On the Historical Roots of Women's Empowerment across Italian Provinces: Religion or Family Culture?

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April 2016

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Abstract

In most developed countries the gender gap is nearly closing in the health and educational spheres while there is still sizeable gender inequality in the economic leadership and political dimensions. Why do women's economic decision-making and political empowerment vary so widely? What are the main potential determinants of such variations? In this paper, over a cross-section of Italian provincial data, we focus on the association between two specific facets of women's empowerment, the percentage of women holding office in local political bodies and the percentage of women in high-ranking jobs, and the religious and cultural conditions which facilitate or hinder women's inclusion. Our hypothesis is that culture, in particular those values embodied by religious culture, plays a central role in shaping norms and beliefs about the role and involvement of women in society. Moreover we suggest that these cultural norms are inherited from the past and therefore have a high degree of inertia. Both OLS and IV results indicate that our measures of women's empowerment are strongly associated with religious culture, as proxied by religious marriages. These results are robust and consistent across specifications.

Older women likewise are to be reverent in their behavior,[…]
they may encourage the young women to love their husbands,
to love their children, to be sensible, pure, workers at home,
kind, being subject to their own husbands,
that the word of God may not be dishonored.
(Titus 2:3-5)

1. Introduction

In the last two decades gender equality has made tremendous progress around the world both in developing and developed countries. However, notwithstanding the gender gap is slowly closing, according to the World Economic Forum (WEF, 2015), no country in the world has fully reached equality between men and women in all dimensions: wide gender gaps still persist even in the most advanced countries, and are particularly stagnating in the economic participation and political empowerment dimensions. Yet the factors of such underrepresentation and therefore the obstacles to effective empowerment of women remain puzzling in the literature and not fully understood.

Why do women's economic decision-making and political empowerment vary so widely? What are the main potential determinants of such a variation? In order to answer to these questions, this paper attempts at investigating the determinants of women's underrepresentation in politics and leadership: over a cross section of Italian provincial data, we focus on the association between two specific facets of women's empowerment, the percentage of women holding office in local political bodies[1] and the percentage of women in high-ranking jobs, and the religious and cultural conditions which facilitate or hinder women's inclusion.

Indeed, as highlighted by Bozzano (2014) making use of a newly constructed index,[2] within the Italian boundaries the degree of gender equality is highly heterogeneous across regions and sizeable gender gaps are still impressive. In fact, despite a rising trend in women's labour market participation, women find it difficult to breach the glass ceiling[3] in managerial ranks and in the political arena. The literature on this debated topic has proposed several explanations, going from institutional, political, and cultural factors to more strictly economic and societal ones as limiting women's opportunities and abilities to effectively participate in decision-making and leadership.

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[1] Also called "descriptive or numerical representation" in the political science literature.

[2] Bozzano (2014) builds the Italian Gender Gap Index for Italian regions applying the methodology elaborated by the WEF's Gender Gap index. The GGI ranks countries according to fourteen indicators in four main areas giving a score between 0 (perfect inequality) and 1 (perfect equality). The index considers four key dimensions: health and survival, educational attainment, economic participation and opportunity, and political empowerment. In 2015, according to the WEF's Gender Gap index, Italy for example is ranked 41st, well behind almost all developed countries and even many developing ones, i.e. Nicaragua (12th), Mozambique (27th), or Burundi (23rd).

[3] The phenomenon of "glass ceiling" is the concentration of higher responsibility positions in the hands of men and the underrepresentation of women at the top level of both public administrations and private firms.

Our conjecture is that culture, in particular those values embodied by religious culture, continue to exert a central role in shaping social norms and beliefs about the appropriate role of women in the home, in the workforce, and in the society at large.

The link between religion and women empowerment is not new in the economic literature: however despite the richness of this growing field, most of the contributions are cross-country studies and mostly focussed on female labour force participation and employment (i.e. Fortin, 2005, Seguino, 2011; Pastore and Tenaglia, 2013, and Fischer and Pastore, 2015, among others), and there are a small number of single-country analyses (among others Leher, 1995, for USA, Heineck, 2004, for Germany, and Maneschiöld and Haraldsson, 2007 for Sweden).

In what follows we therefore focus on the specific cultural and social norms on gender attached to religion that is in the Italian case to Catholicism. We employ a measure of society's religious culture, where the intensity of Catholicism is given by the share of religious marriages over the total number of marriages: in our argument a higher degree of religiosity captured by the share of religious marriages is associated with a more conservative perception of women's traditional position within the family and in society at large and thus with lower degrees of feminization in politics and high-ranking jobs. Moreover we suggest that these cultural norms are inherited from the past and therefore have a high degree of inertia through time.

We adopt the following strategy to substantiate our results. First, we explore the role of religious culture on women's empowerment distinguishing it from the effect of family structure and controlling for current female education, wealth, and geography. Then we deepen our analysis exploring some alternative measures of family-related culture and we run a set of alternative specifications in order to assess the robustness of our findings. Third we evaluate the relevance of religious culture as a channel of transmission of past gender culture through an instrumental variable approach and we discuss the validity of our instruments.

Our main finding is that across Italian provinces our proxy for religious culture is consistently significant and robust in determining women's empowerment in both the political and leadership dimensions, even when we control for a broad set of covariates or alternative measures of the tested channels. Moreover family culture seems to be relevant only for the share of women in high-ranking jobs partly confirming our prior of the primary role of religious culture over other factors at least in the political dimension.

Our paper proceeds as follows. After providing a brief overview on the relevant literature (Section 2), the data are described as well as some stylized facts (Section 3). Then Section 4 presents our empirical strategy and puts forth some relevant correlations. Section 5 proposes a channel through which past culture may affect current gender outcomes by employing an IV strategy and discusses the results. Section 6 discusses the specific features of Catholic Church related to gender roles and then the mechanisms and channels through which religion affects women outcomes. Finally, Section 7 summarizes our findings and concludes.

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2. Related Literature

2.1 Women in Politics and Economic Leadership

There exists a large body of research on women's representation in politics, mainly at the national or international level. These studies mainly belong to the sociological and political science literature and only recently this issue has been at the center of the debate in political economy.[4] Several explanation of descriptive underrepresentation of women in elected bodies have been proposed thus far[5], including political ideology and parties characteristics (Lovenduski and Norris, 1993; Caul, 1999), female role models and stereotypes (Beaman et al. 2009; Campbell and Wolbrecht, 2007; Paxton and Kunovich, 2003), motivational and individual attitudes (Bolzendahl and Coffé, 2010), socio-economic factors such as education, time, income, and labor force participation (Inglehart and Norris, 2003; Campbell et al. 2004, Kenworthy and Malami, 1999), and the role of gender quotas or candidate selection (e.g. Chen, 2010; on Italian data Baltrunaite et al., 2016 and De Paola et al. 2010 and 2014).

Underrepresentation is also present at lower levels of government but this aspect is less researched notwithstanding a recent resurgence of interest. Sundstrom and Stockemer (2015) is the first study which investigates the determinants of women's representation in local government across European countries at the subnational level whereas the limited existing studies focus on case studies and are mainly covering the United States, the United Kingdom, Germany, Nordic European countries (among others Ferreira and Gyourko, 2014, and Eder et al., 2015) extensively brought together and reviewed by Pini and McDonald (2011).

A more limited part of the literature has instead been devoted to the analysis of the issue of "glass ceiling" and women's representation in senior and high-profile occupations. As far as concerns with the former issue, many descriptive studies have largely recognized that the phenomenon is pervasive around the globe and those obstacles that hinder women's attempt to reach high profile occupations and responsibilities hold strong in all European countries notwithstanding the substantial progress in women's participation in the labour market (European Commission, 2015). Most notable contributions in this respect are Booth (2007), and Albrecht et al. (2003) and mostly concern with the gender wage gap. However, only few articles focus on leadership and managerial positions: Arulampalam et al. (2007) and Christofides et al. (2013) confirm that the wage gap is wider at the top of the wage distribution suggesting a female disadvantage in high profile jobs. Focusing on Germany, Busch and Holst (2009) find that only the 28 percent of the gender pay gap can be attributed to human capital endowments (mostly due to different work experiences due to age), 15 percent is due to gender specific segregation structures on the labor market while the remaining part is attributable to the societal and cultural environment as well as structures and practices on the labor market that prevent women to climb the ladder.

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[4] An extensive literature in political economy has mainly focused on the importance of leveraging the position of women, in particular in politics and governance, for the beneficial spillovers it produces, i.e. higher economic growth, higher levels of spending in public goods and foreign aid, lower corruption (see for example Lott and Kenny, 1999; Dollar and Gatti, 2001; Aidt and Dallal, 2008; Bertocchi, 2011; Hicks et al., 2015; Svaleryd, 2009).

[5] For a summary and comprehensive treatment of the topic refer to Duncan and Pfau-Effinger (2000) and Paxton and Hughes (2016).

Finally, a variety of studies on the numerical representation of women in higher hierarchical levels positions at the international and national level are growing (see European Commission, 2012). Focusing on the Italian reality, Bianco et al. (2015) analyze the presence of women in corporate boards[6] and investigate potential determinants highlighting the role of family connections. Del Prete and Stefani (2013) look at the gender gap in top positions in bank boards and confirm a "second glass ceiling" for board membership mainly due to sociocultural factors. Finally, De Paola et al. (2016) look at the glass ceiling in the Italian Academia. Accordingly, they find that females have a lower probability of promotion in the University Departments when the number of positions is limited showing a higher priority given to men due to social norms.

2.2 Culture and Religion and their Impact on Economic Outcomes
Recently a flourishing debate in the economic literature has tried to unfold the role of informal institutions, namely culture, on economic activity as well as on gender outcomes. Cultural norms can be defined as those values, beliefs, and social norms that ethnic, religious, and social groups transmit fairly unchanged from generation to generation (Guiso et al., 2006). From the theoretical standpoint, Bisin and Verdier (2000) explain the transmission of cultural values within the family. Empirically, close to our focus, the relevance of cultural factors in explaining female outcomes, with particular attention to female labour force participation, has been investigated by Antecol (2000), Guiso et al. (2006), and Fernandez and Fogli (2009). Farré and Vella (2013) investigate the intergenerational correlation in gender role attitudes and find that cultural beliefs regarding the role of women in the family and the workplace are transmitted across generations and have an important impact on subsequent generations' female labor supply. Similarly, Alesina and Giuliano (2010) stress the role of a specific trait of family culture, the strength of family ties, in shaping women's outcomes. Finally, Campa et al. (2011) recently analyse the impact of gender culture on gender equality in employment in Italy constructing an index of gender culture at firm and individual levels.

Within this line of research a particular role is played by religion, since it is considered a major determinant of culture (Iannaccone, 1998). Religion in fact is a particular combination of specific beliefs and ethical principles, often characterized by patriarchal and hierarchical precepts, which embodies a definite perception of the role of women within the family and in society at large. Within the sociological literature, Esping-Andersen (1990) puts forth the idea that labour market institutions are strongly affected by religion and associates a conservative view on gender roles with Catholic countries. Guiso et al. (2003) highlight the relationship between the intensity of religious values and gender inequitable gender norms: the more a person participates in religious services, the more conservative his attitude towards women is. The same conclusion is reached by Seguino (2011). Algan and Cahuc (2006) argue that "macho" values are highly positively correlated with being Catholic (or Muslim). Likewise, Pastore and Tenaglia (2013) identify a clear negative association between the share of individuals belonging to the Catholic (and Orthodox) religion and the share of active women in the labor market. Bertocchi (2011) associates the presence of

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[6] This study analyses the determinants of women's representation in corporate boards before the introduction of Law 120/2012 which put in force Law 120/2011 and mandated gender quotas for Italian listed companies.

Catholicism in a country with a lower probability that a woman was allowed a political voice and therefore women's enfranchisement in the period 1870-1930.

2.3. History
Our work is also related to research on the relevance of the long-run effects and legacy of history in shaping current economic outcomes through formal or informal institutions (cultural transmission). Acemoglu et al. (2001) show that the types of rules established by European colonizers are still persistent in shaping current income per capita through current institutions. Putnam (1993) puts forth that the legacy of the experience as a free city-state in medieval times affects the current level of social capital and thus economic development. Guiso et al. (2008) depart from Putnam's conjecture and give evidence that the current marked differences in social capital across Italy are actually influenced by the past culture of independence in the Middle Ages making use of a difference-in-difference strategy. Tabellini (2010) tests empirically the hypothesis that past measures of political institutions in the seventeenth and eighteenth centuries have an impact on current values and beliefs, i.e. the level of trust and respect for others, and hence on output per capita. Similarly, Di Liberto and Sideri (2015) show that past dominations of the Italian peninsula have lingering effects on current public administration quality as well as on economic performance of Italian regions. Finally, and more relevant for our purposes, Bertocchi and Bozzano (2015a) and Alesina et al. (2013) study the lasting effect of distant history on female outcomes: the former argue that the education gender gap is correlated with the legacy of medieval commerce whereas the latter suggest that inequitable gender roles have their origins in different forms of agriculture practiced traditionally, more specifically plough use.

This essay intends to contribute to the above mentioned literature in several ways. First, while there is a vast literature on the determinants of female education, women's labor force participation, motherhood, and fertility,[7] few papers have so far investigated women's numerical representation in politics and in high-ranking jobs.[8]
Second, the analysis is conducted at the local level and within a single country. We are not aware of any previous study on the effect of religion on women's empowerment in politics and leadership in Italian provinces. Moreover, focusing on a single country reduces the common omitted variable problem found in cross-country analyses on the same topic.
Third, although we are aware that to disentangle different cultural elements is an arduous task, we explicitly propose to distinguish between two alternative channels, religious culture and family structure, by including them simultaneously into the analysis. We acknowledge in fact that these two dimensions are not mutually exclusive: however we argue that religion is the primary explanation and major perpetrating force of the differences in gender attitudes whereas family culture as defined as a traditional family structure plays a secondary role being itself influenced by

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[7] See Goldin (1990, 2006) for a treatment of the issue of empowerment of U.S. women from an economic history perspective. For the role of technology on gender empowerment see Goldin and Katz (2002) and Greenwood et al. (2005).
[8] Alesina et al. (2013) are an exception because in their analysis on the role of the plough in determining gender attitudes today they employ as dependent variables the female labour force participation as well as the share of women in national politics and the share of firms with female owners or managers.

religious norms. Finally, we suggest that gender norms are highly persistent through time and religious culture is an important channel through which past gender culture still plays a role in shaping current female political and economic decision-making empowerment in Italy.

3. Cross-provincial Evidence: Data Description and Stylized facts

In order to test our hypotheses about the determinants of women's empowerment in Italy, we compile a province-level database on female achievements and contextual variables for 103 Italian provinces.[9] The main source is represented by census data in 2001 and specific surveys conducted by the Italian National Institute of Statistics (Istituto Nazionale di Statistica - ISTAT) in various years. Summary statistics and extreme values for the core variables are reported in Table 1, while those for the complete dataset, data sources, and the exact definition of each variable are presented in Table A.1 and A.2.

According to the above introduced literature, women's exclusion from political and leadership structures is the result of manifold factors including institutional, structural, and cultural factors. As already anticipated the first set of explanations is not taken into account in the present paper because Italy is a unique country and homogenous as far as concerns with institutional settings such as the electoral system, political party list characteristics, party ideology and party rules, as well as the welfare system.

Next we present the variables involved in the analysis belonging to the other two sets of potential explanations.

3.1 Dependent Variables: Measures of Women Empowerment in Politics and Leadership

For our dependent variables we construct two indicators of women's representation in politics and in top managerial positions. We measure women's political empowerment as the share of elected women in local (provincial) committees[10] over the total number of elected members. This variable is constructed for the year 2008 from a database of the Italian Internal Affairs Ministry (Ministero dell'Interno).[11] In the economic sphere we turn to a measure of female decision-making empowerment, i.e. the share of women who are in charge of senior managerial positions over the total number of individuals in the same position calculated from Census data for the year 2001.[12] This allows us to assess the phenomenon of "glass ceiling" and indeed to capture values and beliefs about the position of women in society.[13] Both dependent variables are constructed in such a way to

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[9] The number of the observations decreases to 99 when historical variables are introduced. This is due to the fact that our historical variables refer to a period in which the provinces that today refer to Bolzano, Trento, Gorizia, and Trieste were not part of the Kingdom of Italy and therefore no data are available. In our sample we attribute the value of the same observation to those provinces which were together in the past and separated today.

[10] In Italy for each province there are two political entities, the "Consiglio provinciale" and the "Giunta provinciale".

[11] The Italian Internal Affairs Ministry maintain an on-line archive which contains several databases on the composition and characteristics (gender, age, party list, etc.) of elected bodies at the regional, provincial, and local level since 1985.

[12] This variable is obtained from Census 2001 from people of both sexes who have declared to be in charge of a senior managerial position according to the following answer: "Do you run a business or head up the work of complex organizational structures (entrepreneur, public or private manager, head physician, dean, business owner).

[13] The sex composition of the adult population is neglected because not relevant (in 2001 the masculinity index for population between 15 and 64 years of age is 99.98).

represent a measure of feminization in politics and high-ranking jobs. In order to interpret it as a measure of gender equality, we simply need to read it against the gender equality benchmark which is 50 percent: in fact this would represent the situation in which the positions both in politics and in top profile occupations are equally distributed among women and men.

Table 1: Descriptive Statistics: Selected Variables[14]

Variable	Obs.	Mean	Std. Dev.	Min	Max
Women in Politics	103	13.03	8.84	Crotone, Oristano 0	Trieste 40.625
Women in Top Manager Positions	103	26.046	2.941	Napoli 19.753	La Spezia 31.547
Religious Marriages	103	67.09	12.543	Gorizia 41.176	Trapani 89.469
Current Fertility Rate	103	1.2074	0.136	Ferrara 0.879	Napoli 1.561

Notes: the variables "Women in Politics" and "Women in Top Manager Positions" are defined as degrees of feminization and therefore the equality benchmark is 50 percent. Min and Max indicate the two provinces where we observe the highest and the lowest values. For the complete descriptive statistics and definitions see the Appendix.

The descriptive statistics reported in Table 1 reveal that women account for just 13 percent of members in provincial political bodies' and for 26 percent of top managers. Moreover, there exists significant provincial variation in both outcomes: in the province of Crotone, in Sicily, and Oristano, in Sardinia, no women are elected in provincial bodies whereas in Bologna (in center Italy) the 43 percent of elected components are women, close to reach equality.[15] In the economic decision-making sphere, Napoli (in the South) performs poorly with only 19 percent of women in top managerial positions whereas La Spezia (in the North) presents the highest score with 31 percent. The correlation between the two variables is 0.62.[16]

Figures 1a and 1b show the variability of our two dependent variables across Italian provinces by quartile. The darker the shade in the map, the higher the degree of gender empowerment and representation in politics (a) and in leadership positions (b). The maps clearly display pronounced provincial disparities in our dependent variables. Even though a clear North-South divide can be detected, with most provinces in the highest quartile being concentrated in the North and in the Center of the peninsula, and those belonging to the lowest in the South, a certain variability is also present within macro-regions and what is more within regions.

[14] See Table A.1 descriptive statistics for all variables.

[15] As already mentioned, the variables women in politics and women in top managerial positions are defined as degrees of feminization in the respective dimensions and therefore the equality benchmark is 50 percent.

[16] Table A.3 in the Appendix reports pair-wise correlations.

Figure 1: The Geography of Women's Representation in Italy

| a) Women in Politics | b) Women in Top Manager Positions |
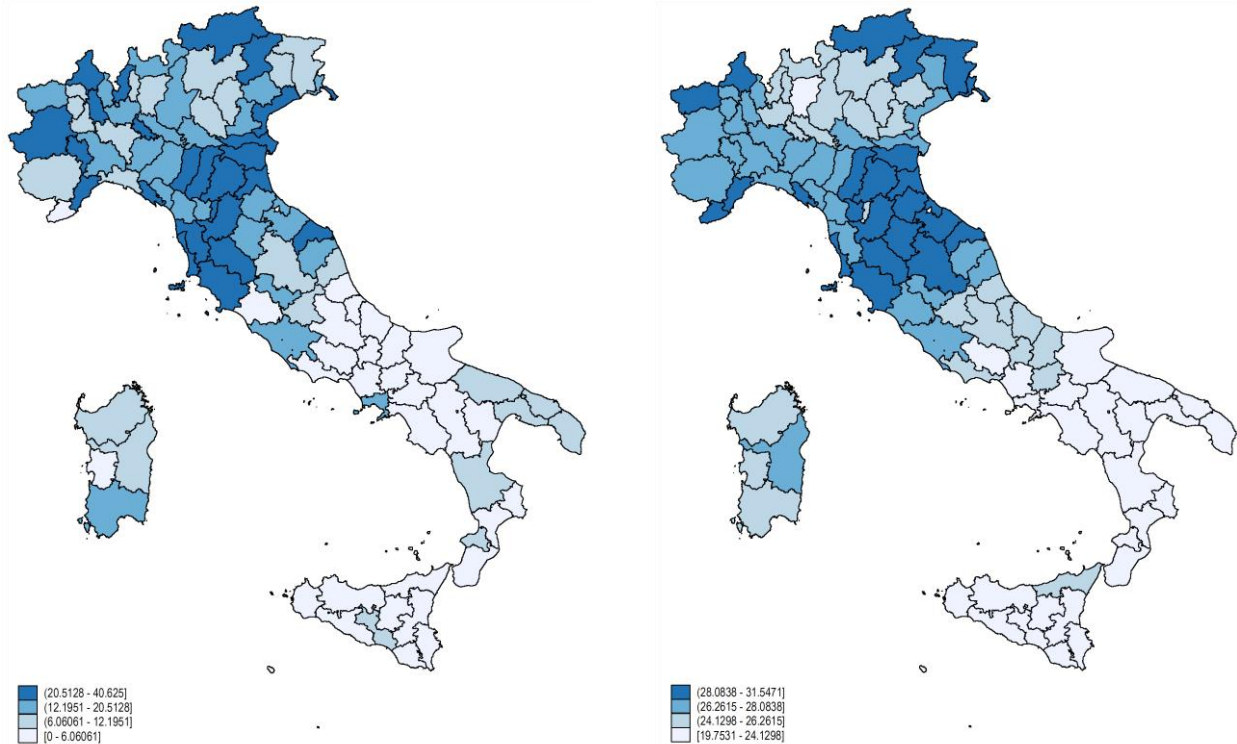
Notes: Values in brackets are the extremes of the quartile distribution. The darker the shade in the map, the higher the degree of gender empowerment and representation in politics (a) and in leadership positions (b). See Table A.1 in the Appendix for more details on data sources.

3.2 Core Explanatory Variables: Religion and Family Culture

As mentioned above, in this study we refer to religious culture as the informal rules and conduct transmitted by religion, more specifically Catholicism, that determine the cultural environment within which men and women accumulate skills and make their career decisions. In the literature several measures of religious intensity have been employed (see Barro and McCleary, 2003) but for our purposes we measure religious culture as the share of religious marriages over the total number of marriages for each province in year 2004.[17] This measure is particularly informative for two reasons: first of all because it represents a gender-related feature of religion since religious (Catholic) marriages are generally characterized by higher gender segregation and lower equality between partners and stem from the patriarchal and hierarchical nature of Catholicism. Second, building on the literature on religion and economics (see Paragraph 6.2 on potential mechanisms at work) the decision to marry religiously can also be interpreted as the outcome of the transmission of religious human capital from parents and varies with the strength of the religious value system in which individuals are raised. This measure is potentially more informative than the actual religious affiliation of people as adults because it is the result of parent upbringing and gender role norms transmitted to daughters and future wives.

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[17] Checchi and Braga (2009) use the share of non-religious /civil marriages over the total number of marriages as an indicator for women sexual emancipation,

According to Guiso et al (2003), however, one might suspect that the dominant religious culture might be transmitted from generation to generation because of social convention and not as product of being raised religiously, in particular when looking at the decision to marry according to the Catholic ceremony. Therefore, we also provide a variable measuring the intensity of religiousness as the frequency of church service attendance[18] which unfortunately is available only at the regional level. The high correlation between our two measures of religion (0.70) allows us to be more confident in arguing that we are likely to pick the effect of religion and not that of conservatism.

Figure 2: The Geography of Religious Marriages in Italy
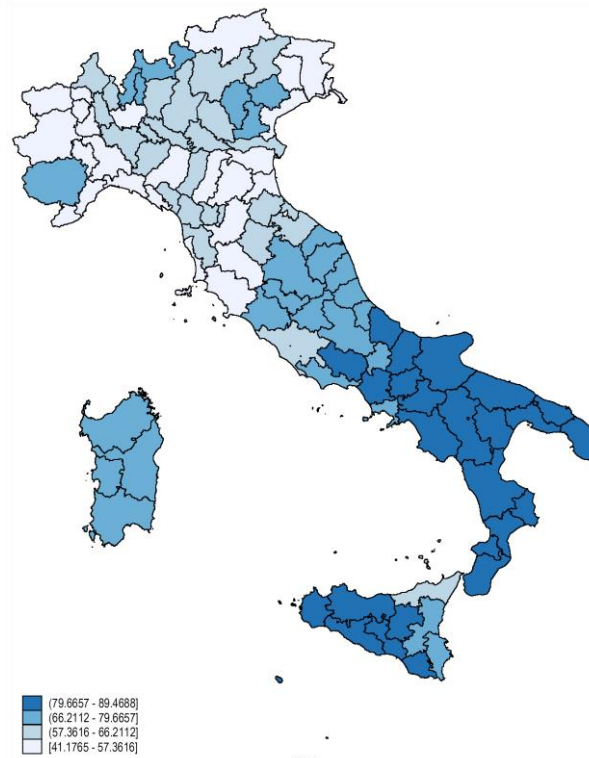
Notes: Values in brackets are the extremes of the quartile distribution. The darker the shade in the map, the higher the degree of religious marriages over the total number of marriages in the province. See Table A.1 in the Appendix for more details on data sources.

On average 67 percent of total marriages in 2004 is religious suggesting a high degree of religiosity throughout the country. However looking at the map in Figure 2, we point out again that there is wide heterogeneity: in terms of the share of religious marriages, the higher degree of religiosity is concentrated in the South of Italy with the highest value in the province of Trapani, in Sicily (89.5 percent), whereas the lower degrees of religiosity are found in the North with the lowest value in the province of Gorizia, in Friuli Venezia Giulia (41 percent), in the North East.[19]

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[18] This variable is obtained as the share of interviewed people over 6 years of age who have declared to go to church at least once a week.
[19] Notice that the median share of religious marriages in the South is 81.5 suggesting a more pervasive religiousness while those of the Center, North West, and North East are 63.8, 58.2, and 57.6 respectively.

Family culture and the family structure relationships have been recently studied by a broad literature because of its impact on economic behaviours and attitudes with particular focus on women's decisions. As highlighted by Alesina and Giuliano (2010) households characterized by strong family ties are larger, namely associated with higher fertility rates and higher family size. In line with this argument, we include two measures of family culture for each province, i.e. the current fertility rate[20] in 2000 and the share of families with five or more components in each province in 1971 and 2001.

Figure 3: The Geography of Total Fertility Rate in Italy
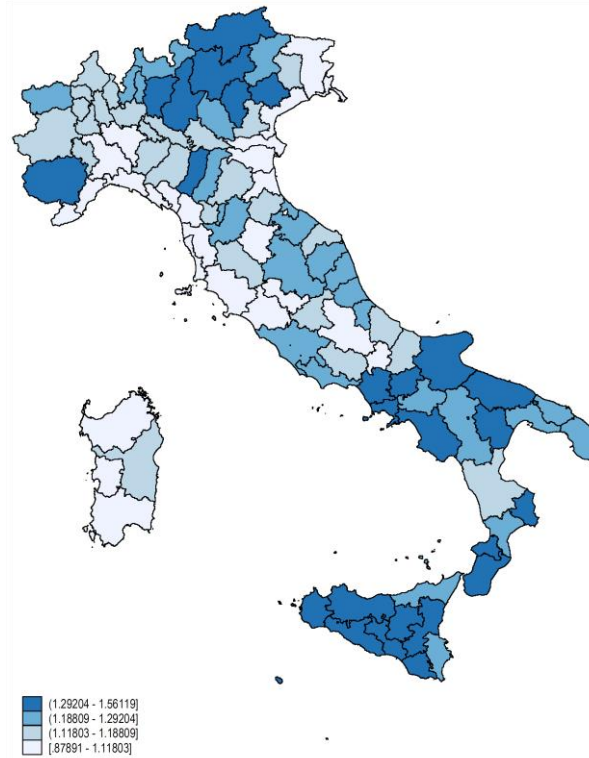
Notes: Values in brackets are the extremes of the quartile distribution. The darker the shade in the map, the higher the total fertility rate in the province. See Table A.1 in the Appendix for more details on data sources.

Figure 3 displays the pattern of total fertility rate across provinces. Italy as a whole shows an average of 1.2 children per woman and Ferrara (in the Center) has the lowest fertility rate while the highest is in Napoli. It is worth noticing in this case that notwithstanding the higher concentration of provinces belonging to the higher quartile is found in the South of Italy, the North-South divide is much less clear. This suggests that our two dimensions of culture, that is religion and family, do follow different patterns.

In addition, given the explanatory power of divorce for women's outcomes as already highlighted for example by Bertocchi et al. (2014) and Fernandez and Wong (2011), we include the divorce rate in 2008 at the regional level as a further indicator of family values. In order to better disentangle the

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[20] Fernandez and Fogli (2009) use past values of female labor force participation (FLFP) rate and total fertility rates (TFR) in the country of ancestry as cultural proxies in order to determine current women's working and fertility decisions.

role of family culture we also include two further measures of marriage-related aspect of family culture: the share of households composed by a single mother and children over the total number of households and the abortion rate of women aged 20-24 in each province. The former variable captures a new form of household structure and therefore the changing nature of family arrangements, while the latter variable could be interpreted as both a measure of sexual emancipation (Checchi and Braga, 2009) and women's choice to delay family formation to fulfil their career expectations.

3.3 Socioeconomic, Geographic, and Historical variables

Next we describe a set of additional factors that are likely to be correlated with women's empowerment and therefore to be controlled for in our estimates. First we include the latitude of each province's main town ("Capoluogo di Provincia") in degrees. Second, to understand the role played by human capital we include female education as the share of women aged 19 or more with at least a high-school diploma over the total number of women. Then we also look at correlates of economic development and labour market structure, i.e. per capita total value added and female labour force participation (FLFP) rate in the provinces, all referring to 2001.

Additionally, we control for a measure of gender equality in the labor market as a whole, labour force participation (LFP) equality, measured as the female to male ratio of labor force participation rates in 2001 and therefore increasing with gender equality.[21] This variable, as well as FLFP, aims at capturing the mechanism of observational learning and preference formation based on the role of the prevailing perceptions and attitudes of women who update their work behaviour observing other women's involvement in the labour market and therefore in generating and perpetuating gender roles (see Fernandez, 2013, for a theoretical underpinning of culture as intergenerational learning process). Furthermore, together with education, a higher participation of women in the labour market lead to improved financial independence and networks which are important factors in the political and leadership dimensions. On the other hand being employed may also yield negative effect on women's participation because of the limited amount of time available for in effective political participation and leadership (due to the primary role of women as mothers and wives who have to combine formal employment with domestic and care work).

To capture the effect of distant history on current levels of gender equality, we include a further set of historical variables. On the one hand we include two measures of past gender culture: the gender gap in literacy in 1861[22] and the total fertility rate in 1930.[23] These two variables are considered to proxy for the preferences and beliefs commonly held about women's role in society from the human capital perspective: indeed they reflect the decisions of parents on human capital investment of daughters and those of women and hence depend on women's characteristics and on the economic, institutional, and above all religious environment. Moreover, granted that culture moves slowly (Tabellini, 2010), gender norms and beliefs about the role of women in society are transmitted

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[21] LFP equality takes values between 0 (perfect inequality) to 1 (perfect equality) among women and men.
[22] We employ the gender gap in literacy in 1861, which is at time of Italy's unification, to capture the bias against women inherited from pre-unitary states. Data are from Bertocchi and Bozzano (2015a, 2015b).
[23] We consider the total fertility rate in 1930 because by this date the process of demographic transition can be considered as concluded for all territories of Italy and therefore total fertility rates were stable. Data are from Ge and Gerzeli (2008).

through generations and therefore shaped by distant history. Summing up, our working hypotheses are the following. Provinces with a wider gender gap in human capital accumulation in the nineteenth century should still show lower degrees of feminization in the political sphere and in senior positions with respect to men. To the same token, provinces with higher fertility rates in the past, meaning a more subordinated and caring role of women, should be characterized today by lower degrees of equality between sexes in the political and economic spheres.

Finally we also introduce a measure of past economic development, an index of relative industrialization in 1871 calculated by Ciccarelli and Fenoaltea (2013) in order to control for the potential role of the structure of the economy in shaping past gender culture.

4. Empirical Analysis: Contemporary Determinants of Women's Empowerment

This section explores the contemporary determinants of gender equality in politics and in top managerial positions, as a function of two main covariates: religious culture and family culture.[24] The idea is to exploit the cross-sectional structure of our data in order to compare the explanatory power of these two dimensions of culture and therefore we try to run a "horse race" exercise.[25]

In formal terms, we estimate by OLS the following model:

$$WE_i = \alpha + \beta X_i + \gamma\, Religious\ Culture_i + \delta\, Family\ Culture_i\ + \varepsilon_i \qquad (1)$$

where WE_i is a measure of women's empowerment in province i, $Religious\ Culture_i$ is the variable of main interest and is proxied by the share of religious marriages over total number of marriages and therefore is increasing in the strength of religious beliefs in the province, $Family\ Culture_i$ is a proxy for family structure, i.e. current fertility rate in each province. We explicitly distinguish religious culture and family culture which are included simultaneously in the regression analysis in order to try to separate the effects of these two channels. Among the controls in X_i we consider female education as the percentage of women aged 19 or more who have completed at least secondary school, and per capita GDP. We apply White-Huber standard errors to deal with potential heteroscedasticity.[26]

From these regressions we obtain some preliminary evidence on the possible determinants of current gender empowerment in politics and in top managerial positions. Results are discussed in the following section.

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[24] Bertocchi (2011) investigates the determinants of women's enfranchisement using an empirical specification which treats women's suffrage as a function of three main covariates: per capita income, the presence of divorce legislation, and the presence of Catholicism as the dominant religion.

[25] A similar approach is followed by Cooray and Potrafke (2011) who investigate empirically whether political institutions or culture and religion underlie gender inequality in education over a panel of 157 countries over the 1991-2006 period.

[26] We do not compute cluster robust standard errors at the regional level because this would leave us with 20 clusters and we would incur into the few-clusters problem (Cameron et al., 2015), biased standard errors, and misleading inferences. However, results still hold in a set of regressions which apply cluster bootstrap-t procedures as proposed by Cameron et al. (2008) to improve inference in cases with a small number of clusters.

4.1. OLS Estimation: Results and Robustness Exercises

Table 2 presents our regression results. In even-numbered columns, the dependent variable is a province's share of seats in local political bodies held by women, while in the odd-numbered ones, the share of women in top managerial positions in each province.

In columns 1 and 2 we run a parsimonious specification as explained in the previous section. Next, in order to address unobserved heterogeneity,[27] we include in columns 3 and 4 a set of geographical dummies as macro-region specific fixed effects, namely North West, North East, Center, and South[28] and, in columns 5 and 6, latitude.[29] Finally, in columns 7 and 8, we add regional fixed effects which are intended to soak up residual variation in institutions, religion, and culture at the regional level. Including these sets of geographical variables and dummies we intend to take into account the well-known and largely documented differences existing in Italy at the territorial level and in particular the historical North-South divide of Italian economy.

We find that religious culture, as captured by the share of religious marriages, is strongly significant at 1 percent in all specifications and negatively associated with both gender outcomes. In other words, a higher degree of religiousness is associated with more traditional gender roles and therefore with lower degrees of women's empowerment both in political life and economic leadership. Family culture as proxied by the current fertility rate is significant in explaining the share of women in managerial positions, showing a negative relationship, while it is not relevant for political empowerment. Female education and income as well as geographical controls, i.e. macro-region dummies and latitude, display no significant influence in explaining women's empowerment. The inclusion of region fixed effects does not modify our main findings, only slightly reducing the coefficient for religious marriages in column 8.

Overall, results in Table 2 show a strong correlation of our measure of religious culture, as captured by the share of religious marriages, and gender outcomes in politics and leadership. In terms of magnitude, our results are impressive, in particular in the political dimension: our estimates imply that moving from the most religious to the least religious province would increase women's feminization in politics by 19.6 percentage points and in senior positions by 7.5 percentage points.[30]

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[27] Unfortunately to fully address the issue of unobserved characteristics, the best solution would be to rely on panel data estimations with province-fixed effect. However because of data limitation this kind of analysis is not possible.

[28] This allows us to check that the results are not driven by the intensity of more traditional gender role in the South of Italy (see Alesina et al., 2013))

[29] Latitude is defined as the latitude of the capital town in the province ("Capoluogo di Provincia") in degrees.

[30] We obtain the maximum effect of religious culture as follows: [max of religious marriages – min of religious marriages] * coefficient of religious marriages. It is calculated from the coefficients in columns 1 and 2.

Table 2: The Determinants of Women's Empowerment: OLS

Estimation technique: OLS	(1) Women in Politics	(2) Women in Top Manager Positions	(3) Women in Politics	(4) Women in Top Manager Positions	(5) Women in Politics	(6) Women in Top Manager Positions	(7) Women in Politics	(8) Women in Top Manager Positions
Religious Marriages	-0.405***	-0.156***	-0.391***	-0.142***	-0.393***	-0.143***	-0.420***	-0.109***
	(0.0942)	(0.0188)	(0.0992)	(0.0194)	(0.0984)	(0.0193)	(0.149)	(0.0270)
Current Fertility Rate	-4.388	-6.190***	-3.201	-5.324***	-2.721	-5.091***	-0.878	-3.184*
	(5.262)	(1.172)	(5.345)	(1.232)	(5.803)	(1.311)	(7.911)	(1.610)
Female Education	-0.181	0.0472	-0.237	0.0643	-0.223	0.0711	0.120	0.0135
	(0.195)	(0.0430)	(0.228)	(0.0520)	(0.237)	(0.0504)	(0.277)	(0.0414)
Income	4.492	0.306	2.490	-1.202	1.975	-1.452	-2.327	-1.299
	(3.276)	(0.735)	(4.171)	(0.903)	(4.486)	(0.934)	(5.432)	(0.891)
North East			2.025	0.484	2.036	0.490		
			(2.114)	(0.478)	(2.133)	(0.481)		
Center			2.983	0.686	3.281	0.831		
			(2.158)	(0.454)	(2.270)	(0.533)		
South			-0.428	-1.193*	0.171	-0.903		
			(3.561)	(0.644)	(3.699)	(0.824)		
Latitude					0.169	0.0820		
					(0.479)	(0.119)		
Region Fixed Effects							Yes	Yes
Observations	103	103	103	103	103	103	103	103
R-squared	0.54	0.77	0.56	0.80	0.56	0.80	0.65	0.90
Adj. R-squared	0.52	0.76	0.52	0.78	0.52	0.78	0.55	0.87

Notes: OLS estimates are reported with White-Huber robust standard errors in parentheses. The unit of observation is a province. The dependent variables are the percentage of women in local political bodies in even-numbered columns and the percentage of women covering high ranking positions in the province in odd-numbered columns. Both variables range between 0 and 100, being 50 the equality benchmark. The reference omitted dummy for macro-regions is North West and a constant is always included.*** $p<0.01$, ** $p<0.05$, * $p<0.1$.

In Table 3 we explore the role of a related further set of alternative variables in order to deeper understand the role of family culture and some marriage-related facets. Starting from the specification in table 2, models 3 and 4, with macro-regions fixed effects as benchmark, we add our additional regressors.

Models 1 and 2 start introducing the abortion rate of women aged 20-24. Models 3 and 4 add the share of large families in 1971 as a proxy for preferences for the traditional family structure as well as for strong family ties in the past (see Alesina and Giuliano, 2010). Models 5 and 6 introduce the divorce rate and models 7 and 8 the share of households headed by a single mother. Finally, the last two columns include all the additional variables together to further check the significance of our focal determinant. These variables are likely to capture the changing characteristics of families and their impact on the role of women in society.

In general, with the exception of large families in 1971 and the divorce rate when we consider women in top manager positions, all additional measures for family culture are not significant. The relevance of religious culture is fairly unchanged across specifications.

Table 3: The Determinants of Women's Empowerment: Alternative Family Measures

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Estimation technique: OLS	Women in Politics	Women in Top Manager Positions	Women in Politics	Women in Top Manager Positions	Women in Politics	Women in Top Manager Positions	Women in Politics	Women in Top Manager Positions	Women in Politics	Women in Top Manager Positions
Religious Marriages	-0.372***	-0.142***	-0.373***	-0.127***	-0.451***	-0.111***	-0.475***	-0.145***	-0.521***	-0.102***
	(0.0998)	(0.0197)	(0.102)	(0.0206)	(0.107)	(0.0227)	(0.122)	(0.0227)	(0.146)	(0.0309)
Current Fertility Rate	-3.569	-5.321***	-2.893	-5.064***	-3.453	-5.193***	-3.058	-5.319***	-3.533	-4.938***
	(5.307)	(1.238)	(5.469)	(1.160)	(5.225)	(1.085)	(5.519)	(1.225)	(5.308)	(1.019)
Female Education	-0.321	0.0649	-0.260	0.0450	-0.203	0.0468	-0.158	0.0669	-0.196	0.0490
	(0.223)	(0.0537)	(0.223)	(0.0514)	(0.229)	(0.0533)	(0.229)	(0.0510)	(0.244)	(0.0531)
Income	1.880	-1.197	2.681	-1.040	2.369	-1.139	0.487	-1.269	0.121	-0.788
	(4.285)	(0.921)	(4.140)	(0.961)	(4.079)	(0.809)	(4.345)	(0.859)	(4.334)	(0.904)
North East	2.509	0.481	2.489	0.876*	0.880	1.081**	2.024	0.484	1.164	1.210***
	(2.171)	(0.496)	(2.433)	(0.461)	(2.265)	(0.439)	(2.098)	(0.482)	(2.508)	(0.453)
Center	3.145	0.685	3.446	1.078**	2.121	1.135**	2.043	0.655	1.367	1.396***
	(2.169)	(0.457)	(2.262)	(0.484)	(2.144)	(0.469)	(2.020)	(0.452)	(2.237)	(0.508)
South	-0.367	-1.194*	0.292	-0.585	-3.265	0.285	-0.875	-1.208*	-3.995	0.615
	(3.525)	(0.648)	(3.594)	(0.739)	(3.686)	(0.738)	(3.422)	(0.627)	(3.734)	(0.811)
Abortion Rate	0.184	-0.00133							0.138	-0.0412
	(0.192)	(0.0403)							(0.220)	(0.0497)
Large Families 1971			-0.0678	-0.0573**					-0.0273	-0.0421
			(0.138)	(0.0284)					(0.182)	(0.0394)
Divorce Rate					-0.227	0.118**			-0.280*	0.108**
					(0.143)	(0.0468)			(0.158)	(0.0520)
Only Mother Families							-0.861	-0.0289	-0.791	0.0435
							(0.598)	(0.126)	(0.714)	(0.152)
Observations	103	103	103	103	103	103	103	103	103	103
R-squared	0.56	0.80	0.56	0.80	0.56	0.82	0.57	0.80	0.58	0.82
Adj. R-squared	0.52	0.78	0.52	0.79	0.53	0.80	0.53	0.78	0.53	0.80

Notes: OLS estimates are reported with White-Huber robust standard errors in parentheses. The unit of observation is a province. The dependent variables are the percentage of women in local political bodies in even-numbered columns and the percentage of women covering high ranking positions in the province in odd-numbered columns. Both variables range between 0 and 100, being 50 the equality benchmark. Both variables range between 0 and 100, being 50 the equality benchmark. The reference omitted dummy for macro-regions is North West and a constant is always included.*** p<0.01, ** p<0.05, * p<0.1.

In what follows we have performed a series of robustness checks of our preliminary results to reduce the typical concern for unobserved characteristics.[31] We conduct these exercises by

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[31] We also perform a seemingly unrelated regression to check for the simultaneity at stake between the determination of women in politics and in top manager positions. Results are not reported but are unchanged with respect to single equation OLS estimations.

substituting some key variables with alternative measures and then by including further controls. Macro-region dummies are always included as well as constant (not reported).

Table 4 shows the results of our sensitivity exercises for political empowerment and Table 5 for female decision-making leadership. Overall none of these checks affect the role of religious culture. All alternative specifications explain nearly 60 percent of the variability in political empowerment and 80 percent of that in female decision-making empowerment.

In model 1 we substitute current fertility rate with current preferences for large families, i.e. the share of families with five or more components of the total number of families in each province in 2001. As in Table 2, the new proxy for family culture is not significant for political empowerment while negatively correlated with the share of female managers at 1 percent of significance.

In models 2 and 3 we test the impact of overall equality in labour force participation between women and men and the average FLFP rate in the province. Contrary to our expectations, both regressors are not relevant in explaining political empowerment whereas significant and positive for female managers. This means that economic factors embodied by per capita income, LFP equality, and FLFP do not help explaining political empowerment[32] while they play a crucial role in explaining female decision-making empowerment.

In model 4 we substitute the proxy for our focal variable, religious culture, with an alternative measure, i.e. the intensity of religiousness defined as church attendance. Results remain unchanged with respect to our benchmark regression even though the significance of the coefficient for religious attendance decreases to 5 percent when considering the political outcome.

Finally, one would doubt of the robustness of the measurement of our focus variable, religious marriages. In fact as anticipated in the previous table, according to the Catholic religion, marriage is allowed only among unmarried people. Therefore religious culture might be measured with error because the percentage of religious marriages is calculated over the total number of marriages in the province, included second marriages.[33] To solve this issue, we introduce in column 6 the share of first marriages over the total number of marriages in the province and in column 7 we also add the divorce rate. Results are unchanged and the explanatory power of religious marriages is maintained. Only the divorce rate exhibits a positive association with the share of female managers at 5 percent of significance, presenting the same pattern as in Table 3.

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[32] Similar results are found in the political science literature, by Kenworthy and Malami (1999) who analyse the determinants of cross-national variation in the share of parliamentary seats held by women in 1998. They found that standard socioeconomic variables such as women's educational attainment, FLFP, and national economic wealth are not related to the share of legislative seats held by women. Instead they claim a significant role for religion in line with the present study.

[33] In Italy the divorce rate is higher in northern regions and therefore the number of religious marriages could appear lower because of the incidence of second (or more) marriages which cannot be celebrated through the Catholic ceremony.

Table 4: The Determinants of Political Empowerment: Sensitivity Analysis I

	(1)	(2)	(3)	(4)	(5)	(6)
Estimation technique: OLS		Dependent Variable: Women in Politics				
Religious Marriages	-0.411***	-0.370***	-0.380***		-0.466***	-0.512***
	(0.101)	(0.101)	(0.103)		(0.123)	(0.125)
Current Fertility Rate		-1.815	-3.390	-8.162	-4.009	-4.126
		(5.594)	(5.388)	(5.875)	(5.662)	(5.622)
Female Education	-0.202	-0.289	-0.225	-0.288	-0.221	-0.192
	(0.212)	(0.231)	(0.226)	(0.240)	(0.229)	(0.228)
Income	1.951	0.850	-0.0635	6.293	2.372	2.276
	(4.011)	(4.101)	(4.047)	(4.729)	(4.023)	(3.954)
North East	1.902	1.781	1.788	2.623	1.639	0.623
	(2.271)	(2.137)	(2.141)	(2.175)	(2.214)	(2.328)
Center	2.985	3.068	3.143	0.481	2.579	1.831
	(2.345)	(2.116)	(2.113)	(2.376)	(2.113)	(2.116)
South	-0.780	0.361	0.257	-4.028	-0.820	-3.423
	(3.675)	(3.554)	(3.521)	(3.794)	(3.500)	(3.678)
Large families 2001	-0.0004					
	(0.323)					
LFP Equality		23.23				
		(15.64)				
FLFP			0.267			
			(0.228)			
Religious Attendance				-0.308**		
				(0.125)		
First Marriages					0.199	0.169
					(0.257)	(0.280)
Divorce Rate						-0.213
						(0.144)
Observations	103	103	103	103	103	103
R-squared	0.55	0.56	0.56	0.50	0.56	0.57
Adj. R-squared	0.52	0.53	0.52	0.46	0.52	0.53

Notes: OLS estimates are reported with White-Huber robust standard errors in parentheses. The unit of observation is a province. The dependent variables is the percentage of women in local political bodies in the province and it ranges between 0 and 100, being 50 the equality benchmark. The reference omitted dummy for macro-regions is North West and a constant is always included.*** p<0.01, ** p<0.05, * p<0.1.

Overall, the role of previously examined regressors, female education and per capita income, is essentially confirmed. Current fertility rate is never significant for political empowerment but very relevant for female decision-making in all specifications and with a negative sign. This latter fact suggests, as expected, that there is effectively an incompatibility of the career choice with the caring and family roles, but not the decision to enter politics.

Table 5: The Determinants of Economic Leadership Empowerment: Sensitivity Analysis II

	(1)	(2)	(3)	(4)	(5)	(6)
Estimation technique: OLS	Dependent variable: Women in Top Manager Positions					
Religious Marriages	-0.143***	-0.122***	-0.134***		-0.129***	-0.104***
	(0.020)	(0.016)	(0.019)		(0.025)	(0.028)
Current Fertility Rate		-4.023***	-5.464***	-6.391***	-5.182***	-5.118***
		(1.029)	(1.132)	(1.218)	(1.298)	(1.105)
Female Education	0.079	0.016	0.073	0.028	0.061	0.046
	(0.057)	(0.049)	(0.053)	(0.050)	(0.0518)	(0.054)
Income	-1.941*	-2.741***	-3.091***	0.247	-1.181	-1.129
	(1.017)	(0.853)	(1.007)	(0.957)	(0.913)	(0.820)
North East	0.852*	0.255	0.309	0.612	0.552	1.109**
	(0.457)	(0.383)	(0.448)	(0.469)	(0.458)	(0.436)
Center	1.483***	0.766*	0.805	-0.319	0.757	1.167**
	(0.508)	(0.435)	(0.488)	(0.603)	(0.459)	(0.469)
South	-0.0822	-0.452	-0.686	-2.207***	-1.125	0.302
	(0.900)	(0.678)	(0.737)	(0.651)	(0.688)	(0.746)
Large Families 2001	-0.304***					
	(0.0843)					
LFP Equality		21.80***				
		(3.143)				
FLFP			0.197***			
			(0.0563)			
Religious Attendance				-0.162***		
				(0.0394)		
First Marriages					-0.0349	-0.0187
					(0.0663)	(0.0488)
Divorce Rate						0.117**
						(0.0467)
Observations	103	103	103	103	103	103
R-squared	0.79	0.87	0.83	0.76	0.80	0.82
Adj. R-squared	0.77	0.86	0.81	0.75	0.78	0.80

Notes: OLS estimates are reported with White-Huber robust standard errors in parentheses. The unit of observation is a province. The dependent variables is the percentage of women covering high-ranking positions in the province and it ranges between 0 and 100, being 50 the equality benchmark. The reference omitted dummy for macro-regions is North West and a constant is always included.*** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Thus we find consistent evidence that female political empowerment is negatively associated with the intensity of religious culture, as captured by both religious marriage and religious participation. Neither structural covariates such as female education, income, FLFP, and LFP equality nor family culture ones, as captured by large family size, current fertility rate, and divorce rate, appear to play a major role. The share of women in top managerial positions instead is equally strongly associated with religious culture but also influenced by more economic factors and by family structure.

To sum up, even though we should be cautious in interpreting our results as causal, we observe that our proxy for religious culture is consistently significant and robust and plays a central role in determining women's empowerment in both the political and decision-making spheres across Italian provinces, even when we control for a broad set of covariates or alternative measures of the proposed channels. Moreover family culture seems to be significant only for the share of women in

high-ranking jobs partly confirming our prior of the primary role of religious culture over other factors at least in the political dimension.

5. IV Estimation: the Legacy of Past Gender Culture

In the previous section we have tried to introduce in our OLS estimation a series of observable controls in order to minimize the omitted variable problem. Nonetheless our strategy may still produce biased estimates of the coefficients of interest due to reverse causation and measurement error bias.[34]

In what follows, we argue that the provincial variation in women empowerment and representation in Italy is ultimately an outcome of historical processes that continue to operate through religious culture, in particular at the local level. Thus religious culture is treated as endogenous, since historically determined by and embedded in a combination of past beliefs and preferences comprising hierarchical and gender inequitable norms. Our strategy seeks to analyse the effect of the degree of religious culture on women's empowerment today exploiting the exogenous variation in past gender norms. Accordingly we instrument religious culture by a couple of late nineteenth- and early twentieth-century variables: the historical gender gap in literacy in 1861 and the fertility rate in 1930, which are interpreted as indicators of past belief systems and historical proxy of current generationally transmitted gender norms. Our identification strategy is not based on a causal link between past and present. On the contrary, the proposed instruments are considered as the gender-related component of past religious culture and therefore adopted as time lag instruments (Crescenzi at al., 2011; Tabellini, 2010).

The Spearman rank correlation test is used to test the degree of persistence of religious culture and its past correlates. As expected, the correlation between religious culture and the past fertility rate is 0.83, while that with the past gender gap in human capital is -0.71. In other words, our selected instruments explain about 83 and 71 percent of the variability of current religious culture[35]: this confirms our instrumentation strategy and suggests that past gender culture is highly persistent and closely related to current religious culture.[36]

In Figure 4 a-d, through a series of correlation plots we identify a clear association of our dependent variables and the two proxies for past gender culture. Both the share of women in politics and that in top manager positions are negatively associated with the fertility rate in 1930 and positively associated with past gender equality in human capital accumulation as captured by the gender gap in literacy in 1861.[37]

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[34] As explained in Hall and Jones (1999) with an IV estimation strategy both measurement error and endogeneity concerns are addressed.

[35] Te rank correlations between the two instruments and the current fertility rate are more modest, respectively 0.47 and -0.30. This is why we presume that our instruments are more likely to be considered as proxies of past gender culture.
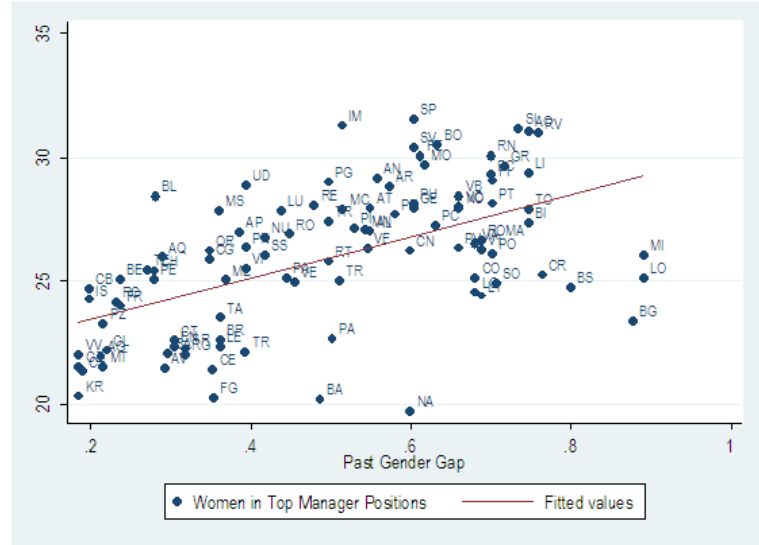
[36] For a similar use of the Spearman rank test see Gallego (2010) and Acemoglu et al. (2001).

[37] Past gender gap in literacy is a variable taking values between 0 (perfect inequality) and 1 (perfect equality). Therefore a value approaching 1 means higher equality among sexes.
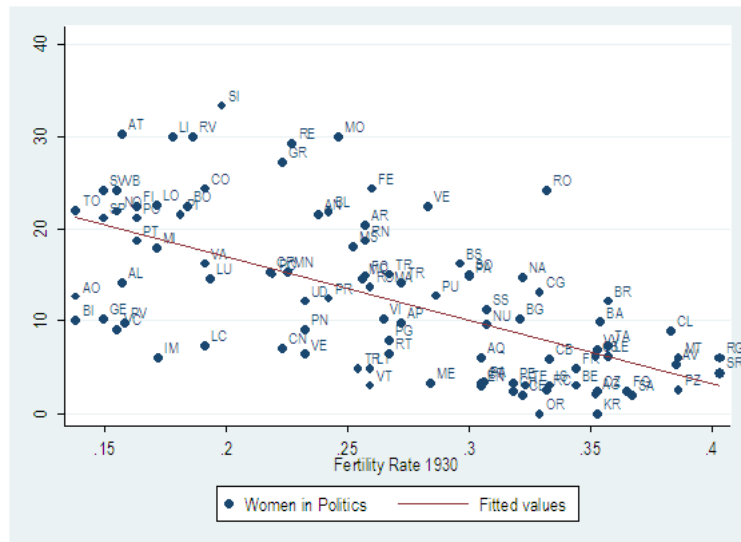
Figure 4: Women's Empowerment and Past Gender Culture
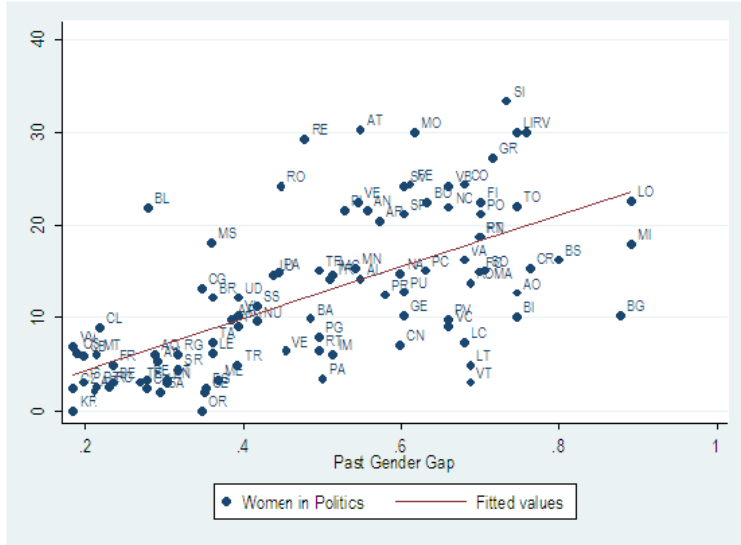
(a) Political Empowerment and Gender Gap 1861

(b) Empowerment in Top Manager Positions and Gender Gap 1861

(c) Political Empowerment and Fertility Rate 1930

(d) Empowerment in Top Manager Positions and Fertility Rate 1930

We now empirically test the following two stage least square model:

$$WE_i = \alpha + \beta X_i + \gamma\, Religious\ Culture_i + \delta\, Family\ Culture_i\ +\ \varepsilon_i \qquad (1)$$

$$Religious\ Culture_i = a + b\, X_i + c\, Past\ Gender\ Culture_i +\ \xi_i \qquad (2)$$

where *Past Gender Culture$_i$* refers to our two instruments that may plausibly be assumed to be a time lagged instrument of current religious culture, i.e. the gender gap in literacy in 1861 and the fertility rate in 1930; as in OLS regressions, X_i include contemporaneous female education as the percentage of women aged 19 or more who have completed at least secondary school to avoid the

risk of picking up the mere effect of human capital in the province[38] (Tabellini, 2010) as well as income. Finally, macro-region dummies and a constant are included.

In Table 6 we show our IV results: for both variables of interest, we find a strong first-stage relationship between past gender culture and religious culture: the two instruments are highly jointly significant (the p-value of the joint significance test of the instruments is zero) and therefore relevant. In addition, the first-stage R-squared tells us that we are explaining 85 percent of the variability of the share of religious marriages. The signs of the coefficient of the instrument are as expected: the fertility rate in 1930 is positively associated with religious marriages today while past gender equality is negatively related. This suggests that provinces with a wider gender gap in human capital accumulation in the second half of the nineteenth century might have transmitted more conservative gender beliefs and show lower degrees of feminization in the political sphere and wider gender gaps in the economic leadership. By the same token, provinces with higher fertility rates in the past, meaning a more subordinated and caring role of women, still exhibit more conservative gender norms and show lower degrees of feminization and more inequality between genders in the economic sphere.

In Columns 4, 5, and 6 we also account for economic development in the end of the nineteenth century introducing an index of industrialization in 1871 to minimize the risk of invalid instruments (Tabellini, 2010), or in other words, to avoid capturing the influence of economic development instead of past gender culture.[39] Our main results are unaffected.

The results confirm the OLS estimates discussed in the previous section. The coefficient of our measure of religious culture, the share of religious marriages, remains negative and strongly significant at 1 percent in both specifications. The IV coefficients are larger than their OLS counterparts and this suggests that measurement error in religious culture may create an attenuation bias.

To recap, our identification strategy and exclusion restriction imply that, conditional on the controls, past beliefs about women's role in society do not affect current gender empowerment outcomes other than through religious culture, as proxied by the share of religious marriages, which again is likely to pick up the gender-related component of religious culture.

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[38] To be noticed that past gender gap in literacy is not significantly correlated (see Appendix A.3) with current female education providing us with a further proof that the effect of our instrument does not pass through the human capital channel.

[39] In an alternative but unreported specification we also assess the role played by an earlyexperience of democracy on religious culture by running a first-stage regression of the following form:

$$Religious\ Culture_i = a + b\,X_i + c\,Past\ Gender\ Culture_i + d\,Democracy_i + \xi_i$$

Where $Democracy_i$ is a dummy variable that equals 1 if the province was a Communal Republic in the fourteenth century as coded by De Blasio and Nuzzo (2010). Democracy is negatively associated with our proxy of religious culture as expected: a past of democracy is linked to more egalitarian gender norms and beliefs.

Table 6: The Determinants of Women's Empowerment: 2SLS

	(1)	(2)	(3)	(4)	(5)	(6)
	Religious marriages	Women in Politics	Women in Top Manager Positions	Religious marriages	Women in Politics	Women in Top Manager Positions
Estimation technique: 2SLS	I Stage	II Stage		I Stage	II Stage	
Religious Marriages		-0.597***	-0.184***		-0.572***	-0.234***
		(0.123)	(0.0328)		(0.146)	(0.0356)
Current Fertility Rate	25.445***	5.298	-4.111**	26.51***	4.124	-1.721
	(4.227)	(6.406)	(1.710)	(4.364)	(7.640)	(1.675)
Female Education	0.005	-0.300	0.062	-0.009	-0.293	0.047
	(0.148)	(0.223)	(0.052)	(0.145)	(0.223)	(0.052)
Income	-5.405**	0.609	-1.591*	-5.089**	0.602	-1.535*
	(2.530)	(3.778)	(0.913)	(2.471)	(3.714)	(0.832)
North East	-8.085***	1.896	0.502	-8.638***	2.337	-0.445
	(1.733)	(2.127)	(0.474)	(1.775)	(2.591)	(0.528)
Center	-0.885	4.182*	0.882*	-1.329	4.388*	0.416
	(1.644)	(2.151)	(0.459)	(1.750)	(2.322)	(0.430)
South	-2.895	2.006	-0.665	-3.077	2.129	-0.991
	(3.251)	(3.624)	(0.714)	(3.257)	(3.690)	(0.619)
Industrialization 1871				-2.358	1.058	-2.272***
				(2.252)	(3.159)	(0.659)
Gender Gap 1861	-15.95***			-14.81***		
	(3.898)			(3.886)		
Past Fertility Rate 1930	7.607***			7.277***		
	(1.428)			(1.550)		
Observations	99	99	99	99	99	99
R-squared	0.86	0.52	0.78	0.87	0.53	0.79
Adj. R-squared	0.85	0.49	0.76	0.85	0.49	0.77
First Stage F-stat	26.69			19.16		
P-value Hansen test		0.12	0.04		0.12	0.06
Anderson-Rubin p-value		0.000	0.000		0.000	0.000

Notes: 2SLS estimates are reported with White-Huber robust standard errors in parentheses. The unit of observation is a province. The first stages are reported in columns 1 and 4 whereas the second stages are reported in columns 2 and 3 and then 5 and 6. The instrumented variable is the share of religious marriages. The dependent variables of the second stage are the percentage of women in local political bodies and the percentage of women covering high ranking positions in the province. Both variables range between 0 and 100, being 50 the equality benchmark. First stage F-stat is the Angrist-Pischke test for excluded instruments. The reference omitted dummy for macro-regions is North West and a constant is always included.*** p<0.01, ** p<0.05, * p<0.1.

First of all it is worth noting that our instruments are dated back in the past and for this reason are plausibly exogenous to current outcomes. Moreover as noted by Campa et al. (2011) the gender gap in literacy in the early twentieth century is not likely to be correlated with past gender gap in employment and even more unlikely to be related to women's representation in political bodies (at that date not allowed) and in leadership positions in that time. Moreover introducing macro-region fixed effects and then past industrialization in the regressions allow us to be confident that the results are not due to other characteristics of the area, *in primis* economic development and its effect on both gender culture and on religious culture (modernization hypothesis).

The validity of our exclusion restriction is investigated through an over-identification test[40] (the Hansen J test). Being aware of the fact that the test results have to be interpreted with caution, the p-values allow us to affirm that the exclusion restriction holds, although the validity of the instruments seems lower when the dependent variable is the share of women in top managerial positions. Dissimilarly, according to our tests for weak instruments,[41] we can affirm that our instruments seem unaffected by potential weak instrument bias:[42] in both specifications, the first-stage F-statistics are comfortably larger than the threshold indicated by Staiger and Stock (1997). Taken together we therefore consider these IV results to be informative.

Next, in Table 7, we also treat our proxy of family culture as endogenous. This exercise will also allow us to further test whether religious culture is the channel through which past gender roles have an impact on current women's empowerment in politics and high ranking positions as we have argued in the previous sections.

$$WE_i = \alpha + \beta X_i + \gamma \, Religious \; Culture_i + \delta \, Family \; Culture_i + \varepsilon_i \qquad (1)$$

$$Religious \; Culture_i = a + b \, X_i + c \, Past \; Gender \; Culture_i + \xi_i \qquad (2)$$

$$Family \; Culture_i = \pi + \tau \, X_i + \theta \, Past \; Gender \; Culture_i + \eta_i \qquad (3)$$

Second-stage results suggest as already argued that religious culture wins the race in explaining women's empowerment in politics confirming its negative and significant effect at 1 percent level. This would allow us to support our claim that religion is a key channel through which past gender culture is passed from generation to generation. However we cannot completely rule out the role of family culture as determinant of the share of women in leadership position. This leaves room for further research and the possibility to examine these two outcomes separately because they are plausibly originated from interconnected but dissimilar causes.

To conclude, as a whole, both OLS and IV estimates[43] offer the following picture: first, religious culture, and in particular Catholicism, is associated with worse female empowerment outcomes; second, religious culture does not affect gender empowerment through the fertility or the family structure channel; and third, the component of religious culture explained by historical gender culture seems to be an important and lasting determinant of current women's empowerment.

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[40]The use of this kind of test is common in the literature in order to assess the validity of historical variables to be used as instruments to explain current outcomes (e.g. Acemoglu et al., 2001; Gallego, 2010).

[41] In both Tables 5 and 6 we report results of Angrist-Pischke F statistic in order to check for the weak identification of our regression. Moreover we also include the p-value of the Anderson-Rubin test of joint significance of the excluded instruments.

[42] The rule-of-thumb threshold above which we can affirm not to encounter the problem of weak instruments is 10 (Staiger and Stock, 1997). Moreover the results of our tests are also above the threshold values reported by Stock and Yogo (2005).

[43] In a series of unreported sensitivity exercises we extend the benchmark IV regression introducing the same control variables as Table 4 and 5. Our results are unchanged.

Table 7: The Determinants of Women's Empowerment: 2SLS, "Horse Race"

Estimation technique: 2SLS	(1) Religious Marriages	(2) Current Fertility Rate	(3) Women in Politics	(4) Women in Top Manager Positions	(5) Religious Marriages	(6) Current Fertility Rate	(7) Women in Politics	(8) Women in Top Manager Positions
	I Stage		II Stage		I Stage		II Stage	
Religious Marriages			-0.681***	-0.157***			-0.773***	-0.177***
			(0.177)	(0.047)			(0.243)	(0.064)
Current Fertility Rate			45.27	-16.87**			52.06	-15.42*
			(31.06)	(7.517)			(37.66)	(8.740)
Female Education	-0.253	-0.010***	0.124	-0.0739	-0.251	-0.0091**	0.128	-0.0731
	(0.174)	(0.004)	(0.395)	(0.097)	(0.177)	(0.004)	(0.399)	(0.095)
Income	-3.172	0.088	-4.061	-0.101	-3.199	0.071	-4.265	-0.144
	(2.922)	(0.076)	(6.182)	(1.438)	(2.877)	(0.0712)	(6.422)	(1.440)
North East	-8.190***	-0.004	1.675	0.572	-8.153***	0.0183	0.0158	0.218
	(2.023)	(0.041)	(2.632)	(0.692)	(2.090)	(0.042)	(3.559)	(0.871)
Center	-0.644	0.00945	3.656	1.049*	-0.616	0.0269	2.806	0.868
	(1.956)	(0.032)	(2.362)	(0.601)	(1.994)	(0.036)	(2.705)	(0.642)
South	1.546	0.175**	-4.785	1.502	1.546	0.174**	-5.823	1.281
	(3.818)	(0.068)	(6.526)	(1.511)	(3.843)	(0.070)	(7.543)	(1.606)
Industrialization 1871					0.156	0.095*	-3.947	-0.842
					(2.631)	(0.052)	(5.031)	(1.281)
Gender Gap 1861	-11.75***	0.165*			-11.84**	0.112		
	(4.327)	(0.099)			(4.733)	(0.093)		
Past Fertility Rate 1930	9.021***	0.056***			9.039***	0.067***		
	(1.491)	(0.021)			(1.590)	(0.023)		
Observations	99	99	99	99	99	99	99	99
R-squared	0.81	0.35	0.26	0.58	0.81	0.38	0.19	0.61
Adj. R-squared	0.80	0.30	0.21	0.55	0.80	0.32	0.12	0.58
First Stage F-stat	21.95	4.58			17.66	4.74		
Anderson-Rubin p-value			0.000	0.000			0.000	0.000

Notes: 2SLS estimates are reported with White-Huber robust standard errors in parentheses. The unit of observation is a province. The first stages are reported in columns 1 and 2 and 5 and 6 whereas the second stages are reported in columns 3 and 4 and then 7 and 8. The instrumented variable is the share of religious marriages in columns 1 and 4 and current fertility rate un columns 2 and 6. The dependent variables of the second stage are the percentage of women in local political bodies and the percentage of women covering high ranking positions in the province. Both variables range between 0 and 100, being 50 the equality benchmark. First stage F-stat is the Angrist-Pischke test for excluded instruments. The reference omitted dummy for macro-regions is North West and a constant is always included.*** $p<0.01$, ** $p<0.05$, * $p<0.1$.

6. Discussion

6.1 Catholic Religion and Gender Roles

Notwithstanding the scientific interest in the so-called secularization hypothesis,[44] religion continues to preserve its influence in determining economic behavior (Iannaccone, 1998) and in perpetrating a set of slow-changing norms and beliefs through time. As far as we are concerned the present study and the previous literature have highlighted that religion and religiosity are found to have a strong impact on the role of women in several dimensions of life.

Christianity, in fact, and in particular Catholicism are historically characterized by gender inequitable roles and specific behavioural prescriptions deeply rooted in Sacred texts and the following theological dogmas and then crystallized into practice and persistent gender models and stereotypes. The Bible in particular contains many gender inequitable assertions and teachings. For example, the Genesis (3:16) says: *"To the woman he said, I will surely multiply your pain in childbearing; in pain you shall bring forth children. Your desire shall be for your husband, and he shall rule over you."* Eve, the first woman, disobeyed to God and despite the fact that Adam followed her, the main guilt of the sin was hers. God establishes man's supremacy over creation and his leadership within the family and this will imprint the following inferior position of the woman in the family, in the Church, and in the community as a natural outcome. In the public sphere, according to the Corinthians (14:34): "*Women should remain silent in the churches. They are not allowed to speak, but must be in submission, as the law says.*"

Later Christian thinkers have then better delineated the role of women in society and in particular St. Augustin and St. Thomas Aquinas who thought women to be intrinsically inferior and double subjugated to God and husband. This doctrine has then been transmitted fairly unchanged for centuries by the Catholic Church to such an extent that since the end of the nineteenth century a series of encyclicals repeatedly emphasized the inferior position of women and the affirmation of the male-breadwinner model in modern times. Pope Leo XIII wrote in his 1880 encyclical "Arcanum Divinae" on Christian marriage[45] that "*the husband is ruler of the family and the head of the wife; the woman as flesh of his flesh and bone of his bone is to be subordinate and obedient to the husband*"; Pope Pius XI in his encyclical "Castii Connubii" denounced women's emancipation (through contraception) confirming the traditional role of women as mothers and homemakers.

Only in 1963 Pope John XXIII stated in his encyclical "Pacem in Terris" that women as human beings had the right to equal inclusion in both domestic and public life, included work and politics. However the point on the caring role of women is still stressed: "*women must be accorded such conditions of work as are consistent with their needs and responsibilities as wives and mothers*".

These features of the Catholic Church though are also shared by other branches of Christianity: in fact also Protestantism shares the same traditional ideal of family notwithstanding the more egalitarian gender division of work in Protestant countries (Esping-Andersen, 1990). Thus gender inequitable beliefs are not strictly associated to Catholicism as denomination but are a characteristic of mainly all dominant religions with a patriarchal and hierarchical structure which tend to promote

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[44] The secularization hypothesis concerns with that historical process of progressive declining importance of religious values and religiosity in social life through time mainly due to modernization and the increasing relevance of scientific and intellectual progress and rationalism.

[45] Note that the author's decision to measure religious culture through the variable religious marriages stems also from the specific value embedded in the Catholic marriage as clearly stated in this papal encyclical

women's subordination, traditional gender roles, and the breadwinner model. In this respect, as indicated in the review of the literature, some authors argue that not only the denominational affiliation counts but, more importantly, the intensity of religiosity and religious involvement which shape a subordinated role of women and thus gender identity (Guiso et al., 2003, and Algan and Cahuc, 2006) because highly correlated with patriarchal norms and teachings. Indeed the presented evidence reads in the same direction within Italian boundaries.

6.2 Gender Norms, Religion, and Mechanisms at Work
Insofar our results point to a supremacy of religious culture over family culture, we now discuss first the mechanisms at work which link religion with gender roles and second some potential channels through which gender norms can be transmitted across generations and affect women's economic and political empowerment in the long run.

The link between religion and gender empowerment can be interpreted as originated from a series of alternative but not exclusive theoretical mechanisms.
The first involves gender identity formation. Akerlof and Kranton (2000) provide the theoretical underpinning of the link between identity and social context. The appropriate gender identity is in fact acquired within the family as prime locus of early socialization and then through observational learning of peers and the community propelling accommodative and imitative processes. Indeed we can expect that women are more likely to be affected by the community than men, and this is particularly true when women are responsible of raising children. Bisin and Verdier (2000) and Olivetti et al. (2013) emphasize the role of both "direct/vertical" and "oblique/horizontal" socialization in originating and transmitting gender norms as well as religious beliefs and affecting adult women's actions and perceptions.
A second mechanism relies on the role of religious organizations as important socialization agencies. Accordingly women form their identity both as female, as part of a religious group, and as a female within the religious group. It follows that women raised religiously internalize the dominant religious belief system and the attached patriarchal norms attached to it through their socialization in youth and behave accordingly in their life.
Both these mechanisms are informed by an underlying principle of search for inclusiveness and cultural conformity. In fact violating the behavioral prescriptions assigned by the community is costly and, according to our argument, where religious beliefs prevail, not only the society limits women in their opportunities but also women themselves prefer to conform to the prevailing gender roles and stereotypes in order not to incur into guilt and shame.
The third mechanism relies on the notion of "religious human capital" (Iannaccone 1998) as the stock of knowledge and familiarity with religion and its doctrines. This is accumulated through religious upbringing as product of parents' religiosity and their choice to participate in religious activities as well as formal childhood instruction (e.g., within Catholic church the so-called catechism). Given these premises, and given the fact that women are in general likely to be more religious and religiously affiliated than men, we can argue that the higher the intensity of religious capital accumulated in childhood, the higher the probability to behave according to religious dicta

in adulthood (included the decision to marry religiously), also if not actively participating in religious services.[46]

These three potential mechanisms[47] provide us with an explanation of the reasons why higher religiosity is likely to result in less publically and economic active women also in contemporary times and this is mainly due to the process of women's early socialization, upbringing, and the dominant social norms pervading their neighborhood and community.

With this in mind a further consideration is needed and is concerned with the pattern of women's empowerment in modern and developed societies. In fact, as argued in the beginning of the paper we are witnessing a process of increasing female agency in many dimensions: in recent times in fact the role of the family has been changing in its values and structures, the male-breadwinner female-caregiver model has mainly faded away and superseded by the dual-earner family model, women are increasingly emancipated both economically and sexually. Nonetheless the traditional sex role expectations are still present but concealed and modern women are suffering from a disjunction of their role in the private sphere (home and employment) and the in the public one[48] (politics and leadership) as well as from the so-called "double burden" (or "double shift"), that is the condition of many women who work in the labor market and at the same time shoulder the most of domestic tasks and childcare. According to our interpretation, this might be due to the fact that the religious component of culture is slow-moving and die-hard notwithstanding the faster changing features of contemporary family structure and values and the labor market.

This last point introduces us to the potential channels of transmission of gender roles through time. Our main hypothesis is that gender roles are historically determined and have path-dependent effects on current women's empowerment outcomes through cultural intergenerational transmission and are mainly attached to religious heritage and traditions (Bisin and Verdier, 2000; Guiso et al., 2003 and 2006).

However we cannot completely rule out other channels of transmission. In fact, according to our results in Section 5 we have seen that we cannot reject the over-identifying assumption that past gender norms only influence current gender outcomes through religion. Although the presented estimates point at a preeminent role of religious culture over the fertility and human capital channel, we cannot exclude their complex interplay in determining gender empowerment. Indeed the family and the gendered accumulation of human capital are likely to be affected in turn by religious norms and beliefs through their influence on fertility decisions as well as the decision to educate girls or placing higher value on male offspring. Second, economic and societal modernization is considered one of the major forces toward progressive secularization, declining influence of religious values and therefore shaping cultural attitudes in gender roles and beliefs (Ingelhart and Norris, 2003).

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[46] Indeed according to Guiso et al. (2006), religion can largely be treated as invariant over an individual's lifetime.

[47] For a comprehensive treatment of the literature on the processes and mechanism of cultural transmission and socialization refer to Bisin and Verdier (2011).

[48] Ingelhart and Norris (2003) propose an explanation for this disjunction as produced by two different phases of the modernization process: in the first phase industrialization induce women to enter the labor market, accumulate human capital and to begin to be represented in the political arena but with large remaining gender inequalities in power; in the postindustrial phase there is instead a leap forward in effective representation in leadership and political influence. According to this viewpoint, Italy has not reached yet this second phase.

Moreover, gender equality is largely affected by economic conditions, increasing in period of economic expansion while deteriorating in economic distress.

Finally, the institutional channel also plays an important role in the transmission of social norms: this is even more important considering the fact that, despite the official separation between the state and the church, religiously dominated (mainly Catholic) countries have historically tended to endorse a more traditional gender division of work promoting more rigorous employment protection and family and childcare policies (Algan and Cahuc, 2003) as well as a conservative legal framework regulating marriage, divorce and marriage dissolution, and abortion.

7. Conclusions

Women's empowerment is an elusive and multifaceted phenomenon, potentially influenced by a number of factors. This paper has attempted to perform an empirical exploration of the plausible determinants of current women's empowerment across Italian provinces focusing on the role of a specific dimension of culture: the intensity of Catholic religious beliefs. We argue that religious culture and the degree of religiosity are strongly linked to more unequal representation of women in politics and in top managerial positions. Catholicism indeed is historically characterized by gender inequitable roles and specific behavioural prescriptions and the desire to conform to these roles tend to persist over time.

Our findings confirm our prior that women brought up in more progressive provinces where women's empowerment was historically higher should achieve higher level of equality in politics and economic decision-making than women living in more conservative religious areas.

A natural extension is therefore to look for micro-data in order to go from the aggregate level to the analysis of the individual decisions of women to enter politics and shatter the glass ceiling.

This presented evidence does not mean however that culture is unchanging. Traditional gender norms, in particular if entrenched and institutionalized in religious norms, take a long time to change over time and this means that more effort is needed to reach gender equality. Italy, as many other developed countries, is currently struggling to comply with increasing women's representation in power positions. This in turn will help transforming institutional setting in favor of gender-sensitive and family-friendly policies and to increase women and communities' well-being. More specifically, policies should be oriented toward reducing the burden of child care and homework and as a result a reallocation of gender roles within the household and the community, such as flexible work schedules and affordable and effective child care services.

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8. Appendix

All data are available on the web for purposes of replication. Data are collected by the Italian National Institute of Statistics (ISTAT) and can be downloaded from the ISTAT web site at the address www.istat.it and http://sitis.istat.it/sitis/html/index.htm. Data from the Census 2001 are available at the address http://dawinci.istat.it/.

Table A.1: Variable Description

Variable	Definition	Source
Women in Politics	Share of women elected in provincial political bodies over the total number of elected members (Consigli and Giunte Provinciali) – 2008.	Own calculation on data available by Ministero dell'Interno (2012)
Women in Top Manager Positions	Share of women who are in charge of enterprises or in top managerial positions over the total number of employed in the same position – 2001.	Own calculation on Census 2001
Religious Marriages	Percentage of religious marriages over the total number of marriages in the province – 2004 .	ISTAT
Current Fertility Rate	Average number of children per women (Total Fertility Rate - TFR) – 2000.	ISTAT
Female Education	Women aged 19 or more with at least some secondary school over the total number of women aged 19 or more in the province – 2001.	Census 2001
Income	Natural logarithm of total value added per capita . (Italian lira, constant prices, base year 2000), – 2001	Istituto Tagliacarne (2011)
Latitude	Latitude of each province main town ("Capoluogo di Provincia") in degrees.	*Passim*
Abortion Rate	Number of abortions of women of age 20-24/ the female population of age 20-24) * 1.000– 2001.	ISTAT
Large Families	Percentage of families with 5 or more members over the total number of families in the province – 1971 and 2001.	Census 1971 and 2001
Divorce Rate	Share of divorces and legal separations as a percentage of total marriages (Total divorce rate) – regional variable – 2008.	ISTAT
Only Mother Families	Percentage of households composed of mother and children over the total number of households in the province – 2001.	ISTAT
LFP Equality	Female to male ratio labour force participation rates – 2001: (female labour force participation/ male labour force participation).	Own calculation on Census 2001
FLFP	Female labour force participation rate computed as the ratio of women occupied and those actively looking for an occupation over the total female working-age population in the province – 2001.	Census 2001
Religious Attendance	Share of people aged 6 or more that declared to go to the church at least once a week – 2008.	ISTAT
First Marriages	Share of marriages between previously unmarried people as a percentage of total marriages in the province – 2004.	ISTAT
Gender Gap 1861	Female to male ratio literacy rate – 1861: (female population able to read and write in 1861/ female population aged 5 or more in 1861)/ (male population able to read and write in 1861/ male population aged 5 or more in 1861).	Bertocchi and Bozzano (2015a; 2015b)

Fertility rate 1930	Average number of children per women – 1930.			Ge Rondi and Gerzeli (2008)	
Past Industrialization	Index of industrialization – 1871: share of value added over male population over 15 years of age.			Ciccarelli and Fenoaltea (2013)	

Table A.2: Descriptive Statistics: all variables

Variable	Obs.	Mean	Std. Dev.	Min	Max
Women in Politics	103	13.03	8.84	Crotone, Oristano 0	Bologna 40.625
Women in Top Manager Positions	103	26.06	2.94	Napoli 19.75	La Spezia 31.55
Religious Marriages	103	67.09	12.54	Gorizia 41.18	Trapani 89.47
Current Fertility Rate	103	1.21	0.14	Ferrara 0.88	Napoli 1.56
Female Education	103	30.12	3.16	Biella 23.59	Roma 43.61
Income	103	9.77	0.29	Nuoro 9.04	Milano 10.35
Abortion Rate	103	13.328	3.789	Agrigento 5.914	Milano 22.015
Large Families 1971	103	22.183	7.475	Trieste 6.2	Crotone 40.55
Divorce Rate	20	29.83	8.42	Calabria 13.37	Valle D'Aosta 50.31
Only Mother Families	103	10.615	1.437	Ragusa 7.658	Bolzano 15.484
Large Families 2001	103	7.46	3.49	Trieste 2.12	Napoli 17.29
LFP Equality	103	0.62	0.06	Foggia 0.47	Bologna 0.75
FLFP	103	37.19	5.12	Caltanissetta 26.77	Modena 47.63
Religious Attendance	20	31.73	6.51	Tuscany 21.5	Apulia 42.4
First Marriages	103	86.989	5.969	Messina 65.71	Reggio Calabria 96.19
Gender Gap 1861	99	0.50	0.19	Potenza 0.19	Milano 0.89
Fertility Rate 1930	99	2.64	0.75	Torino 1.38	Siracusa 4.03
Past Industrialization	103	0.96	0.32	Teramo 0.48	Milano 1.69

Notes: Min and Max indicate the two provinces where we observe the highest and the lowest values of the variable. For Gender Gap 1861 and Fertility Rate 1930, observations are reduced to 99 because the territories In 1861 the province of Potenza comprised the territories of today's province of Matera. In 1930 the province of Torino comprised the territories of today's provinces of Aosta and Biella.

Table A.3: Correlation among Main Contemporary Variables

	Women in Politics	Women in Top Manager Positions	Religious Marriages	Current Fertility Rate	Female Education	Income	Abortion Rate	Large Families 1971	Divorce Rate	Only Mother Families	Large Families 2001	LFP Equality	FLFP	Religious Attendance
Women in Top Manager Positions	0.678*													
Religious Marriages	-0.725*	-0.842*												
Current Fertility Rate	-0.419*	-0.667*	0.545*											
Female Education	-0.078	0.069	0.047	-0.171										
Income	0.600*	0.624*	-0.747*	-0.332*	0.013									
Abortion Rate	0.298*	0.330*	-0.369*	-0.235*	0.350*	0.372*								
Large Families 1971	-0.533*	-0.684*	0.724*	0.499*	0.036	-0.571*	-0.525*							
Divorce Rate	0.573*	0.784*	-0.812*	-0.493*	-0.098	0.717*	0.392*	-0.804*						
Only Mother Families	0.291*	0.456*	-0.577*	-0.326*	0.047	0.254*	0.024	-0.255*	0.372*					
Large Families 2001	-0.601*	-0.778*	0.811*	0.625*	0.068	-0.720*	-0.419*	0.912*	-0.868*	-0.334*				
LFP Equality	0.621*	0.816*	-0.727*	-0.477*	0.077	0.755*	0.311*	-0.549*	0.654*	0.326*	-0.668*			
FLFP	0.609*	0.687*	-0.718*	-0.318*	-0.085	0.844*	0.220*	-0.462*	0.666*	0.305*	-0.641*	0.923*		
Religious Attendance	-0.537*	-0.749*	0.700*	0.550*	-0.177	-0.470*	-0.366*	0.568*	-0.719*	-0.385*	0.608*	-0.549*	-0.455*	
First Marriages	-0.591*	-0.762*	0.862*	0.548*	0.028	-0.639*	-0.415*	0.790*	-0.760*	-0.474*	0.821*	-0.647*	-0.581*	0.600*

Notes: * indicates significance at 5%.

Table A.4: Correlation of Selected Current and Past Variables

	Women in Politics	Women in Top Manager Positions	Religious Marriages	Current Fertility Rate	Gender Gap 1861
Women in Top Manager Positions	0.6782*				
Religious Marriages	-0.7254*	-0.8418*			
Current Fertility Rate	-0.4185*	-0.6667*	0.5447*		
Gender Gap 1861	0.6306*	0.5511*	-0.7186*	-0.3021*	
Fertility rate 1930	-0.6173*	-0.7420*	0.8251*	0.4770*	-0.7362*

* indicates significance at 5%.