Gender balance in Italian electoral system: some empirical reflections on determinants

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Motivation

Gender balance in politics

✓ Women still face many difficulties in being included in political decision-making: Participation in political competition is not a sufficient condition to fulfill important positions

✓ A seminal work on explanatory factors for gendered paths in political participations identifies three types of determinants (Welch, 1977):
  - **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)

✓ Welch finds that social organizations as well as family, labour market and public engagement affect women behaviour **discouraging political participation**

✓ Many countries have introduced **electoral rules** to speed up the process of gender rebalancing in politics (Italy, too)
In Italy, political institutions are considered as patriarchal power (Sartori, Tuorto and Ghigi 2017): Italian women are still underrepresented in political activities, most of all if compared with other Western democratic countries (Guadagnini 1993; Morales 2009).

Sartori, Tuorto and Ghigi (2017) show that:

- men participate more than women to any form of political activity (visible political activities)
- women appear to be less informed and less interested to political discussions (invisible political activities)
- family situation negatively affects both men and women w.r.t. visible political activities, whereas the effect of domestic works is negative only for women
- cultural constraints are an additional explanation for the Italian gender gap in politics
Gender Equality Index

Power, 2005-2015, Italy

National Law 23/11/2012, n. 215 Gender balance norms in municipal elections

If population > 5000

- **List quote**: no gender can be over represented (threshold 2/3)
- **Double gender preference**: electors can express two preferences if candidates have different sex
This presentation aims at empirically verifying the main determinants of female participation in political competition at the local level (i.e. quote of female candidates on whole participants in municipal elections)

New norms aim at fostering female participation, both directly (electoral norms, candidates and concil members) and indirectly (parties financing, political communication, gender-mainstreaming, reconciliation policies), but ...

Gender gap shows very different paths at local levels

What else? Which is the role of social and cultural aspects?

This work is based on SVEGLIE, an evaluation project commissioned to CNR by the Italian Department of Institutional Reforms, aiming at studying the impact of gender balancing norms at different institutional levels

SVEGLIE allowed us the access to municipal data on electoral candidacy, which are not publicly available
Women’s participation to electoral competition

Women candidate quota (before reform)

Women candidate quota (after reform)
Data and Methodology

Unbalanced panel models

- **Dependent variable**: data on candidates (#males, #females) in Italian municipal elections were released by the Italian Ministry of Interior.

- No data are available for municipalities from special administrative Regions (so called Special or Autonomous Regions).

- **Regressors**: Reliable socio-demographic and economic statistics at the municipal level are very scarce; most variables are available for the census-year only (2011).

- Unbalanced panel data in the range 2008-2016, which includes gender balance reform at the municipal level (from 2013 on).

- Panel data models allow us to capture both cross-section and time-series information, getting rid of the endogeneity bias typical of gender studies.
Robust Hausman tests (Mundlak, 1978) suggest to adopt fixed-effect panel data models, but this implies ruling out time-invariant variables, which are numerically relevant in our dataset.

Double empirical strategy

- Two-step fixed-effect estimation regressing time-invariant variables on the predicted unobservable individual effect (by municipality)
- Correlated random-effect panel data model, which allows us to estimate both between (cross-section) and within (time-series) effects without imposing orthogonality between regressors and individual unobservable effects
Methodology  Two-step fixed-effect regression

Fixed-effect estimation (within transformation)

\[ Y_{it} - \bar{Y}_i = \beta_1(X_{it} - \bar{X}_i) + \beta_2(u_{it} - \bar{u}_i) + (\varepsilon_{it} - \bar{\varepsilon}_i) \]

\( Y \) = quote of female candidates on the whole

\( i \) = municipality

\( X \) = time-variant observed variables

\( u_i \) = individual unobserved fixed-effects

\( \varepsilon_i \) = residual

✓ Individual (municipality) effects (\( u_i \)) are predicted using time-variant regressors in a robust fixed-effect model (heteroskedasticity correction)

✓ Predicted \( u_i \) are regressed against time-invariant variables by robust OLS techniques
## Results

### Two-step fixed-effect regression

<table>
<thead>
<tr>
<th>TIME-VARIANT VARIABLES</th>
<th>%women_cand</th>
<th>(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norm</td>
<td>0.087***</td>
<td>(0.006)</td>
</tr>
<tr>
<td>1.Norm#Pop_&lt;3000</td>
<td>-0.027***</td>
<td>(0.004)</td>
</tr>
<tr>
<td>1.Norm#Pop_3001-5000</td>
<td>0.069***</td>
<td>(0.004)</td>
</tr>
<tr>
<td>1.Norm#Pop_5001-15000</td>
<td>0.059***</td>
<td>(0.005)</td>
</tr>
<tr>
<td>Degree electoral competition (#Lists)</td>
<td>0.005***</td>
<td>(0.001)</td>
</tr>
<tr>
<td>Female quota in population</td>
<td>0.013</td>
<td>(0.181)</td>
</tr>
<tr>
<td>Average family dimension</td>
<td>-0.018</td>
<td>(0.014)</td>
</tr>
<tr>
<td>Time dummies</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Dummy_2013</td>
<td>-0.026***</td>
<td>(0.010)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.274***</td>
<td>(0.099)</td>
</tr>
</tbody>
</table>

| Total observations (unbalanced panel)   | 12,827      |
| Total municipalities                     | 7,036       |
| R-squared (within)                      | 0.420       |
| Rho                                     | 0.551       |

Robust standard errors in parentheses

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

- Gender balancing norms significantly foster female participation in electoral competition (direct effect)
- Different effect of the norm by demographic dimension
- «Cultural» effects also in small municipalities, where the norm is ineffective
- When the norm is introduced (2013) the political system is not completely ready (dummy_2013 < 0)
- No significant effect of family dimension (but negative sign)
- High relevance of nonobservable factors (high rho)
Predicted individual effects, what else?

- $u_i$ represent the unobservable individual effect
- Higher $u_i$ imply higher quota of female candidacy (after controlling for gender rebalancing norms and degree of electoral competition)
- Different distribution by geographic dimension (North West & Center; North East; South & Insulae)
- OLS regression on time-invariant variables (most from 2011 census data) to analyze main determinants
**Results**

OLS on predicted individual effects

<table>
<thead>
<tr>
<th>TIME-INVARIANT VARIABLES</th>
<th>(2) ( fe_u )</th>
</tr>
</thead>
<tbody>
<tr>
<td>North West benchmark</td>
<td>-0.006** (0.003)</td>
</tr>
<tr>
<td>North East</td>
<td>0.001 (0.004)</td>
</tr>
<tr>
<td>Center</td>
<td>-0.027*** (0.005)</td>
</tr>
<tr>
<td>South &amp; Insulae</td>
<td>0.002*** (0.000)</td>
</tr>
<tr>
<td>Female activity rate 2011</td>
<td>0.002*** (0.001)</td>
</tr>
<tr>
<td>Per capita income 2011</td>
<td>0.001** (0.000)</td>
</tr>
<tr>
<td>Unemployment rate 2011</td>
<td>-0.001*** (0.000)</td>
</tr>
<tr>
<td>Female 2nd education rate 2011</td>
<td>-0.001*** (0.000)</td>
</tr>
<tr>
<td>Male 2nd education rate 2011</td>
<td>-0.005 (0.006)</td>
</tr>
<tr>
<td>Urbanization, low benchmark</td>
<td>-0.014*** (0.003)</td>
</tr>
<tr>
<td>Urbanization, medium</td>
<td>-0.033*** (0.003)</td>
</tr>
<tr>
<td>Urbanization, high</td>
<td>-0.012*** (0.003)</td>
</tr>
<tr>
<td>Mountain area</td>
<td>0.072*** (0.025)</td>
</tr>
<tr>
<td>Migrant quote 2010</td>
<td>-0.004 (0.024)</td>
</tr>
<tr>
<td>Female housewife rate 2011</td>
<td>-0.076*** (0.015)</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.076*** (0.015)</td>
</tr>
</tbody>
</table>

Total municipalities 6,949
R-squared 0.098
R-sq adj 0.0965

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Female electoral participation is supported by
- Female activity rates (social capital?)
- Economic conditions (reconciliation?)
- Unemployment rates (civil negotiation?)
- Multicultural context (resident migrants)

Female electoral participation is undermined by
- Educational level (misspecified)
- Urbanization degree
- Closed cultural context (mountain area)
Methodology

Correlated random-effect model

General CRE model

\[ Y_{it} = \theta G_t + \delta Z_i + \gamma X_{it} + u_i + \varepsilon_{it} \]

\( Y \) = quote of female candidates on the whole

\( i \) = municipality

\( G \) = aggregate time effects

\( Z \) = time-invariant observed variables

\( X \) = time-variant observed variables

\( u_i \) = individual unobserved fixed-effects

\( \varepsilon_i \) = residual

✓ Large N and small T

✓ Covariance between \( u_i \) and \( X_{it} \) allowed; strict exogeneity of \( \varepsilon_{it} \)
Correlated random-effect model

«Modified» Mundlak (1978) approach

\[ Y_{it} = \theta G_t + \delta Z_i + \gamma_1 (X_{it} - \bar{X}_i) + \gamma_2 \bar{X}_i + u_i + \varepsilon_{it} \]

\( \gamma_1 = \) fixed-effect estimator (time-series within-subject information)

\( \gamma_2 = \) between-effect estimator (cross-sectional information)

✓ Heteroskedasticity robust estimation

✓ Results similar to two-step fixed-effect model, but time-invariant observables are now directly related to female candidacy

✓ Some regressors now show significant effects (average family size, female quota) in accordance with literature
## Results

Correlated random-effect panel estimation

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>%women_cand</th>
<th>Cont.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norm</td>
<td>0.134***</td>
<td>Female activity rate 2011 0.002*** (0.000)</td>
</tr>
<tr>
<td>1.1Norm#Pop_&lt;3000</td>
<td>-0.082*** (0.004)</td>
<td>Per capita income 2011 0.002*** (0.001)</td>
</tr>
<tr>
<td>1.1Norm#Pop_3001-5000</td>
<td>-0.060*** (0.004)</td>
<td>Unemployment rate 2011 0.001** (0.000)</td>
</tr>
<tr>
<td>1.1Norm#Pop_5001-15000</td>
<td>0.000 (0.003)</td>
<td>Female 2nd education rate 2011 -0.001** (0.000)</td>
</tr>
<tr>
<td>1.1Norm#Pop_&gt;15000 benchmark</td>
<td>0.001*** (0.000)</td>
<td>Male 2nd education rate 2011 -0.002 (0.006)</td>
</tr>
<tr>
<td>Time dummies Yes</td>
<td>0.001*** (0.000)</td>
<td>Urbanization, low Benchmark</td>
</tr>
<tr>
<td>BE electoral competition</td>
<td>0.005*** (0.006)</td>
<td>Urbanization, medium -0.010*** (0.003)</td>
</tr>
<tr>
<td>BE female quota in population</td>
<td>0.406*** (0.082)</td>
<td>Urbanization, high -0.021*** (0.004)</td>
</tr>
<tr>
<td>BE average family dimension</td>
<td>-0.015*** (0.006)</td>
<td>Mountain area -0.012*** (0.002)</td>
</tr>
<tr>
<td>FE electoral competition</td>
<td>0.005*** (0.001)</td>
<td>Migrant quote 2010 0.101*** (0.025)</td>
</tr>
<tr>
<td>FE female quota in population</td>
<td>0.038 (0.182)</td>
<td>Female housewife rate 2011 0.030 (0.027)</td>
</tr>
<tr>
<td>FE average family dimension</td>
<td>-0.042*** (0.014)</td>
<td>Constant 0.003 (0.044)</td>
</tr>
<tr>
<td>North West Benchmark</td>
<td>0.003 (0.003)</td>
<td>Total observations (unbalanced panel) 12,700</td>
</tr>
<tr>
<td>North East</td>
<td>-0.003 (0.003)</td>
<td>Total municipalities 6,953</td>
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<td>Center</td>
<td>0.003 (0.004)</td>
<td>R-sq (within) 0.420</td>
</tr>
<tr>
<td>South &amp; Insulae</td>
<td>-0.028*** (0.005)</td>
<td>R-sq (between) 0.209</td>
</tr>
<tr>
<td>Cont.</td>
<td></td>
<td>rho 0.308</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
CRE & Predicted individual effects

- CRE $u_i$ represent the **unexplained «cultural» effect**
- Different distribution by geographic dimension?
- Open issue: what about socio-cultural determinants?
  - More census (time-invariant) variables
  - Analyse: %women elected, success rate
Are our results supported by the literature?

✓ Married women participation in politics declines because they are more involved in domestic works (Schlozman, Burns and Verba 1994; Sayer 2005; Teorell, Torcal and Montero 2007; Morales 2009; Sartori, Tuorto and Ghigi 2017)

  ✓ Negative BE and FE coefficients for average family size
  ✓ Find more variables describing family situation

✓ Women prefer to get involved in small-scale activities, that can be incorporated into daily life (Stolle, Hooghe and Micheletti, 2005)

  ✓ Negative effect of urbanization degree

✓ Women with higher social capital are more likely to participate to political activities (Chibber 2002; Lowndes 2004)

  ✓ Positive effect of female activity rate
  ✓ The negative effect of female secondary education rate is probably due to misspecification (tertiary education rate)
Are our results supported by the literature?

☑ 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

☑ Studies on participation in associations in Italy focused on North/South differentials, showing that the participation rate in association is lower in the South than in the North (Banfield et al. 1976; Putnam 1993; La Valle 2006; Almond and Verba 2015)

☑ In particular, Putnam (1993) suggests that cultural underdevelopment is the first cause of low association propensity in Southern Italy, whose roots date back in the 12th century

☑ Unobservable individual effects show different geographical paths

(higher in the North, lower in the South)
Discussion and future work

✓ Technicality: comparing fixed- and simple random-effect models in terms of variance (precision)

✓ Data sources: finding other municipal-level explanatory variables affecting the propensity of women to be involved in political activities

✓ Cultural (contagion) effects:
  - Introducing the effect of gender-rebalancing norms at the regional level (regional councils)
  - Estimating interaction variables between the norm effect variable and dummy variables of regions (1.norm#regional_dummy) with the aim to detect eventual reinforcement effects between municipality norms and regional norms

➢ Further work: %women elected, success rate
Thank you for your attention
References

• Chibber, P. (2002). Why are some women politically active? The household, public space, and political participation in India. *International Journal of Comparative Sociology, 43*(3-5), 409-429.
References


