**Discussion**

Several results pointed at 2015 being a pivotal year for immigration dynamics across Europe and the national levels of Germany and Hungary, causing increases in several aspects of polarization regarding opinions about immigration. This can be explained by the fact that that year was the height of the European refugee crisis. During that year, over one million people arrived in Europe by sea, mainly fleeing conflicts in the Middle East, Africa, and South Asia, and especially Syria (Almustafa, 2021; Piguet, 2024). Previous research shows that the 2015 refugee crisis placed strain on European institutions and politics, leading to increased party competition and polarization. Political elites and parties shifted their positions, with right-wing and populist movements gaining traction by emphasizing national sovereignty and stricter immigration controls. The crisis acted as a catalyst for movements and parties that challenged the existing political order, often using xenophobic rhetoric (e.g., Izak, 2021; Hutter & Kriesi, 2021; Yaseen et al., 2025). However, there were regional differences as the crisis sparked different reactions in Eastern and Western Europe, with trust in domestic and EU institutions playing a key role in shaping attitudes (Peshkopia, Bllaca & Lika, 2018).

Why is non-neutrality increasing across Europe/Germany/Hungary

We found clear evidence increases in polarization in the form of the non-neutrality increasing both averaged across Europe and focused on Hungary after 2015, albeit only very weakly for Germany. Meaning there is an ongoing trend of a shifting away from a neutral stance across Europe, but perhaps to varying degrees. Indeed, after 2015, many European countries experienced a shift away from neutral stances, with public opinion becoming more divided and, in some cases, more negative toward immigration, especially in countries where the debate was framed around security concerns (e.g., Cichocki & Jabkowski, 2019; Torres, 2019). Considering Germany, we found only very weak evidence for increasing non-neutrality following the 2015 refugee crisis. Indeed, prior research suggests that some specific events such as the 2015-16 New Year’s Eve sexual assaults in Germany or 2016 Berlin terror attack might have led to temporary negative (i.e., non-neutral) shifts in attitudes toward refugees, but these changes would often be short-lived and usually wouldn’t translate into a long-term trend (Vollmer & Karakayali, 2018, Schmidt-Cantra & Czymara, 2020). For Hungary, we found a clearer increase in non-neutrality after 2015. Reason being the aforementioned governmental anti-immigration campaigns. However, shortly after that increase, we found a period of decreasing non-neutrality, meaning more people moved again towards a neutral stance between 2016 and 2020. After 2020, we again saw a stark increase in non-neutrality. This volatility was found for other metrics as well, indicating that many Hungarians tend to change their minds about immigration rather quickly. This is contradicting other research that states that Hungarian opinions on immigration during this period were stable and strongly anti-immigration, rather than volatile or quickly changing (e.g., Bajomi-Lázár, 2019; Bíró-Nagy, 2021). In addition to the increases in non-neutrality, we found evidence for an ongoing shift away from a neutral opinion stance about immigration across Europe on average as of 2015 in the form of increases in the average deviation from neutrality. The framing of immigration by political actors and the media can contribute to the differentiation and sometimes polarization of public opinion (Lahav, 2004; Kehrberg, 2007). Interestingly, it seems to be the distinguishment between the words “immigrant” and “refugee” which can already lead to more nuanced, but also polarized, attitudes. People generally hold more positive views toward refugees than immigrants, and attitudes vary further based on ethnicity, country of origin, and economic background of newcomers (Kehrberg, 2007). However, while some countries experienced more restrictive opinions in response to increased immigration flows and political framing, overall shifts in public opinion across Europe have been relatively mild, with significant variation between countries (Hatton, 2016). For example, in Germany, we only found an increasing polarization with regards to economic considerations as per an increasing average deviation from neutrality value with the “imbgeco” variable. In fact, the sentiment of Germans about immigration can be shaped by both economic self-interest such as concerns about personal finances and job security (Van Hauwaert & Vegetti, 2025). Germans with neoliberal economic views are more likely to see immigrants as a drain on the welfare state, while those with left-leaning economic views are more likely to see immigrants as beneficial (Grdešić, 2019). While we found economic factors to be the divisive force of immigration opinion shaping with the metric, others report more of a mix of factors. According to Fetzer (2000), cultural marginality and ethnocentrism are often stronger predictors of anti-immigration sentiment than economic self-interest, especially in Western Germany.

Unlike non-neutrality and average deviation from the neutrality, dispersion measures the average spread of individual data points around the mean of a distribution, and not a fixed value such as the neutral “5”. Thus, dispersion measures the individual’s deviation from the average opinion. Higher dispersion means a larger pool of opinions. For Europe overall, we found, as of 2015, only weak increases for “imbgeco” and “imueclt”, with “imwbcnt” increasing a bit stronger, which is a pattern that has started back in 2002. This is consistent with current research, reporting only mild shifts in public opinion on immigration between 2002 and 2012, citing the severity of economic recessions as one major driver (Kehrberg, 2007). The pattern is similar for Germany. However, Hungary again showed much stronger fluctuations following an increase directly after 2015, indicating a larger volatility of opinions even on the individual level at that point.

We identified two moderate groups based on Lorenz’s (2017) research: The moderate acceptors and the moderate opponents. Our results suggest an increase in moderate divergence across Europe, but also distinctively in Germany and Hungary. In Germany, the presence of both pro- and anti-immigration stances within moderate parties, such as the Christian Democratic Union (CDU), has led to internal divisions and conflicting messages on immigration policy, reflecting broader divergences among moderate voters (Schmidtke, 2024). Indeed, studies show a clear antagonism between supporters and opponents of immigration within the German electorate, including among those who identify as moderate or centrist. This divide is especially visible on the issue of immigration (Hebenstreit, 2022). In Hungary, on the other hand, the government’s intensive anti-immigration campaigns, especially during and after the 2015 migration wave, significantly influenced public opinion. These campaigns made anti-immigration sentiment widespread across the political spectrum - including among moderates (Bocskor, 2018). Before the crisis, differences in anti-immigrant attitudes between political groups, including moderates, were minor. However, after the crisis and the government’s campaign, these differences became more pronounced, with party preference playing a larger role in shaping attitude (Barna & Koltai, 2019).

When moderate divergence increases, moderate consensus should logically decrease – which is what we found for Germany and Hungary after 2015. Interestingly, in comparison to Germany, the moderate group consensus for Hungary fluctuated much stronger. This again indicates that the opinions about immigration of moderate voters in the Hungary are much more volatile in comparison with Germany or the European average. Our finding here is directly contradictory to other research which states that immigration preferences among the public tend to remain stable over time. However, it could be changes in the frequency of the salience of immigration as a political issue, which can drive temporary increases in support for far-right parties when immigration is highly visible in public debate, which might be a hidden driver here (Magistro & Wittstock, 2021; Cools, Finseraas & Røgeberg, 2021)

Averaged across Europe, we found evidence for a decreasing moderate size parity for “imbgeco” and “imueclt”, indicating a decrease in polarization among the moderate voters when it comes to economic and cultural factors. This is contradictory to other research which reports stability of attitudes across Europe as a whole, finding only little evidence for significant divergence or convergence between pro and anti-immigration groups, including the moderate voters (Hatton, 2016). However, Di Lillo (2018) reports significant spatial clustering of anti-immigrant attitudes. Nonetheless, this clustering would not necessarily reflect a Europe-wide shift in the balance between moderate pro- and anti-immigrant groups. And indeed, we found substantial evidence for Hungary being one of these anti-immigration hotspots, as indicated by decreasing Likert-scale opinion values (see below).

For Germany, we found increases in moderate size parity for all three variables after 2015, meaning the group sizes of the moderate acceptors and moderate opponents are becoming more equal. In this context, this means an increase in polarization among the moderately opinionated individuals. Current research does not provide clear evidence of a sustained trend toward parity between these groups after 2015, meaning our finding here provides a novel insight. Though not as pronounced as in Germany, we found similar increases in moderate size parity for all three variables in Hungary after 2015, following years of decreasing size parity (meaning years of decreasing polarization among the moderate groups). This evidence shows how even members of the moderate groups can be influenced by state-driven anti-immigrant propaganda in either direction. Strikingly, for all the variables, the moderate size parity ended up at a value smaller than 0.1, indicating that the group sizes were extremely imbalanced at this point. There seems to be no clear prior research that suggests that the group sizes of moderate pro- and moderate anti-immigrant opinionated citizens in Hungary were extremely unequal. Indeed, available research and survey data do not indicate a dramatic imbalance between these groups prior to the 2015 migration crisis (e.g., Schneider, 2007). This means that our findings here might provide another novel insight.

Looking at the raw Likert-opinion values, we actually found positives trends for the average opinion across Europe, moving slightly above the neutral “5”, at least since 2010. This is especially visible for “imbgeco” and “imwbcnt”, while “imueclt” did not change substantially after 2015. Meaning that despite all media coverage and government-run campaigns fueling fear against immigrants run by certain countries, the average European does still have a slightly positive view on immigration, and especially when it comes to economic potential and overall quality of life considerations. Other research points out that there has been a gradual shift toward more positive attitudes about immigrants in Western EU countries since the 2000s, mainly due to younger generations being more open. However, this positive trend appears to be slowing, as the newest cohorts are not significantly more positive than previous ones (Schmidt, 2021). Yet, our results show only “imueclt” stalling, while “imbgeco” and “imwbcnt” are going strong. Considering the raw Likert-scale opinion values, we found that in Germany, there seems to be a growing body of people who think that immigrants might be good for the economy, yet, at the same time, there is a body of people who believe that immigrants might negatively impact the cultural life after 2015. In fact, In Germany, immigration is widely recognized as having positive economic effects, particularly by addressing labor shortages and supporting economic growth. Historically, immigration has helped Germany tackle demographic challenges, such as an aging population and labor shortages, by providing both high- and low-skilled workers. This has boosted productivity, innovation, and overall economic growth (Higgins & Klitgaard, 2019; Grajdeanu, 2023). While a common concern, most studies find little to no negative impact of immigration on native employment or wages (Prantl & Spitz-Oener, 2020). Yet at the same time, while immigrants clearly can contribute to cultural diversity (Giovanis, Akede & Ozdamar, 2021), there are ongoing debates and concerns among some groups about the potential for cultural change or loss of traditional values. Some native-born Germans become less supportive of welfare programs as the proportion of immigrants increases, especially during periods of high unemployment. This reflects concerns about social cohesion and resource allocation, particularly in the early phases of immigration wave (Schmidt-Catran & Spies, 2016). In contrast to the mixed trends in Germany, there is an overall trend of increasing resentment towards immigration in Hungary. The Hungarian government, especially under Viktor Orbán, has run intensive anti-immigration campaigns since 2015, framing immigration as both an economic and security threat. These campaigns conflated migrants with terrorists and criminals, and presented the government as the defender of Hungarian and Christian values (Bocskor, 2018; Bajomi-Lázár, 2019). The media environment in Hungary is highly politicized, with limited pluralism and critical voices. This has amplified government messaging and reduced the visibility of alternative or critical perspectives on immigration (Farkas, 2021). Thus, this trend is largely the result of deliberate political strategies that portray immigration as a danger to Hungarian values and identity, especially since 2015. However, note that several of our polarization metrics show strong fluctuations for Hungary.

To the polarization metrics described in literature, we added a new one in the form of the explained variance of the first principal component (PC1) of the PCA using the three immigration variables. We interpreted an increase of the proportion of explained variance of PC1 as an increase in issue alignment – the synchronization of opinions towards a specific topic. For example, if a person would agree that immigrants are good for the cultural life of a country, with increasing issue alignment, it would be increasingly likely that that person would also consider immigrants to be good for the economy. This is exactly what we found - averaged across Europe before and after 2015, but also on the country-level for both Germany and Hungary. Indeed, individuals who view immigrants positively in one domain, such as cultural life, are often more likely to hold positive views in other domains such as economic contributions (Van Hauwaert, S., & Vegetti, F., 2025). According to our findings, the ongoing trends of issue alignment have been roughly equally fast for both Germany and Hungary after 2015. Germany generally has a more positive opinion about immigration than Hungary (see below. Also, Bocskor, 2018; Heath & Richards, 2019; Bíró-Nagy, 2021). However, other research suggests that the alignment of positive opinions is more likely among those with higher political tolerance, stronger European identity, and better information about immigration (Lahav, 2004; De Coninck, 2020; Van Hauwaert & Vegetti, 2025). Meaning we would have expected a faster rate in Germany than in Hungary.

While the fact that 2015 immigrant crisis was a major turning point in terms of opinions about immigration is perhaps established knowledge, it is striking how much it is reflected in our results regarding polarization. We found several leads that suggest that opinion polarization has been happening both on the European continental scale, and on the national scale, at least for Germany and Hungary, for both the moderate and more extreme groups, since 2015. More surprising, indeed, are the strong fluctuations we found for five out of eight metrics regarding Hungary for that year. This suggests that the opinions there are much more changing and volatile than previously thought, even on the individual level. Considering that the country is under an autocratic, anti-immigrant leadership (or perhaps exactly because the country is under an autocratic anti-immigrant leadership), this finding is quite surprising.

Our results suggest that opinion polarization is quite nuanced and faceted. In Germany, it seems to be mainly economic considerations that have been causing a polarized stance, while cultural concerns seem to be secondary. Whereas in Hungary strongly fluctuating metrics make it hard to discern, whether it is economic, cultural, general quality-of-life or rather a mix of the three factors that have been driving opinion polarization as of 2015. Yet at the same time, there seems to be an ongoing trend of an “overall immigration opinion” that takes over across Europe, but also in Germany as well as in Hungary. Our analysis also sheds light on the more seldom considered moderate group of opinion holders, showing that even among this group, polarization has been happening as well on both the continental and national levels.

This research offers a novel understanding of immigration opinion dynamics across Europe through a robust, large-scale empirical approach. Leveraging polarization metrics established from literature and a completely new one, namely the explained variance of the first principal component (which also serves as a metric for issue alignment). This study reveals both continental and national intricacies of economic, cultural, and quality-of-life considerations of opinion dynamics about immigration. Partly challenging previous assumptions based on established research, this thesis adds a valuable piece to the puzzle. Furthermore, the development of an extensible exploratory web application provides a practical tool for future research and analysis in this field.

Consideration of weaknesses

While this study offers novel insights, certain limitations warrant consideration. The analysis focused on two specific countries in addition to European averages. While these selections provided valuable contrasting cases, the inclusion of a Scandinavian country, known for its progressive policies, could have offered further nuanced and contrasted perspectives. However, due to time restrictions, we had to focus on just Germany and Hungary along with the European average. Furthermore, the temporal analysis of the time series data relied primarily on visual assessment rather than employing specific trend identification methods. While visual assessment allowed for the identification of salient patterns, future research could benefit from the application of formal time series methodologies to quantify trends with greater statistical rigor.

While our study often confirms previous research, it also unveiled several novel insights. For Germany, we found a trend of increasing size parity as of 2015, which, to our knowledge, has not yet been reported, along with the stronger importance of economic factors over cultural ones. Another previously unreported insight is the extremely unequal moderate Group sizes in Hungary, also as of 2015. Whereas previous research suggests that issue alignment should be proceeding faster in Germany than in Hungary, we found that the two countries seem to “issue align” at the same pace, which might mean that either Germany and Hungary are ideologically closer to each other, at least with regards to immigration, than previously thought. Or that the effects of higher political tolerance, stronger European identity, and better information about immigration are not as important, and it is other factors that drive the speed of issue alignment. Also, previous research established that opinions about immigration in Hungary have been quite consistent over the years. However, our results suggest that opinions about immigration are here much more volatile than previously thought, indicating that substantial parts of the Hungarian population are not as indoctrinated by the government-driven anti-immigration propaganda as one might think. Lastly, our research shows that the moderate group size equalness has been decreasing across Europe since 2015 for “imbgeco” and “imueclt”, indicating the opposite of polarization here, while previous research is reporting more of a stable process.

**Future prospects**

The continuously increasing proportion of the explained variance of PC1 across Europe as a whole indicates a more binary view of “the immigrant”, merging concerns about economy, culture and overall quality of life into one big concern, potentially removing and nuance we have found so far, meaning the potential for even more polarization.

Our research showed that nuanced views are necessary in order to identify the underlying factors and locations of immigration opinion polarization hotspots, and that the Hungarian population might not be the “bulwark” of anti-immigrant sentiment it sometimes seems to be considered as. However, our results also suggest that these nuances might disappear in the verge of an overall “the immigrant” opinion, at least when it comes economics, cultural, and overall quality-of-life considerations regarding immigration. This process might only accelerate with (far-)right parties being on the rise across Europe. As of Mai 2025, Germany once again has a conservative leader in form of Friedrich Merz (CDU) with the AFD being on the rise. Viktor Orbán is also not going anywhere. However, one silver lining is that, despite everything, the average opinion about immigration is still getting better, at least averaged across Europe, and a new pope is in place who might use his voice to spread his pro-immigration world views.