international migrants constitute about 3.6 percent of the total global population (World migration report, 2021). While the European Union (EU) provides their member countries with a blanket policy surrounding entry and stay within its borders, each individual country provides varying levels of support and barriers for migrants. Therefore, examination into country-level legislative activity on immigration provides necessary nuance into the experience of these individuals across contexts. I examine immigration legislative activity in the 21st century to determine how attitudes towards immigrants influence government responsiveness. Thus, when the salience of migration starts to increase, to what extent do attitudes towards immigrants shape government responsiveness and, in turn, how does immigration legislative activity influence attitudes towards immigrants? In looking specifically at *proposed* policies, rather than policy outcomes (i.e., immigration flows), how does capturing the nature of immigration bill proposals shape overall thermostatic responsiveness?

To measure immigration legislative activity, I develop a new dataset that captures whether immigration bills proposed in legislatures are supportive versus restrictive of immigrants. Utilizing the Comparative Agendas Project (CAP) dataset, I capture pro- and anti- immigration bills for four European countries: Belgium, Denmark, Germany, and Netherlands.[1] Since so few immigration bills pass at the country-level, the annual number of bills proposed creates greater variation over time than the number of laws passed within each country. Parties propose bills to signal their responsiveness and overall policy agendas, regardless of their ability to be signed into law. However, utilizing immigration bills highlights *legislative activity* on immigration, rather than only enacted immigration legislation.

For immigration attitudes, I utilize Van Hauwaert's (2022) immigration opinions dataset that aggregates immigration opinions across public opinion surveys in Western European countries.[2] Ultimately, I *do not* find that more *supportive* legislative activity on immigration has a subsequent shift in more *negative* immigration attitudes. However, in alignment with my hypothesis, I find *directional* support that in response to a shift in attitudes towards immigrants, immigration legislative activity follows in the same direction. Rather, in capturing actual immigration bills, thermostatic responsiveness varies country to country with regards to the immigration policy domain, where certain time periods show more alignment than others. Overall, while thermostatic responsiveness has been found with immigration policy outcomes – for instance, asylum seeker inflows – it does *not* occur in a similar fashion with legislative activity surrounding immigration in this time period of heightened salience of migration.

While Freeman's (1995) canonical work and others (Morales *et al.*, 2015; Rasmussen *et al.*, 2014) demonstrates the lack of responsiveness with regards to

immigration, other scholars find evidence of responsiveness (Ford *et al.*, 2015; Jennings, 2009; Van Hauwaert, 2023). This paper's findings provide nuance to the debate surrounding thermostatic responsiveness for the immigration policy domain in Europe. Moreover, this original data set emphasizes the country-level variation within the EU on the inclusiveness of immigration across time. Future work must continue to explore between-EU-country variation and what exactly drives responsiveness on immigration.

Thermostatic responsiveness and immigration literature

Scholars have developed and empirically examined a theory that describes the behavioral relationship between the public and their policymakers: the thermostatic model (Soroka & Wlezien, 2010; Wlezien, 1995). Overall, when the public prefers a change in policy from what currently exists, they send a signal to governing officials to adjust policy accordingly. In turn, if elected officials are responsive to the public's preferences, they provide more policy with respect to their request. When representatives are successful in adjusting policy to meet their constituent's preferences, in the next time period the public will prefer fewer changes in policy.

The literature surrounding thermostatic responsiveness focuses on specific issue areas that are well captured in over-time public opinion surveys. In addition, they primarily focus on Anglo-Saxon countries and public spending on issues versus actual public opinion preferences (Van Hauwaert, 2023, p. 2683). The majority of work on thermostatic responsiveness focuses on budget spending (Brooks & Manza, 2006; Page & Shapiro, 1992; Soroka & Wlezien, 2010), legislative behavior (Erikson *et al.*, 2002, 1993; Stimson *et al.*, 1995), and government positioning (Bartle *et al.*, 2019, 2011). Overall, these scholars demonstrate that public policy within and across policy domains realigns to changes in public opinion preferences. Within the U.S., research provides evidence of thermostatic responsiveness with regards to racial policy (Kellstedt, 2003), health care (i.e., the Affordable Care Act) (Morgan & Kang, 2015), education and welfare (Pacheco, 2013), abortion policy (Wlezien & Goggin, 1993), and the environment (Johnson *et al.*, 2005). More specifically, the literature finds evidence of thermostatic responsiveness across more niche policy domains, such as gay rights (Lax & Phillips, 2009) and state-level abortion (Arceneaux, 2002). Along these various policy domains, scholars find evidence of negative policy feedback to changes in public opinion (Wlezien, 2017).

Within the immigration policy domain, scholarship on thermostatic responsiveness remains very limited. Freeman's (1995) canonical work shows that policy responsiveness is *slower* in response to changes in immigration opinions. The underlying reasoning is that elites dominate the immigration discourse and decide on policy changes outside of the public view. More recent work confirms these findings, since interest groups and elites have a stronghold

on immigration regulation (Morales *et al.*, 2015; Rasmussen *et al.*, 2014). However, other scholars *do find* evidence of thermostatic responsiveness in the British context (Ford *et al.*, 2015; Jennings, 2009) and to some extent across Western Europe more broadly (Van Hauwaert, 2023). Works that find evidence of thermostatic responsiveness often utilize asylum seeker inflows or asylum decisions as proxies for public policy. Within the countries analyzed in this paper, immigration inflows and immigration attitudes *do* tend to change together over time – public opinion having less overall variance. Figure 1 shows both the immigration inflows and public opinion across the time period of analysis. Why do these scholars disagree and to what extent is it dependent on how immigration policy is conceptualized?

Theoretical approach

Thermostatic responsiveness to legislative activity on immigration

Studies have found evidence of thermostatic responsiveness to asylum seeker inflows and asylum decisions (Ford *et al.*, 2015; Jennings, 2009). However, this responsiveness comes from policy *outcomes*, rather than policy *outputs*. Therefore, immigration policy is *not* conceptualized to

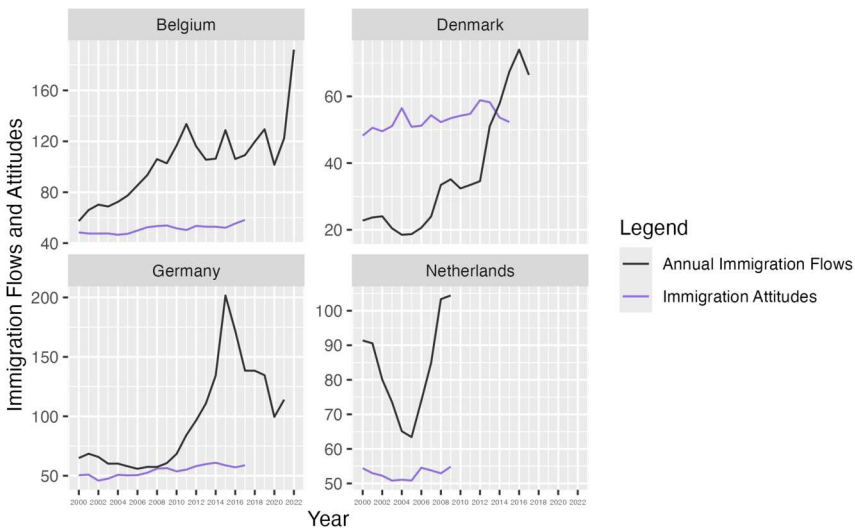

Figure 1. Immigration inflows and attitudes over time. Annual immigration flows are denoted in black from the OECD International Migration Database. Annual immigration attitudes come from Van Hauwaert's 2022 data set and are denoted in purple. Please note the y-axes vary by country and Germany's immigration flows are per 10,000, where the other three countries are per 1,000. While public opinion towards immigrants increases overall across time, the instances of change tend to align with changes in immigration flows.

include other factors that affect responsiveness. While the public is responsive to asylum seekers themselves, are they paying attention to other immigration efforts the government utilizes to respond to their constituents?

Included in immigration efforts more broadly is proposed legislation by the government. While immigration bills *do not* fully encompass efforts on immigration by the government – i.e., orders by the executive, enacted immigration legislation, etc. – they more closely articulate policy outputs than levels of migration flows. Therefore, immigration policy in the thermostatic model is *not only* a function of immigration flows, but also immigration bills, and other unobservable factors. In addition, governments in parliamentary democracies are severely limited in the amount of time to produce policies. In turn, scholars have found that early in the government's term, bill initiations increase in order to show responsiveness to their constituents (Martin & Vanberg, 2011). Moreover, Curtis (2025) in examining coalition governments finds that voters pay attention to legislative activity and evaluate governing parties accordingly within certain policy domains.

More broadly, literature finds that parties – both within the government and opposition – respond to the preferences of their constituents (Soroka & Wlezien, 2010; Stimson *et al.*, 1995). For instance, cross-national evidence suggests that parties make promises within their pledge fulfillments prior to an election, and once in office they follow through on their pledges – in particular when they are a part of the governing coalition (Thomson *et al.*, 2017). However, opposition parties also signal responsiveness. For instance, opposition parties utilize no-confidence motions to create a visible signal of their strength and ability in attempts to increase their future vote share (Williams, 2011). Moreover, scholars find that voters pay attention to the efforts of opposition parties and reward them accordingly (Tuttnauer & Wegmann, 2022). Therefore, to determine the influence of legislative activity, I analyze the presence of thermostatic responsiveness for immigration bills, rather than solely immigration bills passed into law.

Theoretical expectations

Since immigration has become more salient in the 21st century, should we expect *more or less* thermostatic responsiveness in recent years than in the past? And to what extent should we expect thermostatic responsiveness with *legislative activity*? Previous scholarly findings of minimal responsiveness may be limited to earlier time periods, where immigration was predominately monitored and influenced by elites. However, especially since the start of the European refugee crisis in 2011 with the Syrian civil war, the salience of immigration has increased. In turn, the European context has seen a rise in public awareness surrounding immigration specifically – highlighted by the media and harnessed to support the rise of far-right parties. For example, Dennison

(2020) argues that immigration salience in Western Europe has *increased* the electoral success of far-right parties. And with respect to influencing public opinion, Hangartner *et al.* (2019) find an increase in negative attitudes towards immigrants in the Greek islands after experiencing direct effects of the refugee crisis. Since immigration's salience has increased to such a degree as to influence party systems and public opinion, we may expect *more* thermostatic responsiveness because the public pays attention to the efforts of policymakers on this issue. Therefore, when elected officials propose more *supportive* immigration bills, public opinion towards immigrants may become more *negative*. The first hypothesis is as follows:

> H_{1a}: An increase in proposed legislation in *support* of immigration, the more *negative* public opinion towards immigration.

In turn, with the increasing importance of immigration, policymakers may respond to public opinion more on immigration than other policy domains. However, immigration salience may continue to influence the public to be more restrictive on immigration despite the government's attempts to respond. The public responds to the heightened media coverage of immigration *issues* – such as executive orders, news articles surrounding immigration inflows, and incidents involving immigrants (Dunaway & Graber, 2022). Moreover, scholars find that the public reacts and responds to readily accessible information (Buchanan, 2023) – predominately those stemming from policy *outcomes*. Therefore, responsiveness during this time period of migration through legislative activity may not reach the same level of salience through the media as other news of immigration (namely, immigration inflows). In turn, public opinion on immigration may not re-align to *proposed* policy changes and continue to request more policy in their preferred direction:

> H_{1b}: The more *negative (positive)* public attitudes towards immigration, the more *restrictive (supportive)* legislative activity on immigration.

Research design

Original dataset on immigration bills in Europe

To measure legislative attention, I develop an original dataset that determines supportive or restrictive immigration bills across contexts.[3] In developing the dataset, my team of undergraduate research coders utilized the Comparative Agendas Project (CAP) codebook that denotes bills focused on immigration issues over time. Previous work on immigration thermostatic responsiveness utilizes proxies for immigration policy: namely, the number of asylum seekers (Van Hauwaert, 2023) and asylum seeker decisions (Jennings, 2009). However, the number of asylum seekers entering the country at any point in time solely focuses on one group of immigrants – refugees –

rather than including both legal *and* irregular migrants.[4] Therefore, measuring actual proposed policies better captures the current government's stance and mission with regards to broader immigration at any point in time. However, proposed policies may not be as salient to the public as immigration inflows – especially for those living in border towns.

For example, from 2014 to 2015, there was about a 17% increase in immigrants to Belgium – suggestive of positive policy support for migrants. The change in asylum seeker inflows has previously been utilized as a proxy for immigration policy; however, at the same time there are bills in *opposition* of migrants within the dataset in 2015. For instance, one bill passed into law in Belgium in 2015 expands governmental powers to withdraw refugee status from individuals who pose a threat to society. Similarly, even though immigration to Germany between 2019 and 2020 decreased by about 35%, a 2020 bill passed into law facilitated easier entry and residence for certain groups of EU citizen immigrants. In both instances, the increase (or decrease) in immigration inflows from the past year *did not* have the same impact on the support (or opposition) to immigration laws passed in the following year. Without looking at legislative activity itself, the nuance surrounding government responsiveness becomes blurry, and in turn, scholars may be misinterpreting the level of government accountability on the immigration issue.

While the European Union limits individual countries' ability to implement certain immigration policies – in particular because of the European Single Market which allows for freedom to move goods, services, and labor within the EU – individual countries *do* propose domestic legislation in support of or in opposition to immigrants. The broader literature lacks an understanding of how this legislative activity is perceived by the public and the implications on migrants' experience in their new home countries. This new dataset codes proposed immigration bills as either positive, neutral, or negative with regards to immigration. The immigration bills vary widely on both their topic and substance. Positive (supportive) immigration bills consist of language allowing more refugees, permitting naturalization (citizenship) of more immigrants, and creating assistance programs for integration. For instance, one proposed bill in Denmark in 2015 would have granted humanitarian residency permits for vulnerable families with children. Also coded as positive, Germany passed a 2007 bill into law that created easier, more flexible methods for immigrants to attain residency. In contrast, negative (restrictive) immigration bills often propose refusal of more refugees, restrict naturalization of immigrants, and promote barriers to inclusion for immigrants. For instance, a Belgian bill in 2022 proposed implementing a national exam for citizenship, making it more difficult for migrants to become citizens of their new country of residence. Also coded as negative in the Netherlands, a 2008 bill was passed to extend the temporary asylum residency permit from three to five years. This law allowed for stricter monitoring of migrants and

increased the number of temporary residency permits the government could withdraw.

While some policies are clearly in support or in opposition to migrants, many do not lean one way or the other. Neutral immigration bills regularly consist of extending existing policies or aligning to EU immigration policy. For example, a 2010 bill in Germany that was accepted into law instituted a uniform platform online for residency permits. While this bill proposes greater efficiency, it does not necessarily support or oppose access for immigrants. A challenging case for coders – that was deemed neutral – was a 2016 proposed bill in Belgium that would remove citizenship for migrants sentenced with terrorism charges. While removing citizenship may seem anti-immigrant, we deemed this case neutral since it primarily interfaces with an individual country's justice system and terrorism policies. However, if the case had been surrounding misdemeanors, the coders most likely would have deemed the bill negative. The research team went through each immigration policy in the CAP dataset one-by-one, translated the document to English (where necessary), and determined the core message of the document to be negative, neutral, or positive. For unbiased estimates, we implemented inter-coder reliability where a separate researcher coded each bill independently. When any discrepancies occurred, we decided as a research team on the final code together.

In total, the dataset captures bills and laws for the following eight countries in the CAP codebook: Belgium, Denmark, France, Germany, Hungary, Netherlands, Spain, and Switzerland ($N = 656$). Since bills are passed so infrequently and highlight how *all* parties respond to public opinion, I focus on immigration bills rather than passed laws – limiting the study to the four countries where the CAP codes bills by policy issue area: Belgium, Denmark, Germany, and the Netherlands. Limiting the focus to immigration bills, Figure 2 shows the number of proposed bills across the four countries over the time span of the dataset. In every time period, immigration bills are proposed; however, the number of bill proposals does vary by country and year. Moreover, analyzing immigration bills creates necessary variation to properly analyze government responsiveness.

Methodology

The immigration legislative activity data utilized in this paper includes bills for Belgium ($N = 179$), Denmark ($N = 197$), Germany ($N = 161$), and the Netherlands ($N = 33$) from 2000 to the most recent bill coded in the CAP dataset. Table 1 denotes how many supportive, neutral, and restrictive bills were proposed across the four countries since 2000 to the most recent bill coded.

Interestingly, Belgium proposed the most restrictive bills, and both Denmark and Germany proposed the most supportive bills. For each

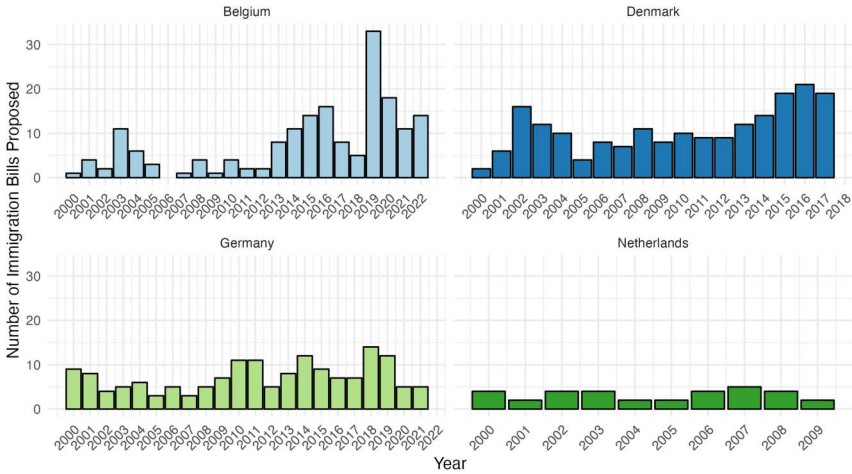

Figure 2. Number of immigration bills proposed over time. Please note that the CAP datasets end for the Netherlands in 2009, for Denmark in 2017, for Germany in 2021, and for Belgium in 2022.

country year, I create a new measure from the supportive, neutral, and restrictive scores of all bills proposed. The immigration bills ratio (henceforth, IBR) subtracts the total number of restrictive bills (B_r) from the total number of supportive bills (B_s) in a given year, divided by the total number of bills proposed (B_t) in a given government.[5] The ratio is calculated as follows:

$$\text{Immigration Bills Ratio (IBR)} = \frac{B_s - B_r}{B_t}$$

By subtracting the supportive bills by the restrictive bills, the ratio includes the directionality of immigration legislative activity. To control for the tendency of more bills being proposed at the beginning of new governments (Martin & Vanberg, 2011), I divide the directionality by the total number of immigration bills proposed during each government. In turn, this controls for variation in legislative attention over time (Jones & Baumgartner, 2005).

To capture immigration opinions, Van Hauwaert's (2022) immigration attitudes dataset aggregates measures across public opinion surveys annually. I re-scale the 0 (least restrictive) to 100 (most restrictive) measure to 0 (*most* restrictive) to 100 (*least* restrictive) for proper comparison with the

Table 1. Immigration bills by country.

Country	Bills time period	Supportive	Neutral	Restrictive	Total bills
Belgium	2000–2022	47	66	66	179
Denmark	2000–2017	103	35	59	197
Germany	2000–2021	94	31	36	161
Netherlands	2000–2009	9	9	15	33

immigration policy measure. The *higher* the value, the more *supportive* the legislative activity or public opinion is of immigration. The immigration opinions measure stops short of the immigration bills measure: Denmark ending in 2015 and Belgium, Germany, and the Netherlands ending in 2017.

The time-series, cross-sectional (TSCS) nature of the data allows for an analysis of thermostatic responsiveness to legislative activity. In the models, I employ key control variables from the literature: GDP per capita,[6] unemployment rate,[7] immigration rate,[8] far-right vote share in the last election, and a binary variable for pre- (0) and post- (1) 2015 European refugee crisis. GDP per capita and the unemployment rate are included because economic factors influence both public opinion towards immigration and the type of immigration legislative activity. In addition, adding in the immigration rate controls for how changes in numbers of inflows may alter both attitudes and bill proposals – for instance, public opinion of respondents living in border towns may shift during heavy immigration inflow periods.

Van Hauwaert (2023) utilizes executive composition to control for partisanship of the government.[9] In addition to this measure, I also implement far-right vote share since it more closely measures how anti-immigrant sentiment has translated into support for existing political parties. For instance, the greater the far-right vote share, the more anti-immigrant bills one might expect. In turn, as the success of far-right parties increases, one might also expect *more negative* public opinions of immigrants due to the normalization of expressing these preferences (Valentim, 2024). In alignment with Van Hauwaert (2023), I employ a binary variable for pre- and post- European refugee crisis to control for any spikes in attitudes towards immigrants and immigration bills due to this specific migration period of large influxes of asylum seekers. Table 2 shows the summary statistics of the variables utilized in the analysis.

To understand how the public responds to legislative activity on immigration, I run error correction models (ECMs)[10] including the new bills ratio measure which accounts for *both* directionality and amount of immigration legislative activity. I implement ECMs rather than other time series models because we would expect the effect that immigration bills have on public opinion (and vice versa) to occur in both the short- and long-term. While we might expect an initial public opinion shift after a bill proposal, the opinions dataset aggregates immigration survey questions annually. Therefore, utilizing this new immigration bills dataset, future research must look at the short-term public opinion effects of immigration bill proposals where more detailed immigration public opinion data exists (i.e., at the country level).[11]

I first analyze current time period (t) change (Δ) in immigration attitudes as the key dependent variable to determine whether the immigration bills ratio (IBR) in the past time period influence the change in immigration public opinion in the current period. In these models, I utilize the lagged IBR, and lagged level ($_{t-1}$) and change (Δ_t) of GDP per capita, unemployment rate, far-right vote share,

Table 2. Summary statistics.

Statistic	*N*	Mean	St. Dev.	Min	Max
Year	72	2,009	6.272	2000	2022
Immigration Bills Ratio (IBR)	72	0.020	0.135	−0.333	0.400
Δ Immigration Bills Ratio (IBR)	68	−0.001	0.162	−0.500	0.347
Immigration Attitudes	53	53.211	3.511	45.920	60.917
Δ Immigration Attitudes	57	0.398	2.292	−5.591	5.401
Post-Refugee Crisis	72	0.250	0.436	0	1
GDP per capita	72	43,339	10,334	23,015	62,013
Unemployment Rate	72	0.062	0.020	0.024	0.112
Far-Right Party Vote Share	72	0.064	0.060	0.000	0.211
Executive Composition	72	2.444	1.221	1	5
Immigration Rate (per 1,000)	72	81.84	40.44	18.51	201.62

executive composition, immigration rate, and the binary post-refugee crisis variable. The first equation analyzes public opinion responsiveness:

$$\begin{aligned}\Delta ImmigrationAttitudes_t = {} & \beta_0 + \beta_1 ImmigrationAttitudes_{t-1} + \beta_2 IBR_{t-1} \\ & + \beta_3 PostRefugeeCrisis_{t-1} + \beta_4 GDPpercapita_{t-1} + \beta_5 \Delta GDPpercapita_t \\ & + \beta_6 UnemploymentRate_{t-1} + \beta_7 \Delta UnemploymentRate_t \\ & + \beta_8 FarRightVoteShare_{t-1} + \beta_9 \Delta FarRightVoteShare_t \\ & + \beta_{10} ExecutiveComposition_{t-1} + \beta_{11} \Delta ExecutiveComposition_t \\ & + \beta_{12} ImmigrationRate_{t-1} + \beta_{13} \Delta ImmigrationRate_t + \epsilon\end{aligned}$$

If the public and its representatives are behaving thermostatically – a change in supportive legislative activity on immigration will have a subsequent, negative associated change on the public's attitudes – β_2 will be negative.

Similarly, I analyze the current time period (t) change (Δ) in IBR as the second key dependent variable in analyzing whether the immigration attitudes in the previous time period shifts the current change in legislative activity on immigration. In these models, I utilize the lagged immigration attitudes, and lagged level ($_{t-1}$) and change (Δ_t) of the same control variables in the first equation. The following denotes the second regression equation to analyze immigration legislative activity responsiveness:

$$\begin{aligned}\Delta IBR_t = {} & \beta_0 + \beta_1 IBR_{t-1} + \beta_2 ImmigrationAttitudes_{t-1} \\ & + \beta_3 PostRefugeeCrisis_{t-1} + \beta_4 GDPpercapita_{t-1} + \beta_5 \Delta GDPpercapita_t \\ & + \beta_6 UnemploymentRate_{t-1} + \beta_7 \Delta UnemploymentRate_t \\ & + \beta_8 FarRightVoteShare_{t-1} + \beta_9 \Delta FarRightVoteShare_t \\ & + \beta_{10} ExecutiveComposition_{t-1} + \beta_{11} \Delta ExecutiveComposition_t \\ & + \beta_{12} ImmigrationRate_{t-1} + \beta_{13} \Delta ImmigrationRate_t + \epsilon\end{aligned}$$

If the government is responding thermostatically, a more supportive change in public opinion towards immigrants will have a subsequent positive associated change in immigration legislative activity and β_2 will be positive.

While unable to incorporate the role of the media within the analysis, I examine news articles that reference proposed immigration bills in Germany throughout the 2014 calendar year.[12] In total, there were twelve immigration bills proposed to the Bundestag in 2014 and only two were referenced by name in the news media. However, of the two mentioned, there is a wide disparity in the number of articles that reference the bill directly. For instance, the 'Act on the Redefinition of the Right of Residence and Termination of Residence'[13] was mentioned 37 times, where the 'Law to Improve the Legal Status of Asylum-Seekers and Tolerated Foreigners'[14] was only mentioned three times in the years following their proposals. The former bill was passed into law, and the latter bill was not. Therefore, as one might expect, laws tend to gain more media coverage than bills. However, six other immigration bills were passed into law in 2014 that *did not* get media traction. In addition, these findings show that bills still have the potential to gain media traction. Due to challenges to measure and account for the media, the analysis does not include a media control variable; however, I expect the media to facilitate and hinder responsiveness.

Results

Looking across Belgium, Denmark, Germany, and the Netherlands, each country is unique with regards to their overall immigration legislative activity and attitudes over time. Figure 3 depicts the change in immigration bills ratio (in black) and immigration attitudes (in blue) across all four countries. Belgium and Germany show initial signs of thermostatic responsiveness in certain time periods – specifically between 2006 and 2014 – because an increase in IBR is followed by a subsequent negative shift in attitudes over time. However, in contrast, Denmark and the Netherlands show no clear trend over the time period – lacking evidence of thermostatic responsiveness.

Immigration public opinion responsiveness

To determine the extent of thermostatic responsiveness, I first examine how the IBR in the previous time period influence the change in immigration attitudes in the current time period across all four countries. I estimate error correction models in Table 3, with immigration opinions as the dependent variable and IBR as the key independent variable. The first model solely looks at the relationship between the level of the IBR in the prior period and the change in immigration attitudes in the current period. The coefficient is *not* statistically significant. After adding in the 2015 refugee crisis binary variable in model two, GDP per capita and the unemployment rate in model three, and the far-right vote share, executive composition, and immigration rate in model four, the coefficient on the IBR remains statistically insignificant. Therefore, I *do not* find

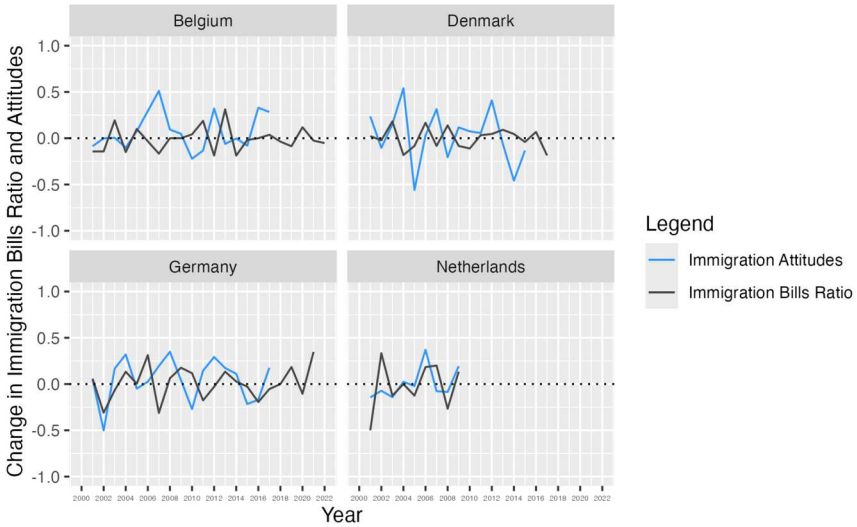

Figure 3. Change in immigration bills ratio and attitudes over time. Average immigration attitudes per country year is denoted in blue. Immigration bills ratio per country year are denoted in black. Both variables indicate the change from the previous time period. Belgium and Germany show initial signs of thermostatic responsiveness, solely between 2006 to 2014. In other periods and in Denmark and the Netherlands, the black and blue lines move more in tandem lacking evidence of responsiveness.

evidence for thermostatic responsiveness (H_{1a}). As the overall ratio of immigration bills goes from restrictive to supportive in the previous period, there is an insignificant change in immigration attitudes in the current time period.

Immigration legislative activity responsiveness

In analyzing the models for responsiveness of immigration legislative activity, I look at how immigration attitudes in the previous time period shape the change in the IBR in the current time period – immigration legislative activity as the dependent variable. Table 4 includes models from the second equation. Model one looks at the relationship between the level of immigration attitudes in the prior period and the current change in the IBR. The coefficient is in the hypothesized, positive direction and statistically significant at the $p<0.05$ level, but relatively small in magnitude. In model two, I include the refugee crisis control variable. Additionally, in model three I include the other key economic control variables – GDP per capita and unemployment rate – and in model four I include partisan control variables and the immigration rate. In the full model (model 5, with country fixed effects), an increase in immigration attitudes in the past time period is *not* associated with a change in supportive immigration bills ratio in the next time period. These results lack

Table 3. Immigration public opinion responsiveness.

	Dependent variable:				
	Δ Immigration Attitudes$_t$				
	(1)	(2)	(3)	(4)	(5)
Immigration Attitudes$_{t-1}$	−0.200*	−0.241*	−0.417**	−0.527**	−0.537**
	(0.092)	(0.093)	(0.123)	(0.145)	(0.144)
Immigration Bills Ratio (IBR)$_{t-1}$	−0.427	−0.376	−0.396	−1.679	−2.047
	(2.309)	(2.264)	(2.303)	(2.228)	(2.515)
Post-Refugee Crisis$_{t-1}$		2.084†	2.364*	1.820	3.419*
		(1.167)	(1.162)	(1.443)	(1.638)
GDP per capita$_{t-1}$			0.0001*	0.0001	0.0001
			(0.00003)	(0.00005)	(0.0001)
Δ GDP per capita$_t$			0.00004	−0.00001	−0.00004
			(0.0001)	(0.0001)	(0.0001)
Unemployment Rate$_{t-1}$			−4.761	4.517	−20.849
			(14.965)	(17.200)	(31.853)
Δ Unemployment Rate$_t$			−54.863	−46.705	−51.693
			(42.666)	(41.757)	(43.533)
Far-Right Vote Share$_{t-1}$				0.405	6.363
				(7.461)	(13.503)
Δ Far-Right Vote Share$_t$				18.622	22.711
				(12.625)	(13.745)
Executive Composition$_{t-1}$				−0.433	−0.350
				(0.299)	(0.324)
Δ Executive Composition$_t$				0.668	0.783†
				(0.402)	(0.402)
Immigration Rate$_{t-1}$				0.001	−0.002
				(0.001)	(0.002)
Δ Immigration Rate$_t$				0.004	0.004
				(0.003)	(0.003)
Constant	10.934*	12.942*	18.971**	25.294**	26.794**
	(4.864)	(4.899)	(6.253)	(6.906)	(6.882)
Observations	57	57	57	57	57
R^2	0.096	0.148	0.267	0.470	0.520
Country Fixed Effects					✓

Notes: †p<0.1; *p<0.05. **p<0.01; Standard errors are noted in parentheses.

clear evidence of thermostatic responsiveness across contexts (H_{1b}), utilizing the measure of proposed immigration legislation, but point to evidence of thermostatic legislative responsiveness in some countries during some periods of time. Therefore, a change in immigration attitudes in the short-term and long-term does *not* necessarily influence changes in legislative attention to immigration in all contexts.

Discussion & conclusion

With the vast increase in immigration across the globe, scholars must understand to what extent the public's opinions are accounted for in legislative activity. Are politicians listening to their constituents' preferences surrounding immigration, or are they listening to other sources of influence (e.g., interest groups, the media, etc.)? From original representative democratic theory, canonical work emphasizes the key, harmonious relationship between

Table 4. Immigration legislative activity responsiveness.

	Dependent variable:				
	Δ Immigration Bills Ratio (IBR)$_t$				
	(1)	(2)	(3)	(4)	(5)
Immigration Bills Ratio (IBR)$_{t-1}$	−0.828**	−0.831**	−0.885**	−0.944**	−1.196**
	(0.126)	(0.126)	(0.133)	(0.141)	(0.147)
Immigration Attitudes$_{t-1}$	0.013*	0.014**	0.012†	0.006	0.006
	(0.005)	(0.005)	(0.007)	(0.009)	(0.008)
Post-Refugee Crisis$_{t-1}$		−0.046	−0.059	−0.046	−0.010
		(0.053)	(0.055)	(0.071)	(0.069)
GDP per capita$_{t-1}$			0.00000	0.00000	0.00001
			(0.00000)	(0.00000)	(0.00000)
Δ GDP per capita$_t$			−0.00000	0.00000	−0.00000
			(0.00001)	(0.00001)	(0.00001)
Unemployment Rate$_{t-1}$			0.773	0.920	−1.872
			(0.867)	(1.091)	(1.815)
Δ Unemployment Rate$_t$			−2.962	−1.695	−4.201
			(2.486)	(2.727)	(2.602)
Far-Right Vote Share$_{t-1}$				0.312	−1.431†
				(0.467)	(0.720)
Δ Far-Right Vote Share$_t$				0.262	−0.606
				(0.793)	(0.786)
Executive Composition$_{t-1}$				−0.005	0.006
				(0.019)	(0.019)
Δ Executive Composition$_t$				−0.030	−0.020
				(0.026)	(0.024)
Immigration Rate$_{t-1}$				0.0001	−0.00005
				(0.0001)	(0.0001)
Δ Immigration Rate$_t$				0.0003	0.0002
				(0.0002)	(0.0002)
Constant	−0.661*	−0.733**	−0.701*	−0.490	−0.375
	(0.256)	(0.270)	(0.336)	(0.428)	(0.394)
Observations	60	60	60	60	60
R^2	0.432	0.439	0.483	0.533	0.640
Country Fixed Effects					✓

Note: †p<0.1; *p<0.05; **p<0.01. Standard errors are noted in parentheses.

elected officials and the citizens they represent (Dahl, 1971; Manin, 1995; Przeworski *et al.*, 1999). Thermostatic responsiveness occurs when there is a necessary correction to align with citizens' preferred levels of policy (Wlezien, 1995). Utilizing immigration bills, I expected that thermostatic responsiveness would still occur as new parties in government attempt to signal responsiveness to their constituent preferences by proposing legislation after being elected into government (Martin & Vanberg, 2011).

In a post-European refugee crisis world, immigration has become an extremely salient policy domain. Since the thermostatic model holds best under highly salient domains (Franklin & Wlezien, 1997), I hypothesize that more supportive immigration legislative activity would increase negative immigration attitudes in the 21st century. However, I find little support for thermostatic responsiveness overall when utilizing a new measure that captures directionality and frequency of immigration bills. Rather, I do find that an

increase in the previous time period's *positive* immigration attitudes are associated with a *more supportive* immigration bills ratio in the four countries under study; however, these results lack statistical significance when controlling for between country differences. In terms of how immigration legislative activity shapes immigration attitudes, I find *little evidence* of expected, negative responsiveness.

One potential explanation for minimal overall thermostatic responsiveness is the lack of power in the analysis itself. Data limitations on both the recency of bills coded by the CAP and immigration opinions poses difficulties in degrees of freedom. Furthermore, since the immigration bills data ends in 2009 for the Netherlands and the immigration attitudes data ends in 2015 for Denmark, there are limitations to drawing conclusions surrounding the more recent migration waves. However, as the CAP and immigration public opinion datasets are updated, future research should compare the pre- to the post-2015 European refugee crisis time period.

Previous work finds support for asylum seekers – as proxies for immigration policy outcomes – and thermostatic responsiveness in immigration opinion (Jennings, 2009; Van Hauwaert, 2023). Therefore, since the public reacts to information that is most readily available to them (Buchanan, 2023), domestic immigration bills simply may not be clearly and frequently communicated to the broader public. Moreover, the media may pick up inflows of asylum seekers to a greater extent than proposed immigration bills; in turn, the public may not have enough information to adjust their preferences. To dive deeper into this potential nuance of the thermostatic model, it is essential to gather insight into the process through which political parties communicate their legislative activity – in this instance immigration bills – to their constituents. These findings pose concern for the lack of responsiveness by legislators and political elites to their constituents' preferences on immigration. However, legislators may respond to their constituents on this issue through means besides legislative activity – for instance through campaign messaging, social media discourse, etc.

In creating a novel, original dataset on the directionality of immigration bills, I find that thermostatic responsiveness is *minimal* across four European countries: Belgium, Denmark, Germany, and the Netherlands. Figure 2 highlights the lack of systematic responsiveness and relatively minimal variation in immigration attitudes: some countries exhibit the thermostatic model in certain time periods, but not consistently over time. Why is this the case? I expect that previous measures of immigration policy – namely, inflow of asylum seekers – drove initial evidence of thermostatic responsiveness. However, by focusing on the most salient time period of immigration, there is little support for this relationship in the 21st century. While the CAP bills data poses limitations to the countries under study, I would expect *more* thermostatic responsiveness in countries that received greater migrant inflows. As one of the cases under study, Germany did receive a

large proportion of migrants overall (as seen in Figure 1); however, incorporating countries such as Greece, Italy, and Turkey may provide greater evidence of thermostatic responsiveness.

In addition, media attention must be incorporated into future analyses to fully control for the information the public receives. To continue understanding the impact of the European refugee crisis, scholars must continue to extend immigration policy and attitudinal data into the present time period. This work emphasizes the importance of domestic immigration legislative activity and stresses the need to explore potential differences across EU countries.

Notes

1. This includes all of the countries with CAP bill/law projects.
2. https://doi.org/10.7910/DVN/FIWNEY.
3. https://doi.org/10.7910/DVN/FT4TRF.
4. I define irregular migrants as 'migrant(s) in a situation of administrative irregularity' – that are frequently called 'undocumented' or 'illegalized' migrants (Moffette, 2018, p. 13).
5. Since snap elections occur in the countries under study, these are the following governmental time periods: Denmark- 2000, 2001–2004, 2005–2006, 2007–2010, 2011–2014, 2015–2018, 2019–2022, 2022–2025; Netherlands- 2000–2001, 2002–2003, 2003–2005, 2006–2009, 2010–2011, 2012–2016, 2017–2020, 2021–2022, 2023–2025; Germany- 2000–2001, 2002–2004, 2005–2008, 2009–2012, 2013–2016, 2017–2020, 2021–2025; Belgium- 2000–2002, 2003–2006, 2007–2009, 2010–2013, 2014–2018, 2019–2023, 2024–2025. I utilize the election year of the new government as the starting year for the new government's time span. While this may include bills from the previous government before the election, fewer bills tend to be proposed in election years.
6. World Bank Group (current US$).
7. World Bank Group (% of total labor force, national estimate).
8. OECD International Migration Database.
9. Executive cabinet composition from the Comparative Political Data Set. The executive composition measure ranges from 1 -- hegemony of the right-wing (and center) parties to 5 -- hegemony of social democratic and other left parties.
10. In Appendix 1, I run vector autoregression models (VARs) for robustness.
11. The immigration bills dataset includes the exact date each bill was proposed.
12. The news articles that cover the 2014 immigration bills may be found in the supplementary materials.
13. Bill ID: 64395.
14. Bill ID: 63445.

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Data availability

The data that support the findings of this study are openly available in Harvard Dataverse at https://doi.org/10.7910/DVN/FT4TRF.

Disclosure statement

No potential conflict of interest was reported by the author.

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