Does gender matter for public spending?
Empirical evidence from Italian municipalities[*]

Massimiliano Rigon[♣] & Giulia M. Tanzi[♣]

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Abstract

This paper studies whether municipal expenditure allocation in Italy is influenced by female representation in City Councils. Despite the existence of gender specific preferences in the society, we find no evidence that the amount of resources distributed among different spending categories is significantly affected by the gender of politicians. Results are robust to a large variety of specifications and estimation techniques, where we also take into account the existence of an endogeneity problem. The latter is addressed using an instrumental variable approach, based on a temporary change in the Italian normative that reserved a gender quota in party lists for municipal elections, causing an exogenous increase in the number of women elected in City Councils.

The absence of a gender bias is consistent with the Median voter theorem, suggesting that politicians preferences and personal characteristics do not matter in public choices. Alternatively, it may be that the gender is not one of the determinant of politicians' voting behaviour, implying that the preferences of the women involved in political activities are close to those of their male colleagues.

JEL classifications: C23, C36, D78, H72, J16.

Keywords: gender, political representation, municipal expenditure, instrumental variable.

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1. Introduction.

Is public spending affected by "gender bias"? More explicitly, could different proportions of women and men in political institutions result in dissimilar expenditure allocation decisions? This question arises from observing that in several countries, both industrialized and less developed, women are underrepresented in political institutions. We wonder if this bias in political representation may have broader economic and social consequences, besides being a problem of equal opportunities in entering politics. In fact, women and men may have different priorities or preferences which could reflect the different roles played in the society and within the family (Svaleryd, 2009; Croson and Gneezy, 2009; Funk and Gathmann, 2010). For example, women could be more interested in childcare and educational activities, because the improvement of these services could allow them to better conciliate private and working life. In addition, women could pay more attention to the functioning of local transportation services, since they seem to be more dependent from public transports. These gender differences in preferences may also be brought into political institutions, influencing the voting behaviour of politicians and, consequently, the allocation of resources across spending categories.

The empirical evidence provided so far on the existence of gender specific decisions on public spending is mixed. Also in the theoretical literature the importance of politicians' characteristics, gender included, in shaping the implemented polices is disputed. The Citizen Candidate Model states that elected representatives pursue their own preferred policies, since they cannot credibly commit themselves to implement policies that do not fulfil their preferences (Besley and Coate, 1997; Osborne and Slivinski, 1996; Alesina, 1988). If this is the case, all groups should be represented in elected assemblies for their interest to be taken into account. An opposite way to describe the politicians' behaviour is provided by the Median Voter Theorem (Downs, 1957), according to which politicians' identity and their preferences should not impact on policy outcomes, because candidates' choices would converge to catch the preferences of the median voter. According to this interpretation, the gender should not be relevant in affecting politicians' decisions.

We indirectly test the validity of these two alternative hypotheses, empirically addressing the existence of a gender effect within Italian municipal political institutions. More precisely, we analyse the relationship between the allocation of municipal public spending and the percentage of female politicians in City Councils. In Italy municipalities are deputed to offer most of services at local level, such as the management of public utilities (local roads, water, sewage, garbage, etc) and the provision of transportation, nursery schools, and of assistance to elderly people. In their spending decisions they enjoy high autonomy, following that local politicians play a crucial role in choosing among a large variety of services to provide.

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As far as we know, our paper is one of the first attempts to provide empirical evidence on the causal effect of gender on policy outcomes in Italy, where women are deeply underrepresented, compared to the other industrialized countries, both in national and local governments. A previous work on Italy is Gagliarducci and Paserman (2009)[1], that focused on the gender of the major in Italian municipalities and that only marginally addressed its effect on budget allocation. At the beginning of the '90s, due to a change in the electoral rules, the power of the major is considerably increased. He is directly elected by the citizens and the winning coalition is granted with a majority control premium which ensures the governability. However, we decided to focus on the City Council since we believe that its role still crucial in the political decision process. First of all the City Council is the representative institution at municipal level that approves by simple majority rule all the budgetary decisions. In addition, we think that it is likely that the councillors, on specific issues and independently from their political affiliation, can originate groups of pressure in order to affect the decisions of the major. In particular, women in the council may converge on issues they are sensitive to and lobby on the other municipal institutions.

To answer our economic question, we run standard panel regressions covering the period 1998-2006 and around 8.000 Italian municipalities. These show that higher women participation (measured as the share of women over total seats) positively affects only the share of expenditure for administration purposes. However, the size of the estimated parameter is really small. No effects are found for the other categories of spending that include environment, education, social assistance and transports. So, the spending categories usually associated to women preferences, such as education or social assistance, are never influenced by the gender of the politicians. Other variables seem to matter in explaining expenditure allocation, such as the age and the education of the politicians, the major' political affiliation, the demographic structure of the population and the level of municipal wealth.

In order to ensure robustness to our results, we estimated our regression modifying the definition of the dependent and of the independent variable, and the econometric strategy. As regard the independent variable, in one specification we restricted out attention exclusively to the women belonging to the major coalition, to capture the real bargaining power of the women who set in the Council, and in another set of regressions we used the percentage of women in the Executive Committee. As an alternative definition of the dependent variable, we consider in our regressions only the fraction of public expenditure that can be more easily manipulated by politicians, to avoid the confounding effect due to pre-committed spending. Robustness checks related to the econometric technique involved

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[1] We are aware that Casarico and Profeta (2010) were working on a project about the relation between the gender of the major and public expenditure allocation in Italian municipalities. However, the work is still not available.

the estimation of a fractional logit model, suitable when the dependent variable, as in our case, is a fraction between 0 and 1. Moreover, in another estimation we moved from the single year, as unit of observation, to the entire political mandate and we focused on the average values of expenditure allocated in the period, in order to remove distortions related to the electoral cycle. Results seem to be robust across all these different specifications, since the gender effect mainly, but weakly, appears in favour of administration expenditure.

When we split the sample in two parts, according to the female representation, the statistical significance of the gender effect increases. More precisely, municipals with a higher proportions of female politicians are associated with more public spending devoted to transports and administration, and with less to environment. It follows that a stronger gender effect is found only when the female representation reaches a given threshold. Notwithstanding, the size of these coefficients is still small, considered in terms of policy implications.

In the most recent literature the scholars have identified the existence of omitted variables that could prevent us to correctly capture the causal relation between the gender and the spending decisions. In fact, municipalities where a higher number of women is elected may be different for social, economic and cultural features from those where the female share is low. While some possible differences can be controlled for, there are some citizens' preferences and values which are not observable. Such unobservable aspects may affect not only the composition of the City Councils but also the allocation of public spending. For example, people living in certain municipalities may attribute great relevance to the value of equality. This can affect the preferred expenditure allocation in the sense that resources have to be used to reduce population disparities. Moreover, it can also affect the gender composition of the municipal institutions, since citizens may prefer a more equal proportion of female and male representatives.

Differently from the literature, that uses Regression Discontinuity Design to identify a truly "gender effect", we exploit a change in the Italian normative which occurred between April 1993 and September 1995. This law reserved a gender quota in parties' lists for municipal elections, which worked as a lower bound for the percentage of female candidates, due the traditionally low number of women in the electoral lists. However, not all the Italian municipalities voted under the gender quota regime because of the short period during which the law was in force and of the differences in elections calendars. As shown by De Paola et al. (2010), this law produced a permanent and exogenous increase of female politicians in those municipalities where an election took place in the years of enforcement of the law. Therefore, the ultimately effect of the quota regime was to split Italian municipalities between "treated" and "not treated" by the law. Our empirical strategy consists in instrumenting the percentage of women elected in the municipality with a dummy

variable, which distinguishes between treated and not treated municipalities. The instrument is exogenous with respect to the municipal unobservable preferences, because the treatment was totally random since it depended only on the elections' calendar. Moreover, as measured in De Paola et al. (2010), the instrument is relevant since the treatment had significant effects on the number of women elected, even after the abolishment of the gender quota regime. This allow us to correctly estimate the causal relation between the gender composition of the Council and the spending decisions, isolating the effects due to the gender of politicians from those related to unobservable preferences. Results of the IV regressions confirm and strengthen our previous results: the gender effect completely disappears, showing that the composition of City Council does not shape at all the expenditure allocation of Italian municipalities.

The absence of a gender effect can be explained in different ways. On the one hand, our results can be interpreted as a support for the Median voter theorem, since politicians' characteristics do not seem to matter for policy making. On the other hand, it could also be that politicians still vote according to their own preferences, but that the gender is not a determinant of their voting behaviour. Women involved in political activities could spontaneously have or move their preferences closer to the males' ones, comparing to the not involved ones. Finally, it is worth noticing that our results can be driven by a threshold effect. In other words, policy changes in term of financial choices driven by the gender of politicians may occur only when the percentages of women elected exceed a remarkable value.

The remaining part of the paper is structured as follow. Section 2 briefly reviews the main results of the literature, while section 3 describes the data and provides some descriptive statistics. The basic econometric specification and first results are the contents of section 4. In section 5 we discuss different specifications of the estimated equation. Section 6 introduces our instrumental variable and it presents the results obtained when we control for possible endogeneity. Finally, section 7 concludes.

2. Literature Review.

In recent years several works have empirically addressed the relationship between the gender of the politicians and policy outcomes. So far, the evidence provided is mixed. These differences could be partially due to the fact that these analyses cover both developing and developed countries which differ for many economic, social and cultural aspects. Moreover, they focus on different levels of governments (municipal or regional) and on different institutions (the major or representative bodies). In this section we briefly summarize the main findings on this issue.

Besley and Case (2003) show that female politicians in the United States legislative bodies apply pressure to increase spending on family assistance and to strengthen child support provision. Ferreira and Gyourko (2010), using data about female majors in the US, provide evidence that gender has no effect on the size and the composition of local public spending. To deal with the endogeneity of female participation to municipal preferences and characteristics, they use the regression discontinuity design (RDD) approach. Basically, they compare short and long run outcomes across elections in which a female candidate barely wins against a male candidate to those in which the woman barely loses to a male candidate. Rehavi (2007), using a RDD inspired instrumental variable approach, finds that the raise in the number of female legislators in the US modestly increases health expenditure. He uses the number of women in legislatures that result from the outcome of very close elections involving one male and one female candidate as an instrument for the overall number of women in legislatures in any particular year.

Moving to Northern European countries, Svaleryd (2009) analyzes the allocation of spending in Swedish municipalities, showing that the shares of women in local Councils increase education and childcare spending to the detriment of elderly care. Halse (2009), using Norwegian municipalities, find a relationship between the gender of the politicians and the budget share devoted to childcare, but the estimated effects are very small. To avoid spurious correlations the author instruments the share of women elected, using the fact that some of Norwegian parties have imposed, in different years, quota rules to achieve higher shares of women on election lists. However, as the author claims, the instrument appeared weak to have reliable results to comment.

As regard other European countries, Funk and Gathmann (2010), considering data on voting in federal ballots in Switzerland, show that women and men have different preferences on public goods. Moreover, they find that the gender greatly affects the composition of government expenditures. In particular, in the budget formation women are more in favour of environment with respect to agricultural and military spending. Campa (2011) analyzes the effects of gender quotas on the election of female politicians in Spain, finding that the size and composition of local government expenditures are not influenced by the number of women elected.

Chattopadhyay and Duflo (2004) study the causal effect of female policy-makers in India through a randomized policy experiment. The reservation of one-third of the seats for women imposed by the law affects policy decisions in ways that seem to better reflect women preferences in favor of the provision of better roads and of drinking water facilities. Also Clots-Figueras (2009), focusing on India, finds that a higher representation of female politicians increases the educational levels of individuals who live in the districts where these politicians are elected.

Similar to Ferreira and Gyourko (2010), but looking at Italian municipalities, Gagliarducci and Paserman (2009) apply RDD analysis. They find that the gender of the major affects the duration of the governments in Italian municipalities, but not the levels of budget deficit, revenues and investments per capita. Moreover, they show that the shares of expenditures on education, welfare and security are not shaped by the gender of the major. Our paper contributes to this literature providing new and more detailed evidence on the gender effect in Italy.

3. Data sets and descriptive statistics.

To build our dataset we rely on two main sources of information: the first one reports data on politicians elected in municipal Councils, while the second one assembles municipal balance sheets.

Data on politicians who seat in City Councils has been collected by the Ministry of Internal Affairs from 1985. In particular, it contains information on the gender, the age, the education level and the affiliation party of the politicians. The members of the Councils are directly elected every 5 years[2] by citizens. Since in Italy there exist the so called preference vote, voters can directly show their preference for a female or male politicians by voting for that candidate.

The dataset reveals that women are strongly underrepresented. Although the female participation in Municipal Councils, measured as the number of women over the total seats[3], has been increasing over time, it reaches only the 18 per cent in 2008 (graph 1). A strong raise (around 8 percentage points) has occurred between 1993 and 1995, when the gender quota law was implemented. Female underrepresentation concerns also the Executive Committee (from 13 per cent in 1998 to 16 per cent in 2008) and majors (from 3 to 10 per cent in the same years).

We observe also an increase over time in the variability across municipalities of the percentage of women in the Councils. In fact, at the end of the '80s more than 75 per cent of municipalities had less than 10 per cent of women in their Councils, while only 2 per cent reached the 20 per cent. In 2008 the concentration in the left part of the distribution is significantly lower (only 26 per cent has less than 10 per cent of female politicians), while the number of municipalities with more than 20 per cent has increased to 40 per cent (Graph 2). Our data also reveal large differences in female participation across municipalities: the share of women is higher in small cities (Graph 3) and in those located in the North and in the Centre of Italy (Graph 4).

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[2] With the exception of the period 1993-1998, when the duration of the electoral mandate was of 4 years.

[3] The number of total seats vary from 12 to 60, according to the population size of the municipality.

On average, female politicians who seat in the Councils appear to be more educated and younger than their male colleagues. In fact, women in charge in 2008 had spent around 13 years in education, one year more than men, and their average age was 43 years, 5 years less than men. These gaps have been kept almost constant over time (Graphs 5 and 6).

Municipal balance sheets, collected by the Ministry of Internal Affairs from 1998 and published by the Italian Institute of Statistics (Istat), contain data on current and capital expenditures. In our work we consider both total expenditure (as a sum of capital and current expenditure) and each of these two categories separately. In fact, they are different in their scopes and consequently they can be differently affected by the politicians' gender. Current spending is used to provide services and for redistributive purposes, and it ensures the regular functioning of the municipality. Instead, capital spending includes direct and indirect investments, capital contribution and granting of loans, and it usually concerns the purchase of real property and durable goods. Between 1998 and 2007 the share of capital spending is about 10 per cent of total spending, while the remaining fraction is used for current expenditure. Around 40 per cent of the latter is devoted to personnel payment, and another 40 cent is used for the purchase of goods and services. The last 20 per cent includes transfers and financial operations.

Considering spending categories, in the sample period almost 40 per cent of total resources covered administration costs. Environment transports and education expenditure accounted for, respectively, the 19, 11 and 10 per cent. Furthermore, social assistance spending, that includes also child and elderly care, counted for the 8 per cent of the expenditure (graph 7). Finally, a variety of other functions (justice, police, culture, sports, tourism and economic activities) sums up to the remaining 12 per cent[4]. Over the period, we identify a decreasing trend for the financial resources devoted to education and to environment, compensated by an increase for administration and social assistance costs. Moreover, there is a consistent variability across municipalities in terms of the shares of financial resources devoted to each category, as shown by the standard deviations reported in table 1.

Our sample of analysis covers around 7500 Italian municipalities, out of around 8100. The 72 per cent of the municipalities belongs to the smallest size class (less than 5000 inhabitants), the 20 per cent of them has between 5000 and 15000 inhabitants and the 8 per cent has more than 15000 inhabitants. As regard the location, 52 per cent are in the North of the country, 22 per cent in the Centre and 25 per cent in the South of Italy.

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[4] The allocation of financial resources among different categories differ for current and capital spending. In the latter, administration spending represents, on average, only the 26,5 per cent, while environment and transport expenditure account for consistent percentages (20,7 and 26,3 per cent respectively).

4. Empirical strategy and first results.

Before empirically address the role of gender in political decisions, we firstly look at the existence of differences in preferences between men and women. In fact, if there are no differences, there is no reason to assume that gender could be relevant in affecting the allocation of municipal spending. The existence of gender specific preferences is illustrated in several works, such as Svaleryd (2009), Croson & Gneezy (2009) and Funk & Gathmann (2010). To have further evidence, focused on the Italian context, we perform an additional analysis considering the Italian Households Multiscope Survey, which refers to about 19.000 people interviewed in 2010 and contains some questions useful for our purposes. In particular, people interviewed are asked to express their opinion on what they consider the main problems in Italy. Results show that women and men preferences differ in a systematic way. More precisely, as shown in table 3, the share of positive answer is statistically higher for women as concerns unemployment, crime, health services, education system, immigration and poverty. In contrast, it is statistically higher the percentage of men that consider tax evasion, public debt and justice as critical issues that need a government action. These results seem to confirm the role of gender in identifying priorities on public issues. Transferring such differences in the municipal context, we may expect that female politicians could be more favourable to finance education and social assistance spending.

Now we move to estimating municipal level regressions covering the period 1998-2006, to find out whether and how the gender of politicians drives municipal spending pattern. The assumed specification is the following:

$$Y_{it} = \beta_1 + \beta_2 * WR_{it} + \beta_3 * COUNC_{it} + \beta_4 * MUNIC_{it} + \lambda_t + \varepsilon_{it}$$

where the index i refers to municipality and index t to year. Our dependent variable is the share of expenditure allocated to each category (administration, education, transports, environment and social assistance) with respect to the total amount of spending. To capture the gender effect on public spending, we consider the ratio of women over the total number of members in the Municipal Council (WR), which is intended to proxy the women bargaining power in influencing spending decisions, since decisions are taken by a simple majority rule.

To ensure a correct identification of the relation, we control for politicians characteristics (COUNC) that can influence their preferences. The regressors includes the gender of the major (dummy variable equal to 1 if the major is female), the average age and education of the politicians, and the incumbent party (dummy variables for left, right, centre and civic lists). Moreover, since the municipal spending can vary significantly according to the timing of the electoral cycle, we control for the number of months to the next election. The other

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set of controls (MUNIC) is related to municipal characteristics, and it includes time-invariant variables, such as the location of the municipality (dummies equal to 1 if the municipality is located next to mountains or next to the sea) and its size (km²), and time variant regressors, such as the population, the per capita number of crimes registered, the voter turnout in municipal elections, the GDP of the province where the municipality is located, the ratio of babies, scholars and old people over the total population. Most of these variables have a clear impact on spending needs. For example, the demographic structure can explain expenditure in childcare, education and elderly care. The location of the municipality can drive the choices of the Councils as regard infrastructures or tourism spending, while the per capita number of crimes influences police expenditures and security measures. With the voter turnout we aim to proxy the level of social capital and with GDP we control for municipal wealth that can obviously affect the spending structure. The number of inhabitants is introduced in order to take into account some crucial differences across municipalities in term of fiscal and electoral rules that may affect spending choices: the Internal Stability Pact and the dual ballot system for the election of the major apply only to those municipalities with a population size above a given threshold.

Controlling for municipal characteristics is also fundamental in order to reduce the estimation bias due to the existence of citizens' unobservable preferences that can be correlated with observable characteristic at municipal level. Finally, we insert provincial dummies that should take into account fixed characteristics at provincial level, and year dummies (λ_t), that capture the effects on allocation expenditure of all those institutional and economic changes that concerned the universality of municipalities.

 Standard errors are made robust to heteroskedasticity and are clustered at the municipality level.

We estimated the model with the random effect. In fact, the standard test which discriminates between the random and the fixed effect does not show significant differences between the two estimators. However, we remind that we have introduced time invariant covariates at municipal level and provincial dummies that are already taking into account for fixed effects. Since the test reveals that there is no significant municipal fixed effect the choice of the random effect is preferable since it is more efficient.

In the first set of regressions we only include the controls for politicians' characteristics, while in a second step we add all the municipal controls. Results of the first step (table 4, 5 and 6) show that the higher the fraction of female counsellors, the higher is the share of total expenditure for administration and transports, and the lower for environment (table 4). Same results when we consider the current expenditure (table 6). However, the sizes of the significant parameters are very small, implying an almost negligible effect of the gender variable. For example, an increase in the women ratio of one percentage point changes the

ratio of expenditure devoted to a certain category of around 0,01 per cent. It worth noticing that the spending categories usually associated to women preferences, such as education or social assistance, are never influenced by the gender of the politicians. When we focus on capital expenditure (table 5), it seems that a different composition of the Council in terms of the gender do not affect spending allocation.

When we include all municipal level controls (table 7 for the total spending), the estimated parameters related to the percentage of female policy-makers are never statistically different form zero, except for the administration expenditure, that is positively influenced by the number of women. When we focus on current expenditures, also transports and environment spending is influenced by the ratio of women in the Councils, positively and negatively respectively (table 9). In general, in the more complete specification, the gender effect is even smaller, both in terms of the number of categories of spending affected and in terms of the magnitude of the estimation parameters.

As concerns other regressors, we note that the gender of the major is not significant (or weakly significant for some categories of current expenditure). This result enforces our finding that gender seems to be scarcely relevant for the policymaker decisions. Moreover, it moves out the hypothesis that public spending allocation could be driven by the gender of major, whose role is often considered crucial in shaping voting behaviour. In contrast, the demographic structure of the population shows a greater explanatory power. In fact, higher percentages of children and scholars increase, as expected, the relative spending in education. Also some Councillors' characteristics matter for public spending, although the estimated coefficients are small: increasing the average education and their age favours spending in education, social assistance and environment, while it reduces administration and transports' expenditure. Finally, many time invariant characteristics at municipal level seem to be significant in explaining different spending allocations (dummies for the location and provincial fixed effect).

Besides the full sample regression, we considered also two sub-samples based on the municipal population, in order to better take into account differences in the spending determinants among municipalities of different size. More precisely, we split the sample using the cut off points of 5.000 and 15.000 inhabitants, which imply changes in the fiscal and electoral rules followed by the municipalities. As in the baseline specification, the gender effect is not significant in any of the considered groups.

5. Alternative specifications of the estimated equation.

In this section we consider a extensive set of robustness checks in order to strengthen the validity of our results. These checks will involve the definition of our variable of interest, the definition of the dependent variable and the estimation strategy.

First of all, as regard the first group of checks, we consider the fraction of women belonging to the major coalition. So far, we have used the total number of female politicians as a proxy of their bargaining power in the Council, taking the assumption that there could exist a bias driven exclusively by the sex of the politicians, independently from being affiliated or not to the winning coalition. However, it is also possible that only those women that belong to the major political coalition play an effective role in affecting spending decisions. These new regressions confirm previous results, showing a small gender bias in favour of administration total expenditure (table 10). In another regression (not shown), we introduce an additional term, made by the interaction between the fraction of women belonging to the winning coalition and the major' political orientation. This allows us to understand if the gender bias could depend on the political orientation. The coefficients of the interaction terms are not statistically different from zero.

As a further control regarding the specification of our independent variable, we move from the Council to the Executive Committee. In fact, one may suggests that the gender bias could emerge more in this institution, since it proposes the political actions that are then approved by the Council. So, we run similar regressions having as variable of interest the percentage of women in the Executive Committee. In these estimates there is a complete absence of a gender bias on total spending allocation (table 11).

In another set of regressions we investigate if the relationship between women representation and political choices is not linear. In fact, it possible that the role of women start to be relevant in term of bargaining power only when the female shares reach a given threshold. In order to take this into account, we identify three different thresholds that coincide with the first quartile, the median and the third quartile of the women participation distribution (respectively equal to 8, 15 and 23 per cent of women over total seats). For each of these thresholds, one by one, we introduce in the regression a dummy variable, which takes value equal to 1 when the share of women exceeds the threshold itself. These dummies are used in place of the percentage of women in the Council. Our findings show that the gender effect exists only when the highest threshold is passed. In other words, moving from below to above the 3rd quartile in term of female participation increases administration and transportation total expenditure, while it decreases environment spending (table 14). Although the coefficients are more significant than in the baseline specification, they remain small in term of magnitude. On the contrary, we do not find significant effect for the other dummy variables associated to the lower thresholds (tables 12 and 13). This means that

higher percentages of women in political institutions are required in order to affect financial choices. Although the introduction of gender quota rules contributed positively to increase the number of female politicians, only a small fraction of municipalities show sufficiently high shares of women. Small raises in the number of elected women could not be enough to observe policy changes, which probably require stronger changes in female participation.

The second group of controls refers to the definition of our dependent variable. Part of the municipal expenditure can be pre-committed, meaning that the members of the Council do not effectively take decisions on some type of expenditure. For example, spending for personnel payment can not be substantially modified, being almost fixed over time. Therefore, we removed this category from the current expenditure, but results (not displayed) in term of gender effect do not change from those of our baseline specification.

Besides the mentioned changes in the specification of our variable of interest and on the spending definition, we also tried two other estimation strategies. First, since the dependent variable of our specification is a proportion (the fraction of expenditure devoted to a certain category) and, by construction, limited between zero and one, we estimated a fractional logit model. Results do not differ from the baseline specification, both in term of the significance and of the magnitude of the estimated coefficients: only administration expenditure is positively and scarcely affected by the female representation. Second, the amount and the allocation of public expenditure, and in particular of capital expenditure, may vary significantly over time according to the electoral cycle, depending, for instance, whether the financial decisions are taken at the beginning or at the end of the electoral mandate. So, we consider as unit of the analysis not the single year, but the entire mandate, focusing on the average values of expenditure allocated in the period. Furthermore, to avoid distortions related to the timing of electoral cycles we consider only those mandates that are complete (5 years). Since our sample spans between 1998 and 2006, we have only one observation for each municipality. However, in some cases we have premature ends of the mandate due to political crises. This, along with some missing observations, reduces the size of our sample to around 5.500 units. Estimating a cross section regression is interesting because it emphasizes the cross municipality variability in the spending allocation behaviour. We expect that the coefficient associated to the women ratio could be higher in magnitude since there is higher variability across municipalities than over time, both in the allocation of expenditure and in the number of female Councillors. As expected, the significant coefficients are slightly higher than those found in the baseline specification and they support the positive relation between total administrative spending and the percentage of female politicians (table 15). Surprisingly, we also find that a higher representation of women lowers social assistance expenditure, a category of spending typically associated to women preferences.

Table 16 summarizes all the robustness checks and the results obtained so far. We display the signs and the degrees of significance of the estimated coefficients for the women ratio regressor. Most results are similar among different specifications. Female politicians' play a role in increasing administration and transports expenditure, and in decreasing environment and social assistance spending. However, the sizes of coefficients are small, implying that the gender effect plays a minority role. Education spending is never affected by the gender of the politicians.

6. Instrumental variable estimates.

Although we introduced in the panel regressions several control variables related to social, cultural, geographic and economic characteristics, there still can be some unobservable differences among municipalities in term of citizens' preferences and values which can affect the expenditure choices. These preferences can also influence the voting behaviour of citizens when choosing among candidates of different sex in elections. This constitutes a clear problem of omitted variables: the unobserved preferences influence both the dependent variable and the independent variable, preventing the correct identification of the causal relation we are interested in. We don't have a clear prior of the direction of the bias generated by these omitted controls for citizens' preferences. This is due to the complexity of the set of preferences we are not able to observe, which can influence different categories of spending in opposite ways.

As mentioned, the endogeneity problem has been recently addressed with the Regression Discontinuity Design approach, that is not applicable in our setting[5]. We propose a different estimation strategy which exploits a temporary change in the Italian normative[6].The Law no. 81 of March 25, 1993 introduced some important changes in the Italian local electoral system, such as the direct election of the major and of the president of the province. More importantly for our purpose, it established that neither sex could represent more than two thirds of a party' list of candidates for municipal elections. In municipalities with up to 15.000 inhabitants, the maximum quota was set at three quarters. However, on September 1995, the Sentence no.422 of the Constitutional Court repealed the section of the law

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[5] The regression-discontinuity design uses a cut-off selection method. The sample is cut in two, with one group as control and the rest as the treatment group. In the gender literature, municipalities are split into two groups according to the sex of the major elected. Considering only those municipalities in which one candidate barely wins against another of a different sex, it is reasonable to assume that the gender of the major elected is random, not driven by specific unobservable peculiarities of the municipality.

[6] The endogeneity problem can be, as a first step, solved using fixed effect, since one may think that cultural characteristics and preferences are mainly time invariant. Since the Hausman test we performed did not show any relevant differences between the random and the fixed effects, we are already taking into account these unobservable preferences in our standard random effect regressions. However, we believe that unobserved preferences can also vary over time, and consequently that they are not completely taken into account just by adding a municipal fixed effect.

containing the gender quota, because of the right of equal access to elective offices protected in the Italian Constitution.

This law worked as a lower bound for the percentage of female candidates, due the traditionally low number of women in the lists. As shown in De Paola et all. (2010) with a difference-in-differences estimation strategy, the reservation of candidacies for women translated in a higher number of elected women[7]. Moreover, they find the effects of the law lasted for some years after its abolishment. However, because of short period during which the law was in force and of the differences in the election calendars, not all municipalities voted under this regime and experienced such an increase in the share of female politicians. Therefore, the normative change split municipalities into two groups: treated and not treated by the law, that represent respectively the 95 and the 5 per cent of the sample. The treated municipalities experienced a change in the female participation referable not to endogenous citizens' preference but to the exogenous change imposed by the law. This allows us to use the split produced by the law to instrument the percentage of women elected in the municipality. More precisely, our instrument is a dummy variable equal to 1 if the municipality voted during the period of validity of the gender quota, and 0 otherwise. We limit our instrumental variable regressions to the period 1998-2003. In fact, computing the standard test on the relevance of the instrument for a more extended period, the instrument becomes weak. The effects of the law on the number of elected women progressively decrease after its abolishment and seem to end in 2004, when the majority of the municipalities had a new election. This instrument satisfies the two conditions for the choice of the instrument: the exogeneity and the relevance. First of all, having voted or not during the gender quotas is completely random, since it depends only on the election calendar, which ensure that the instrument is exogenous[8]. Second, the relevance of the instrument has been empirically tested in De Paola et all. (2010). In table 17 we show the first stage of the IV estimation.

Before proceeding with the IV regressions, we run again the standard OLS regressions considering the shorter period 1998-2003 to check the existence of any differences with respect to the full period regressions. For total expenditure, results are exactly the same in terms of the size and the significance of the estimated parameters, with the only exception of the environmental spending which turns out to be negatively, but weakly, affected by the number of female politicians.

In the IV set of regressions, the effect of the different gender composition in municipal Councils completely disappears. The estimated coefficients of the share of women are never

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[7] A theoretical explanation of this effect is also presented in Bonomi, Brosio, Di Tommaso (2009).

[8] To be sure of the exogeneity of our instrument, we checked for the existence of strategic behaviours of local political parties which could have caused political crisis in order to vote with the new electoral rules. Empirical evidence shows that there are no significant differences in the share of anticipated ends of political mandates in the period 1993-1994.

statistically different from zero, both considering total spending and splitting between capital and current one (tables 18, 19, 20). The demographic structure and municipal characteristics seem to be the real drivers of the expenditure decisions. The politicians' characteristics become less relevant with respect to the standard panel regression results, excepted for the average level of education.

Finally, we also tried to extend the instrumental variable approach to the regressions where the thresholds dummies were used as a proxy of gender bargaining power. In fact, such regressions showed a more relevant gender effect. Unfortunately, in this case we cannot solve the endogenity problem since our instrument reveals to be weak.

7. Conclusions.

In this work we study the existence of a gender effect in municipal spending decisions. We run both panel regressions at municipal level and instrumental variable estimations to correct for possible problems of endogeneity. Results show that the gender of the politicians does not significantly matter when looking at local expenditure allocation in Italian municipalities. In particular, spending categories typically associated to women preferences, such as childcare and education, do not benefit from a greater representation of women in municipal Councils.

Possibly, results can be driven by the fact that shares of women in municipal Councils are usually small and it is possible that the gender effect we are looking for requires a higher female representation. In other terms, women's representation needs to reach a certain critical level to matter for the decision process. In fact, the group of municipalities whose shares of female politicians is above this threshold shows a significantly different allocation of public spending. Non linearity in the gender effect suggests that the introduction of gender quotas in Italy has been useful to increase female participation, but not enough to impact financial resources allocation.

Taking the above consideration into account, the absence of the gender bias seems to support the Median voter theorem, stating that only citizens' preferences matter for policy making, and not those of politicians. However, an alternative explanation could be that politicians still vote according to their own preferences, but that the gender is not a determinant of their voting behaviour. A possible interpretation of such behaviour can be that women involved in political activities could spontaneously move their preferences closer to the males' ones, comparing to the not involved ones.

In any case, our results should not be interpreted in the sense that the problem of women underrepresentation in political institutions is irrelevant. In fact, it remains the problem of equal opportunities in entering politics and of adequate representativeness of institutions,

mainly because Italy is one of the developed countries with the lowest rate of female participation in politics. Moreover, female politicians could impact on political choices in a number of ways not considered in this analysis, for example in improving the political decisional process or promoting the adoption of best practices.

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Appendix

Graph 1

Percentages of women in Municipal Councils and of females majors.
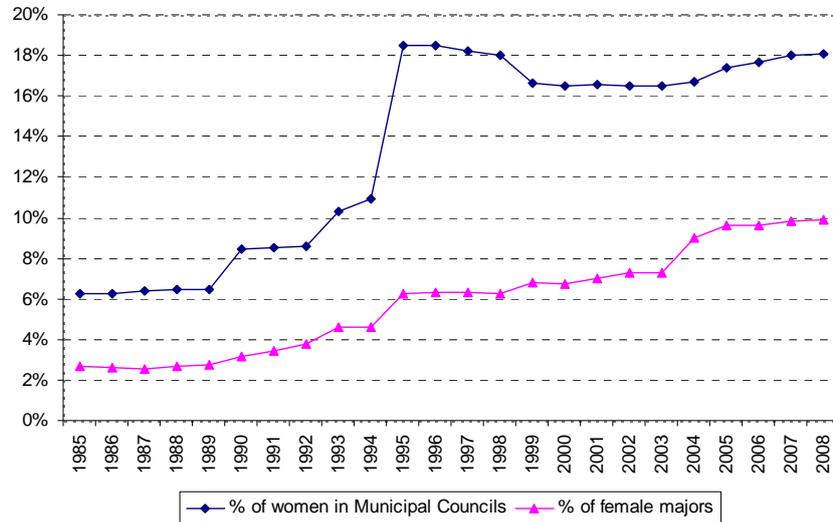
Graph 2

Distribution, by year, of the percentages of women in the Council.
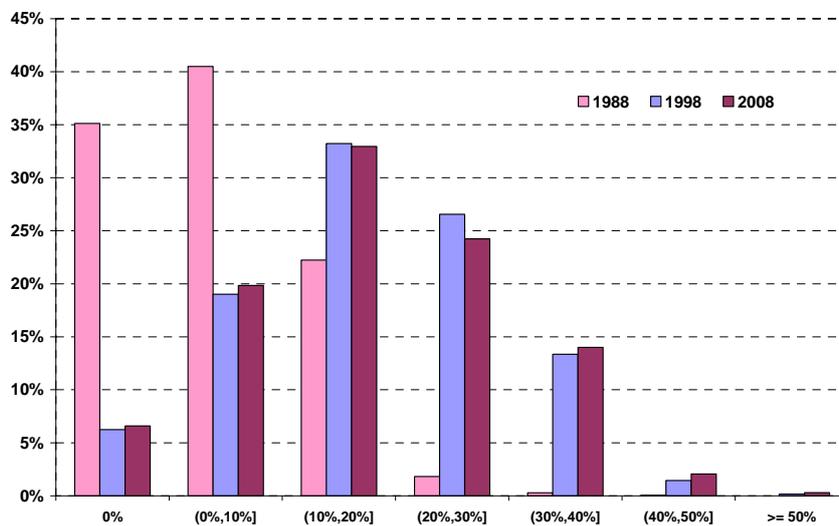
Graph 3

Average ratios of women in the Councils, by municipality size.
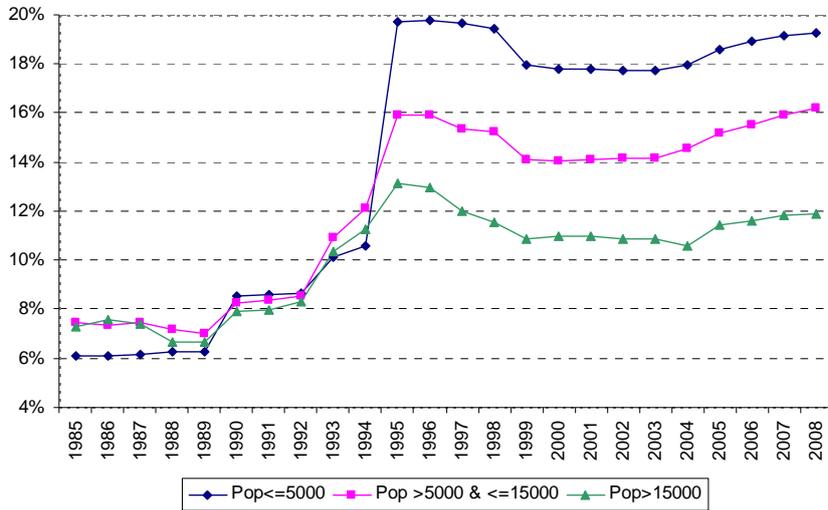
Graph 4

Average ratios of women in the Councils, by location.
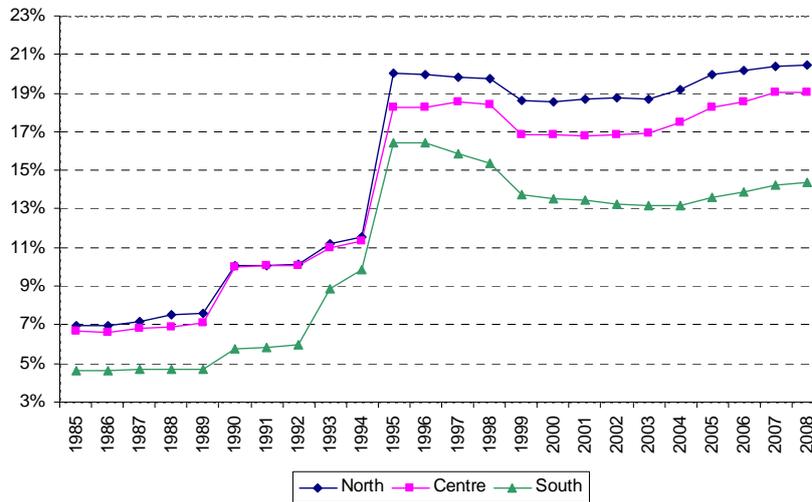
Graph 5

Average years of education of local politicians, by gender.
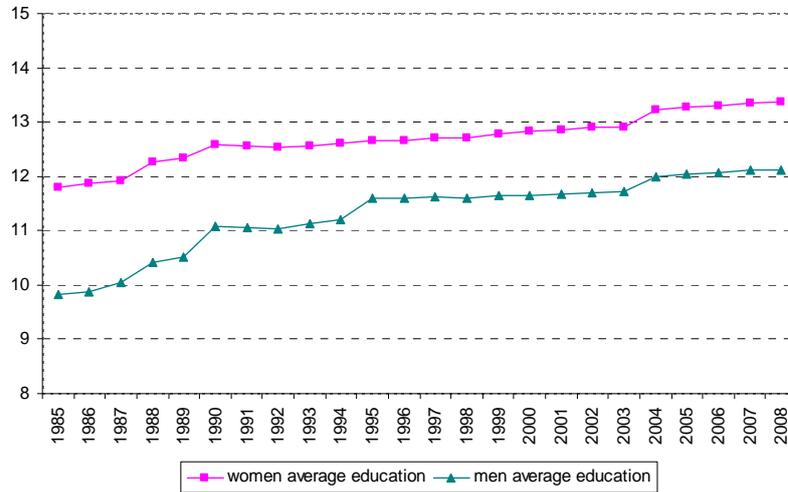
Graph 6

Average age of local politicians, by gender.
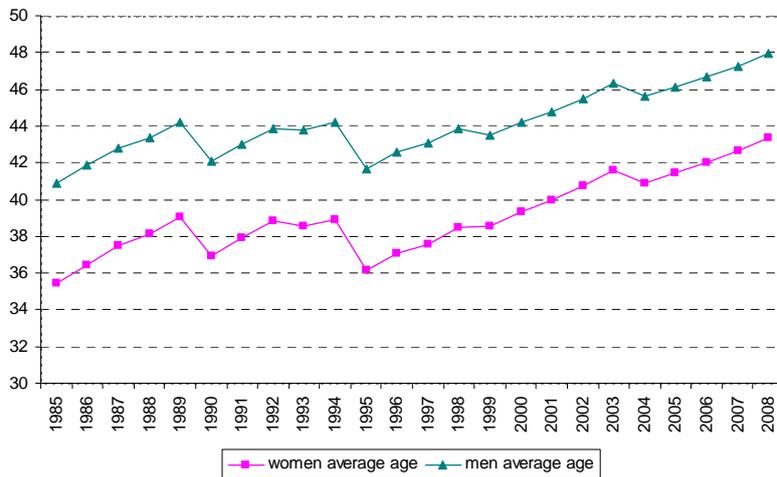
Graph 7

Composition of public expenditure.
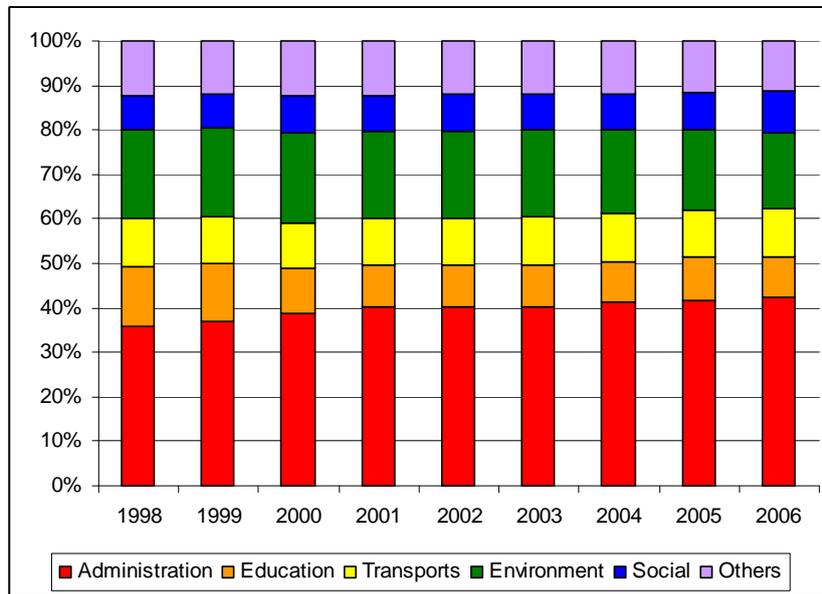
Table 1

Descriptive statistics of the variables included in the dataset in the period 1998-2006.

	Obs.	Mean	SD
Municipal Councils			
Proportion of seats by women over total seats in the Council	62936	0,169	0,104
Proportion of female major over total	62936	0,079	0,269
Proportion of seats by women affiliated to the major political orientation	62936	0,136	0,106
Age of the politicians	62936	44,350	3,978
Education of the politicians in terms of years	62875	12,032	1,541
Municipalities			
Size of the municipality in km2	62957	37,035	49,829
Population in the municipality	62936	7141, 2	41248,2
Ratio of people under 6 years old	62936	0,052	0,013
Ratio of people under 15 years old	62936	0,082	0,020
Ratio of people over 65 years old	62936	0,212	0,064
Number of crimes per capita	62306	0,041	0,016
Voter turnout in municipal elections	59787	0,794	0,089
GDP per capita at provincial level	62674	19628,4	5151,6
Allocation of resources			
Ratio of expenditure spent for administration	62936	0,396	0,17
Ratio of expenditure spent for environment	62936	0,193	0,091
Ratio of expenditure spent for transports	62936	0,107	0,006
Ratio of expenditure spent for education	62936	0,103	0,057
Ratio of expenditure spent for social services	62936	0,068	0,069

Table 2

Correlations between the share of women in the Council and the other regressors

	Proportion of seats by women over total seats in the Council
Proportion of seats by women over total seats in the Council	1
Gender of the major	0,19
Education of politicians	-0,09
Age of politicians	-0,12
Ratio of people under 6 years old	-0,17
Ratio of people under 15 years old	-0,25
Ratio of people over 65 years old	0,09
GDP per capita at provincial level	0,23
Population in the municipality	-0,06
Voter turnout in municipal elections	0,14
Number of crimes per capita	-0,01
Size of the municipailty	-0,15

Table 3

Italian Hoseholds Multiscope Survey 2010.

Which is the main problem in Italy?	Values	% of positive answers Men	Women	P-value
Unemployment	1=yes; 0=no	62,6	65,9	0,0000
Crime	1=yes; 0=no	46,3	49,6	0,0000
Tax evasion	1=yes; 0=no	19,8	14,9	0,0000
Environment	1=yes; 0=no	10,9	11,3	0,2019
Public debt	1=yes; 0=no	12,0	8,5	0,0000
Health system	1=yes; 0=no	13,2	17,7	0,0000
Education system	1=yes; 0=no	5,0	5,7	0,0047
Justice	1=yes; 0=no	17,1	13,7	0,0000
Immigration	1=yes; 0=no	24,8	26,3	0,0010
Poverty	1=yes ; 0=no	23,1	26,2	0,0000
Others	1=yes ; 0=no	2,2	1,6	0,0000

The P-values refer to the Adjusted Wald test of the null hypothesis that the two means are statistically equal.

Table 4

Panel regressions, total expenditure as dependent variable, short specification

	Administration	Education	Transport	Environment	Social assistance
women ratio	0,016***	0,00174	0,006**	-0,009*	-0,00302
	(-0,006)	(-0,003)	(-0,003)	(-0,005)	(-0,003)
sex of the major	0,001	0,002	-0,001	-0,001	-0,001
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
Council average edu	-0,006***	0,001***	-0,002***	0,002***	0,001***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Council average age	-0,001***	0,000	-0,001***	0,0005***	0,0003***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
civic party	-0,0003	0,002**	-0,001	0,002	-0,002***
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
right party	-0,00413*	-0,00093	-0,00294**	0,002	0,000
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
left party	-0,00351*	0,001	-0,001	-0,001	-0,001
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
Constant	0,485***	0,134***	0,130***	0,159***	0,0339***
	(-0,011)	(-0,006)	(-0,006)	(-0,009)	(-0,005)
Observations	62813	62813	62813	62813	62813
N. of municipalities	8011	8011	8011	8011	8011

Standard errors clustered at municipality level, year and provincial dummies included. The dependent variable is the share of expenditure devoted to a certain category over the total.

*** p<0,01, ** p<0,05, * p<0,1

Table 5

Panel regressions, capital expenditure as dependent variable, short specification

	Administration	Education	Transport	Environment	Social assistance
women ratio	-0,027	0,002	-0,006	0,021	-0,008*
	(-0,017)	(-0,009)	(-0,014)	(-0,016)	(-0,005)
sex of the major	0,002	0,005	-0,004	0,006	0,001
	(-0,006)	(-0,003)	(-0,005)	(-0,005)	(-0,002)
Council average edu	0,004***	0,003***	-0,006***	-0,003**	0,001**
	(-0,001)	(-0,001)	(-0,001)	(-0,001)	(0,000)
Council average age	0,001	0,000	-0,00141***	0,000	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
civic party	0,004	-0,00670**	0,000	0,005	-0,001
	(-0,006)	(-0,003)	(-0,005)	(-0,006)	(-0,002)
right party	0,021***	-0,013***	-0,004	-0,010	-0,001
	(-0,007)	(-0,004)	(-0,006)	(-0,007)	(-0,002)
left party	0,009	-0,00622*	-0,009*	0,006	-0,002
	(-0,006)	(-0,004)	(-0,006)	(-0,006)	(-0,002)
Constant	0,198***	0,077***	0,322***	0,260***	0,013
	(-0,030)	(-0,015)	(-0,024)	(-0,028)	(-0,008)
Observations	62813	62813	62813	62813	62813
N. of municipalities	8011	8011	8011	8011	8011

Standard errors clustered at municipality level, year and provincial dummies included. The dependent variable is the share of expenditure devoted to a certain category over the total.

*** p<0,01, ** p<0,05, * p<0,1

Table 6

Panel regressions, current expenditure as dependent variable, short specification

	Administration	Education	Transport	Environment	Social assistance
women ratio	0,01***	0,003	0,005**	-0,01***	-0,002
	(-0,005)	(-0,002)	(-0,002)	(-0,004)	(-0,003)
sex of the major	0,002	0,00214***	-0,001	-0,003	-0,001
	(-0,001)	(-0,001)	(-0,001)	(-0,001)	(-0,001)
Council average edu	-0,005***	0,001***	-0,001***	0,002***	0,001***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Council average age	-0,001***	0,000	0,000	0,0003***	0,000***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
civic party	-0,001	0,002**	-0,001	0,002	-0,003***
	(-0,001)	(-0,001)	(-0,001)	(-0,001)	(-0,001)
right party	-0,004**	0,000	-0,001	0,003*	-0,001
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
left party	-0,001	0,00174**	0,000	-0,002	-0,00164*
	(-0,002)	(-0,001)	(-0,001)	(-0,001)	(-0,001)
Constant	0,455***	0,141***	0,101***	0,166***	0,039***
	(-0,010)	(-0,005)	(-0,005)	(-0,008)	(-0,005)
Observations	62813	62813	62813	62813	62813
N. of municipalities	8011	8011	8011	8011	8011

Standard errors clustered at municipality level, year and provincial dummies included. The dependent variable is the share of expenditure devoted to a certain category over the total.

*** p<0,01, ** p<0,05, * p<0,1

Table 7

Panel regressions, total expenditure as dependent variable.

	Administration	Education	Transport	Environment	Social assistance
Ratio of women in the Council	0,014***	0,001	0,004	-0,007	-0,003
	(-0,006)	(-0,003)	(-0,003)	(-0,005)	(-0,003)
Gender of the major	0,000	0,001	-0,001	0,000	-0,001
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
Council average education	-0,005***	0,001***	-0,002***	0,001***	0,001***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Council average age	-0,001***	0,000*	-0,000***	0,000**	0,000***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Civic party dummy	0,000	0,002**	-0,001	0,001	-0,002**
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
Right party dummy	-0,002	0,000	-0,003**	0,000	0,000
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
Left party dummy	-0,002	0,001	-0,001	-0,001	-0,001
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
Electoral cycle	-0,001***	0,000*	0,000	-0,000*	0,000
	(0,001)	(0,000)	(0,000)	(0,000)	(0,000)
Ratio of children	0,083	0,410***	0,105**	-0,451***	0,052*
	(-0,074)	(-0,036)	(-0,045)	(-0,061)	(-0,032)
Ratio of scholars	-0,122**	0,419***	0,033	-0,271***	0,054*
	(-0,060)	(-0,027)	(-0,037)	(-0,053)	(-0,028)
Ratio of people over 65	0,209***	-0,106***	0,157***	-0,176***	-0,001
	(-0,027)	(-0,013)	(-0,016)	(-0,021)	(-0,013)
GDP of the province	0,000***	0,000***	0,000***	0,000***	0,000***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Population size	0,000	0,000	0,000	-0,000***	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Voter turnout	0,016	-0,009**	-0,005	0,006	-0,013***
	(-0,010)	(-0,004)	(-0,006)	(-0,009)	(-0,005)
Number of per capita crimes	-0,006	0,019	0,045**	0,001	0,000
	(-0,033)	(-0,016)	(-0,018)	(-0,030)	-0,015)
Mountains dummy	0,005	-0,004**	0,015***	0,010***	(-0,012***
	(-0,005)	(-0,002)	(-0,002)	(-0,004)	(-0,002)
Seaside dummy	-0,025***	-0,021***	0,000	0,038***	-0,001
	(-0,004)	(-0,002)	(-0,002)	(-0,003)	(-0,002)
Area	0,000***	0,000***	0,000	0,000**	0,000***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Constant	0,371***	0,064***	0,065***	0,365***	0,023**
	(-0,020)	(-0,009)	(-0,011)	(-0,018)	(-0,009)
Observations	59111	59111	59111	59111	59111
N. of municipalities	7500	7500	7500	7500	7500

Standard errors clustered at municipality level, year and provincial dummies included. The dependent variable is the share of expenditure devoted to a certain category over the total.

*** p<0,01, ** p<0,05, * p<0,1

Table 8

Panel regressions, capital expenditure as dependent variable.

	Administration	Education	Transport	Environment	Social assistance
Ratio of women in the Council	-0,024	0,004	-0,008	0,020	-0,009*
	(-0,018)	(-0,009)	(-0,015)	(-0,017)	(-0,005)
Gender of the major	0,002	0,005	-0,004	0,005	0,002
	(-0,006)	(-0,003)	(-0,005)	(-0,006)	(-0,002)
Council average education	0,002	0,003***	-0,005***	-0,003**	0,001***
	(-0,001)	(-0,001)	(-0,001)	(-0,001)	(0,000)
Council average age	0,000	0,001***	-0,001***	0,000	0,000*
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Civic party dummy	0,006	-0,006*	0,000	0,004	-0,001
	(-0,006)	(-0,003)	(-0,005)	(-0,006)	(-0,002)
Right party dummy	0,02**	-0,012***	-0,003	-0,008	-0,001
	(-0,008)	(-0,004)	(-0,006)	(-0,008)	(-0,002)
Left party dummy	0,010	-0,007*	-0,009*	0,008	-0,002
	(-0,006)	(-0,004)	(-0,006)	(-0,007)	(-0,002)
Electoral cycle	0,0002***	-0,000	-0,000	0,000	-0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Ratio of children	0,089	0,502***	0,178	-0,233	-0,091
	(-0,214)	(-0,100)	(-0,190)	(-0,213)	(-0,068)
Ratio of scholars	-0,285*	0,387***	0,034	-0,078	0,019
	(-0,168)	(-0,080)	(-0,146)	(-0,175)	(-0,048)
Ratio of people over 65	-0,081	-0,151***	0,199***	-0,047	-0,007
	(-0,064)	(-0,027)	(-0,055)	(-0,064)	(-0,016)
GDP of the province	0,000	0,000	0,000	0,000***	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Population size	0,000	0,000	0,000	0,000**	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Voter turnout	-0,003	-0,015	-0,008	-0,017	-0,009
	(-0,027)	(-0,012)	(-0,023)	(-0,027)	(-0,008)
Number of per capita crimes	-0,111	0,068	0,146	0,057	-0,065
	(-0,130)	(-0,088)	(-0,115)	(-0,126)	(-0,046)
Mountains dummy	-0,043***	-0,007	0,012	0,040***	0,000
	(-0,010)	(-0,005)	(-0,008)	(-0,011)	(-0,002)
Seaside dummy	0,021**	-0,024***	0,001	0,012	-0,006***
	(-0,010)	(-0,003)	(-0,007)	(-0,010)	(-0,002)
Area	0,000	0,000***	0,000	0,000	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Constant	0,232***	0,013	0,217***	0,388***	0,024
	(-0,059)	(-0,031)	(-0,050)	(-0,059)	(-0,017)
Observations	59111	59111	59111	59111	59111
N. of municipalities	7500	7500	7500	7500	7500

Standard errors clustered at municipality level, year and provincial dummies included. The dependent variable is the share of expenditure devoted to a certain category over the total.

*** p<0,01, ** p<0,05, * p<0,1

Table 9

Panel regressions, current expenditure as dependent variable.

	Administration	Education	Transport	Environment	Social assistance
Ratio of women in the Council	0,014***	0,004*	0,004***	-0,01**	-0,002
	(-0,005)	(-0,002)	(-0,002)	(-0,004)	(-0,003)
Gender of the major	0,001	0,001*	-0,001	-0,002*	-0,001
	(-0,001)	(-0,001)	(-0,001)	(-0,001)	(-0,001)
Council average education	-0,004***	0,001***	-0,001***	0,001***	0,001***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Council average age	-0,000***	0,000	0,000	0,000	0,000***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Civic party dummy	0,000	0,002**	0,000	0,001	-0,002***
	(-0,001)	(-0,001)	(-0,001)	(-0,001)	(-0,001)
Right party dummy	-0,003	0,000	0,000	0,001	-0,001
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
Left party dummy	0,000	0,002*	0,000	-0,002	-0,002*
	(-0,002)	(-0,001)	(-0,001)	(-0,001)	(-0,001)
Electoral cycle	0,000***	0,000***	0,000***	-0,000***	0,000***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Ratio of children	0,022	0,402***	0,096***	-0,483***	0,110***
	(-0,062)	(-0,033)	(-0,032)	(-0,049)	(-0,030)
Ratio of scholars	-0,117**	0,441***	0,039	-0,321***	0,058**
	(-0,052)	(-0,026)	(-0,027)	(-0,042)	(-0,027)
Ratio of people over 65	0,226***	-0,098***	0,106***	-0,204***	0,028**
	(-0,026)	(-0,013)	(-0,014)	(-0,018)	(-0,014)
GDP of the province	0,000***	0,000***	0,000***	0,000***	0,000***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Population size	0,000	0,000	0,000***	0,000***	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Voter turnout	0,005	-0,009**	-0,007	0,022***	-0,013**
	(-0,009)	(-0,004)	(-0,005)	(-0,007)	(-0,005)
Number of per capita crimes	0,059**	0,002	0,0221*	-0,036	-0,012
	(-0,024)	(-0,014)	(-0,012)	(-0,024)	(-0,013)
Mountains dummy	0,015***	-0,004**	0,015***	0,006**	-0,014***
	(-0,005)	(-0,002)	(-0,002)	(-0,003)	(-0,003)
Seaside dummy	-0,038***	-0,021***	-0,001	0,045***	-0,001
	(-0,004)	(-0,002)	(-0,002)	(-0,003)	(-0,002)
Area	0,000***	0,000***	0,000	0,000***	0,000***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Constant	0,371***	0,065***	0,061***	0,363***	0,010
	(-0,016)	(-0,009)	(-0,008)	(-0,015)	(-0,009)
Observations	59111	59111	59111	59111	59111
N. of municipalities	7500	7500	7500	7500	7500

Standard errors clustered at municipality level, year and provincial dummies included. The dependent variable is the share of expenditure devoted to a certain category over the total.

*** p<0,01, ** p<0,05, * p<0,1

Table 10

Panel regressions, considering the percentage of women affiliated to the major' party, total expenditure as dependent variable.

	Administration	Education	Transport	Environment	Social assistance
Ratio of women affiliated to the major party	0,011***	0,00	0,005*	0,00	0,00
	(-0,01)	(0,00)	(0,00)	(0,00)	(0,00)
Gender of the major	0,000	0,000	0,000	0,000	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Council average education	-0,005***	0,001***	-0,002***	0,001***	0,001***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Council average age	-0,001***	0,0001*	-0,0002***	0,0003**	0,0003***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Civic party dummy	0,00	0,002**	0,00	0,00	-0,002**
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Right party dummy	0,00	0,00	-0,003**	0,00	0,00
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Left party dummy	0,00	0,00	0,00	0,00	0,00
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Electoral cycle	0,000	0,000***	-0,000	-0,000***	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Ratio of children	0,08	0,410***	0,105**	-0,451***	0,05
	(-0,07)	(-0,04)	(-0,04)	(-0,06)	(-0,03)
Ratio of scholars	-0,121**	0,419***	0,03	-0,271***	0,054*
	(-0,06)	(-0,03)	(-0,04)	(-0,05)	(-0,03)
Ratio of people over 65	0,210***	-0,106***	0,157***	-0,177***	0,00
	(-0,03)	(-0,01)	(-0,02)	(-0,02)	(-0,01)
GDP of the province	0,000***	0,000***	0,000***	0,000***	0,000***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Population size	0,00	0,00	0,00	-0,000***	0,00
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Voter turnout	0,02	-0,009**	-0,01	0,01	-0,013***
	(-0,01)	(0,00)	(-0,01)	(-0,01)	(-0,01)
Number of per capita crimes	0,00	0,02	0,0459**	0,00	0,00
	(-0,03)	(-0,02)	(-0,02)	(-0,03)	(-0,01)
Mountains dummy	0,01	-0,004**	0,015***	0,009***	-0,012***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Seaside dummy	-0,026***	-0,021***	0,00	0,038***	0,00
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Area	-0,0003***	0,000**	0,00	0,000**	0,0001***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Constant	0,373***	0,064***	0,065***	0,36***	0,023**
	(-0,02)	(-0,01)	(-0,01)	(-0,02)	(-0,01)
Observations	59111	59111	59111	59111	59111
N. of municipalities	7500	7500	7500	7500	7500

Standard errors clustered at municipality level, year and provincial dummies included. The dependent variable is the share of expenditure devoted to a certain category over the total.

*** p<0,01, ** p<0,05, * p<0,1

Table 11

Panel regressions, considering the female ratio in the Executive Committee, total expenditure as dependent variable.

	Administration	Education	Transport	Environment	Social assistance
Ratio of women in the Executive Committee	-0,002	0,002	-0,001	0,002	-0,003*
	(-0,003)	(-0,002)	(-0,002)	(-0,003)	(-0,002)
Gender of the major	0,001	0,000	-0,001	-0,001	-0,001
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
Council average education	-0,005***	0,001***	-0,002***	0,001***	0,001***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Council average age	-0,001***	0,000*	-0,000***	0,000***	0,000***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Civic party dummy	0,000	0,002**	-0,001	0,001	-0,002**
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
Right party dummy	-0,002	0,000	-0,003**	0,000	0,000
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
Left party dummy	-0,002	0,001	-0,001	-0,001	-0,001
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
Electoral cycle	0,000***	0,000***	-0,000	-0,000**	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Ratio of children	0,083	0,411***	0,105**	-0,451***	0,052
	(-0,074)	(-0,036)	(-0,045)	(-0,061)	(-0,032)
Ratio of scholars	-0,120**	0,418***	0,033	-0,272***	0,054**
	(-0,060)	(-0,027)	(-0,037)	(-0,053)	(-0,028)
Ratio of people over 65	0,211***	-0,106***	0,157***	-0,178***	-0,001
	(-0,027)	(-0,013)	(-0,016)	(-0,021)	(-0,013)
GDP of the province	0,000***	0,000***	0,000***	-0,000***	0,000***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Population size	0,000	0,000	0,000	-0,000***	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Voter turnout	0,016	-0,009**	-0,005	0,006	-0,013***
	(-0,010)	(-0,004)	(-0,006)	(-0,009)	(-0,005)
Number of per capita crimes	-0,006	0,019	0,0450**	0,001	0,000
	(-0,033)	(-0,016)	(-0,018)	(-0,030)	(-0,015)
Mountains dummy	0,005	-0,004**	0,015***	0,010***	-0,012***
	(-0,005)	(-0,002)	(-0,002)	(-0,004)	(-0,002)
Seaside dummy	-0,026***	-0,021***	0,000	0,038***	-0,001
	(-0,004)	(-0,002)	(-0,002)	(-0,003)	(-0,002)
Area	-0,000***	0,000***	0,000	0,000***	0,000***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Constant	0,375***	0,064***	0,066***	0,363***	0,023**
	(-0,020)	(-0,009)	(-0,011)	(-0,018)	(-0,009)
Observations	59111	59111	59111	59111	59111
N. of municipalities	7500	7500	7500	7500	7500

Standard errors clustered at municipality level, year and provincial dummies included. The dependent variable is the share of expenditure devoted to a certain category over the total.

*** p<0,01, ** p<0,05, * p<0,1

Table 12

Threshold regression, including a dummy=1 if the share of woman exceeds the first quartile of the distribution, 0 otherwise; total expenditure as dependent variable.

	Administration	Education	Transport	Environment	Social assistance
Threshold 1 (8% of women)	0,000	0,000	0,000	0,000	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Gender of the major	0,000	0,000	0,000	0,000	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Council average education	-0,005***	0,001***	-0,002***	0,001***	0,001***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Council average age	-0,001***	0,0001*	-0,0003***	0,0004***	0,0003***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Civic party dummy	0,000	0,002**	0,000	0,000	-0,002**
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Right party dummy	0,000	0,000	-0,003**	0,000	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Left party dummy	0,000	0,000	0,000	0,000	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Ratio of children	0,08	0,411***	0,106**	-0,451***	0,052*
	(-0,07)	(-0,04)	(-0,04)	(-0,06)	(-0,03)
Ratio of scholars	-0,119**	0,419***	0,03	-0,272***	0,0533*
	(-0,06)	(-0,03)	(-0,04)	(-0,05)	(-0,03)
Ratio of people over 65	0,211***	-0,106***	0,157***	-0,177***	0,000
	(-0,03)	(-0,01)	(-0,02)	(-0,02)	(-0,01)
GDP of the province	0,000***	0,000***	0,000***	-0,000***	0,000***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Population size	0,000	0,000	0,000	-0,000***	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Voter turnout	0,02	-0,00898**	-0,01	0,01	-0,0134***
	(-0,01)	(0,00)	(-0,01)	(-0,01)	(-0,01)
Number of per capita crimes	-0,01	0,02	0,0451**	0,000	0,000
	(-0,03)	(-0,02)	(-0,02)	(-0,03)	(-0,01)
Mountains dummy	0,01	-0,004**	0,015***	0,01***	-0,012***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Seaside dummy	-0,026***	-0,021***	0,000	0,038***	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Area	-0,000***	0,000***	0,000	0,000***	0,000***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Constant	0,376***	0,064***	0,066***	0,363***	0,022**
	(-0,02)	(-0,01)	(-0,01)	(-0,02)	(-0,01)
Observations	59111	59111	59111	59111	59111
N. of municipalities	7500	7500	7500	7500	7500

Standard errors clustered at municipality level, year and provincial dummies included. The dependent variable is the share of expenditure devoted to a certain category over the total.

*** p<0,01, ** p<0,05, * p<0,1

Table 13

Threshold regression, including a dummy=1 if the share of woman exceeds the median value of the distribution, 0 otherwise; total expenditure as dependent variable.

	Administration	Education	Transport	Environment	Social assistance
Threshold 2 (15 % of women)	0,000	0,000	0,000	-0,002*	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Gender of the major	0,000	0,000	0,000	0,000	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Council average education	-0,005***	0,001***	-0,002***	0,001***	0,001***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Council average age	-0,001***	0,0001*	-0,0003***	0,0003**	0,0003***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Civic party dummy	0,000	0,002**	0,000	0,000	-0,002**
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Right party dummy	0,000	0,000	-0,003**	0,000	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Left party dummy	0,000	0,000	0,000	0,000	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Ratio of children	0,08	0,410***	0,105**	-0,451***	0,05
	(-0,07)	(-0,04)	(-0,04)	(-0,06)	(-0,03)
Ratio of scholars	-0,120**	0,419***	0,03	-0,271***	0,0536*
	(-0,06)	(-0,03)	(-0,04)	(-0,05)	(-0,03)
Ratio of people over 65	0,211***	-0,106***	0,157***	-0,177***	0,00
	(-0,03)	(-0,01)	(-0,02)	(-0,02)	(-0,01)
GDP of the province	0,000***	0,000***	0,000***	-0,000***	0,000***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Population size	0,000	0,000	0,000	-0,000***	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Voter turnout	0,02	-0,009**	-0,01	0,01	-0,0135***
	(-0,01)	(0,00)	(-0,01)	(-0,01)	(-0,01)
Number of per capita crimes	-0,01	0,02	0,0450**	0,000	0,000
	(-0,03)	(-0,02)	(-0,02)	(-0,03)	(-0,01)
Mountains dummy	0,01	-0,004**	0,015***	0,009***	-0,012***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Seaside dummy	-0,026***	-0,021***	0,00	0,038***	0,00
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Area	-0,000***	0,000***	0,00	0,000***	0,0001***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Constant	0,373***	0,064***	0,066***	0,365***	0,023**
	(-0,02)	(-0,01)	(-0,01)	(-0,02)	(-0,01)
Observations	59111	59111	59111	59111	59111
N. of municipalities	7500	7500	7500	7500	7500

Standard errors clustered at the municipality level, year and provincial dummies included. The dependent variable is the share of expenditure devoted to a certain category over the total.

*** p<0,01, ** p<0,05, * p<0,1

Table 14

Threshold regression, including a dummy=1 if the share of woman exceeds the third quartile of the distribution, 0 otherwise; total expenditure as dependent variable.

	Administration	Education	Transport	Environment	Social assistance
Threshold 3 (23% of women)	0,003***	0,000	0,001**	-0,002**	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Gender of the major	0,000	0,000	0,000	0,000	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Council average education	-0,005***	0,001***	-0,002***	0,001***	0,001***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Council average age	-0,001***	0,0001*	-0,0002***	0,0003**	0,0003***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Civic party dummy	0,00	0,002**	0,000	0,000	-0,002**
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Right party dummy	0,000	0,000	-0,003**	0,000	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Left party dummy	0,000	0,000	0,000	0,000	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Ratio of children	0,08	0,410***	0,106**	-0,451***	0,05
	(-0,07)	(-0,04)	(-0,04)	(-0,06)	(-0,03)
Ratio of scholars	-0,121**	0,419***	0,03	-0,271***	0,0536*
	(-0,06)	(-0,03)	(-0,04)	(-0,05)	(-0,03)
Ratio of people over 65	0,210***	-0,106***	0,156***	-0,176***	0,00
	(-0,03)	(-0,01)	(-0,02)	(-0,02)	(-0,01)
GDP of the province	0,000***	0,000***	0,000***	-0,000***	0,000***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Population size	0,000	0,000	0,000	-0,000***	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Voter turnout	0,02	-0,009**	-0,01	0,01	-0,013***
	(-0,01)	(0,00)	(-0,01)	(-0,01)	(-0,01)
Number of per capita crimes	-0,01	0,02	0,0452**	0,000	0,000
	(-0,03)	(-0,02)	(-0,02)	(-0,03)	(-0,01)
Mountains dummy	0,01	-0,004**	0,015***	0,01***	-0,012***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Seaside dummy	-0,025***	-0,021***	0,000	0,038***	0,000
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Area	-0,0003***	0,000***	0,00	0,000***	0,0001***
	(0,00)	(0,00)	(0,00)	(0,00)	(0,00)
Constant	0,373***	0,064***	0,065***	0,365***	0,023**
	(-0,02)	(-0,01)	(-0,01)	(-0,02)	(-0,01)
Observations	59111	59111	59111	59111	59111
N. of municipalities	7500	7500	7500	7500	7500

Standard errors clustered at municipality level, year and provincial dummies included. The dependent variable is the share of expenditure devoted to a certain category over the total.

*** p<0,01, ** p<0,05, * p<0,1

Table 15

Cross municipality regression, using the electoral mandate as unit of observation; total expenditure as dependent variable.

	Administration	Education	Transport	Environment	Social assistance
Ratio of women in the Council	0,060***	-0,008	0,002	-0,008	-0,029***
	(-0,013)	(-0,007)	(-0,007)	(-0,010)	(-0,008)
Gender of the major	-0,006	0,00369*	-0,002	0,000	0,005
	(-0,004)	(-0,002)	(-0,002)	(-0,003)	(-0,003)
Council average education	-0,014***	0,002***	-0,005***	0,003***	0,007***
	(-0,001)	(0,000)	(-0,001)	(-0,001)	(-0,001)
Council average age	-0,002***	0,000	-0,0005***	0,0007***	0,001***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Civic party dummy	0,017***	0,001	0,006***	-0,005	-0,008***
	(-0,004)	(-0,002)	(-0,002)	(-0,003)	(-0,003)
Right party dummy	0,000	0,002	-0,003	-0,002	0,003
	(-0,004)	(-0,002)	(-0,002)	(-0,004)	(-0,003)
Left party dummy	0,005	0,003	0,010***	-0,007*	-0,002
	(-0,005)	(-0,003)	(-0,003)	(-0,004)	(-0,004)
Ratio of children	-0,063	0,348***	0,079	-0,069	-0,034
	(-0,194)	(-0,096)	(-0,123)	(-0,138)	(-0,098)
Ratio of scholars	-0,245*	0,649***	0,063	-0,285***	0,064
	(-0,141)	(-0,076)	(-0,090)	(-0,110)	(-0,077)
Ratio of people over 65	0,208***	-0,072***	0,197***	-0,164***	-0,077***
	(-0,045)	(-0,022)	(-0,028)	(-0,035)	(-0,025)
GDP of the province	0,000	0,000	0,000	-0,000***	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Population size	1,21e-07*	0,000	4,00e-08*	-0,000***	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Voter turnout	0,102***	-0,021**	0,005	0,008	-0,085***
	(-0,019)	(-0,009)	(-0,013)	(-0,016)	(-0,012)
Number of per capita crimes	0,029	0,210	0,314	-0,302	0,086
	(-0,461)	(-0,212)	(-0,244)	(-0,289)	(-0,242)
Mountains dummy	0,001	-0,004	0,013***	0,013***	-0,009***
	(-0,005)	(-0,003)	(-0,003)	(-0,005)	(-0,003)
Seaside dummy	-0,014***	-0,020***	0,001	0,032***	-0,008***
	(-0,004)	(-0,002)	(-0,002)	(-0,004)	(-0,002)
Area	-0,0003***	0,000*	0,000**	0,000	0,000**
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Constant	0,412***	0,035	0,027	0,398***	0,040
	(-0,092)	(-0,042)	(-0,047)	(-0,074)	(-0,058)
Observations	5462	5462	5462	5462	5462
R squared	0,322	0,359	0,269	0,294	0,291

Standard errors are robust, year and provincial dummies included. The dependent variable is the share of expenditure devoted to a certain category over the total.

*** p<0,01, ** p<0,05, * p<0,1

Table 16

Coefficients' signs and significance for the women ratio in the different specifications.

	Administration	Education	Transport	Environment	Social assistance
Female ratio in the Council	++				
Female ratio belonging to the major affiliation	++		+		
Female ratio in the Executive Committee					–
Threshold 1 (8% of women)					
Threshold 2 (15% of women)				–	
Threshold 3 (23% of women)	+++		++	– –	
Eliminating pre committed expenditure	++				
Fractional logit model	+++				
Female ratio in the Council, electoral mandate	+++				– – –

Table 17

IV regressions, first stage of the estimation.

	women ratio
gender quotas	0,014***
	(-0,004)
sex of the major	0,039***
	(-0,003)
Council average edu	0,007***
	(-0,001)
Council average age	-0,004***
	(-0,0002)
civic party	0,00
	(-0,003)
right party	-0,010***
	(-0,004)
left party	0,00
	(-0,003)
% of children	0,05
	(-0,077)
% of scholars	0,04
	(-0,065)
% of old people	0,142***
	(-0,0279)
GDP province	0,000***
	(-0,000)
Pop	0,00
	(-0,000)
Human capital	-0,01
	(-0,0162)
Per capita crimes	-0,01
	(-0,036)
Mountains	0,00
	(-0,004)
Seaside	-0,010***
	(-0,004)
Area	-0,0002***
	(-0,000)
Constant	0,243***
	-0,03
Observations	46300
F test on the relevance of the instrument	11,5***
N. of municipalities	7474

Standard errors in parentheses, year and provincial dummies.

*** p<0,01, ** p<0,05, * p<0,1

Table 18

IV regressions, total expenditure as dependent variable.

	Administration	Education	Transport	Environment	Social assistance
Ratio of women in the Council	0,094	0,171	0,314	0,158	-0,231
	(-0,312)	(-0,164)	(-0,202)	(-0,253)	(-0,228)
Gender of the major	-0,003	-0,007	-0,0142*	-0,007	0,008
	(-0,013)	(-0,007)	(-0,008)	(-0,011)	(-0,008)
Council average education	-0,007***	0,000	-0,004***	0,000	0,003*
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,002)
Council average age	-0,001	0,001	0,001	0,001	-0,001
	(-0,001)	(-0,001)	(-0,001)	(-0,001)	(-0,001)
Civic party dummy	0,004**	0,004***	0,000	-0,002	-0,003**
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
Right party dummy	0,000	0,002	-0,002	0,001	-0,001
	(-0,004)	(-0,002)	(-0,003)	(-0,003)	(-0,002)
Left party dummy	-0,001	0,001	-0,002	0,000	-0,001
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,001)
ELectoral cycle	0,000	0,000	0,000	0,000	-0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Ratio of children	0,078	0,462***	0,122***	-0,479***	0,027
	(-0,062)	(-0,031)	(-0,042)	(-0,056)	(-0,036)
Ratio of scholars	-0,128**	0,407***	-0,007	-0,174***	0,032
	(-0,051)	(-0,026)	(-0,035)	(-0,046)	(-0,031)
Ratio of people over 65	0,226***	-0,134***	0,123***	-0,196***	-0,007
	(-0,051)	(-0,026)	(-0,033)	(-0,042)	(-0,030)
GDP of the province	0,000***	0,000***	0,000***	0,000***	0,000***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Population size	0,000***	0,000	0,000*	0,000***	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Voter turnout	0,018*	-0,012**	-0,006	0,013	-0,019***
	(-0,010)	(-0,005)	(-0,006)	(-0,008)	(-0,005)
Number of per capita crimes	-0,037	0,013	0,015	0,141***	-0,0313*
	(-0,035)	(-0,017)	(-0,024)	(-0,033)	(-0,016)
Mountains dummy	0,004	-0,004*	0,014***	0,008**	-0,011***
	(-0,005)	(-0,003)	(-0,003)	(-0,004)	(-0,004)
Seaside dummy	-0,028***	-0,020***	0,004	0,040***	-0,005
	(-0,005)	(-0,003)	(-0,003)	(-0,004)	(-0,004)
Area	-0,000***	-0,000*	-0,000*	0,000	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Constant	0,370***	0,016	-0,009	0,294***	0,094*
	(-0,083)	(-0,043)	(-0,055)	(-0,071)	(-0,056)
Observations	46300	46300	46300	46300	46300
N. of municipalities	7474	7474	7474	7474	7474

Standard errors clustered at municipality level, year and provincial dummies included. The dependent variable is the share of expenditure devoted to a certain category over the total.

*** p<0,01, ** p<0,05, * p<0,1

Table 19

IV regressions, capital expenditure as dependent variable.

	Administration	Education	Transport	Environment	Social assistance
Ratio of women in the Council	-0,508	0,341	1,086	0,686	-0,135
	(-0,760)	(-0,387)	(-0,677)	(-0,776)	(-0,208)
Gender of the major	0,028	-0,013	-0,060*	-0,028	0,009
	(-0,039)	(-0,022)	(-0,036)	(-0,040)	(-0,012)
Council average education	0,005	0,003**	-0,009***	-0,006	0,001*
	(-0,003)	(-0,001)	(-0,003)	(-0,003)	(-0,001)
Council average age	-0,002	0,002	0,004	0,003	0,000
	(-0,004)	(-0,002)	(-0,003)	(-0,004)	(-0,001)
Civic party dummy	0,0112*	-0,00649*	0,000	0,000	-0,002
	(-0,006)	(-0,004)	(-0,006)	(-0,006)	(-0,002)
Right party dummy	0,0249*	-0,008	0,007	-0,005	-0,003
	(-0,013)	(-0,007)	(-0,012)	(-0,013)	(-0,004)
Left party dummy	0,0121*	-0,006	-0,006	0,009	-0,003
	(-0,007)	(-0,004)	(-0,006)	(-0,007)	(-0,002)
Electoral cycle	0,000	0,000	0,000	0,000	0,000
	(-0,000)	(-0,000)	(-0,000)	(-0,000)	(-0,000)
Ratio of children	0,017	0,497***	0,369*	-0,226	-0,117*
	(-0,219)	(-0,130)	(-0,204)	(-0,224)	(-0,067)
Ratio of scholars	-0,384**	0,475***	0,021	0,063	-0,038
	(-0,178)	(-0,103)	(-0,165)	(-0,182)	(-0,054)
Ratio of people over 65	-0,018	-0,185***	0,063	-0,121	-0,003
	(-0,122)	(-0,058)	(-0,107)	(-0,125)	(-0,032)
GDP of the province	0,000	0,000	0,000	-0,000***	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Population size	0,000***	-0,000***	0,000***	-0,000***	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Voter turnout	-0,016	-0,023	0,006	-0,025	-0,002
	(-0,029)	(-0,016)	(-0,026)	(-0,030)	(-0,008)
Number of per capita crimes	-0,043	0,122	-0,012	0,130	-0,0807*
	(-0,148)	(-0,097)	(-0,142)	(-0,151)	(-0,049)
Mountains dummy	-0,041***	-0,005	0,010	0,039***	0,000
	(-0,011)	(-0,006)	(-0,010)	(-0,011)	(-0,003)
Seaside dummy	0,013	-0,022***	0,011	0,019	-0,007**
	(-0,012)	(-0,006)	(-0,010)	(-0,012)	(-0,003)
Area	0,000	0,000	0,000	0,000	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Constant	0,404*	-0,108	-0,170	0,197	0,079
	(-0,243)	(-0,134)	(-0,222)	(-0,249)	(-0,071)
Observations	46300	46300	46300	46300	46300
N. of municipalities	7474	7474	7474	7474	7474

Standard errors clustered at municipality level, year and provincial dummies included. The dependent variable is the share of expenditure devoted to a certain category over the total.

*** p<0,01, ** p<0,05, * p<0,1

Table 20

IV regressions, current expenditure as dependent variable.

	Administration	Education	Transport	Environment	Social assistance
Ratio of women in the Council	0,118	0,155	0,192	0,223	-0,238
	(-0,305)	(-0,166)	(-0,180)	(-0,242)	(-0,243)
Gender of the major	-0,003	-0,005	-0,008	-0,011	0,008
	(-0,011)	(-0,006)	(-0,007)	(-0,009)	(-0,009)
Council average education	-0,005**	0,000	-0,002	-0,001	0,003
	(-0,002)	(-0,001)	(-0,001)	(-0,002)	(-0,002)
Council average age	0,000	0,001	0,001	0,001	-0,001
	(-0,001)	(-0,001)	(-0,001)	(-0,001)	(-0,001)
Civic party dummy	0,002	0,004***	0,000	-0,001	-0,003***
	(-0,002)	(-0,001)	(-0,001)	(-0,001)	(-0,001)
Right party dummy	-0,002	0,003	0,001	0,002	-0,002
	(-0,003)	(-0,002)	(-0,002)	(-0,003)	(-0,002)
Left party dummy	0,000	0,002***	0,000	-0,002*	-0,002**
	(-0,001)	(-0,001)	(-0,001)	(-0,001)	(-0,001)
Electoral cycle	0,000	0,000	0,000	0,000	0,000
	(-0,000)	(-0,000)	(-0,000)	(-0,000)	(-0,000)
Ratio of children	-0,023	0,450***	0,066**	-0,436***	0,071*
	(-0,050)	(-0,028)	(-0,028)	(-0,042)	(-0,037)
Ratio of scholars	-0,148***	0,401***	0,005	-0,213***	0,049
	(-0,042)	(-0,023)	(-0,024)	(-0,035)	(-0,032)
Ratio of people over 65	0,229***	-0,135***	0,101***	-0,190***	0,019
	(-0,042)	(-0,023)	(-0,023)	(-0,036)	(-0,029)
GDP of the province	0,000	0,000***	0,000	-0,000***	0,000***
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Population size	0,000	0,000	0,000**	-0,000**	0,000*
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Voter turnout	0,001	-0,012***	-0,006	0,031***	-0,016***
	(-0,008)	(-0,004)	(-0,004)	(-0,007)	(-0,005)
Number of per capita crimes	0,018	-0,010	0,006	0,108***	-0,048***
	(-0,023)	(-0,013)	(-0,012)	(-0,021)	(-0,015)
Mountains dummy	0,013***	-0,004*	0,014***	0,004	-0,012***
	(-0,005)	(-0,003)	(-0,003)	(-0,004)	(-0,004)
Seaside dummy	-0,035***	-0,020***	0,002	0,05***	-0,005
	(-0,006)	(-0,003)	(-0,003)	(-0,004)	(-0,005)
Area	-0,000***	0,000*	0,000	0,000*	0,000
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Constant	0,379***	0,029	0,021	0,258***	0,083
	(-0,075)	(-0,041)	(-0,044)	(-0,061)	(-0,058)
Observations	46300	46300	46300	46300	46300
N. of municipalities	7474	7474	7474	7474	7474

Standard errors clustered at municipality level, year and provincial dummies included. The dependent variable is the share of expenditure devoted to a certain category over the total.

*** p<0,01, ** p<0,05, * p<0,1