The Enfranchisement of Women and the Welfare State[*]

Graziella Bertocchi

Universita' di Modena e Reggio Emilia, CEPR, CHILD and IZA

ABSTRACT

We offer a rationale for the decision to extend the franchise to women within a politico-economic model where men are richer than women, women display a higher preference for public goods, and women's disenfranchisement carries a societal cost. Men and women are matched within households which are the center of the decision process. We derive the optimal tax rate under two alternative regimes: a males-only enfranchisement regime and a universal enfranchisement regime. The latter is associated with a higher tax rate but, as industrialization raises the reward to intellectual labor relative to physical labor, women's relative wage increases, thus decreasing the difference between the tax rates. When the cost of disenfranchisement becomes higher than the cost of the higher tax rate which applies under universal enfranchisement, the male median voter is better off extending the franchise to women. A consequent expansion of the size of government is only to be expected in societies with a relatively high cost of disenfranchisement.

We empirically test the implications of the model over the 1870-1930 period. We proxy the gender wage gap with the level of per capita income and the cost of disenfranchisement with the presence of Catholicism, which is associated with a more traditional view of women's role and thus a lower cost. The gender gap in the preferences for public goods is proxied by the availability of divorce, which implies marital instability and a more vulnerable economic position for women. Consistently with the model's predictions, women's suffrage is correlated positively with per capita income and negatively with the presence of Catholicism and the availability of divorce, while women's suffrage increases the size of government only in non-Catholic countries.

JEL Classification Numbers: P16, J16, N40, H50, 011.

Key Words: women's suffrage, inequality, public goods, welfare state, culture, family, divorce.

"...the exclusion of women (...) from any share in the representation (...) violates one of the oldest of our constitutional maxims (...) that taxation and representation should be co-extensive."

John Stuart Mill, House of Commons, 20 May 1867

1   Introduction

Despite the fact that women represent at least half of the world population, in the large and growing literature on suffrage extension and its economic causes and effects little attention has been devoted to the analysis of women's enfranchisement. Historically, in the vast majority of cases, women were the last to be granted the right to vote, thus coming after poor men. This consideration casts doubts on the relevance, when applied to women's suffrage, of the often purely economic arguments developed in the literature on franchise extension.

In this paper, we derive and test a politico-economic model which offers a rationale for the decision to extend the franchise to women. The basic idea behind our theory is that the franchise is always extended by a group with power to a group without power when an event, or a sequence of events, interferes with its decision making process. Our goal is to understand which factors are involved when the first group is represented by men and the second by women.

While the focus of the paper is on that unique transitional period that runs from the last few decades of the nineteenth century until the 1930s, when the franchise was extended to women in those countries that are now modern industrial democracies, the implications of our results can also be usefully applied to a comparative analysis of women's rights across countries with different levels of development. The World Economic Forum Global Gender Gap Report (2007) shows that women's political empowerment is far from complete even in the most advanced countries, with top-scoring Swedish women holding 52.5% of the Swedish men's rights, and that there is still considerable cross country variation, with Yemenite women at the bottom with a score as low as 0.8%.

The main assumptions on which our model rests are the following.

First, men are richer than women, since men and women are endowed with equal amounts of intellectual labor, while men have a larger endowment of physical labor than women. Since the

development process affects the relative reward of intellectual and physical labor, the resulting wage gap evolves over time reflecting well-known stylized facts.

Our second assumption is that women display a higher preference for public goods and that the larger is women's disadvantage, the higher is their preference for public goods relative to men's. Gender differences in the taste for public goods, that may reflect differences in income and wealth, risk aversion, and the perception of the role of government as a potential insurer, have been documented in several contexts. They can be influenced by family structure, so that institutions affecting the stability of family structure, such as divorce, can be related to women attitudes toward government.

Our third assumption is that there is a cost for society associated with women's disenfranchisement. This cost is determined by a country's culture, and in particular its family culture, i.e., the perceptions of women's position within the family and in society at large, including women's economic, social, and political roles. Religion is a primary explanation of the observed cross country differences in such attitudes, with Catholicism being associated with a more traditional women's role and thus a lower cost of disenfranchisement.

We introduce the above three assumptions within a dynamic politico-economic model populated by overlapping generations of constant size and with stationary endowments, where men and women are matched within households which are the center of the decision making process. The technology combines capital with two kinds of labor endowments, physical and intellectual labor, in such a way that the richer in capital is an economy, the more highly rewarded is intellectual labor relative to physical. The government levies a proportional income tax in order to finance a public good.

In the resulting framework, we compare the preferred tax rate of the median voter under two alternative regimes: full male suffrage (with full female disenfranchisement) and universal suffrage. The tax rate is higher in the latter case because of the gender-related gaps in wages and public goods preferences, but will decrease with economic development at a speed which is influenced by the sensitivity of women's public goods preferences to their economic disadvantage. When the cost of women's disenfranchisement becomes higher than the cost of accepting the median voter's choice under universal suffrage, the male median voter is better off extending the franchise to women. We also explore the implications for the size of government, and show that its expansion following women's enfranchisement is to be expected only in societies where the cost of disenfranchisement is high relative to the gender-related gaps in wages and public goods preferences, i.e., in countries with a progressive culture. To sum up, our simple framework captures the complex interactions

between economic, cultural, and political factors, while at the same time it allows to identify a precise set of testable implications.

The second part of the paper tests the above implications for a sample of 22 countries over the 1870-1930 period. The model's main predictions are that the decision to enfranchise women is affected negatively by the gender gaps in wages and in the preferences for public goods, positively by the cost of disenfranchisement. We proxy the gender wage gap inversely with the level of income per capita. We capture the cost of disenfranchisement with a measure of society's culture given by religion, where the presence of Catholicism is associated with a more conservative perception of gender roles and thus with a smaller cost. The proxy we employ for the parameter that measures the gender gap in the preferences for public goods is the availability of divorce, which implies marital instability, a more vulnerable social and economic position for women, and therefore a higher female preference for government and redistribution. We show that, consistently with the model's predictions, women's suffrage correlates positively with the level of per capita income and negatively with the presence of Catholicism and the availability of divorce, even after controlling for the general level of democracy and a number of additional controls. Moreover, we show that the size of government tends to be positively affected by women's suffrage, as uncovered by previous studies, but also that the impact of the interaction between women's suffrage and the proportion of Catholics is negative. This finding can be interpreted as follows. The impact of women's suffrage is lower in conservative, Catholic societies where disenfranchisement costs are small, since under small costs the franchise is extended only when the gender gaps are small, implying a small increase in the resulting tax rate.

The paper is organized as follows. Section 2 introduces the related literature. Section 3 reviews the historical evidence on the enfranchisement of women and the evolution of divorce legislation in the relevant time period. Section 4 presents the model. Section 5 illustrates our dataset. Section 6 empirically tests the implications of the model. Section 7 summarizes our findings and indicates directions for related future research.

2   Related literature

While the issue of franchise extension has recently received considerable attention within the literature on institutions, with contributions by Acemoglu and Robinson (2000), Bertocchi and Spagat (2001), Justman and Gradstein (1999), Lizzeri and Persico (2004), and Llavador and Oxoby (2005),

few papers have so far specifically focused on the determinants of the extension of the franchise to women. While our goal is to provide both a theoretical and empirical investigation of the determinants of female empowerment, most other contributions are limited to the empirics. Kenny (1999) and Braun and Kvasnicka (2009) focus on franchise expansion in the US between 1869 and 1920 and provide evidence that men expanded the franchise to women first in Western states, where women were relatively scarce, since the consequent political costs were reduced. Geddes and Lueck (2002) find that the expansion of women's property rights in the US in the 1850-1920 period is associated with increases in wealth, the growth of cities, and greater levels of female human capital. Fernandez (2009) models the relationship between women's property rights and development and tests it for the same data, uncovering a negative correlation between survival-fertility and reform. Another theoretical contribution is offered by Doepke and Tertilt (2009), who show how the relative bargaining position of men and women within the family is shaped by education and human capital accumulation.

A closely related literature investigates the impact of women's enfranchisement on the size and composition of government. Lindert (1994) presents a broader empirical investigation on the determinants of the rise in social spending the 1880-1930 period. His sample therefore includes the unique transitional period between the males-only franchise and the extension of the franchise to women, for which he finds a positive impact on the size of government. Lott and Kenny (1999) investigate the same issue for the US in the 1870-1940 period and again find a positive effect. Miller (2008) shows that suffrage laws in the US were followed by immediate shifts in legislative behavior and large, sudden increases in spending, particularly for local public health. Aidt et al. (2006) focus on the impact of democracy on government spending in 1830-1938 Europe and confirm that female suffrage has a positive impact, through spending on collective goods such health, education and welfare. They also stress the differential impact of franchise extension to men and women, where the former had contributed to the general growth in government mainly through an expansion of spending on security and long-term public services. Aidt and Dallal (2008) present further evidence on a positive and sizeable long-run impact of women's suffrage on spending for six Western European countries for the period 1869-1960. The post-war experience is often focused on the case of Switzerland, which granted women voting rights only in 1971, thus providing ground for a unique natural experiment. Abrams and Settle (1999) show that women's suffrage raised the overall size of the Swiss government, and that this occurred through welfare spending, but not government consumption. At the cantonal level, Funk and Gathmann (2005) find larger gender

differences regarding the scope, rather than the size, of government, with a negative overall impact and differential effects across different kinds of expenditures. For instance, women oppose some types of expenditures such as welfare, education, security, while support environment and culture. Also at the cantonal level, Krogstrup and Walti (2006) find that including women in the electorate increases average per capita budget balances.[1]

The above literature on women's suffrage and government size is closely related to a parallel line of research which has studied the discrepancy between men's and women's political preferences. The common denominator between these two branches of the literature is the idea that women care more about social issues and that they tend to be poorer than men. The reasons for these differences can be found in societal modernization, which brings marital instability and a transformation of traditional sex roles. In particular, the diffusion of divorce and the evolution of the relevant legislation are viewed as possible reasons why, at least in the past few decades, women prefer higher public expenditures than men, and therefore vote for those parties, typically of the Left, that favor heavier public intervention. The argument already appears in the aforementioned paper by Lott and Kenny (1999) on the impact of women's vote on the size of the US government in 1870-1940. They suggest that the gender gap may arise from women's fear that they can be left to raise children on their own, and conclude that family breakdown and increasing divorce rates may be the channel through which women's preferences may affect government size. More recently, Edlund and Pande (2001) study the evolution of the political gender gap during the last three decades in the US, where women have increasingly favored the Democratic party, and again trace these developments to the decline in marriage. In particular, they show a strong positive correlation between state divorce prevalence and the political gender gap, with higher divorce prevalence reducing support for the Democrats among men but not women.[2] Washington (2008) tests the hypothesis that parenting daughters increases support for women's issues and shows that the propensity to vote liberally on reproductive rights is significantly increasing in a US Congress member's proportion of daughters. Oswald and Powdthavee (2010) model the idea that daughters make people more Left-wing and provide supporting evidence for Britain. How the composition of public spending can be affected by gender-based differences in tastes for public goods is the question addressed by Chattopadhyay

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[1]The relevance of gender for fiscal policy is also explored by Alesina et al. (2009), who review the theory of optimal taxation in light of the fact that labor supply elasticity is higher for women than for men, and show that income tax rates should be lower for women than for men.

[2]Friedberg (1998) also explores the impact of unilateral divorce laws on divorce rates, while Stevenson and Wolfers (2007) study the influence of divorce reforms on family formation decisions.

and Duflo (2004), who find that women's political influence in village councils in India matters substantially for the types of public goods provided.[3]

Since culture, as captured by religion, plays a crucial role in our theoretical and empirical analysis, we also contribute to recent research on the economic impact of culture, including papers by Fernandez and Fogli (2009), Giuliano (2007), Guiso et al. (2006), and Tabellini (2010). We focus specifically on religion, since religion is a particularly important cultural trait as far as family attitudes and the perception of women's role are concerned. Related contributions on religion include Bisin and Verdier (2000) and Botticini and Eckstein (2005). Specifically, Guiso et al. (2003) use the World Value Survey to identify the relationship between intensity of religious beliefs and attitudes toward women and find that religious people tend to be less favorable with respect to working women. However, they do not focus on the relative impact of different religious denominations. Algan and Cahuc (2006) provide international micro evidence to show that male breadwinner values are highly positively correlated with the fact to be a Catholic or a Muslim. Doepke and Zilibotti (2008) discuss the realtionship between the evolution of economic conditions and religion.

Finally, this paper also connects to the literature which has studied the economic position of women, linking it to the stages of the development process. The existence of a discrepancy between men's and women's earnings has been well documented at least since biblical times. Their gradual convergence since the second part of the nineteenth century, however, has also been substantial. Goldin (1990) shows that full-time earnings of American women rose from 46 to 67 percent of men's earnings over the 1890-1988 period, and relates these findings to the impact of industrialization and the increased importance of non-manual skills. Galor and Weil (1996) study the determinants of women's relative wage in a model where industrialization promotes the role of intellectual labor relative to an agrarian economy where physical labor is more rewarded. The gender wage gap can therefore be directly related to the agricultural share of labor, and tends to decrease as the role of agriculture declines. Owen and You (2009) find that the process of development has a positive impact on attitudes towards women and on the quality and quantity of women's human capital. The transition from agriculture to manufacturing influences not only the gender wage gap, but more generally the workings of the family, including parenting decisions and intergenerational links, as

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[3]Cavalcanti and Tavares (2010) explore another complementary reason why women may prefer larger government, by assuming that government spending decreases the cost of performing household chores. Experimental evidence from standard public goods games, collected by Cipriani et al. (2007), suggests that boys are less cooperative than girls.

established by Galor and Moav (2002) and Bertocchi (2006), respectively.

3 Historical evidence

In the first subsection below we present the main historical facts related to the extension of the franchise to women, including the timing of the relevant legislation and of the social struggle behind it. Among the determinants of women's suffrage that our model and the subsequent empirical analysis highlight, a prominent role is played by the evolution of divorce legislation, which we link to women's preferences for public goods. Since this topic has scarcely been addressed within the economics literature, in the second subsection we supply specific evidence on the history of divorce during the relevant time period. Table 1 summarizes information on the timing of the introduction of women's suffrage and divorce in the 22 countries of our sample. The discussion below is, however, more general, and thus touches on a larger set of countries.

3.1 The enfranchisement of women

In this section we briefly discuss the historical evidence related to the extension of the franchise to women. The period that goes from the end of the nineteenth century until the 1920s witnessed a first wave of extensions, despite marked cross country differentiation. In 1893 New Zealand became the first country to grant women the right to vote in national elections. Australia followed in 1902. In the US an organized movement on behalf of woman suffrage first emerged in 1848. By 1910 women had the right to vote in Wyoming, Utah, Idaho, Colorado, and Washington, but it is only following the active participation of women to World War I that in 1919 Congress passed by a narrow margin a woman suffrage constitutional amendment which was ratified by the states in 1920. Canada adopted national legislation on this issue in 1917.

Within Europe, the first country to extend the franchise to women in national elections was Finland in 1907. The rest of Scandinavia quickly followed suit, with Norway and Denmark also allowing women to vote before World War I, while Sweden waited until 1919. British women's struggle to achieve the right to vote has a long history culminating with the suffragettes movement, which intensified its action around 1905. Nevertheless, as for the US, it is only after World War I that women succeeded in achieving the vote, which in 1918 was granted to women over age 30. In 1928 the franchise finally became universal. Germany's Weimar Republic included women in the electorate in 1918. In the same year Austria and most Eastern European countries did so, while

Belgium and the Netherlands joined in 1919. Turning the attention to Southern Europe, Spain and Portugal enfranchised women in the 1930s, while a subsequent wave of legislation had to wait until after World War II, when France, Italy and Greece granted women the franchise in 1944, 1945 and 1952, respectively. A unique exception in Europe is represented by Switzerland, where women were granted the vote only in 1971.

Outside Europe, among the late-comers we find Japan, China and India, that granted women the franchise between 1945 and 1950. In Latin America there was a first wave of legislation in the 1930s (involving Ecuador, Chile, Brazil), while Argentina and Mexico only joined after World War II. Similarly, South Africa granted the franchise to white women in 1930, while most other African countries ratified the universal franchise in the post-decolonization constitutions. Currently, most countries in the world grant women the voting franchise, with a few exceptions, notably the countries of the Persian Gulf. However, Kuwait recently introduced women's franchise in 2005.

Fleck (1993) provides a synopsis for the developments just described. Further details are available for example in DuBois (1998) and Flexner and Fitzpatrick (1996).[4]

Opposition to women's enfranchisement came from a view of women as subordinate to men and unable to form independent political judgement, and from the idea - strongly supported by the clergy, and in particular by the Roman Catholic Church - that the only place for a woman was to be the home. In 1891 Pope Leo XVIII in Encyclic "Rerum Novarum" stated: *"Women (...) are not suited for certain occupations; a woman is by nature fitted for home-work, and it is that which is best adapted at once to preserve her modesty and to promote the good bringing up of children and the well-being of the family."* Eighty years later, in 1981, Pope Ioannes Paulus II in Encyclic "Laborem Exercens" reasserted the Catholic male breadwinner conception as follows: *"It will redound to the credit of society to make it possible for a mother – without inhibiting her freedom, without psychological or practical discrimination, and without penalizing her as compared with other women – to devote herself to taking care of her children and educating them in accordance with their needs, which vary with age. Having to abandon these tasks in order to take up paid work outside the home is wrong from the point of view of the good of society and of the family when it contradicts or hinders these primary goals of the mission of a mother".* The Protestant Reformation, on the other hand, introduced new values regarding the role of women (see Douglass, 1985), among which

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[4]To be noticed is that women's suffrage only represents a first step in the achievement of equal political rights, and generally comes before women are allowed to run for office. To be also noticed is that in most cases male suffrage became universal before female suffrage, and that there are very few examples of women being enfranchised before men of the same social class or race.

a belief in a woman's free choice of a husband, and in the importance of education for young girls, in order to allow them to read the Gospel. Indeed Luther's views on girls' education contrasted strongly with Catholic neglect (see Becker and Wößmann, 2008). In "Economy and Society" Weber attributes the dominant role of men in the public sphere in Catholic (and Muslim) countries to their mission to proselytize, which in practice involved the ability to raise an army and act by force. By contrast, Protestantism abolished this gender distinction by challenging the messianic role of the Church (see Algan and Cahuc, 2006). The Catholic Counter-Reformation responded to the Reformation with a further tightening of its attitudes on this matter.

Not surprisingly, given these premises, women's movements for enfranchisement followed quite different paths in countries with predominantly Catholic or Protestant population (i.e., the two main religions represented in our sample). In the latter, women's demands were much more aggressive. In England, back in 1647, Mary Astell fought to obtain more education for women. In 1792 Mary Wollstonecraft demanded for women those rights that the French Revolution had reserved for men only. In 1867 the first society for the enfranchisement of women was founded, among others, by John Stuart Mill. During the latter half of the 19th century, a number of campaign groups were formed in an attempt to lobby Members of Parliament and gain support. Active political campaigns followed, involving the founding of other activists groups, holding public meetings, writing letters to politicians, and publishing pamphlets. In 1903, two suffragettes were arrested and imprisoned for having disrupted a public speech held by a member of the government. A first march, involving over 3,000 women, was held in London in 1907. The media took notice, and the tactics implemented by the movement became increasingly violent, including an attempt in 1908 to storm the House of Commons and the arson of David Lloyd George's country home (despite his support for women's suffrage). Imprisoned suffragettes were force-fed and in 1913 Emily Davison was killed by a horse during a demonstration. In the US, as previously mentioned, women's struggle started in 1848 at the Seneca Falls Convention. In 1888 Elizabeth Cady Stanton and Susan B. Anthony organized the International Council of Women and in 1904 Susan B. Anthony founded the International Alliance of Women for Suffrage. Around the beginning of the twentieth century, women activists were subject to arrests and many were jailed. Even in countries with mixed religious affiliations, the Roman Catholic Church was the religious group that most consistently opposed women's suffrage. In 1906, for instance, the Nebraskans Catholic Church organized a strong opposition to the attempts to provide women access to the ballot box. Likewise, in New Zealand the Roman Catholic Church, contrary to other Churches, forcefully resisted extending the rights of women. In predominantly

Catholic countries, on the other hand, support for women's rights came from the socialist parties and workers' unions, despite the fact that sometimes even Left-wing parties were against women's enfranchisement, out of fear that women might make conservative political choices. In Italy, the socialist Anna Kuliscioff was a prominent figure of the women's movement, which was swept way by the advent of the fascism in the 1920s (see Petrosillo, 2006).

3.2 The introduction of divorce legislation

The standard reference for the history of divorce is Phillips (1988). He provides a broad analysis of the way divorce laws were transformed during the nineteenth century and the decades immediately following it.

In Europe, before the nineteenth century a sizeable number of countries with a Protestant population (the Netherlands, Sweden, Norway, Denmark, Finland and Switzerland) had provisions allowing divorce which dated back at least to the Reformation, while divorce was generally unavailable in Catholic countries. Religious authorities in Orthodox countries such as Greece and Russia allowed divorce, although they discouraged it. In 1783 divorce was extended to the non-Catholic populations of Austria and the Austrian territories, but Austria had to wait until the Nazi divorce law of 1938 for an extension of the legislation to Austrian Catholics. After the Napoleonic conquests, divorce - which had been adopted in France in 1792 with the Revolution, through a very liberal legislation - was introduced in the countries of the French Empire. With the Restoration, however, France abolished divorce in 1816, only to reintroduce it in 1884. In 1830 Belgium became independent but, despite the fact that it previously allowed divorce only to the non-Catholic population, it legalized divorce for all citizens using the Napoleonic Code as a model. In 1857 England's first divorce law was passed, after nearly three centuries of pressure. Previously, divorce in England had only been possible through an Act of Parliament. In Italy opposition by the Roman Catholic Church was strong, so that Italy did not recognized divorce in its 1865 new civil code after unification. In 1875 Germany extended divorce laws beyond the Protestant states of Northern Germany to Catholic states of the South. In Portugal and Spain divorce was introduced relatively early (1910 and 1932, respectively), only to be revoked in 1940 and 1939, and finally reintroduced in 1977 and 1981.

Moving outside Europe, the 1857 British divorce law had global implications since the British legislation became the model throughout the British Empire. Australia and New Zealand soon adopted similar provisions. However, divorce was not recognized in Canada at the federal level

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until 1968, while before that time the only way to get divorced was to apply to the Canadian Senate. In the US divorce legislation fell within the jurisdiction of the states. Many of the states of the North-East introduced divorce legislation soon after independence, in the 1780s and 1790s. In the South the developments were slower, but by 1860 all states except South Carolina had passed divorce laws. The Western states rapidly installed liberal divorce laws during the first decades of the nineteenth century. Japan had divorce provisions at least since 1868. In Argentina and Brazil divorce laws were passed in 1954 and 1975, respectively.

Post-war developments in Europe, beside the aforementioned cases of Spain and Portugal, include the cases of Italy and Ireland. Italy's introduction of divorce legislation in 1970 was followed by a fierce but unsuccessful struggle, supported by the Roman Catholic Church, to abolish it. In the Republic of Ireland divorce was prohibited by the 1937 Constitution. In 1986, the electorate rejected the possibility of allowing divorce in a referendum but, after a second referendum in 1995 the prohibition of divorce was repealed and, despite Church opposition, divorce was finally approved in 1996.

Moral and religious issues were raised during the decades preceding World War I within the discussion that surrounded the legislative activity. A long-debated question was whether divorce was harmful or beneficial to women. Proponents of divorce argued that women could only benefit from a legislation that protected them from oppressive marriages, while opponents feared that divorce would make women more vulnerable, both economically and socially. The women's rights movement was divided on the matter of divorce liberalization, and some feminists perceived divorce as a threat for women, rather than a way to liberate themselves. Even at the founding event in 1848 in Seneca Falls, the US women's movement was deeply divided about divorce, and a draft resolution advanced by Elizabeth Cady Stanton to liberalize divorce was defeated after a heated discussion.

Overall, by the outbreak of World War I divorce had spread geographically even in predominantly Catholic countries. At the same time, divorce had also become cheaper, faster and more easily accessible, by becoming available from regular courts (judicial divorce), rather than from legislatures (legislative divorce). Moreover, there was a general liberalization with an expansion of the grounds for divorce. The net effect of these changes, combined with more general social and economic developments, was a rapid increase in the number of divorces. The divorce rate (per $1,000$ population) increased in the US from 0.2 in 1860 to 0.9 in 1910. In the same year, the highest figures elsewhere were represented by Switzerland (0.41) and France (0.36), while most

other countries, including Australia and New Zealand, had rates below 0.2.

4   The model

4.1   Endowments

We consider an overlapping generations model where N individuals live for two periods. There is no population growth. In the first period of their life, individuals work and receive a wage income, which is entirely devoted to financing second period consumption and is therefore saved and invested in the capital market. In their second period, acting as capital owners, individuals receive the return to their savings and consume it entirely, after paying a proportional tax which is used by the government to finance a public good.

Individuals come in two kinds: men and women. Each group has equal size. Men and women differ in two dimensions. First, they differ in their endowments, since they are born with different proportions of two kinds of labor input. Following Galor and Weil (1996), we assume that men and women have equal endowments of intellectual input, but that men have more physical strength than women. To simplify, we assume that women have no physical strength. Beside gender heterogeneity, there is also individual heterogeneity. In particular, each man m, for $m = 1, 2, ..., \frac{N}{2}$, receives an identical number of units of physical labor, which we normalize at 1, such that $\ell^p = 1$, whereas each woman f, for $f = 1, 2, ..., \frac{N}{2}$, receives none. The endowments of intellectual labor ℓ^{im} and ℓ^{if} , for each man and woman respectively, are differentiated across individuals. For simplicity we assume that their distribution is the same for men and women, and that for both it is skewed to the right, i.e., both for men and women, the median intellectual labor endowment is smaller than the mean. All men are matched with all women in a perfectly assortative fashion according to their labor endowments, so that the best endowed man mates the best endowed woman, and so on. Marriage dissolution is not allowed. Society is therefore composed of households consisting of couples, which are denoted by h, for $h = 1, 2, ..., \frac{N}{2}$. It follows that the total supply of physical labor at each t is $L^p = \frac{N}{2}$, while the total supply of intellectual labor is $L^i = \sum_m \ell^{im} + \sum_f \ell^{if}$, for $m = 1, 2, ..., \frac{N}{2}$ and $f = 1, 2, ..., \frac{N}{2}$.

Men and women also differ in their preferences, as discussed below.

4.2 Technology

There are three factors of production: physical capital K, physical labor L^p, and intellectual labor L^i. Again following Galor and Weil (1996), at each time t the three factors enter in the production function as follows:

$$Y_t = a[\alpha K_t^\rho + (1-\alpha)(L^i)^\rho]^{\frac{1}{\rho}} + bL^p, \tag{1}$$

where Y_t is aggregate output, $a, b > 0$, $0 < \alpha < 1$, and $-\infty < \sigma < 1$. The first term in (1) can be interpreted as output of the modern sector, and the second term as output of the traditional sector. This functional form assumes that physical capital and intellectual labor exhibit complementarity in production, whereas physical labor is neither a complement nor a substitute for either. This formulation implies that, the richer in physical capital is an economy, the more highly rewarded is intellectual labor relative to physical labor.

All factors of production are assumed to earn their marginal products as determined by profit maximization under perfect competition. Given the structure of the production technology, the return to a unit of physical labor at time t, ω_t^p, and the return to intellectual labor at time t, ω_t^i, are

$$\omega_t^p = b, \tag{2}$$

$$\omega_t^i = a(1-\alpha)(L^i)^{\rho-1}[\alpha K_t^\rho + (1-\alpha)(L^i)^\rho]^{\frac{1-\rho}{\rho}}. \tag{3}$$

Each man earns a wage $w_t^m = \omega_t^p + \omega_t^i \ell^{im}$, while each woman earns a wage $w_t^f = \omega_t^i \ell^{if}$. Increases in the amount of physical capital, holding intellectual labor constant, raise the return to intellectual labor thus reducing the average wage gap between men and women, $\frac{\overline{w_t^m}}{\overline{w_t^f}}$. Each household's wage income is given by the sum of the husband's and wife's wage income, i.e., $w_t^h = w_t^m + w_t^f$, for $h = 1, 2, ..., \frac{N}{2}$.

4.3 Preferences

Both men and women derive utility from their own consumption, their spouse's consumption, and a public good g_t which the government provides at each t. However, men's and women's preferences differ since women display a more pronounced preference for the public good. This difference can be explained by the different social position of men and women, with women finding themselves in

a more vulnerable economic status. The gender-symmetric, altruistic utility functions of each man m and each woman f are respectively given by

$$u_t^m(c_t^m, c_t^f, g_t) = c_t^m + c_t^f + \gamma_t^M g_t, \tag{4}$$

$$u_t^f(c_t^f, c_t^m, g_t) = c_t^f + c_t^m + \gamma_t^F g_t, \tag{5}$$

where c_t^m and c_t^f are the respective levels of private consumption[5] at time t for a man m and a woman f born at time $t-1$ and γ_t^M and γ_t^F capture men's and women's differential preferences for the public good. For simplicity, we normalize the former at $\gamma_t^M = 1$, while we assume that γ_t^F increases with the gender wage gap, according to the following expression:

$$\gamma_t^F = 1 + \varphi \frac{\overline{w}_t^m}{\overline{w}_t^f}, \tag{6}$$

where $\varphi > 0$ is a parameter that captures the sensitivity of women's preferences to the average gender wage gap. This formulation implies that, the larger is women's economic disadvantage, the higher is their preferences for the public goods relative to men's. While modelling family breakdown is beyond the scope of the present model, we can think of the risk of divorce as a motivation for our assumption, since in the event of divorce women would be left with a lower income and thus a higher preference for redistribution. Clearly, for any strictly positive φ, women's preferences for the public good will remain higher than men's, even for equal wages. Notice, however, that the ratio $\frac{\overline{w}_t^m}{\overline{w}_t^f}$ never converges to 1 since physical labor is only endowed to men.

The government raises income tax revenues to finance the public good according to the following balanced budget constraint:

$$g_t = \tau \bar{y}_t^h - \frac{\tau_t^2}{2} \bar{y}_t^h, \tag{7}$$

where τ_t is a proportional tax rate set at t, such that $0 < \tau_t < 1$, $\bar{y}_t^h$ is mean income at t, and the second term captures tax collection costs. As in Meltzer and Richard (1981), τ_t is set through a political choice under majority voting. Voting takes place at each t on the contemporaneous level of the tax.

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[5]A more general non linear formulation could allow for a different weight attached by individuals on their own and their spouses' consumption.

4.4 The decision process

Within each household the decision process depends on the enfranchisement rules.[6] We shall distinguish between a males-only enfranchisement (ME) regime[7] and a universal enfranchisement (UE) regime that allows women's participation to political decisions on the tax rate.

4.4.1 The males-only enfranchisement regime

Under ME, each man maximizes his own utility, as given in (4). In doing so, by our assumption on preferences he also takes into account his wife's consumption, but he disregards his wife's preferences for the public good. Utility maximization is subject to a budget constraint given by $c_t^h \leq (1 - \tau_t)y_t^h - \delta$, where $c_t^h = c_t^m + c_t^f$, y_t^h is the couple's income, with $y_t^h = w_{t-1}^h r_t$, and r_t is the return to capital. The positive parameter δ represents the societal cost for women's disenfranchisement, which reflects both the struggle on the political arena and the tension within the private sphere. This cost can be related to a country's culture, and in particular its family culture, i.e., the perceptions of women's role within the family and in society at large, including their economic, social, and political roles. The more conservative is family culture, and the stronger the view of women as subordinate to men, the lower the cost.

To be noticed that the cost δ could alternatively enter directly in the utility function, even if the present formulation makes the subsequent derivation easier. The interpretation of δ as a goods cost can be defended by interpreting consumption in a broader sense, i.e., by assuming that conflict in society can reduce income (for instance, riots can destroy physical output, as in Bertocchi and Spagat, 2001) and/or that arguments within the family can reduce the enjoyment of consumption. The assumption that δ is fixed can be justified by the fact that a country's culture, and in particular family culture, is associated with slow-varying traits and traditions, such as religious affiliation. However, a fixed cost also leads to a vanishing weight of δ as output grows, which could be avoided by endogeneizing the cost of disenfranchisement as a decreasing function of, once again, the gender wage gap. This would generate a cost which is increasing over time, with a consequent acceleration of women's enfranchisement. An increasing cost would be consistent with the historical evidence regarding the gradual strengthening of the movement for women's suffrage.

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[6]For early contributions on the collective approach to household behavior see Apps (1982) and Chiappori (1988). For an application to the issue women's empowerment, see Doepke and Tertilt (2009).

[7]Consistently with most historical evidence, we assume that the issue of women's enfranchisement is posed only after universal franchise is reached for men.

Despite these considerations, for the sake of simplicity, we retain the time invariant formulation.

Given these premises, we can derive the optimal solution of the couple's problem under ME in two stages. We first derive optimal household consumption as

$$c_t^h = (1 - \tau_t)y_t^h - \delta. \tag{8}$$

Since the levels of male and female consumption enter linearly in the utility function, only household consumption matters. The corresponding indirect utility function is given by

$$v_t^m = (1 - \tau_t)y_t^h + (\tau_t - \frac{\tau_t^2}{2})\bar{y}_t^h - \delta. \tag{9}$$

It follows that the tax rate preferred by a man m is given by

$$\tau_t^m = 1 - \frac{y_t^h}{\bar{y}_t^h}. \tag{10}$$

Since indirect utility is single-peaked with respect to the tax rate, we can apply the median voter theorem and establish that, under ME, the equilibrium tax rate is the preferred tax rate of the male median voter, according to

$$\tau_t^{m*} = 1 - \frac{y_t^{h*}}{\bar{y}_t^h}, \tag{11}$$

where y_t^{h*} is the income of the median household. The tax is higher, the lower is the income of the median household relative to the mean.

4.4.2 The universal enfranchisement regime

Under the UE regime, each couple jointly maximizes the weighted sum of the wife's and the husband's utilities. For simplicity, we assume equal weights[8], i.e., under UE each couple maximizes

$$u_t^h(c_t^m, c_t^f, g_t) = \frac{1}{2}(c_t^m + c_t^f + g_t) + \frac{1}{2}(c_t^f + c_t^m + \gamma_t^F g_t) = c_t^m + c_t^f + \gamma_t^H g_t, \tag{12}$$

subject to a budget constraint simply given by $c_t^h \leq (1 - \tau_t)y_t^h$, since under this regime $\delta = 0$. The wife's preference for the public good is now taken into account in determining the couple's joint preference parameter $\gamma_t^H = \frac{1+\gamma_t^F}{2} = 1 + \frac{1}{2}\varphi\frac{\overline{w}_t^m}{\overline{w}_t^f}$. Therefore, by women's enfranchisement we mean

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[8]By introducing different weights we could consider different bargaining positions for men and women.

that women's preferences are fully taken into account in the joint selection of the tax rate. The optimal level of household consumption is now given by

$$c_t^h = (1 - \tau_t)y_t^h, \tag{13}$$

with the corresponding indirect utility function given by

$$v_t^h = (1 - \tau_t)y_t^h + \gamma_t^H(\tau_t - \frac{\tau_t^2}{2})\bar{y}_t^h. \tag{14}$$

The resulting preferred tax rate for household h under UE is given by

$$\tau_t^h = 1 - \frac{y_t^h/\gamma_t^H}{\bar{y}_t^h}, \tag{15}$$

where the level of the tax rate is increasing in the preference parameter.[9] Again the median voter theorem implies

$$\tau_t^{h*} = 1 - \frac{y_t^{h*}/\gamma_t^H}{\bar{y}_t^h}, \tag{16}$$

which is higher than the level of τ_t^{m*} derived in (11) because of the influence of γ_t^H.

To be noticed is that if marriage dissolution were explicitly allowed in the model, the utility functions in (4) and (5) could easily be adapted to standard individual utilities. Bertocchi (2007) shows that even under individual maximization women would select a lower tax rate than men, which suggests that a gender gap in the choice of taxation would occur also in a more complete model with endogenous dynamics of couple formation and dissolution.[10]

4.4.3 The enfranchisement of women

Assume now that the economy is initially in the ME regime: under which circumstances will men decide to extend the franchise to women by letting them participate into the couple's decision making process relative to the level of tax rate? Under the ME regime, the tax rate will be lower, but women's disenfranchisement bears a cost which must be weighted against these considerations. It follows that the male median voter is better off keeping women out of the electoral process when his indirect utility under ME is higher than under UE, i.e., if and only if the following inequality holds:

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[9]The ratio y_t^h/γ_t^H is a measure of "hedonic income", i.e., income discounted by a preference parameter. See Bolton and Roland (1996).

[10]Cubeddu and Ríos-Rull (2003) present a multi-period framework where family status can change over time and individuals maximize expected utility over each of its possible realizations, i.e., single vs married.

$$(1 - \tau_t^{m*})y_t^h + (\tau_t^{m*} - \frac{\tau_t^{m*2}}{2})\bar{y}_t^h - \delta \geq (1 - \tau_t^{h*})y_t^h + (\tau_t^{h*} - \frac{\tau_t^{h*2}}{2})\bar{y}_t^h. \tag{17}$$

After simple algebraic manipulations, the above expression reduces to:

$$(\tau_t^{h*} - \tau_t^{m*})y_t^h - [(\tau_t^{h*} - \frac{\tau_t^{h*2}}{2}) - (\tau_t^{m*} - \frac{\tau_t^{m*2}}{2})]\bar{y}_t^h \geq \delta. \tag{18}$$

The LHS of (18) shows the cost of accepting the higher tax rate which would be chosen under universal enfranchisement, while the RHS shows the cost of women's disenfranchisement. If, at some t, the LHS becomes smaller than the RHS, so that (18) is no longer satisfied, then the male median voter is better off extending the franchise to women. As the economy industrializes and the reward to intellectual labor increases relative to physical labor, the relative wage of women increases, thus reducing the gender gap in the preferences for the public good and inducing a reduction in the implied τ_t^{h*} and thus of the LHS of (18). However, for a sufficiently low δ, it may happen that (18) is never reversed. In practice, the driving force of enfranchisement is the fact that economic development and the consequent reduction of the gender wage gap make the women's preferred tax rate closer to that of the men's. Since men face a cost of disenfranchisement, as the threat of a higher tax fades out, it makes less and less sense for the men to keep women from voting.

In more detail, three factors are involved in the determination of the timing of this decision. First, the larger is the cost of disenfranchisement, and more progressive is society's view of women's role, the sooner the franchise is extended to women. Second, the smaller is the men-women discrepancy in the preferences for the public good, as captured by φ, the sooner the enfranchisement. Finally, the franchise is extended sooner in societies where physical labor is less rewarded relative to intellectual labor, i.e., where capital accumulation and industrialization have reached a more advanced stage. The model therefore establishes a relationship between the level of economic development and women's political status.

4.5   Dynamic politico-economic equilibrium

We can now define the dynamic politico-economic equilibria of the model, under ME and UE, as follows.

Definition *A males-only enfranchisement (ME) politico-economic equilibrium is a sequence $\{K_t, \tau_t^{m*}\}_{t=0}^{t'}$ such that at each t utility (4) and profits are maximized, capital market clears, and the tax rate is optimally set by the median male, starting from a given initial condition. A universal enfranchisement (UE) politico-economic equilibrium is a sequence $\{K_t, \tau_t^{h*}\}_{t=t'}^{\infty}$ such that at each t utility (12)*

and profits are maximized, capital market clears, and the tax rate is optimally set by the median household, starting from a given initial condition.

The dynamics of the model can be studied by tracking the evolution of capital, starting from an initial $K_0 > 0$, as

$$K_t = \frac{N}{2}\overline{w}^m_{t-1} + \frac{N}{2}\overline{w}^f_{t-1} = g(K_{t-1}), \tag{19}$$

where the function g depends on the technology's parameters a, b, α, and ρ. Along the equilibrium path, as physical capital accumulates, women's relative wage increases, thus reducing gender inequality. Moreover, the redistribution scheme embedded in the way the public good is financed induces convergence of individual incomes. In the long run, the dynamical system evolves towards a steady state which is associated with constant values of consumption, capital, income and the tax rate.

Our main results are summarized in the following proposition.

Proposition *(i) The dynamic politico-economic equilibrium of the model switches from ME to UE at the time t' when (18) is no longer satisfied, i.e., when the cost of a suboptimal tax rate outweights the cost of disenfranchisement. (ii) The franchise is extended to women sooner, the lower is the gender wage gap, the lower is the public goods preference parameter φ, and the larger is the cost of disenfranchisement δ.*

To conclude, it should be noticed that any exogenous franchise requirement based on income, if added to the above framework as a constraint on men's decision making process, would further delay the enfranchisement of women since they are poorer than men. Therefore, we should expect the general level of democracy to facilitate the decision to enfranchise women.

The results we have reached so far also shed light on the implications of women's franchise for the size of government. Its expansion following women's enfranchisement is to be expected only in societies where the cost of disenfranchisement is high relative to women's relative wage and public goods preferences, i.e., those factors that imply a differencel between the political choice of men vs. women. Namely, in culturally conservative societies where such cost is low, it is legitimate to expect that enfranchisement occurs only when the wage gap is significantly reduced and/or when the preferences gap is moderate. This implies in turn a limited impact of enfranchisement on the size of government under these circumstances. On the other hand, in progressive societies where the cost is large, suffrage extension might be associated with a significant shift in the median voter's

choice and a subsequent large impact on the size of government. We summarize this finding as follows.

Corollary *For countries with similar levels of the gender-related wage and preferences gaps, the impact of the enfranchisement of women on the size of government increases with the cost of disenfranchisement.*

5 Data

We base our empirical investigation on the predictions of the model on a unique dataset we assemble for 22 countries over the 1870-1930 period. For most variables, we construct a five-year panel dataset, taking the observation at the beginning of each five-year period.[11] Detailed information on each variable and its sources is provided in the Data Appendix. Table 2 reports summary statistics for the variables in our dataset.

To test our main proposition, we construct the dependent variable by coding information on women's suffrage to construct a dummy for countries that have at least partial women's suffrage at the beginning of each five-year period. The model predicts three main candidates as determinants of the enfranchisement of women: the gender wage gap, the gender gap in public goods preferences, and the cost of disenfranchisement. In the following, we shall discuss how we select appropriate proxies for each of these variables.

First, while data on the gender wage gap are not available for our historical sample, our model predicts that it is inversely related to the general level of development, which can be measured by per capita GDP. The following evidence documents the existence of a strong correlation between the gender wage gap and per capita GDP. Time series evidence on wage ratios for males and females in manufacturing is illustrated by Goldin (1990) for the US, for selected years comprised within 1885 and 1925. The figures report a gradual decline, which is confirmed by the correlation of -0.56 we compute with the corresponding time series of per capita levels of GDP (in constant dollars, see Maddison, 2001). Over the cross section, on the basis of OECD data for the year 2005, CESifo compiles information on the difference in earnings between females and males of 55-to-64 years old for 19 of the countries in our sample. The correlation we compute between these data and per capita GDP is -0.54. Moreover, for the year 2006 and for the same sample of 22 countries which

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[11]We prefer this procedure to averaging the five-yearly data, since averaging introduces additional serial correlation.

enter our dataset, we find a correlation of 0.59 between per capita GDP and the World Economic Forum's index recording women's relative achievements in the realm of Economic Participation and Opportunity (which in turn inversely reflects a measure of wage equality). Finally, for 13 of our countries, Blau and Kahn (1988) supply a panel of micro data from the International Social Survey Programme, over the 1985-94 period, on the gap in earnings between men and women, corrected for differences in weekly work hours. The correlation we compute between their 1985-94 average earnings gap and the corresponding average per capita GDP is as high as 0.70. Taken together, the time series, cross section, and panel evidence that we collect both at the micro and macro level confirms the existence of a strong "first stage" relationship between the gender wage gap and per capita GDP,[12] that justifies our empirical strategy to employ (the logarithm of) per capita GDP as the main proxy for the gender wage gap.

Second, for the gender-based discrepancy in the preferences for the public good, we use as a proxy the presence of divorce legislation. We code this variable at the beginning of each five-year period. The idea is that the availability of divorce induces marital insecurity, which is particularly disruptive for women's finances, and therefore a higher preference for public goods for women in the face of an uncertain future. The idea is not new to this paper and is in fact advanced in a large and growing literature. It has first been proposed by Lott and Kenny (1999), who link women's higher preference for government expenditures in the US before 1940 to family breakdown and increasing divorce rates. Kenny (1999) argues that *"marriage typically encourages men to accumulate human capital and leads women to acquire household skills and shoulder most of the child rearing responsibilities. (...) Although the gains from this marital specialization and from efficient statistical discrimination in the labor market can be internalized through marriage, divorced women are unable to recoup the full compensation for their family-specific investments and single working women lose from labor market discrimination (...). Hence, single women as well as women who anticipate that they may become single may prefer a more progressive tax system and more wealth transfers to low-income people as an alternative to a share of a husband's uncertain future income."* These considerations lead this author to conclude that the economic damage of divorce for women negatively affects men's decision to allow women to vote. Miller (2008) explains the large increase in public health spending in the US, following suffrage laws, with the fact that women's choices

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[12]To be noticed is also that the decision to enfranchise women is generally preceded by a gradual rise of women's labor force participation (see Costa, 2000), which is also correlated with income growth and reinforces the impact of the reduction of the gender wage gap.

emphasize child welfare and the provision of public goods more than those of men. The fact that women care more about child welfare reinforces the influence of divorce since women anticipate that, if the marriage ends, they will retain custody of the children and will find themselves in the position to raise them on their own, with a consequent more compelling need of public support. The hypothesis that divorce may influence women preferences for government has also been explicitly tested in various contexts. Edlund and Pande (2001) trace the evolution of differential political preferences in the US to family breakdown and find, over the past three decades, a strong positive correlation between state divorce prevalence and the political gender gap, with higher divorce prevalence reducing support for the Democrats and larger government intervention among men but not women. Aidt and Dallal (2008), with a focus on six Western European countries for the period 1869-1960, explicitly recognize how, once divorce became legalized, *"(t)he increased risk of divorce encouraged women to turn to the state for financial support and insurance"*, which leads them to assert that *"(a) higher divorce rate is associated with more social spending as women, ceteris paribus, want the state to provide more safety nets."* Moreover, *"(w)omen prefer larger governments because they are more likely to benefit from the services provided and less likely to pay for them through progressive taxation. This is so for a number of reasons: Most importantly, the gains of household specialization are internalized by marriage, but unravelled by divorce."* Their regression analysis confirms that higher divorce risk leads to higher social spending when women have the right to vote.

To produce a sort of "first stage" evidence about the relationship between preferences for public goods and divorce, we combine data from the latest wave of the World Value Survey, published in 2009, for ten of our countries, on the following two survey questions. The first asked respondents to assess if they agreed with the claim that "Marriage is an out-dated institution". The second asked to evaluate their "Confidence in the government". The correlation between the fraction of respondents in agreement with the claim that "Marriage is an out-dated institution" and the fraction that declared "a great deal of" or "quite a lot" of confidence in the government is positive at 0.27. These findings suggest that in countries where the institution of marriage is less stable we do observe a more favorable attitude toward government intervention. While this evidence is of course only cross country, rather than cross gender, it does offer some indirect support to our working hypothesis that the introduction of divorce legislation can be an appropriate proxy for the gender gap in preferences for government. Nevertheless, we are aware of the fact our empirical analysis will have to face two potential problems: the endogeneity of divorce with respect to women's suffrage

and the possible omission of third factors driving both the dependent variable and the regressor. Our investigation will account for both concerns.

Third, we refer to the share of Catholic as a measure of the societal cost of women's disenfranchisement. As shown by Algan and Cahuc (2006), the conception of the gender role in society is strongly influenced by religion. Their analyze data by the World Values Survey and the International Social Survey Program which report religious affiliation alongside with individual preferences concerning family organization and the gender division of work, for the OECD in the 1980s and the 1990s. On this basis, they can show that Catholics, Orthodoxs and Muslims are more prone to the traditional male breadwinner conception than Protestants and atheists. In particular, people affiliated to the former religious groups tend to claim that women should not enter the labor market when jobs are scarce for men and that women could endanger family life by working. The influence of religion is robust to the inclusion of fixed country effects, suggesting a distinct role of religion if compared with other cultural traits. Within the sociology literature, Esping-Andersen (1990) also associates a conservative view of women and the family with Catholic countries. Building on the political science literature (see McDonagh and Price, 1985), in their analysis of women's enfranchisement in the US Braun and Kvasnicka (2009) find that a high share of Irish-born Americans tended to delay woman suffrage adoption and explain this result with the fact that for this predominantly Catholic group the traditional view of women was particularly pronounced. Finally, as discussed in 3.1, in Catholic countries the early movements in favor of women's rights had a slow and difficult development, and even within non-predominantly Catholic countries, such the US and New Zealand, the Roman Catholic Church was the religious group that most consistently opposed women's suffrage. To sum up, it is reasonable to assume that the cost of disenfranchisement is smaller in societies where culture, and in particular family culture, favors a traditional role for women. For our sample, the most important distinction appears to be the one between the Catholic and the other religions, so our proxy for the cost of disenfranchisement is the share of Catholics over population, with a higher share being associated with a lower cost. In the subsequent regression analysis, as for divorce, we will account for the potential problems of reverse causation and of omitted variables bias.

We complete our dataset with a variable capturing the overall level of democracy. To this aim we select a standard measure of democracy represented by the Polity variable from the Polity IV dataset, which includes information on several characteristics of a political system irrespective,

however, of women's suffrage. We also select additional economic, demographic and institutional variables which may play an independent role: namely, the agricultural share of labor, the level of urbanization, a proxy of human capital and education reflecting primary and secondary enrollments, a measure of fertility given by the young share of the population, and a dummy for a common law legal origin. Finally, beside controlling for fixed effect in both the geographic and temporal dimensions, we also focus on the peculiar impact of a single, major historical event such as World War I through a dummy for the year 1920.

To test the corollary we derived for our main proposition, we employ as dependent variable a measure of the size of government over GDP compiled by Lindert (1994) with a focus on social spending. In particular, spending for infrastructure and defense is not included.[13] Total government expenditures are also decomposed into expenditures for welfare, pensions, health, and housing. All government data are only available at the beginning of each decade, starting in 1880. Therefore, this second part of the empirical investigation is based on a ten-year panel dataset. The data are available for 19 of the 22 countries in our five-year dataset and exclude Germany, Ireland and Switzerland. Adapting previously cited specifications conducted over comparable samples, we include among our covariates (the logarithm of) per capita GDP, the agricultural share, a measure of the age structure of the population capturing the weight of the young, the level of democracy, a measure of the presence of Catholics, and the year 1920 dummy, in addition to the women's suffrage dummy which is the focus of our attention.

6 Empirical findings

6.1 The determinants of women's enfranchisement

We apply the intuition coming from theory and we investigate 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 a divorce legislation, and the presence of Catholicism as the dominant religion. We can now detail our hypotheses regarding the potential role of the above mentioned factors.

The level of per capita income is meant to proxy for the gender wage gap, with a higher income

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[13]For several countries in our sample the level of government expenditures is 0, especially in the initial decades. As described by Lindert (1994), very few governments paid nationwide subsidies for pensions, housing and unemployment in 1880.

being associated with a smaller wage gap and therefore with a smaller discrepancy between the tax chosen by the male median voter and that chosen jointly by the median household. Therefore, per capita income should exert a positive impact of the decision to enfranchise women.

The availability of divorce, if it proxies for marital insecurity and a larger discrepancy between male and female preferences for public goods, should induce a higher tax rate if women were allowed to vote, and therefore should delay women's enfranchisement. Divorce should therefore enter with a negative coefficient.

The more conservative is family culture, as captured by the presence of Catholicism, the less likely is that women are allowed a political voice. The coefficient of the Catholic share should therefore be negative.

Table 3 reports our regression results over the 1870-1930 period for the presence of women's suffrage. We start with a set of five-year pooled OLS specifications with robust standard errors clustered at the country level. In column (1) we present a first parsimonious specification showing that our three main determinants all enter with a significant coefficient and the expected sign.[14] In column (2) we control for the general level of democracy, since in some cases reforms regarding women's suffrage coincided with other political reforms, e.g., the change from majority rule to proportional representation or minor extensions of the male franchise (see Aidt and Dallal, 2008, for details), so that its consideration should allow to disentangle separate channels. As expected the coefficient is positive and highly significant. In column (3) we insert additional covariates which may contribute to women's enfranchisement. The role of the regressors previously examined is confirmed, while the level of urbanization, the quality of education and the agricultural share of labor turn out to be insignificant, which can be explained by their high correlation with income, so that their additional explanatory power is limited.[15] The impact of a common law legal origin is weakly significant and negative which suggests that, at the margin, common law countries were slower in implementing reforms.[16] The coefficient for the year 1920 dummy is positive, as suggested

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[14]In unreported regressions, our results are confirmed when we replace income with alternative measures of development, i.e., the agricultural share of labor and the level of urbanization, which should also be correlated with the gender wage gap. The correlations between per capita GDP and the agricultural share and urbanization are -0.82 and 0.77, respectively.

[15]When added to (2) one by one, the agricultural share of labor is insignificant, while urbanization has a positive coefficient, significant at 10%, and education has a negative and highly significant coefficient. The negative pairwise correlation between women's suffrage and education, which is somewhat surprising, could be justified by the fact that education in this historical period tended to be a privilege of men, and thus tended to increase the gender wage gap.

[16]To account for differential fertility patterns, unreported additional regressions also include the share of young in

by the historical patterns illustrated in Table 1, which confirms that the events associated with World War I accelerated the process of women's enfranchisement. This can be explained by the fact that the war, at least in some countries, opened to women economic opportunities previously unavailable, and possibly also changed attitudes toward government and the general influence of religion. To further clarify the possible channels through which the war, and its end, affected the dependent variable, we experiment with interactions between the 1920 dummy and the main regressors, but no statistically significant pattern emerges.[17] To sum up, the extended specification (3) allows to control for a number of additional factors which are not accounted for by the model, but their strength proves to be relatively weak in comparison with the robustness of the main theoretical links we identified.

In the following robustness checks, we always refer as a benchmark to the extended specification (3). Our results so far are based on OLS linear probability models but, in column (4), we show that results from a binary, probit model are broadly similar to those of the linear case, despite the fact that urbanization gains some significance at the expense of Catholicism.[18] The results presented so far need to be taken with caution, since our investigation is plagued by two potential concerns: endogeneity and omitted variables. To some extent, the two problems are actually linked, since the relationship between women's suffrage and our regressors may be driven, rather than by direct causality, by an omitted exogenous third factor affecting both. For instance, the availability of divorce may itself be driven by the same forces that drive women's suffrage. Even religion can be interpreted to be endogenous to the same political and economic changes that influence enfranchisement. Therefore, in column (5), to alleviate the potential problem of reverse causation between women's suffrage and its determinants we run a 2SLS regression where the five-year lags of all regressors are employed as instruments: all results hold despite the smaller sample.[19] Finally, in column (6), we exploit the panel dimension of the dataset. The regression in (6) includes temporal and cross region fixed effects (so that the year 1920 dummy is of course omitted). The latter are

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the population. When inserted alone to specification (2) this regressor displays a positive coefficient, which becomes insignificant when added to (3). Therefore, since this regressor drastically reduces the estimated sample size, we exclude it from the subsequent specifications.

[17] Duby and Perrot (1998) explain that World War I did not have the same economic meaning for women in all countries. While in most cases the war coincided with the massive entry of women in the labor market, as a replacement of male manpower, only in some countries, e. g., England, this renewed role of women persisted after the war and gained them political recognition.

[18] A logit specification yields results similar to the probit and is not reported for brevity.

[19] An alternative specification with ten-year lags as instruments produces similar results.

defined by assigning each country to one of three following regions: Continental Europe, Northern Europe, and the New World.[20] Not surprisingly, the significance level of our main three regressors is reduced, but their role is confirmed, while even the common law dummy loses its significance. This suggests that, despite the potential for omitted variable bias due to the fact that other constant factors may determine the relationship between women's suffrage and the regressors we focus on, correcting for these factors through fixed effects does not affect our results.[21]

Overall, even though the limitations of our dataset should call for caution in interpreting our results as causal, we can conclude that our theory of the determinants of women's enfranchisement, which highlights the role of specific economic, institutional, and cultural factors, finds support in the empirical evidence we provide.

6.2 The impact of women's enfranchisement on government size

A corollary of the main proposition in the model predicts that the impact of women's suffrage on the size of government should be larger in societies where the cost of disenfranchisement is high relative to those factors that imply a large differential between the political choice of men vs. women, i.e., the gender gaps in wages and public goods preferences.

We test this prediction using an empirical specification which treats the size of government as a function of the standard determinants employed in the literature, with and without women's suffrage. To be noticed is that we are not testing a general theory of the size of government. Since our main goal is not to study its general determinants, but to focus on the specific contribution of women's vote, we stick to a specification as similar as possible to those already available in the literature. The regressors we enter are the level of income per capita (in logarithms), the agricultural share, the share of young population, the degree of democracy, the share of Catholics, a dummy for the year 1920, and our dummy for women's suffrage. For a comparable sample of 21 countries over the same 1880-1930 period, Lindert (1994) finds a positive effect of women's suffrage on social spending.[22] Qualitatively similar results can be found for Europe in Aidt et al. (2006)

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[20] Continental Europe is the reference region.

[21] In unreported regressions (where the fixed common law dummy is of course omitted) we show that our results are confirmed with finer geographic fixed effects at the country level and, separately, with time fixed effects. However, when country and time effects are entered together, income loses its significance. However, given our sample size, where the spatial dimension, 22, exceeds the temporal one, 13, inserting fixed effects at the country level turns out to be a very demanding exercise, which results in too many dummy variables. The implied loss of degrees of freedom and potential multicollinearity thus drains the model of statistical power.

[22] Lindert (1994) includes the lagged value of per capita GDP and its growth rate, the lagged value of the agricultural

and Aidt and Dallal (2008), for samples of 12 countries in 1830-1938 and six countries in 1869-1960, respectively.[23]

The main innovation we introduce within the above described framework is to gauge the relevance of the interaction between the presence of Catholicism and women's suffrage, in order to clarify to which extent a conservative family culture retards women's suffrage at least until a stage at which its impact on government - through the gender gaps in wages and public goods preferences - is minimized. In other words, a negative sign for the interaction would indicate that in Catholic countries the impact of women's suffrage on government is reduced, if compared with non-Catholic countries. In fact, adding this interaction, the coefficient of women's suffrage would solely capture the impact on government size for non-Catholic countries. We therefore expect this coefficient to be larger than in a regression where the interaction is not considered.

Table 4 shows our main results using ten-year, Tobit[24] regressions with robust standard errors clustered at the country level. In column (1) we only consider standard determinants, without women's suffrage, and find a positive and significant impact for income per capita and democracy. The positive influence of income appears to support a luxury-good view of government as exemplified by Wagner's Law.[25] The coefficients of agriculture and the 1920 dummy are negative but not significant. Even if ours is not a theory of the general determinants of government size, since we specifically focus on the impact on government size of women's suffrage, we can briefly comment on the role of the newly entered regressors which are empirically relevant. The negative impact of the presence of a relatively young population is in line with previous empirical studies, as it is that of the share of Catholics. The latter result indicates that Catholicism, which in our model affects government size indirectly though women's suffrage, also exerts a direct impact on preferences for social spending. This can be explained by the role of the Catholic Church as a provider of social service, and/or by the fact that in Catholic countries a more traditional family structure can ensure private provision of certain services.

share, the proportion of young and old individuals, the share of Catholics and Protestants, a democracy dummy, voter turnout, and the frequency of executive turnover.

[23]Aidt et al. (2006) include per capita GDP, the urbanization rate, a measure of the enfranchisement of men, a polity dummy, and the share of old population. Aidt and Dallal (2008) also consider gender-related regressors such as the divorce rate, the share of single women, and female labor force participation.

[24]The dependent variable is often 0 and limited to non-negative values.

[25]Since the relationship between government and income can be affected by simultaneity problems, we also run (but do not report for brevity) the same regression entering the lagged value of income per capita: the coefficients are very similar, even if as expected income loses significance (reduced to the 5% level).

In column (2) we add women's suffrage and find a positive, mildly significant impact for it, while the impact of the other regressors is confirmed.[26] In column (3) we show that adding an interaction between women's suffrage and the share of Catholics disentangles the channels through which women's suffrage affects the size of government. The coefficient of women's suffrage is now twice as large and strongly significant at 1%. Moreover, the interaction effect is also significant and with the expected negative sign. In more detail, without the interaction, the coefficient of women's suffrage - across all countries independently of their religion - is 0.37. Adding the interaction, the coefficient of women's suffrage, which now captures its impact for countries with no Catholics, jumps to 0.78. Likewise, for countries where Catholics represent 100% of the population, the impact of women's suffrage can be computed as the sum of the coefficients of women's suffrage and of the interaction, i.e., $0.78 - 0.97$, which becomes negative at -0.19. Even averaging over the fraction of the Catholic population, the impact of women's suffrage remains negative. Our results are robust to a number of alternative specifications which are summarized as follows. Adding divorce to the regression yields nearly identical results, as its coefficient is always insignificant. While our women's suffrage dummy refers to the year when legislation was passed, we also codified an alternative dummy with reference to the year when women first voted. In practice the two dummies are very highly correlated so that all the above results can be replicated with the alternative dummy definition. Finally, the sign and significance of the coefficients of women's suffrage and of its interaction with the Catholic share are confirmed in panel OLS panel regressions with fixed country and time effects together, even if all the other regressors except democracy lose their significance under these restrictions.

Overall, our results confirm the relevance of women's suffrage as a determinant of the size of government and, more importantly, suggest channels through which this influence manifests itself. If, as implied by our theory of enfranchiment, women's suffrage is granted because of a large cost of disenfranchisement, as it is the case in countries with a more progressive culture towards women, the discrepancy between the tax rates chosen by a male alone and that chosen jointly by a household is such to imply an increase in the size of government, both because women are poorer and because they display a higher preference for public goods. On the other hand, in Catholic countries with a conservative family culture and a small cost of disenfranchisement we should expect women's suffrage to be granted only when a male and a female median voter would make

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[26]To address the potential problem of reverse causation between government size and women's suffrage, as an alternative we enter the lagged value of women's suffrage, i.e., women's suffrage at the beginning of the previous decade, to find similar results which we do not report for brevity.

a similar choice regarding tax rates, with a reduced impact on the size of government. However, there may be alternative interpretations of the significance of the interaction effect. It may indicate that female enfranchisement has a reduced impact in Catholic countries because of the smaller size of government as a result of more intense provision of social services by the Church and/or by the family. The latter interpretation would closely complement the main view advanced in the paper, since private services provided within the family also imply a traditional role of women in society.

It has been argued that women's suffrage might have an impact non only on the size of government, but also on its composition. In Table 5, again for Tobit specifications, we test this hypothesis by regressing our variables on each available component of government expenditures. This exercise is limited by the fact that the available data only cover social expenditures, while military and infrastructure expenditures are not included. Overall, regression results for individual components are weaker, as it is the case in all previous studies. The impact of women's suffrage differs across components. Nevertheless, we find that the pattern established for general expenditures is replicated by the pensions, health, and housing components, despite a lower significance level, while welfare expenditures are not significantly affected by women's suffrage. This exception can in part be explained by the differential timing of each component's growth. In particular, welfare expenditures, which essentially comprise old-style poor relief, were the first to be expanded during the initial decades of the sample, even before women were allowed to vote, while other forms of intervention were developed later, and therefore appear to be more closely associated with women's suffrage reforms which also came relatively late in the sample.

7   Conclusion

We have explored the determinants of women's enfranchisement and found that women are enfranchised sooner under a lower gender wage gap, a lower gender gap in the preferences for public goods, and a higher cost of disenfranchisement. Since the gender wage gap is in turn related to the relative reward of intellectual vs. physical labor, women's enfranchisement is accelerated by the process of capital accumulation and industrialization. Thus the model establishes a relationship between the level of economic development and women's political status. The driving force of enfranchisement is the fact that economic development makes the tax rate under universal enfranchisement closer to that applying under males-only enfranchisement, which in turn increases the relative cost of disenfranchisement. At the same time, the process is affected by additional factors that reflect the

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structure of the family and the dominant culture. We have also studied the implications of women's enfranchisement for the size of government, and shown that its expansion following women's enfranchisement is only justified in societies where the cost of disenfranchisement is high relative to the gender wage gap and the gender gap in public goods preferences.

We have empirically tested the implications of the model for a sample of 22 countries over the 1870-1930 period. We have proxied the gender wage gap with the level of per capita income. The proxy we have employed for the gender gap in the preferences for public goods is the availability of divorce, which implies marital instability and a more vulnerable social and economic position for women. We have captured the cost of disenfranchisement with a measure of society's culture given by religion, where the presence of Catholicism is associated with a more traditional view of women's role, and therefore a smaller cost of disenfranchisement. We have shown that, consistently with the model's predictions, women's suffrage correlates positively with the per capita income level, negatively with the presence of Catholicism and the availability of divorce, even after controlling for additional economic, demographic, and institutional controls. Moreover, our results suggest that the size of government is positively affected by women's suffrage only in societies with a more progressive family culture, as indicated by a negative coefficient of the interaction between women's suffrage and the proportion of Catholics.

The main focus of our investigation is the 1870-1930 period, since it includes the unique transitional phase between the males-only franchise and the extension of the franchise to women in those countries that are now modern industrial democracies. Nevertheless, some of the implications of our results can also be usefully applied to a comparative analysis of women's rights across countries with different levels of development. While most countries of the world now practice universal suffrage, the right of women to vote only represents a first stage in the process of full political, economic and social equality. Further understanding of the causes and consequences of women's rights is in our agenda for future research.

DATA APPENDIX

The sample includes 22 countries over the 1870-1930 period. The countries are Argentina, Australia, Austria, Belgium, Brazil, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the US. Data refer to the initial year of each of the 13 five-year periods, except for the data on government over GDP, government components over GDP, and the young share, which are only available at the beginning of each decade starting from 1880. In a few cases data from adjacent years had to be substituted. The following list describes each variable in the dataset and indicates its sources.

Women's suffrage: Dummy for countries that have at least partial women's suffrage. We construct this variable on the basis of information from Flora (1983), Lindert (1994), and a variety of library sources.

Log GDP pc: The logarithm of per capita GDP in 1990 International Geary-Khamis dollars. The source is Maddison (2001).

Divorce: Dummy for countries that allow divorce. We assume that divorce is not allowed if it is restricted to religious minorities (as for example in Austria) or if it is only achievable through an Act of Parliament (as for example in Canada). We construct this variable on the basis of information from Flora (1983) and Phillips (1988).

Catholic share: Catholics over population. Five-year data are adapted from ten-year data in Lindert (1994).

Democracy: Polity variable. The original range on the interval $[-10, 10]$ is normalized on $[-1, 1]$. The source is Polity IV (2002).

Agricultural share: Work force employed in agriculture over work force. The source is Banks (2001).

Urbanization: Aggregate population for cities above 50,000 over population. The source is Banks (2001).

Education: Primary and secondary school enrollment over population. The source is Banks (2001).

Common law: Dummy for countries with a common law legal origin. The source is La Porta et al. (1999).

Year 1920: Dummy for the year 1920.

New World: Dummy for countries located in the New World, i.e., Argentina, Australia, Brazil, Canada, New Zealand, and the US.

Northern Europe: Dummy for countries located in Northern Europe, i.e., Denmark, Finland, Ireland, Norway, Sweden, and the United Kingdom.

Continental Europe: Dummy for countries located in Continental Europe, i.e., Austria, Belgium, France, Germany, Greece, Italy, the Netherlands, Portugal, Spain, and Switzerland.

Young share: Population aged 20 to 39 over total population. The source is Lindert (1994).

Government/GDP: Total government social transfers over GDP. The source is Lindert (1994).

Welfare expenditures/GDP: Government expenditures for welfare over GDP. The source is Lindert (1994).

Pensions expenditures/GDP: Government expenditures for pensions over GDP. The source is Lindert (1994).

Health expenditures/GDP: Government expenditures for health over GDP. The source is Lindert (1994).

Housing expenditures/GDP: Government expenditures for housing over GDP. The source is Lindert (1994).

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Table 1
The timing of women's suffrage and divorce legislation

Country	Women suffrage	Divorce
NEW ZEALAND	1893	1867
AUSTRALIA	1902	Pre-1860
FINLAND	1906	Pre-1860
NORWAY	1913	Pre-1860
DENMARK	1915	Pre-1860
CANADA	1917	1968
AUSTRIA	1918	1938
GERMANY	1918	1875
IRELAND	(1918)	1996
UK	1918	1857
BELGIUM	1919	1807
NETHERLANDS	1919	Pre-1860
SWEDEN	1919	Pre-1860
US	1920	Pre-1860
PORTUGAL	1931	1910-1940, 1977
SPAIN	1931	1932-39 1981
BRAZIL	1934	1975
FRANCE	1944	(1792-1816) 1884
ITALY	1945	1970
ARGENTINA	1947	1954
GREECE	1952	Pre-1860
SWITZERLAND	1971	Pre-1860

Table 2
Summary statistics

Variable	Observations	Mean	Standard Dev.	Minimun	Maximum
Women's suffrage	286	0.19	0.39	0	1
Log GDP pc	266	3.41	0.22	2.83	3.80
Divorce	286	0.64	0.48	0	1
Catholic share	260	0.52	0.42	0.00	1.00
Democracy	247	0.39	0.60	-0.9	1
Agricultural share	204	0.40	0.16	0.06	0.71
Urbanization	241	173.84	100.46	0	486
Education	228	0.13	0.05	0.01	0.23
Common law	286	0.27	0.45	0	1
Year 1920	286	0.08	0.27	0	1
New World	286	0.27	0.45	0	1
Northern Europe	286	0.27	0.45	0	1
Continental Europe	286	0.45	0.50	0	1
Young share	114	0.53	0.05	0.43	0.67
Government expenditures/GDP	114	0.60	0.76	0.00	3.4
Welfare expenditures/GDP	114	0.28	0.36	0.00	1.69
Pensions expenditures/GDP	114	0.14	0.28	0.00	1.41
Health expenditures/GDP	114	0.18	0.27	0.00	1.28
Housing expenditures/GDP	114	0.01	0.05	0.00	0.37

Table 3
The determinants of women's enfranchisement

	(1) Pooled OLS	(2) Pooled OLS	(3) Pooled OLS	(4) Pooled Probit	(5) Pooled 2SLS[#]	(6) Panel OLS[##]
Dependent variable: Women suffrage						
Log GDP pc	0.81	0.47	1.12	4.52	0.95	0.67
	[0.11]***	[0.14]***	[0.33]***	[2.16]**	[0.46]**	[0.30]**
Divorce	-0.13	-0.20	-0.29	-2.36	-0.33	-0.13
	[0.07]*	[0.07]**	[0.09]***	[0.64]***	[0.10]***	[0.08]*
Catholic share	-0.24	-0.25	-0.50	-1.00	-0.56	-0.25
	[0.08]***	[0.08]***	[0.10]***	[0.85]	[0.11]***	[0.12]**
Democracy		0.29	0.36	11.20	0.48	0.25
		[0.05]***	[0.05]***	[3.19]***	[0.08]***	[0.06]***
Urbanization			0.001	0.004	0.001	0.001
			[0.001]	[0.002]*	[0.001]*	[0.000]
Education			-1.78	-9.03	-1.91	0.69
			[1.14]	[6.61]	[1.66]	[1.05]
Common law			-0.21	-1.23	-0.323	-0.09
			[0.10]**	[0.60]**	[0.12]***	[0.10]
Agric. share			0.46	-1.09	0.37	0.46
			[0.37]	[2.53]	[0.47]	[0.32]
Year 1920			0.25	1.52	0.24	
			[0.09]***	[0.57]***	[0.10]**	
Adjusted R^2	0.22	0.35	0.49		0.50	0.61
McFadden R^2				0.70		
Observations	240	212	154	154	133	154

Five-year panel. Standard errors in brackets. For pooled estimates standard errors are robust with clustering at the country level. [#] IV are original regressors, lagged five years. [##] Region and time effects included. * significant at 10%,** significant at 5%, *** significant at 1%.

Table 4
The impact of women's enfranchisement on government size

Dependent variable: Government expenditures/GDP			
	(1)	(2)	(3)
Log GDP pc	2.66	1.99	1.49
	[0.78]***	[0.70]***	[0.60]**
Agricultural share	-0.27	-0.32	-0.86
	[0.65]	[0.59]	[0.56]
Young share	-12.42	-11.12	-10.32
	[1.70]***	[1.43]***	[1.19]***
Democracy	0.34	0.25	0.18
	[0.13]**	[0.11]**	[0.09]*
Catholic share	-1.47	-1.34	-1.02
	[0.17]***	[0.18]***	[0.14]***
Year 1920	-0.21	-0.36	-0.40
	[0.15]	[0.19]*	[0.17**
Women's suffrage		0.37	0.78
		[0.18]**	[0.17]***
Women's suffrage* Cath.sh.			-0.97
			[0.41]**
Adjusted R^2	0.73	0.75	0.77
Observations	81	81	81

Tobit estimates. Ten-year panel. Robust standard errors in brackets, with
clustering at the country level. * significant at 10%, ** significant at 5%, ***
significant at 1%.

Table 5
The impact of women's enfranchisement on government components

	Welfare expenditures/ GDP	Pensions expenditures/ GDP	Health expenditures/ GDP	Housing expenditures/ GDP
Dependent variables:				
	(1)	(2)	(3)	(4)
Log GDP pc	0.10	0.68	0.93	1.04
	[0.31]	[0.48]	[0.32]***	[0.49]**
Agricultural share	-0.75	-0.34	-0.10	-0.56
	[0.33]**	[0.54]	[0.24]	[0.27]**
Young share	-5.56	-4.66	-3.40	-2.56
	[0.87]***	[1.25]***	[0.70]***	[0.64]***
Democracy	0.07	0.14	0.14	-0.12
	[0.07]	[0.07]*	[0.06]**	[0.06]*
Catholic share	-0.79	-0.21	-0.33	-0.01
	[0.09]***	[0.12]*	[0.07]***	[0.08]
Year 1920	-0.27	-0.12	0.005	-0.04
	[0.11]**	[0.12]	[0.09]	[0.08]
Women's suffrage	-0.03	0.51	0.20	0.08
	[0.14]	[0.15]***	[0.10]**	[0.07]
Wo.suffr.*Cath.sh.	0.13	-0.38	-0.57	-0.30
	[0.28]	[0.21]*	[0.20]***	[0.17]*
Adjusted R^2	0.62	0.56	0.63	0.52
Observations	81	81	81	81

Tobit estimates. Ten-year panel. Robust standard errors in brackets, with clustering at the country level. * significant at 10%, ** significant at 5%, *** significant at 1%.