

CONSTITUTIONS AND THE POLITICAL AGENCY OF WOMEN:
A CROSS-COUNTRY STUDY

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ABSTRACT

The under-representation of women in parliaments worldwide warrants attention at the underlying sources. This study examines one potential source: the countries' constitutions. Based on a large cross-country dataset, we demonstrate that women's representation in parliament is larger in countries with constitutional protection from gender-based discrimination. Our baseline estimates suggest that the presence of such protection results in over a three and a half percentage point increase in women's share of parliamentary seats. We probe some underlying mechanisms and show that places with constitutional protection from gender-based discrimination are likely to have legislations directly targeting women's under-representation. Our results underscore the role of constitutional design in promoting women's political agency.

KEYWORDS

Constitutions, laws, women, political agency, parliamentary representation, gender equality.

JEL codes: K00, J16, D72.

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INTRODUCTION

An important expression of agency is having a voice in society and influencing policy (World Bank 2011). However, women currently have less input than men in decision making in their communities and societies as they are heavily underrepresented in politics and government, especially in its upper reaches. Countries have made slow but significant progress on Millennium Development Goal 3, of “promoting gender equality and empowering women” (United Nations 2015). However, in many countries, gender inequality persists and women continue to face discrimination in political decision-making. As of 2014, only 39 countries (20.9 per cent of countries globally) had met the target set by the U.N. Economics and Social Council in 1990 of having 30 per cent or more women in national legislative seats (World Bank 2014). Addressing this important gender gap in agency will require a continuous and proactive policy commitment to gender equality. And the development of new policy will require a strong evidence base that incorporates recent advances in knowledge and makes use of available data and indicators.

This paper investigates the available knowledge and data on a key aspect of the current barriers to women’s agency: their under-representation in parliamentary decision-making. This expression of agency is important to women’s lives, with current evidence indicating that women’s representation in parliament influences policies in ways that are more relevant to the preferences of women (e.g. Sonia Bhalotra and Irma Clots-Figueras 2014; Raghavendra Chattopadhyay and Esther Duflo 2004). However, the legislative and other factors that influence women’s parliamentary representation are poorly understood.

This paper’s particular focus is on the role of formal legal institutions in enhancing women’s agency through parliamentary representation. We pursue the idea that constitutional protection from gender-based discrimination can bolster women’s exercise of agency, by

formalizing their individual and collective rights and providing them with frameworks to exercise their voice (World Bank 2012).

As such, the paper pursues some important themes of recent feminist legal and political scholarship. Helen Irving (2008, 1), for example, argues that a country's constitution has gender impacts partly because it frames "women's membership of, or absence from, the constitutional community." Posing the rhetorical question "what do women want from a constitution?", Irving (2008, 21) responds that, amongst other things, women want full opportunities for participation, and access to political positions and public office.

Beverly Barnes and Ruth Rubio-Marin (2005, 7-8) express a similar perspective. They observe that women who are active in feminist movements have begun to identify constitutions and constitutional change as relevant to our lives. They observe a number of important reasons for this, including the capacity that constitutional rights provide to women to challenge state activity in the courts, the visibility of constitutional provisions, and the tendency for constitutional rights to 'permeate' the general legal culture. Adele Cassola, Amy Raub, Danielle Folet and Jody Heymann (2014, 202) add to this list of reasons for feminist scholars to pay attention to constitutions, noting that constitutional gender protections can be leveraged to:

...oppose the passage of discriminatory legislation, litigate against existing laws and practices that violate women's rights, challenge customary and religious traditions that restrict gender equality, and encourage the passage of new legislation that promotes equal rights for women.

It is interesting to note in this context then that although there has been a substantial history of women's involvement in constitutional design, and gender analysis has been applied to a range of countries' constitutions, there is scant literature on the broad, cross-national

principles of constitutional design (see Irving, 2008, 28). Indeed, Barnes and Rubio-Marin (2005, 2) identify “a huge gap – a gender gap – in contemporary constitutional analysis.”

Barnes and Rubio-Marin (2005) attempted to redress this gap in the literature by examining the constitutions and constitutional jurisprudence in twelve countries (Australia, Canada, Colombia, Cost Rica, France, Germany, India, Israel, South Africa, Spain, Turkey, and the United States). Georgina Waylen (2006) pursued a similar approach in her study of the role of constitutions in the enhancement of women’s rights. Waylen conducted four detailed case studies (of Brazil in the 1980s, and South Africa, Poland and Argentina in the 1990s) and was especially concerned with assessing the effectiveness of constitutional change as a strategy for enhancing gender rights. Adele Cassola, Amy Raub, Danielle Folet and Jody Heymann (2014) took a more quantitative approach, and attempted to analyze data on the constitutional rights entrenched in 191 countries with the aim of describing the status of equal rights across genders in the world’s constitutions. They also document how constitutional gender provisions have evolved over time, and identify patterns of regional variation.

The conclusions of each of these studies identify the important role that constitutions can play in protecting and enhancing gender rights. However, each of the studies have also emphasised that the effects of constitutional change on women’s rights is likely to depend heavily on the conditions and context of the change, including the country’s legal traditions, its constitutional hermeneutics, and the presence of key participants who are open to gender concerns and prepared to take them on board. A common assessment is that whilst constitutional gender protections should not be viewed as a panacea for gender inequality, they do represent a valuable tool that can be used in the struggle for greater equality.

Our study contributes new empirical evidence on the relationship between constitutional gender provisions and gender equality by contributing a broad, cross-country

overview of the relationship between constitutional anti-discrimination provisions and women's parliamentary representation. We provide the first empirical evidence in support of the argument that constitutional design is an important institutional factor promoting women's political agency. Furthermore, we show that the entrenchment of a protection from gender-based discrimination in such a fundamental document as a country's constitution, gives rise to additional institutional factors previously shown to contribute to women's parliamentary representation.

LITERATURE ON WOMEN'S PARLIAMENTARY REPRESENTATION

Our study also builds on a relatively large empirical literature on the determinants of women's parliamentary representation. A range of empirical studies has sought to explain cross-national variations in the numbers of women elected to parliament. They have largely converged around three sets of factors: socio-economic, institutional and cultural (see, for example, Pamela Paxton, Sheri Kunovich and Melanie M. Hughes 2007, for a review). To date, however, the role of constitutional protection from discrimination has not been examined as an institutional factor promoting women's parliamentary representation.

Socio-economic factors are often regarded as the "supply-side" of politics (e.g. Vicky Randall 1987; Pippa Norris 1997) and are thought to influence the pool of potential female politicians. Explanations traditionally have focused on the levels of economic development and women's socio-economic status. Economic development can contribute to women's increased involvement in the public sphere through a number of mechanisms. First, economic development generally leads to a change in the nature of available jobs that are more conducive to women's paid work (e.g. Claudia Goldin 2006a; Claudia Goldin 2006b). Second, if economic development helps to liberate women from housework (e.g. Jeremy Greenwood, Ananth Seshadri and Mehmet Yorukoglu 2005) and results in new patterns of

their fertility (e.g. Grant Miller 2010), it can help women achieve greater independence and improve their capacity to pursue political careers. According to Pippa Norris and Ronald Inglehart (2001), the first phase of industrialization sees significant advances in women's educational attainment and their participation in representative government; they gain greater political influence in the second, post-industrial phase. However, not all types of economic development promote gender equality. Michael L. Ross (2008), in particular, argues that when economic development is based on oil and mineral extraction, it discourages women from entering the labour force and reduces their political representation.

The empirical evidence for the impact of socio-economic factors on women's parliamentary representation is mixed. Measures of economic development have been found to be significant in some previous studies of women's parliamentary representation (e.g. Ian McAllister and Donley T. Studlar 2002; Mark M. Gray, Miki Caul Kittilson and Wayne Sandholtz 2006) but not in others (e.g. Lane Kenworthy and Melissa Malami 1999; Pamela Paxton and Sheri Kunovich 2003). However, most empirical studies conducted to date have confirmed the importance of a country's economic structure and in particular, the negative implications of its endowments of oil reserves, for women's participation (Michael L. Ross 2008; Alice Kang 2009).

Several studies have considered specific mechanisms by which economic development may affect women's parliamentary representation, focusing on different measures of women's education and labour force status. With respect to women's educational attainment, there has been little evidence to support its link with women's parliamentary representation (e.g. Lane Kenworthy and Melissa Malami 1999; Pamela Paxton and Sheri Kunovich 2003). Similarly, a correlation between women's labour participation and their parliamentary representation has been documented in some cases (e.g. Torben Iversen and Frances Rosenbluth 2008; Daniel Stockemer and Maeve Byrne 2012) but not others (Lane

Kenworthy and Melissa Malami 1999; Didier Ruedin 2012). While the role of employment in specific professions has been emphasized, no consistent evidence for its relationship with women's parliamentary representation has been provided (e.g. Pamela Paxton 1997; Lane Kenworthy and Melissa Malami 1999).

A wide range of institutional factors generate differences in the “demand” for women's political representation (Pamela Paxton, Sheri Kunovich and Melanie M. Hughes 2007). By shaping the rules of the game, these factors influence the likelihood that women will be pulled into political office. Among the institutional factors, the level of democracy, electoral systems and gender quotas have been a particular focus of the literature (e.g. Pamela Paxton, Melanie M. Hughes and Matthew A. Painter 2010). However, the link between democracy and women's parliamentary representation is theoretically ambiguous. Women may encounter clearer rules and less arbitrary constraints when competing in elections under democracies. In non-democracies, on the other hand, there is scope for women to be placed into power even when they do not enjoy widespread public support (e.g. Jude Howell 2002). The role of the electoral system appears to be more certain, with proportional representation systems generally thought to be more conducive than plurality/majority systems to increasing women's representation (see, for example, Richard E. Matland 2005, for a detailed discussion). Proportional representation systems often have higher district magnitudes, which facilitate women's inclusion since the number of members elected per district increases, and closed party lists, which enable parties to place women in higher rank orders (e.g. Mona Lena Krook 2010). Finally, gender quotas are increasingly seen as an important instrument to achieve balanced gender representation in politics. As Esther Duflo (2012) argues, “...in the absence of affirmative action of some sort, it would be very difficult for women to break into politics”.

A large body of empirical literature has tested the relevance of institutional factors for

women's parliamentary representation across countries. The evidence on the relationship between democracy and women's parliamentary representation is mixed. The documented effect of democracy on women's parliamentary representation ranges from negative (e.g. Pamela Paxton 1997) to positive (e.g. Pamela Paxton, Melanie M. Hughes and Matthew A. Painter 2010), while many studies find no statistically significant relationship (e.g. Lane Kenworthy and Melissa Malami 1999; Pamela Paxton and Sheri Kunovich 2003). Considering the features of electoral systems, many studies find the women's representation to be higher in countries with proportional representation electoral systems (Andrew Reynolds 1999; Ian McAllister and Donley T. Studlar 2002). However, some find that its significance holds up only in Western industrialised democracies (Melanie M. Hughes 2009; Mona Lena Krook 2010). Gender quotas have been shown to significantly positively correlate with women's parliamentary representation in a number of studies (e.g. Li-Ju Chen 2010; Maria De Paola, Vincenzo Scoppa and Rosetta Lombardo 2010).

The third set of explanations for women's parliamentary representation focuses on cultural and ideological factors, which influence both the supply of and the demand for female candidates. As Pamela Paxton, Sheri Kunovich and Melanie M. Hughes (2007) argue, "...cultural ideas about women can affect women's levels of representation throughout the political process, from an individual woman's decision to enter politics, to party selection of candidates, to the decisions made by voters on election day". Studies have considered various sources of cultural attitudes, such as geographic location, religion and colonial history. Warfare may also impact the beliefs about gender roles by, on one hand, causing societies to become more hierarchical and male dominated, and on the other hand, generating a greater need for female involvement in economic and political fields outside of the home (Alberto Alesina, Paola Giuliano and Nathan Nunn 2013). Melanie M. Hughes (2009) argues that warfare may affect women's parliamentary representation not only through cultural but also

through socio-economic and political forces.

Empirical studies have provided some evidence on the role of cultural and ideological factors. With respect to geographical location some studies find, for example, that Asia and Middle East have lower levels of female representation, while Scandinavian and “Marxist-Leninist” countries have higher levels of female participation in parliament (e.g. Pamela Paxton 1997; Pamela Paxton and Sheri Kunovich 2003). There is also some evidence to support the role of religious beliefs in driving women’s parliamentary representation, however it is not conclusive. In particular, the argument that Muslim countries hold gender values detrimental to women’s representation in parliament has received support in some studies (e.g. Lane Kenworthy and Melissa Malami 1999; Andrew Reynolds 1999), but not in others (e.g. Pamela Paxton 1997; Michael L. Ross 2008). With respect to differences across religions, Andrew Reynolds (1999) finds that the greatest contrasts are between predominantly Christian countries and countries of other religions, including Islam. Because of the influence of Western European colonization on the subsequent development of institutions, studies have considered the impact of colonial history on women’s parliamentary participation. However, no conclusive evidence has been arrived at (e.g. Pamela Paxton, Melanie M. Hughes and Jennifer L. Green 2006; Kathleen M. Fallon, Liam Swiss and Jocelyn Viterna 2012). Finally, considering the implications of warfare, Melanie M. Hughes (2009) finds that certain types of civil conflict positively affect women’s parliamentary representation.

DATA AND APPROACH

Whilst a large empirical literature on the determinants of women’s parliamentary representation clearly now exists, the role of constitutions in affecting the share of women elected to parliament has thus far not been explored. We attempt to address this gap in the

literature by considering, first, the direct link between constitutional protection from gender-based discrimination and women's parliamentary representation. We also explore possible indirect linkages, including those between constitutional protection from gender-based discrimination and other institutional factors relevant to women's parliamentary representation, such as gender quotas.

Our analysis of the effect of constitutional protection from gender-based discrimination on women's parliamentary representation is based on a cross-section of countries in 2011 - the latest year for which data on variables relevant for our study are available for a large sample of countries. Many previous studies of women's parliamentary representation have dealt with small sample sizes (e.g. Ian McAllister and Donley T. Studlar 2002; Pamela Paxton and Sheri Kunovich 2003), and may have suffered from regional biases, despite their universalizing assertions (Mona Lena Krook 2010). Our study does not face that shortcoming. After dropping observations with missing data on key variables, we still remain with 106 countries in the baseline sample, covering different regions of the world. Our analysis is based on a multivariate regression framework that includes a wide range of variables derived from well-established data sources. In contrast with most previous studies, we consider the problem of endogeneity in estimating the relationship between constitutional protection and women's parliamentary representation by utilising 2SLS regressions, in addition to our baseline OLS regressions. Below we provide the details on the measurement of variables and our estimation approach.

Variables

The set of variables used in the baseline regressions, together with details on their measurement and sources is outlined in the first two columns of Table 1. Our dependent variable is *women in parliament* defined as the percentage of parliamentary seats in a single

or lower chamber held by women and comes from the World Bank (2014) (sourced from the Inter-Parliamentary Union). This measure is widely used in other cross-country studies of women's political representation (e.g. Lane Kenworthy and Melissa Malami 1999; Eileen McDonagh 2002; Michael L. Ross 2008; Pamela Paxton, Melanie M. Hughes and Matthew A. Painter 2010).

The key explanatory variable of interest is the presence of constitutional protection against gender-based discrimination, which is derived from Women, Business and the Law (WBL), a publication on gender differentiations in legal treatment that affects women's opportunities, jointly produced by the International Finance Corporation and the World Bank. WBL is "the only dataset measuring the gender gap in legislation using quantitative and objective data". The dataset offers several unique features (International Finance Corporation and World Bank 2012). First, it is based on information derived directly from laws and regulations. Second, because standard assumptions are used when collecting data, comparisons are valid across economies. The data was collected in three waves, current as of June 2009, March 2011 and April 2013. Mohammad Amin and Asif Islam (2014) recently used the same data source in their cross-country study of the effects of non-discrimination clauses in hiring practices on women's employment.

WBL provides information on whether a "non-discrimination clause covering gender or sex" is present in a country's constitution. Based on this information we define a variable *constitutional protection* that takes on the value of 1 "if the constitution explicitly includes gender or sex as protected categories for non-discrimination" and 0 if "there is no non-discrimination provision, or if there is a non-discrimination provision that does not include gender or sex as a protected category" (International Finance Corporation and World Bank 2012). This variable is defined based on the data from 2011, the latest year for which data on other variables used in our study are available for a large sample of countries. In our sample

of 106 countries, 67 per cent have such constitutional protection.

To single out the effect of constitutional protection on women's parliamentary representation, our analysis incorporates controls for a number of other potential determinants. We attempt to include measures of the variables identified as important in previous studies. However, we also select from the list to avoid the danger of overcontrolling, given that some of these variables may be endogenous to constitutional protection. In particular, we do not include measures of women's education and labour market status, or the presence of gender quotas, as these are potentially left-hand side variables with respect to constitutional protection and may also be mechanisms by which constitutional protection affects women's parliamentary representation. Therefore, we would be estimating the effect of constitutional protection on women's parliamentary representation other than its effect through these variables, if they were included in the model. Leaving these variables out is necessary to obtain an estimate of the total effect of constitutional protection on women's parliamentary representation.³

First, we incorporate socio-economic factors. GDP per capita is one of the most widely used measures of economic development particularly in the literature on women's representation in labour force and politics (e.g. Ian McAllister and Donley T. Studlar 2002; Michael L. Ross 2008; Mohammad Amin and Asif Islam 2014). Accordingly, we control for economic development by including a measure of GDP per capita (in logs) and its square

³ We do attempt a robustness check with women's share of the labour force (which is likely to incorporate their educational attainment, among other things) included as an additional variable to explain women's parliamentary representation. The results are reported in Table 5. In an additional set of results reported in Table 6, we document the explanatory power of constitutional protection over the presence of gender quotas for women's parliamentary representation.

term.⁴ Additionally, to reflect the implications of a country's economic structure for women's participation, we include oil rents as a share of GDP as a control variable. Furthermore, following Michael L. Ross (2008), we also control for a country's share of economically active population due to its potentially significant effect on economic development due to the added productivity of this group.

Second, we add measures of the institutional determinants of women's parliamentary representation as controls. We include a dummy for proportional representation electoral systems. In addition, we control for a country's level of democracy by including their Polity score – a standard measure based on Polity IV database (Monty Marshall and Keith Jagers 2014). In an effort to single out the effect of constitutional protection from other legal rules relevant for women's political representation, we additionally control for three sub-traditions of civil law – French, German and Scandinavian with English common law being the excluded category. A large body of research has shown that the historical origin of a country's laws is highly correlated with a broad range of its legal rules and regulations, as well as with economic outcomes (Rafael La Porta, Florencio Lopez-de-Silanes and Andrei Shleifer 2008). Furthermore, the history of constitutionalism is another factor that may have broad implications for the presence of constitutional protection as well as outcomes correlated with women's representation, such as the stability and different characteristics of the governing regime. We therefore additionally control for the number of years since enactment of a country's constitution.

Finally, we include factors to represent cultural norms relating to women's representation. We control for Muslim and Christian shares of the population. A country's share of European descendant population is included as a control, to capture the influence of

⁴ Claudia Goldin (1995) suggests that there is a U-shaped relationship between economic development and women's labour force participation.

mass European migration on beliefs around gender norms (Alberto Alesina, Paola Giuliano and Nathan Nunn 2013). Communist policies were dominated by concerns about labour shortages, the imperative of industrialization and values of equality, resulting in women being absorbed into the labour force rapidly (Anna Pollert 2003). To capture the influence of such policies on women's representation, we include a dummy for a country's communist past. To reflect the consequences of warfare for beliefs about gender roles, we include controls for the histories of a country's involvement in intra- and inter-state wars. We include continent fixed effects throughout.⁵

Estimation approach

We test the hypothesis that constitutional protection from gender-based discrimination will bolster women's parliamentary representation by estimating regressions of the following form:

$$WomParl_i = \alpha_1 + \alpha_2 Const_i + \alpha_3 X_i + \varepsilon_i \quad (1)$$

where i indices countries; $WomParl_i$ is the share of parliamentary seats in a single or lower chamber held by women; $Const_i$ is a dummy for a country whose constitution has a non-

⁵ By including continent fixed effects we do not explicitly control for the Middle East, a region where women lag in their representation. However, rather than proxying for the potential disadvantage faced by the women of the Middle East through the use of a region fixed effect term, we use two direct measures: Oil rents and Muslim share of the population. This approach of directly controlling for key region-specific determinants of women's representation instead of a region itself is consistent with other studies in the literature (e.g. Andrew Reynolds 1999; Alberto Alesina, Paola Giuliano and Nathan Nunn 2013).

discrimination clause covering gender or sex; X_i denotes the baseline control variables from Table 1 and ε is an unobservable component with a zero mean and a finite variance.

Our estimation proceeds in several steps. First, we estimate the above regression equation to measure the correlations between the key variables of interest. This produces a set of baseline results. Second, we provide a number of robustness checks, and in particular, address the various problems in drawing inferences about the nature of causal relationships from the baseline results. Specifically, while parliamentary representation, as well as other variables, are defined as of 2011 in our baseline estimations (unless explicitly specified otherwise), we attempt an estimation with a single, longer time period where we link the average of women's parliamentary representation over the ten years leading to 2011, with *constitutional protection* and other controls at the start of that period. This approach helps to diminish the likelihood of reverse causation. In a further step, we address the concerns over endogeneity directly, by means of IV estimation. We hypothesize that the comprehensiveness of a constitution in terms of the total number of rights provisions could be a valid instrument for the provision on non-discrimination on the basis of gender. We discuss this instrumental variable strategy and demonstrate its validity in the robustness checks section.

An alternative approach to deal with the problem of endogeneity would be to use a panel data analysis of constitutional protection and women's representation in parliament. Having more than one observation for a country, we could control for time invariant unobservable characteristics of countries. However, constitutions do not often change over short periods of time. With respect to constitutional protection from gender-based discrimination, in the 20 years from 1990-2010, for example, only 32 out of the sample of 100 countries on which there is data have recorded a change (International Finance Corporation and World Bank 2014). Hence we choose to have a larger and more diverse cross-section of countries for analysis in this paper.

RESULTS

Descriptive statistics

In the last three columns of Table 1, we report the descriptive statistics (means, standard deviations, minimum and maximum values) of all the variables included in our baseline analysis. Table 2 reports the means and standard deviations of the key variables of interest, *constitutional protection* and *women in parliament*, in different sub-samples. In the whole sample, 67 per cent of countries have constitutional protection, however, in the group of OECD countries this rate falls to 50 per cent. There are also differences across authority regimes, with constitutional protection more common in non-democracies (72 per cent) than in democracies (65 per cent).

Women's representation in parliament, which averages at 19.5 per cent, also exhibits a significant degree of variation across groups of countries. Importantly, given the research question pursued in this paper, it is only marginally lower (at 18.9 per cent) in countries without constitutional protection than in countries with protection (19.8 per cent). Nevertheless, the difference in women's parliamentary representation between places with and without constitutional protection persists when keeping income and democracy constant. Among OECD countries, women's representation is 23.2 per cent in places with no constitutional protection and 27.8 per cent in places with constitutional protection. Likewise, in the group of non-OECD countries, women's representation is 15.2 per cent in places with no constitutional protection and 17.4 per cent in places with constitutional protection. We observe similar patterns when considering the differences by authority regimes: in both democracies and non-democracies, women's representation is higher in places with constitutional protection. In the empirical analysis below we show that after controlling for a

number of other characteristics of countries, we observe a substantial positive effect of constitutional protection on women's parliamentary representation.

Baseline model

We further examine the relationship between constitutional protection and women's parliamentary representation through a regression analysis. In column (1) of Table 3 we report the results of an OLS regression that include countries' socio-economic characteristics as controls. In these results, *constitutional protection* has a positive and statistically significant impact on *women in parliament*. We also find a U-shaped relationship between economic development and women's representation in parliament. Furthermore, in accordance with the finding by Michael L. Ross (2008), we observe a negative impact of a country's endowments of oil rents (measured as a share of GDP) on women's representation in parliament.

In the next step of our investigation we additionally include measures of the institutional environment in the OLS regression model. The results are reported in column (2). They indicate that in the presence of these controls, the magnitude of the relationship between *constitutional protection* and *women in parliament* falls, however, it nevertheless remains significant. The relationships between variables relating to economic development and oil rents as a share of GDP, and women's parliamentary representation also remain statistically significant in these estimates. The results in column (2) additionally indicate that countries with a Scandinavian legal origin and those with older constitutions have more women in parliament. The estimated coefficient on the variable *proportional representation*, while positive and large in magnitude, is statistically insignificant. Consistent with a substantial prior literature (e.g. Lane Kenworthy and Melissa Malami 1999; Pamela Paxton

and Sheri Kunovich 2003), we do not find a statistically significant effect of democracy on *women in parliament*.

Column (3) reports the results of regressions where the list of explanatory variables is further augmented to include measures of cultural norms that might influence women's participation in parliament. The inclusion of these measures does not alter the estimated relationship between *constitutional protection* and *women in parliament* or the relationship between the measures of economic and institutional environment and women's representation (except for the coefficient on *age of constitution* which turns insignificant). Of the "cultural variables", *European descent share* has a positive impact on women's representation. This is unsurprising, given that this variable is used to proxy for the degree of Western European influence, a pioneering region with respect to the institutions favourable to women's representation. However, in the final model, reported in column (4), where we include continent dummy variables to control for differences in geographic location, this variable is no longer a statistically significant factor. The estimated coefficient on *constitutional protection* with and without continent dummies are essentially identical suggesting that it is not only identified from broad differences across different parts of the world, but from finer within-region variation.

Our estimates on constitutional protection are not only statistically significant they are also economically meaningful. Based on the estimates in column (4), comparing countries similar in a wide range of socio-economic, institutional and cultural characteristics and located within the same world regions, women's share of parliamentary seats is, on average, 3.5 percentage points higher in countries with constitutional protection from gender-based discrimination. This is equal to 18.1 per cent of the sample mean for *women in parliament* and 33.5 per cent of its standard deviation.

Robustness checks

We first consider the robustness of our results to influential observations. These are observations that, if deleted, could substantially alter important features of the analysis. We apply two standard rules to identifying the potentially influential observations. In column (1) of Table 4, we use the DFITS measure, which captures changes in the OLS slopes as individual observations are dropped from the sample, whereas in column (2) we use the DFBETA measure, which assesses how individual coefficients change as observations are dropped from the sample (see David A. Belsely, Edwin Kuh and Roy E. Welsch 1980 for details). We then re-estimate the OLS regressions excluding the corresponding set of possible influential data points. Baseline country controls and continent dummies are included in these and all the subsequent regressions, but not reported (available on request). The estimated coefficient on *constitutional protection* remains statistically significant when influential observations are removed. Moreover, using DFITS to eliminate influential observations results in an increase in the magnitude of the estimated coefficient to 4.533 from the baseline 3.529 (column (1)).

Next, we consider the robustness of the results to using alternative sets of control variables. While widely used, GDP per capita is by no means a perfect measure of economic development. Since the literature predominantly regards socio-economic variables as the “supply-side” of politics (e.g. Vicky Randall 1987; Pippa Norris 1997), the use of GDP per capita measure in baseline models controls for distributional effects. To allow for the possibility that economic development can also be a “demand-side” variable, we additionally control for the level of GDP (column (3) of Table 4). The estimated coefficient on *constitutional protection* remains robust to this change in the set of socio-economic controls. The coefficients on *Ln GDP per capita* and *Ln GDP* terms are insignificant under this specification. Additionally, we consider the use of GNI instead of GDP as our measure of

economic development to allow for the possibility that the material wellbeing of the residents of a country, along with foreign income, affects the key relationships. We re-estimate models with GNI per capita (and its squared term) (column (4)); and GNI per capita and level of GNI (column 5) used as our measures of economic development. The estimated coefficients on constitutional protection change remarkably little compared to the baseline estimates. The estimated coefficients on the GNI terms are insignificant.

We also consider the robustness of the results to using alternative measures of women's political representation as the dependent variable. Our baseline model is based on cross-sectional data in 2011. One concern with this approach is that it increases the likelihood of reverse causation. This issue is unlikely to be a substantial problem as less than a third out of the sample of 100 countries for which there is data recorded a change in their constitutions between 1990 and 2010 (International Finance Corporation and World Bank 2014). Nevertheless, to address the possibility of reverse causation we consider an alternative model whereby we use women's parliamentary representation averaged over the 10 years period from 2002-2011 (the data come from International Finance Corporation and World Bank 2014, a source documenting the evolution of gender parity in laws in 100 countries). Column (7) of Table 4 reports the results using this dependent variable with *constitutional protection* and other time-variant controls measured as of 2002. This test also helps us gauge the sensitivity of the results to the time period used in the baseline estimation. As the reported results demonstrate, this change in estimation has virtually no impact on our results. Additionally, we consider the relationship between constitutional protection and the growth rate of women's parliamentary representation, instead of its level, averaged over the period from 2002-2011 (*constitutional protection* and other time-variant controls are measured as of 2002). As the results reported in column (8) demonstrate, the relationship between *constitutional protection* and the average growth rate of women's parliamentary

representation is statistically significant and positive. As a final step, we consider a further alternative measure of women's political representation: the share of ministerial positions occupied by women. Data on this variable is available as of 2012 from the World Bank (2014). As the results reported in column (9) of Table 4 demonstrate, the estimated relationship between *constitutional protection* and *women in cabinet* is positive and similar in magnitude to the relationship between *constitutional protection* and *women in parliament*. However, the estimated standard error is large, yielding the coefficient statistically insignificant. This potentially suggests that while constitutional provisions contribute to the advancement of women into parliaments, they do not raise the glass ceiling for women in politics to the degree that would enable their representation in ministerial cabinet positions – a possibility that needs to be validated by future research.

Addressing endogeneity

The results so far suggest a positive effect of constitutional protection on women's representation in parliament. However, while including a large set of controls likely mitigates the effect of unobserved heterogeneity, the estimated coefficient on *constitutional protection* may still remain biased if this set is not exhaustive. The possibility of reverse causation (with women's representation in parliament potentially leading to constitutions favourable to women) has also not been fully discounted. Here we directly address the issue of bias in our estimates by using an instrumental variable for identification. To be valid, such instrument needs to be correlated with *constitutional protection* but uncorrelated with *women in parliament*, except through the variables we control for.

The protection clauses on gender-based discrimination should be more commonly found in constitutions containing a large number of different human rights provisions. Motivated by this conjecture, we use the number of rights provisions contained in a country's

constitution as an instrument (sourced from Zachary Elkins, Tom Ginsburg and James Melton 2014). We re-estimate the relationship between *constitutional protection* and *women in parliament* using 2SLS regression. The first stage is reported in column (1) of Table 5. Our instrument is correlated with *constitutional protection* (this relationship is significant at the 1 per cent significance level). The corresponding second stage results reported in column (3) of the Table are consistent with our baseline results and confirm the positive and statistically significant relationship between *constitutional protection* and *women in parliament*. Moreover, they are higher in magnitude suggesting negative bias in our baseline estimates. Based on the Hausman test results reported at the bottom of Column (3), we reject the null hypothesis that *constitutional protection* is exogenous. This underscores the importance of addressing the endogeneity of *constitutional protection* in determining its effect on women's parliamentary representation.

The exclusion restriction implied by our IV regression is that, conditional on the controls included in the regression, rights provisions contained in a country's constitution have no effect on *women in parliament*, other than their effect through *constitutional protection*. We investigate the validity of this restriction by using a simple over-identification test. If the model is over-identified with more excluded instruments than included endogenous variables, we are able to test whether the excluded instruments are independent of the error term. To that end we add an indicator of whether the rights are included in a separate heading/document (rather than being incorporated into various parts) of a constitution as an additional instrument for *constitutional protection*. We use Hansen J statistic to test the null hypothesis that the instruments are uncorrelated with the error term. The over-identification test and the related results are reported in Table 5. In column (2) we report the first stage results using two instruments, while column (4) reports the corresponding second stage estimates of the effect of *constitutional protection* on women's

representation in parliament, which remains positive and significant. The results of the over-identification test appear at the bottom of column (4). The Hansen J test has a p-value of 0.33, failing to reject the null hypothesis. We therefore conclude that the test does not yield any evidence for a direct effect of our instrument on *women in parliament*.

As an additional test for the validity of the exclusion restriction implied by our IV regression, we conduct an easy-to-interpret informal test of exogeneity of *number of rights*, by directly regressing it against *women in parliament*. Column (5) reports the results of a regression that excludes *constitutional protection*. The coefficient on *number of rights* is significant, however it turns insignificant once *constitutional protection* is controlled for in column (6). This confirms that the impact of *number of rights* on *women in parliament* likely works through its effect on *constitutional protection*. This provides additional support for the validity of our instrumental variable approach and suggests that our estimates likely capture the effect of constitutional protection on women's parliamentary representation.

As a final robustness check of the results, we include women's share of the labour force as an additional explanatory variable for *women in parliament*, as suggested in some of the existing studies (e.g. Torben Iversen and Frances Rosenbluth 2008; Daniel Stockemer and Maeve Byrne 2012). We did not include this measure in the baseline model explaining women's parliamentary representation, as it is potentially endogenous to *constitutional protection*. This measure likely incorporates several aspects of women's supply, including their qualifications but also unobserved cultural aspects around participation (Didier Ruedin 2012). As the results of the 2nd stage regression reported in the last column of Table (5) show, *women in labour force* is statistically significantly linked to women's share in parliament. However, its inclusion produces only a modest drop in the *constitutional protection* coefficient. This also suggests limited scope for the possibility that *constitutional*

protection increases women's parliamentary representation by simply increasing the number of women who work outside the home.

Transmission mechanisms

Our finding on the positive effect of constitutional protection on women's parliamentary representation raises a number of important questions, especially about the reasons for the effect. We can suggest several. First, entrenchment of a provision against gender-based discrimination in a constitution may lead to an increased political representation of women directly through the electoral mechanism. For example, the provision may put extra pressure on political parties to have female candidates on their lists, and it may result in more resources and capacity for women to launch political careers and get elected. Second, a change in a country's political culture may result, leading to more favourable electoral outcomes for women not only through the increased supply of female candidates but also through increased participation of female voters and more votes given to female candidates. As Helen Irving (2005, 21) argues, constitutional provisions make important symbolic statements and help name disadvantage. In doing so they can create important impetus for positive change.

In most cases, however, constitutions rarely contain a lot of instrumental details but rather provide guidance on the type of decisions to be made. In the words of Peter C. Ordeshook (1993: 231f): "A constitution is not a piece of legislation; it is the mechanism people use to guide the formulation of legislation and law." To shed light on this issue we conduct two additional empirical explorations.

First, we explore whether constitutional protection from gender-based discrimination is systematically correlated with the legislated quotas for women's presence in the lower house of parliament (source: International Institute for Democracy and Electoral Assistance,

Inter-Parliamentary Union and Stockholm University 2014). In our estimation sample, 53.3 per cent of countries have some form of legislated quotas. The results of a bivariate probit regression model using the *number of rights* as an instrument for *constitutional protection*, as shown in column (1) of Table 6, suggest that having constitutional protection increases the probability of introducing quotas by 32.8 percentage points.

Second, we consider whether laws on non-discrimination in hiring practices on the basis of gender are also more likely to be found in places with constitutional protection (here our data come from the International Finance Corporation and World Bank 2012). In our estimation sample, 73.1 per cent of countries do have such laws. As the results reported in column (2) of Table 6 demonstrate, countries with constitutional protection have a 17.7 percentage point higher probability of having these laws. Therefore, it appears that the adoption of legislation targeting women's under-representation is a potentially important mechanism linking constitutions with women's political representation.

CONCLUSION

Based on a large cross-country dataset, this study has shown that women's representation in parliament is larger in countries with constitutional protection from gender-based discrimination. Our baseline estimates suggest that the presence of such protection results in over a three and a half percentage point increase in women's share of parliamentary seats. Our more detailed analysis of this data show that places with constitutional protection from gender-based discrimination are likely to have legislations directly targeting women's under-representation.

These results underscore the role of constitutional design in promoting women's political agency and suggest that constitutional building processes offer some opportunities to enhance and protect women's agency. Our findings thus support existing case study evidence

that suggests that constitutional provisions are an important part of the institutional structure influencing gender rights. This does not deny that a constitution, however progressive, will not *guarantee* gender equity. The presence of enforcement mechanisms, political finance and access to campaign funding are amongst a myriad factors affecting the ability to translate constitutional gender provisions into improved rates of women's representation in parliament. However, the constitutional provisions are an important part of this puzzle. As Helen Irving (2008, 21), argues, the wording of a constitution is of 'immense significance':

A well-designed constitution is better than one that is poorly designed, and a constitution that is well designed and also sensitive to the goals of gender equity, equity, and agency, is better still.

Thus, the struggle to protect and enhance women's agency should incorporate constitutional/legal strategies wherever they are possible. Constitutional protection from gender-based discrimination appears to be an important part of an enabling framework for the development of improved policies – and the achievement of better outcomes for women. These insights might be especially relevant to nations going through constitutional reforms and in those countries that do not have alternative (non-constitutional) capacities to ensure women's representation.

The empirical nature of this paper has produced a relatively 'broad-brush' analysis of the links between constitutional protections from gender-based discrimination and women's representation in parliament. It helps to identify – and justify – potential indicators of women's agency and voice relating to constitutions and other institutions. However, it does not contain the necessary, nuanced detail on how constitutional provisions might (and might not) translate into tangible policy outcomes. This task will need to be taken up in further, detailed case studies of constitutions (and constitutional change) and their effects on women's agency. Studies of this type ideally will also explore how the effects of constitutional gender

provisions are influenced by a range of potentially mitigating factors, such as enforcement mechanisms, political finance and access to campaign funding.

As improved data sets on gender distinctions in different laws become available it should also be possible to use more fine-grained measures to quantitatively assess the constitutional distinctions between countries and their relevance to women's agency. The efforts of Adele Cassola, Amy Raub, Danielle Folet and Jody Heymann (2014) are creating important new opportunities for work of this type. Their efforts to construct measures of a range of constitutional gender provisions (ranging, for example, from gender equality and non-discrimination to equality in family rights) suggest exciting opportunities for future studies of types of gender constitutional provisions that are most important to women's agency and key outcomes, such as the gender pay gap and levels of gender-based violence. With the passage of time, greater levels of constitutional change are likely to be measured⁶, and this will create further opportunities for empirical studies of the gender effects of constitutional provisions.

⁶ Adele Cassola, Amy Raub, Danielle Folet and Jody Heymann (2014, 210) note that it is currently difficult to measure change in constitutions.

TABLES

Table 1: Description of variables

Variable	Definition and source	Mean (s.d.)	Min	Max
Dependent variable				
Women in parliament	Share of parliamentary seats in a single or lower chamber held by women (World Bank 2014)	19.47 (10.54)	0.30	44.70
Independent variables				
Constitutional protection	Dummy for a country whose constitution has a non-discrimination clause covering gender or sex (International Finance Corporation and World Bank 2012)	0.67 (0.47)	0	1
Ln GDP per capita	Natural log of per capita GDP measured in constant 2011 international dollars based on PPP (World Bank 2014)	9.34 (1.07)	6.83	11.32
Oil rents	Oil rents as a share of GDP (World Bank 2014)	5.42 (12.28)	0	67.70
Working population age	Share of total population that is in the age group 15 to 64 (World Bank 2014)	64.45 (5.85)	48.84	73.74
Proportional representation	Dummy for systems with proportional representation/ where the candidates are elected based on the share of votes received by their party (Thorsten Beck, George Clarke, Alberto Groff, Philip Keefer and Patrick Walsh 2001)	0.70 (0.46)	0	1
Polity	Score capturing the regime authority spectrum on a 21-point scale ranging from -10 (hereditary monarchy) to +10 (consolidated democracy) (Monty Marshall and Keith Jagers 2014)	5.63 (5.40)	-9	10
English legal origin	Dummy for English legal origin (Rafael La Porta, Florencio Lopez-de-Silanes and Andrei Shleifer 2008)	0.24 (0.43)	0	1
French legal origin	Dummy for French legal origin (Rafael La Porta, Florencio Lopez-de-Silanes and Andrei Shleifer 2008)	0.57 (0.50)	0	1
German legal origin	Dummy for German legal origin (Rafael La Porta, Florencio Lopez-de-Silanes and Andrei Shleifer 2008)	0.16 (0.37)	0	1
Scandinavian legal origin	Dummy for Scandinavian legal origin (Rafael La Porta, Florencio Lopez-de-Silanes and Andrei Shleifer 2008)	0.04 (0.19)	0	1

Note – N=106; All variables are defined as of 2011 unless explicitly specified otherwise.

Table 1: Description of variables (continued)

Variable	Definition and source	Mean (s.d.)	Min	Max
Independent variables				
Age of constitution	Number of years since the constitution was enacted (Zachary Elkins, Tom Ginsburg and James Melton 2014)	43.54 (84.92)	0	796
Muslim share	Share of Muslim adherents as of 2010 (Zeev Maoz and Errol A. Henderson 2013)	21.65 (33.40)	0	99
Christian share	Share of Christianity adherents as of 2010 (Zeev Maoz and Errol A. Henderson 2013)	55.56 (35.04)	0	97.93
European descent share	Share of population in 2000 with ancestors from Europe (Nathan Nunn and Diego Puga 2010)	43.27 (43.71)	0	100
Communist past	Dummy for countries that had a communist system at any point since 1960 (Michael L. Ross 2008).	0.25 (0.44)	0	1
Years of intra-state war	Number of years between 1816-2007 that the country was involved in an internal war (Meredith Reid Sarkees and Frank Wayman 2010).	8.54 (13.57)	0	81
Years of interstate war	Number of years between 1816-2007 that the country was involved in an interstate war (Meredith Reid Sarkees and Frank Wayman 2010).	5.95 (9.23)	0	41
Africa	Dummy for a country in Africa	0.21 (0.41)	0	1
Asia	Dummy for a country in Asia	0.28 (0.45)	0	1
Europe	Dummy for a country in Europe	0.30 (0.46)	0	1
North America	Dummy for a country in North America	0.10 (0.31)	0	1
Oceania	Dummy for a country in Oceania	0.02 (0.14)	0	1
South America	Dummy for a country in South America	0.08 (0.28)	0	1

Note - N=106; All variables are defined as of 2011 unless explicitly specified otherwise.

Table 2: Descriptive statistics by subgroups

		Mean of <i>constitutional protection</i> (s.d.)	Mean of <i>women in parliament</i> (s.d.)		
			No protection (N=35)	Protection (N=71)	All (N=106)
All		0.67 (0.47)	18.88 (11.01)	19.76 (10.36)	19.47 (10.54)
Income	OECD	0.50 (0.51)	23.21 (9.00)	27.81 (10.53)	25.51 (9.91)
	Non-OECD	0.74 (0.44)	15.23 (11.43)	17.43 (9.15)	16.86 (9.75)
Democracy	Democratic	0.65 (0.48)	20.38 (10.03)	21.45 (10.66)	21.08 (10.39)
	Non-democratic	0.72 (0.46)	14.54 (13.13)	16.24 (8.92)	15.76 (10.08)

Note – Countries with Polity scores ranging from +6 to +10 are categorized as democratic (Monty Marshall and Keith Jagers 2014).

Table 3: Constitutional protection and women in parliament: OLS regressions

	(1)	(2)	(3)	(4)
Dependent variable: Women in parliament				
Constitutional protection	4.568** (2.051)	3.447* (2.053)	3.480* (1.978)	3.529* (1.982)
Ln GDP per capita	-31.749** (15.208)	-34.383** (15.820)	-31.873** (15.708)	-31.504* (17.004)
Ln GDP per capita squared	1.932** (0.818)	1.979** (0.839)	1.705** (0.844)	1.673* (0.912)
Oil rents	-0.272*** (0.076)	-0.272** (0.106)	-0.216** (0.085)	-0.207** (0.088)
Working age population	-0.332 (0.216)	-0.123 (0.220)	0.021 (0.264)	-0.026 (0.328)
Proportional representation		3.805 (2.368)	2.577 (2.553)	2.512 (2.973)
Polity		-0.105 (0.302)	-0.365 (0.277)	-0.409 (0.287)
French legal origin		0.737 (2.886)	-0.877 (3.397)	-0.801 (3.743)
German legal origin		-0.091 (3.605)	-0.963 (3.458)	-0.710 (4.201)
Scandinavian legal origin		16.961*** (3.009)	13.599*** (3.249)	13.485*** (4.264)
Age of constitution		0.011* (0.006)	0.008 (0.007)	0.006 (0.006)
Muslim share			-0.021 (0.041)	-0.018 (0.041)
Christian share			-0.003 (0.047)	0.004 (0.046)
European descent share			0.108*** (0.037)	0.076 (0.054)
Communist past			-3.900 (2.991)	-4.492 (3.041)
Years of intra-state war			0.008 (0.077)	0.005 (0.078)
Years of interstate war			-0.093 (0.118)	-0.088 (0.122)
Continent dummies	No	No	No	Yes
N	117	106	106	106
R-squared	0.21	0.36	0.44	0.45

Note –Robust standard errors are in parenthesis; * denotes significance at 10 per cent level, ** at 5 per cent level, *** at 1 per cent level.

Table 4: Constitutional protection and women in politics: OLS regressions - sensitivity checks

	(1)	(2)	(3)	(4)	(5)	(7)	(8)	(9)
Dependent variable:								
	Women in parliament					Women in parliament, average of levels 2002-2011	Women in parliament, average of growth rates 2002-2011	Women in cabinet
Constitutional protection	4.533** (1.735)	3.602** (1.471)	3.485* (1.970)	3.519* (2.014)	3.421* (1.977)	3.511* (1.964)	4.202* (2.483)	3.002 (2.170)
Ln GDP per capita	-37.936** (16.885)	-39.242** (17.311)	-1.091 (2.055)			-28.173* (15.359)	12.261 (19.201)	-32.419** (16.042)
Ln GDP per capita squared	2.069** (0.908)	2.126** (0.926)				1.645** (0.810)	-0.791 (1.034)	1.697* (0.867)
Ln GDP			0.278 (1.002)					
Ln GNI per capita				-27.553 (17.574)	-0.558 (2.035)			
Ln GNI per capita squared				1.491 (0.937)				
Ln GNI					0.310 (1.001)			
Other baseline controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Continent dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	101	97	106	105	105	73	71	104
R-squared	0.56	0.52	0.43	0.44	0.42	0.62	0.35	0.55

Note – (1) excludes observations based on DFITS; (2) excludes observations based on DFBETA. Robust standard errors are in parenthesis; * denotes significance at 10 per cent level, ** at 5 per cent level, *** at 1 per cent level.

Table 5: Constitutional protection and women in parliament: Addressing endogeneity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	2SLS 1st stage		2SLS 2nd stage		OLS		2SLS 1st stage	2SLS 2nd stage
	Dependent variable:							
	Constitutional protection		Women in parliament		Women in parliament		Constitutional protection	Women in parliament
Constitutional protection			8.068*** (3.122)	9.271*** (3.324)		1.912 (2.466)		7.360** (2.863)
Women in labour force							0.002 (0.009)	0.579*** (0.130)
Number of rights	0.017*** (0.002)	0.018*** (0.003)	Excluded	Excluded	0.134** (0.055)	0.102 (0.067)	0.017*** (0.003)	Excluded
Section on rights		0.488** (0.223)		Excluded				
Baseline controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Continent dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F-test of excluded instruments	44.10	18.68					41.03	
Hausman test (p-value)			0.08	0.04				0.08
Hansen J (p-value)				0.33				
N	104	80	104	80	104	104	104	104
R-squared	0.42	0.52	0.40	0.32	0.44	0.44	0.42	0.46

Note – Number of rights is the number of rights provisions contained in a constitution. Section on rights is a dummy for constitutions where the rights are included in a separate heading/document rather than being incorporated into various parts. Robust standard errors are in parenthesis; * denotes significance at 10 per cent level, ** at 5 per cent level, *** at 1 per cent level.

Table 6: Constitutional protection and laws on women: Bivariate probit regressions

	(1)	(2)
	Dependent variable:	
	Legislated quotas	Hiring non-discrimination laws
Constitutional protection	0.328*** (0.090)	0.177** (0.077)
Baseline controls	Yes	Yes
Continent dummies	Yes	Yes
N	77	104
Likelihood-ratio test of Rho=0 (p-value)	0.00	0.01

Note - Number of rights (defined in the note for Table 5) is used as an instrument. Average marginal effects are reported. Standard errors are in parenthesis; * denotes significance at 10 per cent level, ** at 5 per cent level, *** at 1 per cent level.

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