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does the context matter?
Empirical evidence from Italian municipalities

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ABSTRACT

A long tradition of electoral studies focuses on the effects of the social context on political participation (Marsh, 2002; Huckfeldt and Sprague, 1993). At the same time, an equally fertile line of research applies to the determination of the main causes of the gap of women in political representation. This article is located at the crossroads of these two fields of research. Its purpose is to illustrate how context variables can determine female candidate quota. In order to investigate the relationship between the quota of female candidatures and a plurality of social and economic variables related to context, a specification of the Correlated Random Effect (CRE) model has been applied to a panel. Indeed, this model allows to consider together time variant and time invariant variables. Data refer to municipal elections in Italy from 2009 to 2016. This period is particularly interesting since in 2012 an electoral reform became law that provides some gender rebalancing mechanisms in municipal elections.

KEYWORDS: Gender gap, political participation, contextual factors, panel data, correlated random effect.

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Contents

1. INTRODUCTION

Political participation is a very complex phenomenon. In general, participation covers all citizens' activities affecting politics (Van Deth, 2014). Among these activities we can mention voting in elections, helping a political campaign, giving to a candidate or a cause, writing or calling officials, petitioning, boycotting, demonstrating, collaborating on issues, running for an elective office or holding an elective or party office (Uhlaner, 2001). According to some authors, political participation can be described along a continuum from the simplest to the most structured forms (Milbrath, 1965). The intensity of involvement varies in the different forms of participation. At the two extremes of this distribution we can find, on the one hand, the manifestation of the vote and, on the other, the assumption of a public office.

The choice to stand for election is one of the most intense forms of political participation. Electoral statistics show that the choice to stand as a candidate is more frequent among men than among women: in all Western countries, the quota of men candidates in the elections is greater than the quota of women, even if the phenomenon has gradually decreased over time. This happens also in Italy, where gender differences in the number of candidates can be found in all electoral levels: municipal, regional, national, and European (CNR-IRPPS, 2018). Although following a downward trend, the gaps were still substantial in the last ten years, particularly in municipal elections.

Although differences in specific forms exist, the political participation of men is higher than that of women in all countries of the world. The Inter-Parliamentary Union - IPU in its publication Women in Politics (2017) showed that the share of women elected to national parliaments at the global level is placed at 23%, with significant differences between countries. This is still a relatively low level and in view of the slow process of rebalancing the political representation of women there is much attention to efficient methods of overcoming the gender gap in political institutions. Quotas are one of these mechanisms: either they can be provided for at the legislative level, even with constitutional rules, as happens in about 70 countries, or they can be adopted by political parties on a voluntary basis, as it happens in about 56 countries. European recommendation of the Committee of Ministers (2003) to the Member States, dealing with participation of women and men in political and public decision-making processes, proposed the introduction of specific rules for gender rebalancing. The rules concerned the functioning of electoral systems, including those of political institutions and political parties that can create obstacles to the participation of women in political and public life.

Following these recommendations, in November 2012, Law no. 215 was enacted in Italy, introducing provisions aimed at promoting the rebalancing of gender representation in local administrations. The law stated two duties for municipalities larger than 5,000 inhabitants:

- list quota: in the lists of candidates, no gender can be represented by more than two thirds;
- double gender preference: it allows the voter to express two preferences (instead of one, as required by previous legislation) as long as they concern candidates of different sex.

The application of this law has produced positive results, but some territorial differences continue to persist (CNR-IRPPS, 2018). There is a significant difference in terms of candidacy of women between the municipalities in northern Italy, those in the center and even more of those

in the south. Since the rules are the same for all Italian municipalities, these differences appear to be the product of different socio-economic and cultural contexts. In this direction. our study intends to investigate the impact of different socio-economic and cultural contexts on female candidates in Italian municipal elections.

The reminder of the paper is organized as follows: in next section. a theoretical framework of reference is proposed. In section 3. methodology and data are presented, followed by an in-depth discussion of results. Finally, conclusions and further research issues are discussed.

2. THEORETICAL FRAMEWORK

The theme of women's participation in politics has been variously addressed in the literature with contributions from different disciplines: economics, sociology, and political science. In particular, there is a long tradition of studies on the determinants of the lack of participation of women in politics. Table 1 summarizes main research topics referring to women in politics with key-references as reading suggestion.

Table 1: Main research topic and related references

Topics	Papers/Books
General literature on women's participation in politics	Dolan, K. (1998); Dolan, K. (2014); Costa, M. (2019); Khanna, M. (2009); Hora, E. A. (2014); Stolle, D., Gidengil, E. (2010); Paxton P. (1997); Mannarini, T., Legittimo, M., & Talò, C. (2008); Marien, S., Hooghe, M., & Quintelier, E. (2010).
Gender norms and female political participation	Schwindt-Bayer, L. A. (2009); Besley, T., O. Folke, T. Persson, and J. Rickne (2013)
Labour market participation and female political participation	Iversen T., Rosenbluth F., (2008); Iversen, T. and Rosenbluth, F. (2006); Barbieri, P., & Scherer, S. (2005); Jaumotte, F. (2003); Andersen, K., & Cook, E. (1985).
Family obligations and female political participation	Quaranta, M. (2016a, 2016b)
Wealth and female political participation	Iversen T., Rosenbluth F., (2008)
Education and female political participation	Goetz A. M., (2003)

From the analysis of literature, participation is conditioned by a plurality of factors, which can be studied from either an individual or a contextual point of view. Both traditions of study are present in electoral studies (Weng, 2015; Johnson, Shively & Stein, 2002).

The first approach studies the influences that individual conditions have on the attitude of people to participate in politics. Many of these studies focus on socioeconomic characteristics of people such as work, family status, education, etc. A seminal work in this sense is certainly that of Susan Welch. Welch (1977) finds that social organizations as well as family, labor market and public engagement affect women's behavior discouraging political participation. She identifies three types of determinants of gender political participation:
- **Structural factors**, i.e. socio-economic characteristics defining individuals (education, employment, work, income, legal and political structures, discrimination and institutional barriers);
- **Situational factors** related to individual choices (marital status, family arrangement);
- **Socialization factors** (childhood, adult political socialization, personal relations).

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Starting from this tri-partition, which is still convincing today, latter literature has explained in more detail the single determinants of women's participation in political life and in particular in electoral competition. Among structural factors, many studies claim that education is a powerful determinant of women's political participation. More educated women have a better chance of participating in political life (Goetz, 2003; Bhalotra, Clots-Figueras & Iyer, 2013). Employment is more controversial as a cause for female participation in politics: the correlation between female success in labor markets and in politics fails to account for the enormous cross-national variation in female political representation. In some countries, such as in Scandinavia, female labor force participation and female political representation are powerfully correlated, whereas in other countries, such as the US, the slope of the curve is much flatter (Iversen & Rosebluth, 2008).

Situational factors offer another important interpretative key for the political participation of women. The choices of marrying, divorcing and having children are still very conditioning for women. The participation of married women in politics declines because they are more involved in domestic activities (Schlozman, Burns & Verba, 1994; Saye,r 2005; Teorell, Torcal & Montero, 2007; Morales, 2009; Sartori, Tuorto & Ghigi, 2017). Quaranta (2016a, 2016b) show that overall, marriage, divorce and childcare affect political participation of women and men in different way, depending on the reference cultural model of society.

In fact, individual life choices are strongly influenced by the culture of a country. Studies on participation in associations in Italy focused on North/South differentials, showing that the participation rate is lower in the South than in the North (Banfield, 1976; Putnam, 1993; La Valle, 2006; Almond & Verba, 2015). Sartori, Tuorto and Ghigi (2017) showed also that political institutions matters. In the Italian case, they are considered as patriarchal power (Sartori, Tuorto & Ghigi 2017): men participate more than women to any form of political activity *(visible political activities)* and women appear to be less informed and less interested to political discussions *(invisible political activities)*. Italian women are still underrepresented in political activities, most of all if compared with other Western democratic countries (Guadagnini 1993; Morales 2009).

Finally, socialization factors contribute to explain the participation of women in political life. Women with higher social capital are more likely to participate to political activities (Chibber, 2002; Lowndes, 2004). Although women can have as much social capital as men, it tends to be of a slightly different type: it is more strongly embedded in neighborhood specific networks of informal sociability and it is less likely to be invested in formal political activity (Lowndes, 2004).

The second approach to electoral studies states that contexts are relevant because men and women have differential access to resources and opportunities that affect political mobilization. For example, where women have fewer employment or educational opportunities, the lack of these resources may depress participation when compared with that of men (Desposato & Norrander, 2009). Both perspectives of investigation are valid and contribute to reveal different aspects of the phenomenon of political participation.

In electoral studies, the term "context" refers to the environment in which individuals reside and behave (Johnson, Shively & Stein, 2002). Studying a context means to identify how 'environmental properties determine variation in a given behavior of interest' (Sprague & Carlson, 1982). The context can be defined through many dimensions: social, economic, institutional, cultural, etc.

Our study aims to determine the relevance of the context in local elections, in particular with regard to the proportion of female candidates. However, as explained in next section, availability of data refers to municipality level and no microdata for women are disposable, with the exception of candidacy.

3. METHODOLOGY AND DATA

In order to explain which are the factors affecting the gender gap in political involvement, the following sections present the empirical model and the data used.

In details, from the methodological point of view, the authors explain the choice of adoption of the modified Correlated Random Effect (CRE) framework that is a model able to consider

together time variant and time invariant variables. Afterwards, a section on data is presented and a critical comment of results is provided.

3.1. A modified Correlated Random-Effect (CRE) approach

The availability of longitudinal data on municipal elections in the span 2009-2016 suggests the adoption of (unbalanced) panel models to analyze the socio-economic determinants of the active participation of women in Italian municipal elections, thus exploiting both the cross-sectional (between municipalities) and the time-series (within municipality) information. Unfortunately, reliable socio-demographic and economic time series are very scarce at the municipal level in Italy. On the contrary, many official statistics are available for the census-year (2011), thus providing additional time-invariant information in the period of interest.

In this context, the Correlated Random-Effect (CRE) framework (Mundlak, 1978; Chamberlain, 1982) provides a useful tool, which includes both time-invariant and time-series dimensions when many units are observed in a short period[1]. The CRE approach consistently estimates the coefficients of interest under nonparametric restrictions on the distribution of the individual unobserved heterogeneity, given the covariate process. Under some conditions, the Fixed-Effect (FE) and the Random-Effect (RE) estimators can be considered as special cases of the CRE approach (Wooldridge, 2010). It unifies these two frameworks by modeling both the between (cross-section) and the within (time-series) effects with no orthogonality restriction between each covariate and the unobserved (individual) heterogeneity. In practice, the CRE framework allows both the selection indicator and the covariates to be correlated with the unobservable heterogeneity, which is a more plausible setting than independence, i.e. orthogonality.

In the case of linear models with additive heterogeneity applied to unbalanced panels (Wooldridge, 2013, 2019), i.e. when data points are observed at time t for unit i if the selection indicator $s_{it} = 1$[2], the CRE approach estimates the equation

$$s_{it}y_{it} = s_{it}\boldsymbol{g}_t\boldsymbol{\theta} + s_{it}\boldsymbol{z}_i\boldsymbol{\delta} + s_{it}\boldsymbol{w}_{it}\boldsymbol{\gamma} + s_{it}c_i + s_{it}u_{it}, \; t = 1, \dots, T, \tag{1}$$

where $\boldsymbol{g}_t$ is a vector of aggregate time variables (including time dummies), $\boldsymbol{z}_i$ is a set of time-invariant observed variables, $\boldsymbol{w}_{it}$ is a set of variables that change across i and t (at least for some units i and some time periods t), c_i is the unobserved individual heterogeneity, and u_{it} is the (serially uncorrelated) idiosyncratic error.

The CRE approach models the relationship between c_i and the observed covariates as

$$c_i = \psi + \overline{\boldsymbol{x}}_i\boldsymbol{\xi} + a_i, E(a_i|\overline{\boldsymbol{x}}_i) = 0,$$

where $\overline{\boldsymbol{x}}_i$ includes the individual time averages of both $\{w_{it}\}$ and the aggregate time variables[3] $\boldsymbol{g}_t$ (Wooldridge, 2010).

Technically, this model can be consistently estimated by feasible GLS[4] with fully robust inference, which controls for both serial correlation in $\{u_{it}\}$ and heteroscedasticity in either a_i or u_{it}. This strategy returns the FE (within) estimator of $\boldsymbol{\theta}$ and $\boldsymbol{\gamma}$, which is robust to arbitrary violations in the relationship between c_i and $\{x_{it}\}$. On the contrary, imposing $\boldsymbol{\xi} = \boldsymbol{0}$ gives the usual RE estimator. When $\boldsymbol{\xi}$ is statistically significant, it is an estimate of the so-called "contextual" effect, which models the difference between the between (cross-section) and within (time-series) effects, i.e. an effect of the context (Raudenbush & Bryk, 2002; Bell & Jones, 2015). However, in the case of longitudinal data, the contextual effect is quite difficult to be interpreted (Bell *et al.*, 2018) and an equivalent within-between formulation (CREWB) of the model is more preferable:

$$s_{it}y_{it} = s_{it}\psi + s_{it}\boldsymbol{z}_i\boldsymbol{\delta} + s_{it}(\boldsymbol{x}_{it} - \overline{\boldsymbol{x}}_i)\boldsymbol{\beta}_W + s_{it}\overline{\boldsymbol{x}}_i\boldsymbol{\beta}_B + s_{it}a_i + s_{it}u_{it}, \; t = 1, \dots, T, \tag{2}$$

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[1] The dataset covers 6,953 municipalities out of 7,915, that go to election from 1 to 4 times during the reference period. Most municipalities (76.8%) are observed twice.

[2] This modeling framework can be applied to units where a full set of data are observed, i.e. $s_{it} = 1$ if and only if both the outcome and the covariates are fully observed.

[3] In fact, in unbalanced panels the time average of aggregate time variables changes across i.

[4] Feasible GLS is based on a specific variance-covariance matrix, i.e. $Cov(a_i, u_{it}) = 0$ and $Var(u_{it}) = 0$ for all t; $Cov(u_{it}, u_{is}) = 0$ for all $t \neq s$.

where $\{x_{it}\}$ includes all time-variant variables, including aggregate time dummies.

In practice, the CREWB formulation allows the analyst to separate the effect that the (average) level of each time-varying independent variable has across municipalities (β_B) and the effect that its variation (i.e., deviation from the mean) has within each municipality (β_W).

3.2. The data

In the proposed analysis the authors faced on different type of data. Indeed, the study aims at investigating not only the dynamics of female participation to political competition after the electoral reform, but also the socio-economic characteristics of the municipalities involved. Notice that the present analysis is carried on socio-economic aggregate data on municipalities; hence, the paper studies aggregated and cultural average effects, rather than behavioral aspects.

Data considered cover several and heterogeneous information on Italian municipalities from 2009 to 2016, that allow to catch the effect of the entry into force of the gender balance law. In fact, the national law 215/2012 came into force in 2013, changing the definition of electoral lists in terms of candidates.

In details, the authors study the determinants of the female candidate share in Italian municipalities, where data are available[5]. The dependent variable of the econometric analysis is the <u>women candidate quota</u> and many other factors have been considered for understanding its evolution over time, apart from the electoral law.

Figure 1 maps the Italian municipalities colored on the basis of their women candidate quota immediately before (left panel, map a) and just after (right panel, map b) the entry into force of the national law[6]. In light grey are the municipalities with lower shares, whereas in black are the municipalities with higher percentage of female candidates. Before the norm, the low-performing municipalities are concentrated in the South of Italy; however, the right map shows that in the same area the number of municipalities with a low share is clearly decreased. Hence, the map presents a preliminary evidence of the impact of the norm, suggesting that the number of municipalities with a higher percentage ($\geq 40\%$) of women in the lists is increased.

A variable proxying the degree of <u>electoral competition</u> has been added to the model in order to control for a size effect of politics and it has been represented by the number of presented lists. All the variables on the lists and the sex of candidates are released by the Italian Ministry of Interior and have been elaborated by the authors.

Other variables have been considered in the present analysis with the aim to evaluate which are the determinants that motivate women to participate to local political activity. As underlined from the economic and sociological literature, women have changed their role in family and society; indeed, they started working and being economically independent and, at the same time, the female education rate increased, highlighting the ability of women to cover high and qualified position, even in politics. Starting from these issues, socio-demographic and economic information have been considered, in order to verify if some factors push women to be involved in politics.

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[5] No data on special administrative Regions (i.e., Special or Autonomous Regions) are available, with some few exceptions.

[6] Note that in Italy municipal elections occur every five years but not simultaneously. Hence, the map pictures the last election before and the first after the reform for each municipality, independently of the year of occurrence. In particular, the sample size before the law is composed by 6,483 units, and after by 6,222.

Figure 1: Maps of women candidate quota before and after the reform

(a)

The women candidate quota (before reform)

(b)

Women candidate quota (after reform)
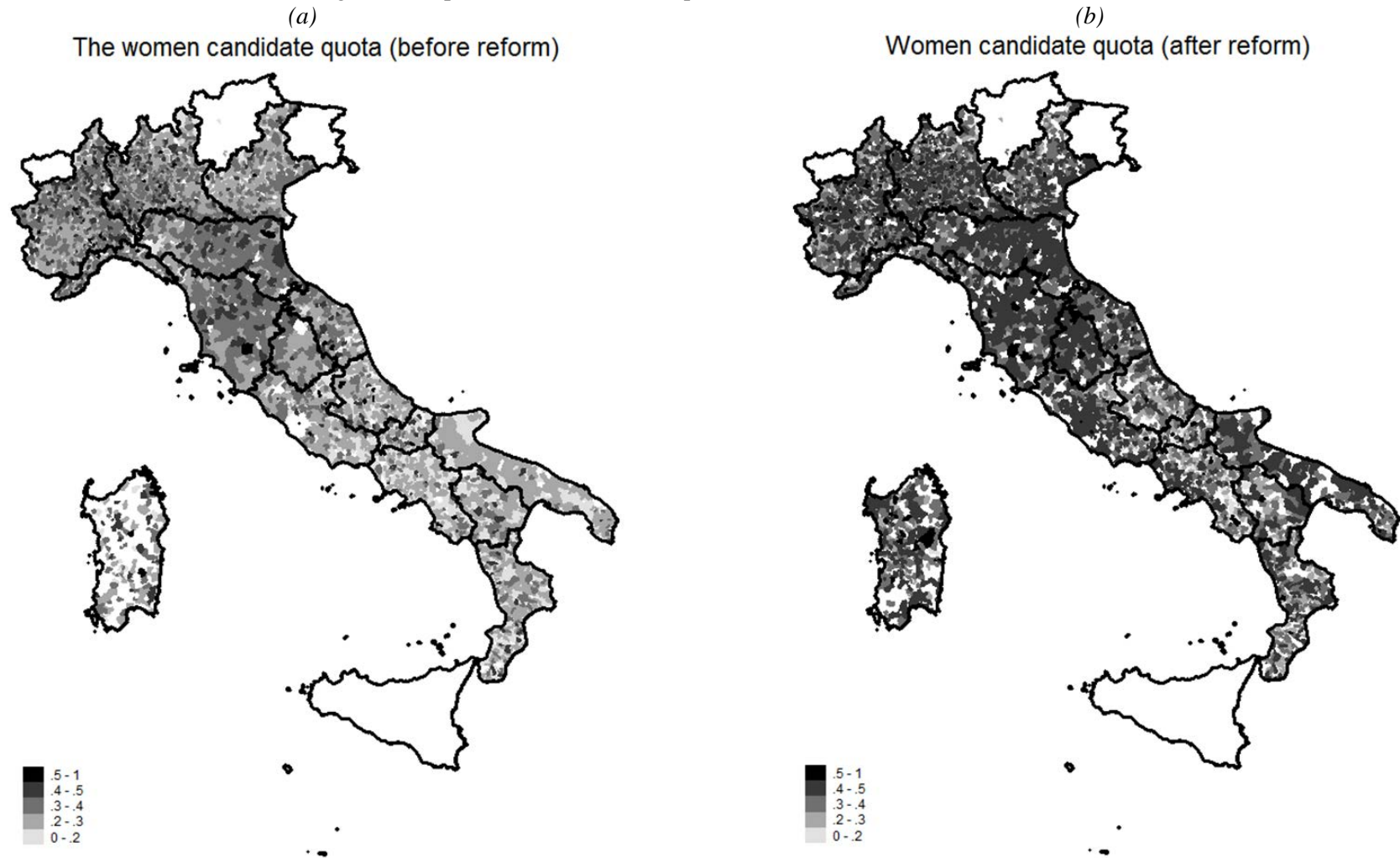
However, at the municipality level, reliable data are very scarce and the authors used the official Census 2011 survey released from Istat, which are time-invariant in the span of interest. Obviously, this detail seriously influences the choice of the model to adopt.

In the next table (Table 2), summary statistics of the considered variables are proposed.

Table 2: Summary statistics of variables

Variables	Obs	Mean	Std. Dev.	Min	Max
Women candidate quota	12705	0.304	0.106	0	0.818
Norm	12705	0.490	0.500	0	1
Electoral competition	12705	3.518	3.718	1	34
Average family dimension	12705	2.335	0.278	1.210	3.860
Female activity rate[+]	12705	0.406	0.724	0.104	0.717
Per capita income (in €1,000)[+]	12705	20.489	3.009	11.998	53.589
Female unemployment rate[+]	12705	0.124	0.750	0	0.537
Male unemployment rate[+]	12705	0.796	0.524	0	0.360
Housewives share[+]	12705	0.164	0.054	0.019	0.414
Female graduation rate[+]	12705	0.795	0.445	0	0.883
Male graduation rate[+]	12705	0.650	0.413	0	0.789
Urbanization degree [+]	12705	1.627	0.684	1	3
Mountain area[+]	12705	1.913	0.958	1	3
Migrants share[+]	12705	0.067	0.046	0	0.340
Female share in population	12705	0.506	0.016	0.304	0.624
Population*	12705	7.799	1.321	3.497	11.961
Geographical macro-area dummy variables	yes	yes	yes	yes	yes

[+] Census (time-invariant) variables
* Values are expressed in natural logarithm

The <u>average family dimension</u> is represented by the mean number of family components, which proxies the difficulty of conciliating family engagement with working and social life. In general, if a woman is involved in minding children and many housework, she could dedicate less time to politics and other social activities. However, family income allows women to be helped in their engagements and this aspect has been considered with a variable measuring the <u>per capita income</u>. In addition, the variables <u>housewives share</u>, <u>female activity rate</u>[7] and (female/male) <u>unemployment rate</u> have been introduced with the aim to better investigate the social determinants of women's decision to enter in politics. However, since individual microdata are unavailable, we can analyze determinants considering the average municipal level only.

Other control variables have been considered in the analysis, which capture environmental aspects: the percentage of women on the total population, the whole population and the percentage of foreigners in the population[8] (i.e., <u>Female share in population</u>; <u>Population</u>; <u>Migrants rate</u>).

In addition, geographical characteristics have been added. The <u>urbanization degree</u> is calculated by the Istatk, following the Eurostat definition. In details, it classifies cities, towns and suburbs or rural area on the base of a combination of geographical contiguity and population density. Three classes are defined: cities (i.e., densely populated areas); towns and suburbs (i.e., intermediate density areas); rural areas (i.e., thinly populated areas). Urban areas are represented by the

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[7] The activity rate measures the supply of work in short-time and it has been defined by Istat as the ratio between active population and population in working age.
[8] These data refer to 2010.

aggregate of cities, towns and suburbs[9]. In the regression model, three dichotomous variables have been introduced, one for each class.

The classification of the <u>mountain area</u> has been made by Istat following the law 991/1952, that subdivides the Italian territory into three types (i.e., mountain, hill, valley) based on the altitude. In general, people living in the mountain areas are more closed than others, then there can be a different propensity of women to be involved in politics. In the regression model, for each mountain area a dichotomous variable has been used.

Finally, even if literature suggests some possible effects of all the above confounders on the will of women to be involved in politics, Italy is a Country with very different cultural stereotypes between the North and the South: reasoning on the differences among macro-areas, this work can shed new lights on the socio-cultural aspects affecting political participation. Hence, dummy variables on the geographical macro-area have been introduced with the aim to control for geographical diversities. In details, Italian regions have been grouped into 4 classes based on the proximity and starting from North to South[10].

4. Estimation results

The CREWB model in equation (2) is applied to investigate the cross-section and the time-series variation in the female share of candidates to the municipal elections. The base model is shown in Table 3, column 1. The first part of the table provides a couple of coefficients for each time-varying variable, that capture the between (BE) and within (WE) effects respectively. The second part of the table investigates the effect of the time-invariant variables, mostly derived from the census data.

First of all, the data confirm a relevant effect of the electoral norm in fostering the presence of women in the political arena: when the norm becomes law, municipalities on average increase women's electoral participation by the 9.5% (see Figure 1). The effect is stronger in densely populated municipalities as a direct effect of the gender-balancing clauses of the norm, which compel electoral lists to provide at least one candidate over three of the less represented sex in municipalities larger than 5,000 inhabitants[11].

Both the gender composition in population and the overall level of electoral competition positively affect the share of female candidates. In fact, when the electoral competition is stronger, as proxied by the total number of competing lists, the territories reinforce the engagement of their female component: the BE coefficient (0.002) suggests an higher share of candidate women in more competitive arenas, while the WE coefficient (0.008) describes a similar effect when territories increase their level of electoral competition. Moreover, a higher share of women in population means more women involved in electoral races (0.340), but the effect is milder (0.169) when women's involvement in the previous municipal council is controlled for (Table 3, column 3).

The last time-varying variable of the base model describes the difficulties that Italian women still experience in reconciling their social/professional life with family care: both the BE and WE coefficients[12] show a detrimental effect of larger families on women's propensity to take an active political role in their community. Finally, the gender openness of the political context is taken into account in model 3 (Table 3, column 3) by two time-varying proxies referred to the previous ballot, the council gender composition and the major's sex. Both variables significantly affect the female propensity to run municipal elections, other results remaining stable. In particular, the BE coefficient shows a higher female participation if women were previously more represented

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[9] A deeper explanation of the index can be found on the website of Eurostat: https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Degree_of_urbanisation

[10] This variable has been built according to the Istat classification. Geographical macro-area considered are: North-West; North-East; Center; South and Islands.

[11] The violation of this requirement involves the cancellation of either the exceeding candidates or the whole list, in larger cities (>15,000 inhabitants).

[12] They are both significant but not statistically different.

(0.309), with a slight reduction over time (-0.048). For example, territories that expressed 10% more female council members show 3% more female candidates. On the contrary, an outgoing female major is associated with a slightly lower propensity to candidate across municipalities (-0.014), partly compensated by a positive time-series trend (0.007).

Table 3 – CREWB model estimation

		(1)	(2)	(3)
VARIABLES				
WE Norm		**0.095***	**0.095***	**0.096***
BE Norm		**0.020***	**0.020***	**0.015***
Time dummies		*Yes*	*Yes*	*Yes*
BE Electoral competition (# lists)		0.002***	0.002***	0.002***
BE Population (log)		0.008***	0.008***	0.013***
BE Female share in population		0.340***	0.353***	0.169**
BE Family dimension		-0.023***	-0.025***	-0.016***
BE Female share in previous council				0.309***
BE Female major in previous election				-0.014***
WE Electoral competition		0.008***	0.008***	0.007***
WE Population (log)		0.254***	0.254***	0.250***
WE Female share in population		0.292	0.292	0.309
WE Family dimension		-0.052***	-0.052***	-0.051***
WE Female share in previous council				-0.048***
WE Female major in previous election				0.007*
Macroarea	North-West	Benchmark	Benchmark	Benchmark
	North-East	-0.001	-0.001	-0.004
	Center	0.000	0.001	0.001
	South	-0.032***	-0.030***	-0.021***
Activity rate, Female		0.128***	0.130***	0.087***
Per capita income (in €1,000)		0.002***	0.003***	0.002***
Unemployment rate	Female	-0.035	-0.043	-0.022
	Male	0.111***	0.020	0.018
Housewives share		0.024	-0.027	-0.004
Unemployment Male * Housewives share			0.520*	0.431*
Rate of graduation	Female	0.230***	0.194**	0.124*
	Male	-0.329***	-0.362***	-0.216***
Graduation Female * Graduation Male			0.113	0.035
Urbanization degree	Low	Benchmark	Benchmark	Benchmark
	Medium	-0.007***	-0.007**	-0.004*
	High	-0.013***	-0.013***	-0.010***
Mountain area	Low	Benchmark	Benchmark	Benchmark
	Medium	-0.009***	-0.009***	-0.003
	High	-0.014***	-0.014***	-0.008***
Migrants share		0.115***	0.120***	0.075***
Constant		-0.037	-0.034	-0.027
Observations		12,705		12,691
Municipalities		6,953		6,949
R-sq (within)		0.351		0.354
R-sq (between)		0.209		0.325
rho		0.260		0.178

TIME-VARIANT variables and *TIME-INVARIANT variables* are the row-group labels on the left side of the table.

*** p<0.01, ** p<0.05, * p<0.1

Other socio-economic characteristics do significantly influence women's political activity: their participation is higher when the community is richer (per capita income) and multi-cultural (share of resident immigrants), thus confirming the existence of an overall cultural conditioning. Moreover, women's participation is fostered by their (average level of) social and human capital: when women are more educated (share of graduated women) and more active on the labor market (activity rate), their participation is higher. This result is confirmed by Chibber (2002) and

Lowndes (2004) that highlight how women with high social capital are more involved in political activities. In addition, our results suggest that, on the contrary, men's human and social capital seems to have a negative effect on women's electoral share that decreases when men are more educated (share of graduated men) and more employed.

Statistical tests on coefficients confirm that the detrimental effect of males' education is significantly larger than the positive effect of females' education[13] on women's political participation, thus suggesting a sort of prevalence effect of men's social capital in the political life of Italian municipalities. It is confirmed by the results in model 2 (Table 3, column 2), where the interaction between male and female education (graduation female * male) is statistically not relevant. Moreover, model 2 enlightens a positive effect of the share of housewives if combined with the male unemployment rate: this variable is not relevant *per se*, but on average it has a positive effect (0.520) on the share of female candidates depending on the quota of unemployed men. It suggests for women a sort of "breadwinner" effect of the local political activity: *ceteris paribus*, if male unemployment rate is 1% higher, the share of candidate women is 5.2% greater.

Finally, pure territorial characteristics affect female candidacy too. On the one side, the urbanization degree of the area has a negative impact, since political activity in a highly urban context is more complicated and time-consuming, i.e. more difficult to conciliate with other life dimensions. On the other side, the mountain range has a negative effect too, since mountain communities generally imply more traditional cultural context, where women could be less independent and emancipated. As well, there is a significant residual cultural effect in the Southern Italy municipalities (-0.032), which slows down women's political activity: *ceteris paribus*, electoral lists in South Italy count the 3.2% less women than in the rest of the country.

4.1. Does the context matter?

This cultural effect can be further investigated, in order to assess whether each determinant shows significantly different effects by macro-area. In fact, the models in Table 3 provide an average national effect of each determinant on women's political participation, where territorial differences are controlled for the macro-area variables.

On the contrary, addicting the general formulation in model 3 by macro-area interactions for each determinant, we can test whether coefficients show some territorial specificity. In particular, some contextual effects emerge:

- The negative cross-sectional effect of family dimension is mainly driven by the North-East municipalities, which are generally characterized by lower fertility rates than the rest of Italy;
- The negative cross-sectional effect of female outstanding majors is observed only in the North, where about 13% municipalities experienced a female guidance in comparison with 9% in the Center and 5% in the South;
- The female activity rate has a significant effect in Central Italy only;
- Education and urbanization are relevant in Southern Italy only;
- The positive effect of migrants' share in population is driven by North-East and Central municipalities;
- The norm shows the largest effect in the South (11.5%) and the smallest in the North-West (7.1%), suggesting a sort of convergence effect in territories that are historically characterized by higher gender unbalance.

5. CONCLUSIONS AND FURTHER RESEARCH

The analysis of factors influencing the involvement of women in politics is a relevant topic studied by gender literature. This work proposes a specific case study on variables that can affect female active participation in the Italian electoral system and in details, the analysis aims at investigating which are the "push factors" for women to become candidates in municipal elections.

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[13] The Wald test confirms the null that the negative effect is larger at the 99.9% confidence level.

Our study is based on a large database covering elections from 2009 to 2016 and investigates evidences from contextual determinants affecting women propensity to candidate themselves in politics.

The paper is innovative for both the characteristics of the dataset and the methodology applied. In fact, on the one hand a large and specific database has been built for the Italian case study; even if a full set of micro-data on candidates' characteristics is not available, results suggest some interesting contextual issues, especially considering geographical diversity. On the other hand, the Correlated Random Effect methodology is new to gender studies and very useful to treat time invariant variables in panel context.

Data show that with the entry into force of the electoral law in 2012, the quota of women in lists has grown, especially in those geographical area, i.e., the South of Italy, where the percentage of women in politics was relatively low (see Figure 1). However, the electoral norm is not the focus of the paper, rather it controls results for the other determinants of candidacy.

More appealing results concern other social and cultural aspects, that are in line with prevalent literature. Women with a higher level of education are more boosted to be candidate in electoral lists but when men are highly educated, women's propensity to be involved in the electoral process decreases. In addition, in accordance with literature, Italian women have problems in accommodating family commitments, hence female quota decreases when the average family size increases.

Furthermore, rather new and case-specific findings are found if we consider electoral competition. Italian female candidates appear to be present where there is more competitiveness even if this effect is mitigated when the female political involvement in previous period is controlled for.

The urbanization degree and the localization in mountain area define specific contextual variables affecting the propensity of women to be candidate: either increasing the city complexity or the mountain level, the female quota decreases. Indeed, the difficulty in managing family and life in a busy reality can play a limiting effect in female participation; instead, cultural aspects underlie the scarcity of women in politics of mountain communities.

Considering that the present work is an exploratory case study on Italian (contextual) factors pushing women in politics, other investigations deserve to be done on testing differences among geographical macro-area in political participation. From preliminary results on differences in cultural factors by macro-area, some initial considerations can be carried on. For example, the family size in Italy affects women's political participation above all in the North-East. Another example is the above-mentioned effect of the female outstanding major that is completely gathered by the Northern part of Italy. These factors are very case-specific and their explanation has to be found in peculiar territorial characteristics. The current study sheds new light on contextual variables but they need to be examined even more because until now, they remain an open issue.

6.   REFERENCES

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