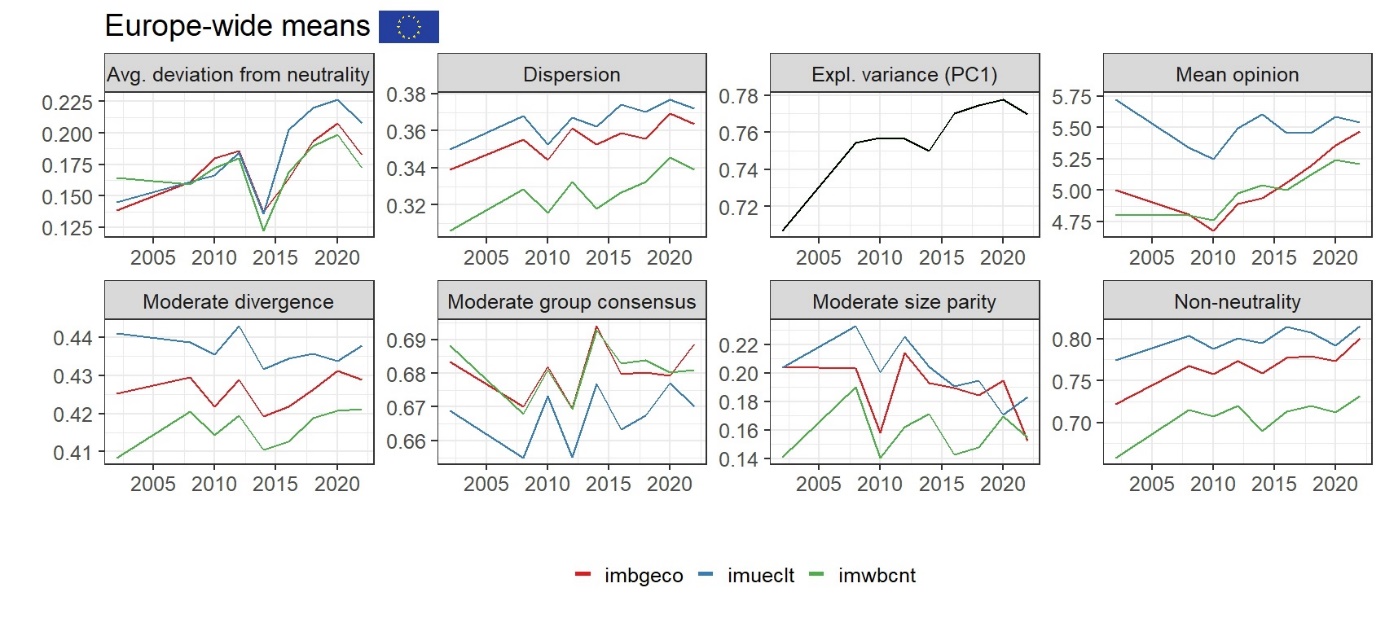
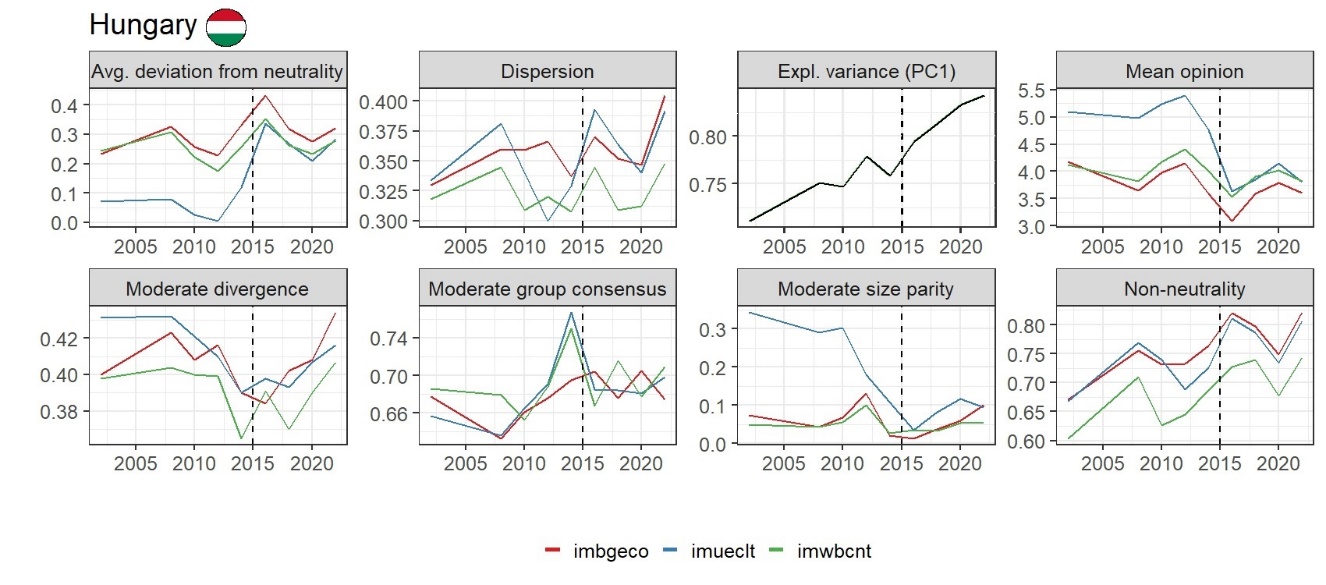
Results



**Fig 3.xxx** The seven aspects of polarization and the average opinion over time on the European continental level averaged across all available countries between 2002 and 2022.Avg. deviation from neutrality: Shows the average extent to which opinions deviate from a neutral stance, i.e., an increase of acceptance **or** rejection. Higher values suggest thus stronger opinions, whether positive or negative, indicating increasing polarization. The trends for all three variables seem to show a general increase in deviation from neutrality, particularly noticeable after around 2015. This suggests that opinions on immigration have become less neutral and more pronounced over time. **Dispersion:** This metric measures the spread or variance of opinions across the European population. Higher dispersion indicates a wider range of opinions, which can be a sign of polarization. The trends here are somewhat varied across the variables, but generally show an upward tendency, especially in the later years. This implies that the range of opinions on immigration has broadened. **Expl. variance (PC1):** Refers to the explained variance of the first principal component of the PCA based on the three migration variables. A higher value suggests that a single underlying dimension (the general sentiment towards immigration) explains a larger proportion of the variance in opinions. The upward trend in this graph suggests that opinions on immigration have become increasingly structured along a primary dimension of opposition, again indicating an increase in polarization. Mean opinion: This is not a polarization metric per se, but shows the average opinion for each variable on the Likert-scale. Small values indicate resentment, five indicates a neutral stance, and large values indicate approval. Thus, a downward trend shows an increase in negative sentiment, and a positive trend an increase in positive sentiment. While "imueclt" generally maintains a higher mean opinion, all three categories show some level of fluctuation and a tendency to increase in mean opinion towards the later part of the observed period. The period around 2010 seems to be a turning point for all three, with opinions generally starting to recover or increase after that year. M**oderate divergence:** Captures the extent to which the average views of the moderately accepting and moderately opposing individuals diverge. The trends are somewhat fluctuating, but there appears to be an overall increase in moderate divergence, particularly for the "imbgeco" variable, indicating an increase in polarization amount the two moderate groups. **Moderate group consensus:** This graph illustrates the level of agreement within the two moderate groups. The trends show a general decrease, particularly for "imueclt" and "imwbcnt," implying that even among those with moderate views, there might be less internal consensus. This suggests a weakening of the moderate middle ground. Moderate size parity: Captures the ratio of the smaller to the larger group holding moderate opinions. The imbgeco variable shows a fluctuating trend, with a notable peak around 2015 and then a decrease. This suggests that the balance between moderately accepting and opposing individuals, according to this measure, varied over time, with a period of greater balance around 2015. The imueclt variable also shows considerable fluctuation, with peaks and troughs. It's harder to discern a clear directional trend here. The imwbcnt variable appears to show a general upward trend, particularly in the later years. This suggests that the sizes of the moderately accepting and moderately opposing groups, according to this variable, have become more similar over time, indicating increasing polarization in terms of parity. **Non-neutrality:** This graph directly measures the prevalence of non-neutral opinions. Higher values indicate a larger proportion of the population holding either positive or negative views on immigration. All three variables show a clear upward trend, especially after 2015, strongly suggesting a significant increase in the proportion of Europeans holding non-neutral opinions on immigration.

Hungary

Considering Hungary, results strongly suggests that the period around 2015 was a critical turning point for public opinion on immigration. Before this time, average opinions tended to be slightly positive to neutral, with moderate levels of deviation and dispersion. The events around 2015 - likely the peak of the European migration crisis - appear to have triggered a significant shift: Average opinions turned sharply negative across all three dimensions (economic, cultural, and general impact). Opinions became more polarized, with individuals holding stronger views, both positive and negative, leading to higher average deviation from neutrality and increased dispersion within groups. Views on the different aspects of immigration became more aligned, as indicated by the increasing explained variance of the first principal component. While there were some fluctuations in the divergence between groups and the consensus within groups, the overall picture is one of a significant and sustained negative shift in public sentiment towards immigration in Hungary following the 2015 period. Opinions became more extreme, with a larger proportion of the population holding non-neutral views and a greater average deviation from neutrality, indicating polarization. Parallel to that, we found a shift towards negative sentiment, as the average opinion on all three measured aspects of immigration became more negative. Additionally, we found a growing divergence between moderate groups: The gap between those with moderately accepting and moderately opposing views widened. Also, The relative size of the moderately opposing group appears to have increased. Also, increased alignment of opinions was found as views on the economic, cultural, and societal impacts of immigration became more congruent. In summary, the refugee crisis seems to have acted as a polarizing event in Hungary, leading to more negative, less neutral, and more divergent opinions on the various facets of immigration. The increased explained variance in the first principal component suggests that attitudes towards immigration became more unidimensional and potentially more strongly linked to a general stance for or against it.

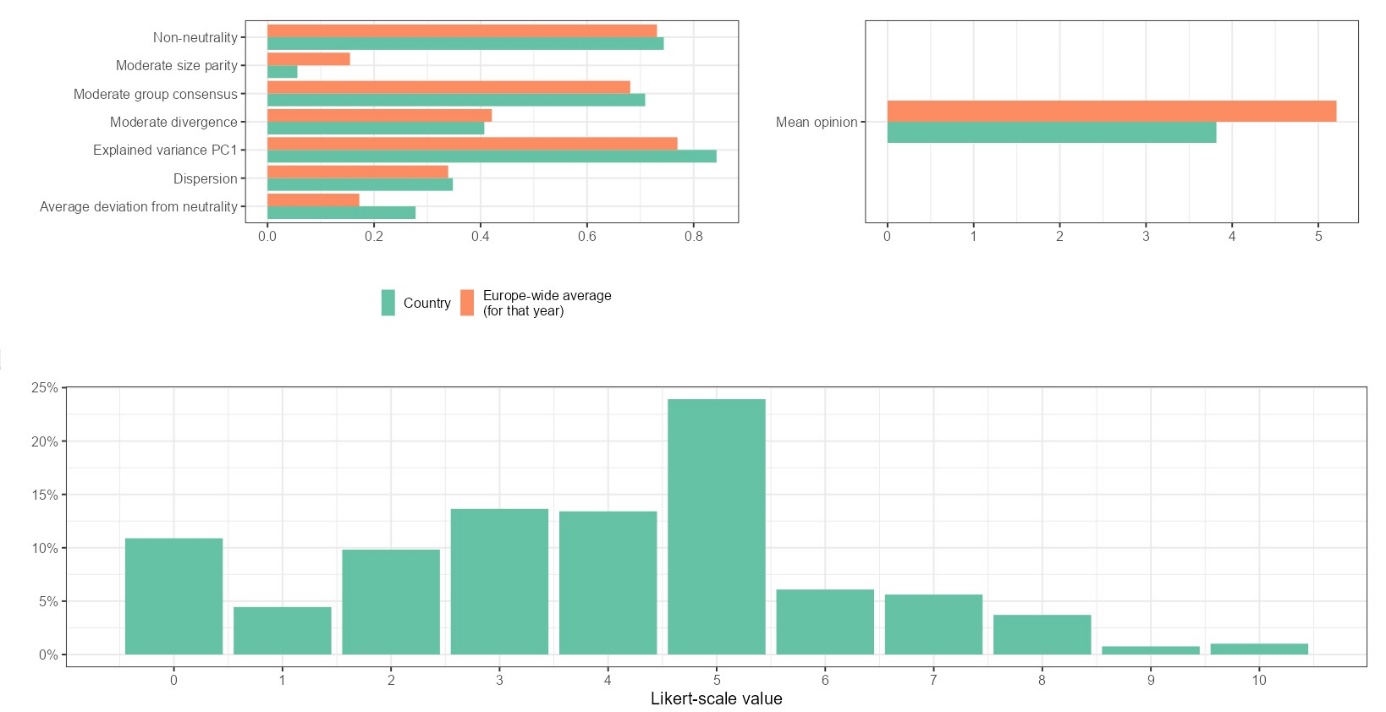


**Fig 3.xxx** The seven aspects of polarization and the average opinion over time for Hungary. Avg. deviation from neutrality: Shows how far, on average, opinions are from the neutral midpoint. Results indicate a general trend of increasing deviation from neutrality across all three aspects of immigration, particularly after 2015. This suggests that opinions became less neutral and more strongly held in either the positive or negative direction following the refugee crisis. The economic impact (red line) shows a notable spike in deviation around 2015 and remains relatively high. Dispersion: This indicates the spread of opinions within the population. Higher dispersion means a wider range of views. The plot shows a fluctuating pattern, but generally, dispersion seems to increase or remain at a higher level after 2015, suggesting that the refugee crisis might have led to a broader spectrum of opinions on immigration. Expl. variance (PC1): The explained variance of the first principal component from a PCA combining the three immigration aspects shows a clear upward trend, especially after 2015. This suggests that a single underlying dimension (the general attitude towards immigration) became increasingly dominant in explaining the variation in opinions across the three measured aspects. In simpler terms, opinions on the economic, cultural, and societal impacts of immigration became more aligned. Mean opinion: This displays the average opinion. For all three aspects, the mean opinion generally decreases after 2015, indicating a shift towards more negative average perceptions of immigration following the refugee crisis. The most pronounced negative shift appears in the perception of immigrants making the country a worse place to live (green line). Moderate divergence: This measures the gap between the average opinions of moderately accepting and moderately opposing groups. We observe an increase in moderate divergence after 2015 for all three aspects, suggesting that the views of those with somewhat positive and somewhat negative initial stances on immigration drifted further apart following the refugee crisis. Moderate group consensus: This shows the internal agreement within the moderately accepting and moderately opposing groups. Lower values indicate higher consensus. The plot shows varying trends, but there isn't a clear consistent pattern of increasing or decreasing consensus within these moderate groups across all three aspects after 2015. There are fluctuations, suggesting that the impact of the refugee crisis on internal group agreement was complex and varied depending on the specific aspect of immigration. Moderate size parity: This is the ratio of the smaller to the larger moderate group. A value closer to 1 indicates similar sizes. The plot shows a decrease in moderate size parity around and after 2015, particularly for the economic and societal impact aspects. This suggests that one of the moderate groups (likely the moderately opposing group, given the shift in mean opinion) grew in relative size compared to the other following the refugee crisis. Non-neutrality: This represents the proportion of individuals holding non-neutral views. There's a clear increase in non-neutrality across all three aspects after 2015. This reinforces the finding from the "Avg. deviation from neutrality" plot, indicating that more people moved away from a neutral stance and adopted a more definite positive or negative opinion on immigration after the refugee crisis. The data strongly suggests that the European refugee crisis of 2015 had a significant impact on the polarization of opinions about immigration in Hungary

Looking at the most recent development in Hungary captured by the ESS (2022), and considering the most general variable “imwbcnt” (immigrants make the country worse [0] or better [10]) in comparison to the Europen-wide average for the same year, we got several insights. Based on the non-neutrality metric, we found that Hungary shows a substantially higher proportion of individuals with non-neutral views (around 0.8) compared to the European average (around 0.7). This indicates that in Hungary, a larger percentage of people held a definite opinion (either positive or negative) on whether immigrants make the country a worse or better place to live, compared to the average across Europe. The moderate size parity metric very low values for Hungary (close to 0), while the European average is higher (around 0.2), suggesting a significant imbalance in the sizes of the moderately accepting and moderately opposing groups in Hungary. One of these groups is much smaller than the other. Compared to Europe, Hungary has a less balanced distribution within the moderate opinion spectrum. Considering the moderate group consensus, Hungary exhibits a higher value (around 0.7) compared to the European average (around 0.5). This implies that within the moderate groups in Hungary (those leaning slightly positive or slightly negative), there is less internal disagreement and more alignment of views compared to the moderate groups across Europe. Looking at the moderate divergence, Hungary shows a value (around 0.45) than the European average (around 0.35). This indicates a larger gap between the average opinions of the moderately accepting and moderately opposing individuals in Hungary compared to the average across Europe. The moderate views are further apart in Hungary. Assessing the explained variance of PC1, Hungary has a slightly higher value (around 0.75) compared to the European average (around 0.7). This suggests that a single underlying factor (likely a general attitude towards the societal impact of immigration) explains a slightly larger portion of the variation in opinions on this specific question in Hungary compared to the European average. Regarding the dispersion metric, Hungary has a slightly higher value (around 0.3) compared to the European average (around 0.25). This indicates a slightly wider spread of opinions on whether immigrants make the country a worse or better place to live in Hungary compared to the average across Europe. For the average deviation from neutrality, Hungary shows a considerably higher average deviation from neutrality (around 0.25) compared to the European average (around 0.15). This confirms that, on average, opinions in Hungary are further away from the neutral point on the scale compared to the European average.

Comparing not the polarization metrics, but the average opinion value (on the Likert scale), Hungary exhibits a notably lower (around 3.5) average than the European-wide average (around 5.2). This clearly indicates that, on average, people in Hungary held a more negative view on whether immigrants make the country a worse or better place to live compared to the average opinion across Europe in 2022. The distribution of opinions is heavily skewed towards the lower end of the scale. The largest proportion of responses is at the neutral point (5), but there are substantial proportions expressing negative views (0, 1, 2, 3, 4). This distribution visually confirms the lower mean opinion observed in Hungary. A significant portion of the population leans towards the negative end of the spectrum regarding the societal impact of immigration.

Hungary showed more polarized opinions: A larger proportion of people held non-neutral views, and the average opinion was further from the neutral point. Additionally, the average opinion in Hungary was significantly more negative than the European average. There is also greater divergence among moderate groups: The gap between moderately accepting and opposing views was wider. The moderate groups were also less balanced with unequal sizes of the moderately accepting and opposing groups. Yet, we found evidence for a potentially higher internal agreement within moderate groups, as the moderate groups in Hungary showed more internal consensus. Lastly, the distribution of opinions skewed towards the negative, with a substantial portion of the Hungarian population holding negative views on the societal impact of immigration. In essence, in 2022, Hungary stood out from the European average with more pronounced negative opinions and a higher degree of polarization regarding the societal impact of immigration. The distribution of opinions reveals a significant segment of the population holding negative views on this aspect.



**Fig 3.xx** ComparingHungary in 2022 using the imwbcnt variable with the corresponding European averages. Non-neutrality: Hungary shows a substantially higher proportion of individuals with non-neutral views (around 0.8) compared to the European average (around 0.7). This indicates that in Hungary, a larger percentage of people held a definite opinion (either positive or negative) on whether immigrants make the country a worse or better place to live, compared to the average across Europe. Moderate size parity: Hungary has a very low moderate size parity (close to 0), while the European average is higher (around 0.2). This suggests a significant imbalance in the sizes of the moderately accepting and moderately opposing groups in Hungary. One of these groups is much smaller than the other. Compared to Europe, Hungary has a less balanced distribution within the moderate opinion spectrum. Moderate group consensus: Hungary exhibits a higher moderate group consensus (around 0.7) compared to the European average (around 0.5). This implies that within the moderate groups in Hungary (those leaning slightly positive or slightly negative), there is less internal disagreement and more alignment of views compared to the moderate groups across Europe. Moderate divergence: Hungary shows a higher moderate divergence (around 0.45) than the European average (around 0.35). This indicates a larger gap between the average opinions of the moderately accepting and moderately opposing individuals in Hungary compared to the average across Europe. The moderate views are further apart in Hungary. Explained variance (PC1): Hungary has a slightly higher explained variance (around 0.75) compared to the European average (around 0.7). This suggests that a single underlying factor (likely a general attitude towards the societal impact of immigration) explains a slightly larger portion of the variation in opinions on this specific question in Hungary compared to the European average. Dispersion: Hungary has a slightly higher dispersion (around 0.3) compared to the European average (around 0.25). This indicates a slightly wider spread of opinions on whether immigrants make the country a worse or better place to live in Hungary compared to the average across Europe. Average deviation from neutrality: Hungary shows a considerably higher average deviation from neutrality (around 0.25) compared to the European average (around 0.15). This confirms that, on average, opinions in Hungary are further away from the neutral point on the scale compared to the European average. The top right chart compares the mean opinion in Hungary (green bar) to the European-wide average (orange bar) for the 'imwbcnt' variable in 2022. The scale likely ranges from 0 (immigrants make the country worse) to 10 (immigrants make the country better). The mean opinion in Hungary is notably lower (around 3.5) than the European-wide average (around 5.2). This clearly indicates that, on average, people in Hungary held a more negative view on whether immigrants make the country a worse or better place to live compared to the average opinion across Europe in 2022. This histogram shows the distribution of opinions on the 11-point Likert scale (0 to 10) in Hungary for the 'imwbcnt' variable in 2022. The distribution is heavily skewed towards the lower end of the scale. The largest proportion of responses is at the neutral point (5), but there are substantial proportions expressing negative views (0, 1, 2, 3, 4).

* Germany or Sweden as good candiates for “refugees welcome” propaganda