The Political Effects of (Mis)perceived Immigration: a Comment

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Abstract

Barilari et al. (2025) examine how expectations of future migration affect protest voting in municipal elections in Italy between 2010-2015 and 2015-2018. They study how the exposure of boat arrivals shortly before elections affect changes in voting patterns. They construct a municipality-level shift-share-like exposure by aggregating the interaction of recent origin-specific arrivals with the origin-specific share of migrants in a municipality (as a share of total population from that origin in Italy), for all origin countries. They interpret this exposure as a measure of perceived future migration flows to study the effect of expected migration on electoral outcomes. Their design relies on a first-difference design between subsequent elections, controlling for many factors, including changes in population and the change in the number of hosted refugees. This comment shows that their results are mechanically driven by a combination of (i) a mechanical correlation between their exposure measure and municipality size and (ii) a strong increase in protest voting in large municipalities, which is at least partially explained by fringe parties not running in small municipalities. Controlling for the level of municipality size renders all main results insignificant.

1 Estimating the effect of expected migration on voting

Barilari et al. (2025) estimate the following econometric model:

$$\Delta Y_{i,y} = \beta_1 \Delta EXPIND_{i,y,t} + \beta_2 \Delta \Gamma_{i,y} + \beta_3 \Delta \Upsilon_{i,y} + \delta_y + \Delta \epsilon_{i,y} \tag{1}$$

$\Delta Y_{i,y}$ are changes in protest vote shares, for which the authors use various proxies. The controls in $\Delta \Gamma_{i,y}$ include the change in local migrant share and beds in refugee hosting centers, $\Delta \Upsilon_{i,y}$ includes several municipal characteristics, including the change in the size of the electorate. As changes in the electorate can go both ways and is relatively moderate within years, it is only weakly (negatively) correlated with the size of the electorate in the first election ($\rho = -0.38$). Every municipality, independent of size, receives unit weight in these regressions.

Importantly, the authors do not allow for differential voting trends between municipalities with different characteristics, they only allow *changes* in local characteristics. This does not

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capture simple factor model terms where baseline factors interact with time-varying factor loadings. Hence, this design relies on a form of unconditional parallel trends analysis that states that municipalities with lower and higher $EXPIND_{i,y,t}$ should have followed similar voting trends if expected arrivals would be 0.

They operationalize the exposure index as follows:

$$EXPINDEX_{i,y,t} = \sum_{j} REF_{j,t,y} \times IMM_{j,i,y} \tag{2}$$

Here, $REF_{j,t,y}$ are the number of refugees of nationality j landing by boat on the Italian coast within t days before election day in year y. $IMM_{j,i,y}$ is the ratio between the number of immigrants of nationality j residing in municipality i and the total number of immigrants of nationality j in Italy, in year y.[1] This exposure index resembles how shift-share instruments for *total* migration are constructed in the international migration literature (Jaeger, Ruist and Stuhler, 2018).[2] In the migration literature, this measure is divided by (an exogenous version) of total population to arrive at an instrument predictive of migration-to-population shares. The exposure used by Barilari et al. (2025) depends on municipal size through the "share" part $IMM_{j,i,y}$, as the number of people of a given nationality is usually larger in large cities than small municipalities. As the municipal electorate size in the first election in Barilari et al. (2025) dataset ranges from 79 (Balmuccia) to 996,400 (Milano), the variation in the change in the exposure index is strongly correlated to the size of the electorate in the first period ($\rho = 0.87$). Figure 1 shows a scatterplot with linear fit between both variables. If there are differential trends by municipal size, β_1 could spuriously capture the effect of municipality size rather than expected refugees.

2 Controlling for municipal electorate size

I reanalyze the main results of Barilari et al. (2025), controlling for the size of the electorate during the first election to allow the parallel trends assumption to hold only conditional on municipality size. Table 1 shows the main results from Table 2 of Barilari et al. (2025) in Panel A. Panel B includes a linear control for the electorate size: all effects disappear or even change sign. At the same time, the size of the electorate strongly predicts increased vote shares for all types of protest votes, except for turnout. I do not interpret the negative and significant result in Column 4 as causal, as a parallel trends assumption conditional only on electorate size may still be violated if there is non-linear or other confounders.

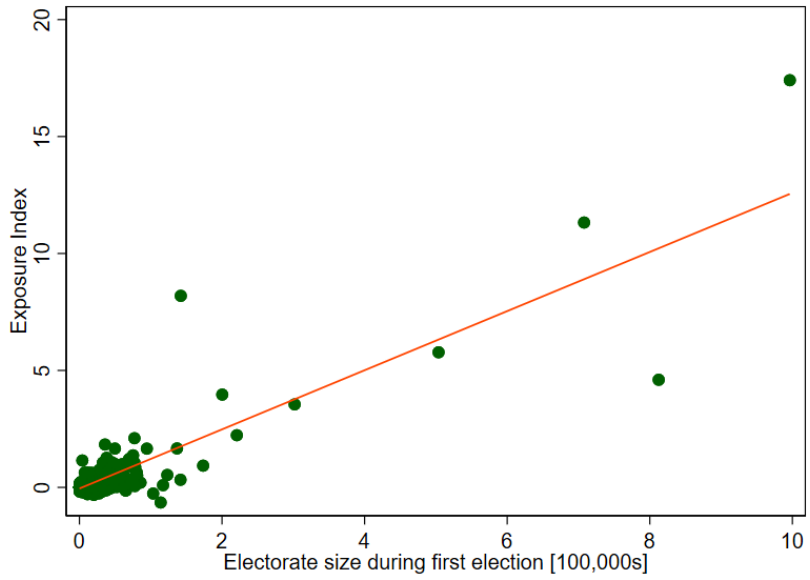
Panel C replaces the exposure index by a relative exposure index, which is simply given by dividing the exposure index by the electorate in the first election year. This factor is a bit better behaved as it is not inherently scale-dependent. Panel D does the same, but first calculates the relative exposure indexes in the respective years, and subtract the exposure index of the first election from that of the second election. We find insignificant effects across all outcomes.

This is surprising as Barilari et al. (2025) claim in footnote 5 that their results are robust to using a scale-independent population index by dividing IMM by total municipal popula-

[1] The authors use different values for t. I only use the first one they present results for: all days since January 1. The exact choice does not matter for my reanalysis as the measures with different t are strongly correlated.

[2] Hence, this exposure index can be interpreted as the change in the number of predicted refugee arrivals. This also means that the treatment is extremely distributed, with few observations with high leverage, as shown in Figure A1.

Figure 1: Correlation between the Change in the exposure index and the baseline electorate size



Note: Scatter plot with linear fit showing the strong relation between changes in the Exposure Index and the baseline electorate size. Data originates from the replication package of Barilari et al. (2025).

tion, which would be equivalent to my procedure for Panel D, except for using population size rather than electorate size. However, as population and electorate size are strongly related, it seems implausible that those yield different conclusions. Barilari et al. (2025) mention that their results are available upon request.

3 Why do larger municipalities had so much stronger growth in anti-immigrant voting?

Leaves the question, why did protest votes increase in larger municipalities more than in small ones? The short answer: because voters could. As it is costly for fringe parties to put a candidate forward, they do this strategically, starting with the largest municipalities, gradually introducing candidates in smaller places. Municipalities with exactly 0 votes for specific parties most likely have no candidate running, as at least the candidate herself would have voted for themselves.

To examine the degree this happens, Panel (a) of Figure 2 shows the non-parametric relation between the exact share of 0s for the measure of anti-immigrant vote shares (Column 3 of Table 1, the other outcomes show similar patterns) in the first and second elections. Between the first and second election, the share of places with an exact 0 vote shares for immigrant parties decreased considerable among municipalities with an electorate size between 10,000 and 90,000, but not below, as it did not (yet) pay off for these parties to introduce candidates there. In other words, protest parties started introducing candidates

Table 1: Results, revisited

Outcome:	Turnout	Share protest votes	Share anti-immigrant	Share populist parties	Share Lega Nord
	(1)	(2)	(3)	(4)	(5)
Panel A: Reproducing Table 2 of Barilari et al. (2025)					
Exposure index	-0.439*	0.009***	0.021***	0.048***	0.014***
	(0.257)	(0.002)	(0.005)	(0.018)	(0.004)
Observations	2,841	2,841	2,841	2,841	2,841
R^2	0.052	0.037	0.037	0.037	0.037
Panel B: Adding a control for electorate size					
Exposure index	0.018	0.001	-0.017*	-0.061***	-0.014*
	(0.365)	(0.004)	(0.009)	(0.016)	(0.007)
Electorate [100,000s]	-1.011	0.017**	0.085***	0.240***	0.061***
	(0.718)	(0.008)	(0.015)	(0.034)	(0.012)
Observations	2,841	2,841	2,841	2,841	2,841
R^2	0.052	0.040	0.049	0.095	0.043
Panel C: Exposure per capita using baseline electorate					
Exposure index per 100,000 [electorate in baseline]	-0.074	0.001	0.001	0.002*	0.001
	(0.131)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	2,841	2,841	2,841	2,841	2,841
R^2	0.052	0.036	0.034	0.028	0.035
Panel D: Exposure per capita using contemporaneous electorate					
Exposure index per 100,000 [contemporaneus electorate]	-0.071	0.001	0.001	0.002*	0.001
	(0.126)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	2,841	2,841	2,841	2,841	2,841
R^2	0.052	0.036	0.034	0.028	0.035
Mean dep. var.	-6.554	0.004	0.000	0.020	-0.002

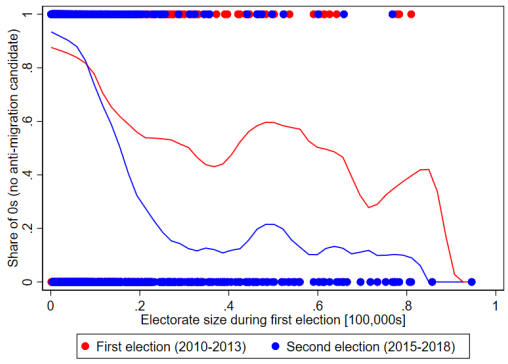
Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Panel A exactly reproduces row 1 of Table 2 of Barilari et al. (2025). Panel B includes a control for the electorate size at the time of the first election, Panel C controls for the exposure index divided by electorate size at the time of the first election and panel D does both . The number of observations is lower than indicated by Barilari et al. (2025) as I directly estimate a first difference model instead of a FE model. In addition, 36 municipalities are singletons: they only occur once in the dataset and do not contribute to first-difference estimation and are hence dropped. Data originates from the replication package of Barilari et al. (2025).

in mid-sizes elections.

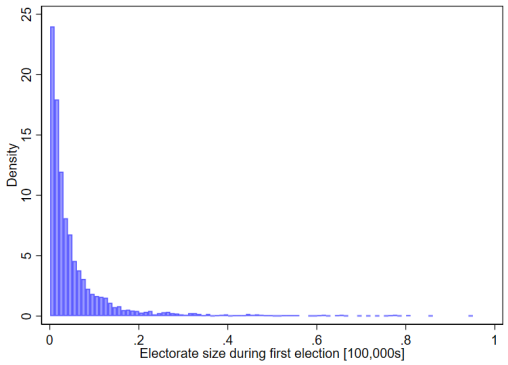
As all regressions in Barilari et al. (2025) are unweighted, every municipality, regardless of size, receives unit weight. Panel (b) of Figure 2 shows the distribution of electorate size: a large weight is effectively put on small municipalities with up to several 1000s of inhabitants. During the study period, Italy-wide vote shares for anti-immigrant, populist and protest vote rose strongly. For example, anti-immigrant voting rose from 5.4 to 8.8 %. Hence,

the places with small populations did not see an increase in protest voting mechanically, but the mid-sized municipalities (through extension of candidates to these places) and large municipalities (through increased voting for those candidates) saw considerable increases. This mechanical pattern in protest voting was captured by the expected-migration voting index in Panel (a) of Table 1. The findings in Figure 3a of Barilari et al. (2025) corroborate the conclusions above: the newly running protest candidates are mostly in middle-sizes municipalities. Hence, protest voting mechanically and strongly increase between mid-sized places relative to small places, but to a lesser extent between large and middle-sized places, as in large places protest candidates were already running.

Figure 2: Electorate size and exact 0 vote shares for anti-immigrant parties.



(a) Relation between electorate size and the absence of an anti-immigrant candidate in first and second election



(b) Distribution of electorate size

Note: Left: Scatter plot with non-parametric fit showing the strong relation between an exact 0 vote share and the baseline electorate size for the first and second election. Right: distribution of electorate size. Data originates from the replication package of Barilari et al. (2025).

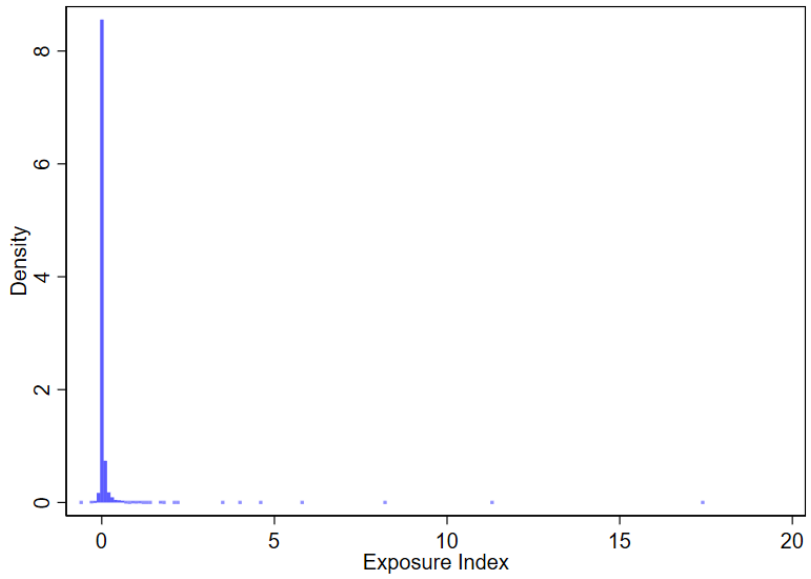
References

Barilari, Francesco, Davide Bellucci, Pierluigi Conzo, and Roberto Zotti. 2025. "The political effects of (mis) perceived immigration." *Journal of Economic Geography*, lbaf003.

Jaeger, David A, Joakim Ruist, and Jan Stuhler. 2018. "Shift-share instruments and the impact of immigration." National Bureau of Economic Research.

A Appendix

Figure A1: Distribution in the change in exposure index (treatment variable)



Note: Histogram of the change in the exposure index between elections. Data originates from the replication package of Barilari et al. (2025).