

# Municipal-Level Gender Norms: Measurement and Effects on Women in Politics

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## Extended Abstract

A growing body of evidence in Economics suggests that social beliefs and attitudes towards women’s role in society—typically referred to as ‘gender norms’—affect a variety of women’s outcomes. While most of this literature focuses on the role of traditional gender attitudes in explaining gender gaps in labor market outcomes and the household division of labor (see [Giuiliano, 2020](#), for an excellent review), much less is known about the role of gender norms in mediating policy effectiveness and support in the political arena ([Tertilt et al., 2022](#)). For instance, do gender norms shape female and male legislators’ support for gender equality, beyond party and constituency effects?

The key challenge in measuring the impact of traditional gender attitudes on individuals’ decisions and behavior is to isolate their influence from that of market variables and institutions. For this reason, cross-country analyses cannot isolate the impact of social norms and gender attitudes. At the same time, within-country analyses raise the problem of leveraging some source of *local* variation in norms. Existing studies often rely on attitudinal surveys, but these are typically aggregated at a national or regional level. One popular solution is to compare migrants with different cultural backgrounds—the so-called epidemiological approach ([Fernández, 2007](#)). Yet, migrants represent a selected (possibly underrepresented) population and their decisions might generally differ from the natives’.

The main contribution of this paper is to develop a spatially disaggregated measure of gender norms by leveraging the massive amount of public information from Facebook. Recording individuals’ activity not only on its own platform, but also on all websites that have a link to it (about 30% of all existing websites), Facebook has inadvertently generated the world’s largest database on individuals’ preferences and interests ([Obradovich et al., 2020](#)). While traditional survey-based measures of culture are time consuming and cost prohibitive to be implemented at the subnational level, the granularity of the information from Facebook empowers rich knowledge into the cultural landscape at a previously impossible resolution ([Lazer et al., 2009](#)).

Specifically, we construct a granular index of gender norms—the Gender Norms Index (hereafter *GNI*)—at the municipal level in Italy. In fact, Italy is an ideal setting, as it is particularly renowned for featuring one of the most marked regional divisiveness in cultural traits, which can be traced back to differences in local political history. As a first step, we assemble a broad list of gender-related interests from three different sources: (i) we consider interests included in the ‘Family and Relationships’ category from Facebook official classification (e.g., *motherhood*, *fatherhood*, *marriage*); (ii) we assemble key words from the abstracts of papers in journals that often publish research on Gender Economics; and (iii) we gather page titles from gender-related portals in Wikipedia (such as *Feminism*, *Sociology*, *LGBTQ+*).

In a second step, we simulate multiple online advertisement campaigns by sequentially querying Facebook Marketing API’s for all of the gender-related interests in our list and each Italian municipality. We store this information into ‘interest vectors’, one for each municipality. Finally, we summarize vectors into our *GNI* using a machine learning method to replicate a

benchmark survey-based index at the region level—the finest spatial dimension available in surveys. In particular, we weigh each interest using weights estimated via a machine learning algorithm to determine which interests best predict a benchmark region-level index based on survey questions regarding gender roles, as is standard in the literature.

Figure 1 shows the fine-grained map of our *GNI* across the different municipalities in Italy. Surprisingly, we can see that most of the variation in our *GNI* is across towns *within* narrowly defined geographical areas, rather than across regions or provinces. This is the local heterogeneity of norms that is neglected in surveys and that we leverage in our empirical analysis.

In the second part of the paper, we use our *GNI* to investigate the extent to which these differences in gender norms carry over to political views and policy activity of elected representatives in the Italian Parliament. To this end, we assemble a novel data set on the members of the Italian House of Representatives between 1948 and 2018 (corresponding to legislatures I to XVIII) by scraping the data directly from its official website.

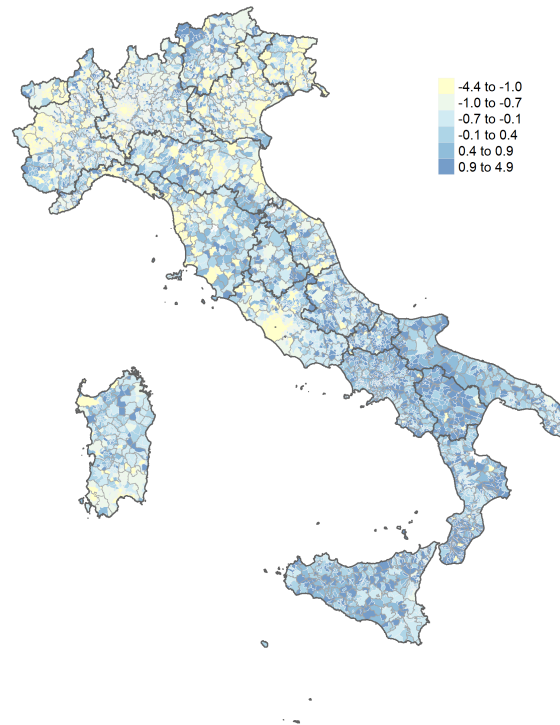
We document that females are more likely to sit in parliamentary committees focusing on gender-sensitive issues, cultural heritage and education, labor, and social issues. At the same time, we find that women’s greater commitment to gender-sensitive, labor and social issues is driven only by female politicians who were born in relatively *progressive* towns, as measured by our municipal-level index of gender norms. Conversely, female officials born in *conservative* towns are more likely to sit in parliamentary bodies working on cultural heritage and education. Importantly, the granularity of our *GNI* allows us to control for legislature and electoral district fixed effects, which means that our effects of interest are identified by comparing politicians who were born in towns featuring different levels of gender norms, but who are elected in the same legislative term and electoral district.

To conclude, in this paper we exploit the massive amount of data from Facebook to measure fine-grained variation in gender norms across neighboring municipalities. We then document that female legislators are more likely to sit in parliamentary committees focused on gender-sensitive matters, labor and social issues, but not if they come from a relatively conservative town, thus suggesting the importance of social norms in shaping legislators’ policy activity.

## References

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Figure 1: Gender Norms Index (*GNI*) across Italian municipalities



*Notes:* The Figure displays the Gender Norms Index (*GNI*) across Italian municipalities, which is generated by estimating the selected model on the Facebook gender-related interest vectors of Italian municipalities. The model is selected using a machine learning algorithm to predict a benchmark survey-based index using interest vectors at the region level. Black boundaries identify Italian regions (20). Gray boundaries identify commuting zones (610).