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Women's descriptive representation in developed and developing countries

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Abstract
Today there is a wealth of research on women's legislative representation and the factors contributing to it. For example, proportional representation in large multi-member districts and an egalitarian political culture are commonly associated with high rates of women's representation. However, in the developing world findings are less solid and there is little consensus on the salience of various explanatory variables (for example, political culture or electoral system type) on women's descriptive representation. In this article, I explore the possibility that the divergent findings that characterise the discipline stem from the different dynamics at work in developed and developing countries. My results indicate that development by itself has a positive and significant impact on the percentage of female representatives. Development also interacts with other variables (for example, women's participation in the workforce and quotas) in determining the level of women's representation.

Keywords
Women's legislative representation, development, electoral quotas

Introduction

Women's descriptive representation in parliamentary systems remains low. As of September 2013, women constitute only just in excess of a fifth of legislators in lower houses across the world. This is widely viewed as a 'democratic deficit', given that 50 percent of the world's population are women.[1] More substantively, there is some, albeit inconclusive, evidence that increases in the percentage of female deputies also lead to the advancement of policy issues that are important to women, such as childcare, equal pay, and protection against violence (for example, Childs and Krook, 2006).[2]

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Since the 1990s the representation of women in parliament has become a focal point for gender-equality campaigning both at transnational and national levels. In support of such campaigns, political scientists have undertaken numerous case studies and comparative and large-*N* studies to try to identify factors that foster increased representation of women (Krook, 2010a; Wängnerud, 2009). These analyses link women's representation to institutional variables such as quota laws, the electoral system type, or the strength of left-wing parties; to socio-economic indicators such as the GDP per capita; to contextual factors such as the number of women in the workforce; and to cultural indicators such as the degree of religiosity in a state. However, despite the fact that many studies (for example, Bauer, 2008; Tremblay, 2007) highlight the importance of quota rules for achieving high numbers of female deputies, there is some controversy in the literature pertaining to the influence of other variables on women's representation.

While the factors that contribute to higher levels of women's representation (that is, quota rules, proportional representation, large districts, and an egalitarian political culture) have been quite clearly identified in western countries, the same cannot be said for the non-western world (Inglehart and Norris, 2003; Schwindt-Bayer, 2010). Why is it that different studies (for example, Thames and Williams, 2010) focusing on few or many cases or on various regions of the world or on different time periods produce a diverse range of results as to the relative and absolute importance of different determinants of female parliamentary representation? In discussing various studies, Krook's review article (2010b) suggests that the factors influencing the descriptive representation of women might be different in industrialised and industrialising countries. For example, Krook reports that factors strongly identified with high women's representation in western democracies, such as the electoral system type or women's labour force participation, are less influential in determining women's representation in the non-western world.

In fact, it may not be surprising to find that the factors impacting on women's parliamentary representation in developed countries are different from those in developing countries. Compared to citizens of high-income countries, citizens in low-income countries tend to hold different or more traditional cultural values, face different economic realities (for example, material needs may not be satisfied), and live under different political conditions (for example, more political corruption). However, no recent study has established the degree to which development impacts the parliamentary representation of women. My study makes three contributions, one empirical, one theoretical and one methodological. Empirically, I establish the impact of development on women's representation. Theoretically, I aim to understand how various indicators (for example, women's labour force participation, quotas, or the electoral system type) affect women's representation differently in affluent and less affluent countries. Methodologically, I determine whether pooling across time and space when building models of women's representation or whether subdividing the universe of cases yields more accurate results.

With the help of a multivariate dataset on women's representation across all world regions from 1995 to 2010, I aim to determine whether different levels of development result in different levels of women's representation. My quantitative analysis finds that development by itself increases the percentage of female parliamentarians, and that the impact of several other variables, including women's labour force participation, is different in less affluent than in more affluent countries. These results indicate that pooling across time and space might be problematic when building models on women's representation.

This article proceeds as follows. The subsequent section will situate this study within the broader literature on women's representation and will offer some possible explanations for why there might be differences in the number of women in parliament between industrialised and industrialising states. In the next part, I will introduce the predictor variables and their operationalisation. The following section will focus on the statistical procedures employed for the study. In the

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penultimate part, I will present the results. Finally, I will summarise the main results of the article and provide some avenues for future research.

Existing literature

For more than 50 years, scholars have considered the determinants of women's parliamentary representation. Studies have evaluated the impact of factors such as the electoral system type, the number of women in the workforce, the percentage of women with a college degree, the unemployment rate, the percentage of left-wing parliamentarians, and the percentage of Catholics among the population (for a pioneering study, see Rule, 1987). By the 1990s emphasis was being placed on the role of political parties in legislative recruitment (Lovenduski and Norris, 1993). For example, Githens et al. (1994) demonstrated that the candidate selection process, the level of centralisation of party structures, and the percentage of women in parties also impacted upon women's parliamentary representation. Other scholars (Caul, 1999; Squires, 1996) provided strong evidence that both statutory quota rules and party quotas boosted the representation of women in parliament.[3]

In the 2000s, several macro-level analyses attempted to identify additional factors that influenced women's representation. Some of these studies took a global perspective (Wängnerud, 2009). Other scholars conducted region-specific research, focusing on Africa (Walsh, 2006), Latin America (Schwindt-Bayer, 2010), or on western democracies (Childs, 2008; Sawer et al., 2006). Recent scholarship has introduced new independent variables, such as corruption and regime type, which may influence the extent to which women are represented in parliament (Stockemer, 2009, 2011). It has also considered discrepancies in the relative and absolute importance of various independent variables (Krook, 2009).

Besides the rather obvious conclusion that both statutory and party quotas increase the number of women in national legislatures, there is no consensus on the relative and absolute salience of other institutional, social, and contextual variables. As of 2010, there was academic disagreement on the role played by, essentially, all other factors (for example, political culture or the electoral system type) in determining and predicting women's parliamentary representation. For example, several studies with an emphasis on developing countries (for example, Yoon, 2004) have questioned the long-held belief that electoral institutions and particularly proportional representation systems facilitate the political representation of women. Other analyses (Inglehart and Norris, 2003; Paxton, 1997) find contradictory results as to the impact of economic development and cultural change on women's representation. Moreover, there exist debates as to whether democracies offer better political opportunities for women than anocracies or autocracies (for example, Bauer and Britton, 2006; Stockemer, 2009; Tripp et al., 2008).

One possible reason for these contrasting results might lie in a country's level or stage of development. There are sound theoretical arguments for why development by itself might impact the number of women in parliament. For example, classical sociological approaches (Verba and Nie, 1972; Wolfinger and Rosenstone, 1980) indirectly suggest that women's representation should increase as a country modernises. These theories suggest that the two main facets of development (that is, higher material wealth and higher levels of education) are correlated with increased support for democracy, increased social spending, and a societal push towards the emancipation of women (Burns et al., 2001). Value-change theorists (for example, Inglehart and Norris, 2003) advance a very similar argument in that they link economic modernisation to transformations in societal values and beliefs, and present a two-step modernisation process: first, countries are transformed from agrarian to industrialised societies and, second, countries are transformed from industrialised to post-industrial or service societies, which in turn, alters the way women and men live together.

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According to Inglehart (1990), the shift from agrarian to industrialised societies triggers the necessary material conditions for women to be represented. It brings women into the paid workforce, reduces fertility rates, and boosts literacy and education among both sexes, thereby creating the material preconditions for the political representation of women. Inglehart and Welzel (2005) add that the transformation from industrial to post-industrial societies produces the societal conditions needed for women to gain greater representation. More precisely, Inglehart (1997) claims that the fulfilment of material needs leads to an intergenerational shift in values from essential 'survival' values to post-material 'quality of life' values. In other words, the post-materialist thesis postulates that individuals in wealthy post-industrialised societies should look to advance self-expression values, environmental protection, and equality between the sexes. In this sense, the promotion of post-material values should also facilitate a fairer representation of the sexes in elected positions. Based on both classical sociological approaches and the post-materialist approach, I hypothesise that in medium-developed or underdeveloped countries, which are often still male dominated and materialist, women will face difficulty in gaining access to political office. Conversely, high-income societies, which tend to be more post-materialist in outlook, should be more receptive towards the representation of women in decision-making bodies (Inglehart, 1997; Inglehart and Welzel, 2005).

However, the literature has, so far, paid little attention to the questions of whether development can explain or predict women's representation in countries and whether there are similarities or dissimilarities between high-income and low-income states. Though recent scholarship (for example, Krook, 2010b) has demonstrated that some variables, such as proportional representation (PR) and higher levels of female labour-force participation, appear to have a stronger influence on women's representation in Western European or Organisation for Economic Cooperation and Development (OECD) countries than in developing states, only one cross-national study (that is, Matland, 1998) explicitly compares women's representation in developed and non-developed countries. Evaluating 26 industrialised and 16 industrialising states, Matland (1998) finds that PR, women's participation in the workforce, the cultural standing of women, and development play a different role in the developed world than in the developing world. While the small number of cases in his samples renders the conclusions of the analysis suggestive only, Matland's findings still strongly support the possibility that different dynamics are at stake between the industrialised and industrialising world in explaining and predicting the level of women's representation in parliament.

In this article, I will build on recent scholarship (for example, Krook, 2010b) that emphasises the possibility that different factors drive women's representation in rich and poor countries, as well as Matland's study (1998), in several ways. First, by evaluating the influence of development and its interactive impact with other explanatory variables of women's representation in affluent and less affluent countries across more than 500 elections, the current study provides more robust results than Matland's analysis, which only covered 42 cases. Second, this study allows me to evaluate the magnitude of differences between various independent variables across affluent and less affluent countries. I therefore explicitly analyse whether and to what degree development's influence on women's representation is affected by other institutional (for example, the electoral system), cultural (for example, religious beliefs), and circumstantial factors (for example, regime type). Third, by highlighting commonalities and differences in the effects of various covariates across affluent and less affluent countries, this study assesses whether, when building models of women's representation, it is preferable to pool data on women's representation across space and time or to subdivide the universe of cases. In the following sections, I will present all control variables and discuss their possible interactions with development. Before doing so, I will operationalise the independent and dependent variable(s) of interest.

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The dependent variable

The dependent variable for this study is the percentage of females in the lower house of the national parliament.[4]

The independent variable of interest

The main independent variable of this study is development. I use four categories to differentiate between four developmental levels, following the World Bank's criteria (2010). The World Bank considers all countries that have a GDP per capita of $12,196 or higher as high income countries, countries with a GDP per capita between $3946 and $12,195 as middle high income, countries with a GDP per capita between $996 and $3945 as middle low income, and countries with a GDP per capita below $996 as low income. To operationalise these four categories, I create an ordinal variable from one to four, in which low-income countries are coded as one and high-income countries are coded as four. In line with modernisation scholars, such as Inglehart and Welzel (2005), I assume that these four income categories correspond to various types of societies. For example, nearly all low-income countries rely on agriculture as the primary mode of production. For the second and third categories (medium-low-income and medium-to-high-income countries), the dominant mode of income changes in favour of industry. Regarding the last category, countries with an above average GDP per capita of $12,196 tend to be less reliant on industry and more service focused, which might contribute to the spread of post-materialist values.

Control variables

Quota rules

There is widespread consensus in the literature (for example, Krook, 2009) that quotas are an efficient means of increasing women's presence in political decision-making bodies. There are two types of quotas: legally binding quotas and party quotas. The former type is either guaranteed by the constitution or by statute law. Generally, legally binding quotas take either the form of reserved seats or candidate quotas that apply to all parties that participate in a given election. In general, such quotas are very efficient, as they guarantee a certain number of seats in parliament or on a candidate list. In addition to this direct effect, legally regulated quota rules should also have an indirect and more psychological effect, encouraging women to seek political involvement because they know they might succeed (Franceschet et al., 2012).

The second type, political party quotas, refers to measures adopted by individual parties and incorporated into their rules. While they are less effective than constitutional or statutory quotas, in that not all parties in a given country adopt them, party quotas should also have a dual influence on increased women's representation. For one, they should have a direct influence on higher women's representation. If parties pledge to nominate a set number of women for parliamentary positions, more women should be elected, which ought to increase the overall percentage of female members in the legislature (Tripp and Kang, 2008). In addition, party quotas should have an indirect influence. If some parties pledge to nominate 30, 40, or 50 percent women on their lists, other parties with no quota rules may be influenced to follow suit by nominating more women, which, in turn, ought to boost women's parliamentary representation (Praud, 2012).

It is unclear whether the influence of quota rules is greater in affluent countries or in less affluent countries. On the one hand, it is possible that quota rules are more effective in producing higher levels of representation in industrialised countries. Following classical sociological approaches

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and modernisation theory, governments and parties in post-materialist countries might respond to pressure from women's movements to implement quota rules to provide for a more equal representation of women in politics. In addition, affluent countries might also have the means and control mechanisms necessary to enforce these quota provisions. In contrast, party structures and political institutions tend to be less developed in less affluent countries, making the implementation and supervision of quota provisions more difficult (Leys, 2010).[5]

On the other hand, it is possible that the influence of quotas could be more pronounced in developing countries. If modernisation theorists are correct, then there should already be more female representatives in affluent countries than in less affluent ones. This implies that quota rules could be more effective in less affluent countries. A study by Ballington and Dahlerup (2006) seems to confirm this hypothesis, provided that these quota rules are adopted and implemented at a high benchmark (for example, at 30 percent or higher). In the following analysis, I will use two dummy variables to capture the two different kinds of quota rules. First, because of the theorised higher benefits of statutory quotas as compared to party quotas that are only adopted by some parties, I code the first type of quotas as one and everything else as zero. Second, I code countries where one or several parties have quotas as one and all other states as zero.[6]

The electoral system type

For more than 50 years, political scientists have identified a country's electoral system type as an important determinant of women's representation in politics (Norris, 2006). According to one long-established proposition, women should have better electoral prospects if several candidates are elected in an electoral district through a system of proportional representation. For both parties and voters, the inclusion of women on party lists is seen as beneficial, as female candidates increase the representativeness of the electoral lists (Tremblay, 2012). In contrast, parties in a majoritarian system, in which only one candidate is elected per district, would be more inclined to nominate relatively highly educated middle-aged and senior men, because they are likely to have the reputation and experience for a successful candidacy (Henig and Henig, 2001).

However, the aforementioned thesis connecting the electoral system type to women's representation has not received unanimous support in the academic milieu in recent years. In particular, large-*N* studies (for example, Yoon, 2001, 2004) that extend their focus beyond Western Europe report that the electoral system type has no impact on women's representation in parliament. Theoretically, it might be plausible that in traditional societies, parties choose their representatives more along ethnic, tribal, or religious lines, as well as through clientelistic networks, whereas in relatively wealthy post-materialist nations, these networks tend to be weaker. Such differences in the selection process of candidates could explain why the electoral system seems to have less of an influence in developing countries than in developed ones (McAllister and Studlar, 2002).[7] I operationalise the electoral system type by two dummy variables. First, I code all PR systems (including mixed-member proportional systems) as one and all other systems as zero.[8] Second, I code mixed systems as one and all others as zero.[9]

Political culture

A third important factor that may influence the representation of women is political culture. Defined as the value and belief system that impacts on an individual's role in politics, political culture is likely to shape perceptions about women's role in politics (Hill, 1981). Liberal and egalitarian cultures should be relatively favourable to women's push for equal access to political positions. In contrast, more traditional cultures are likely to remain dominated by paternalistic

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gender relations and different roles for men and women. Consequently, female candidates may face greater hurdles in accessing political power in more traditional countries (Paxton and Kunovich, 2003). While it is likely that development, the main variable of interest for this study, captures some of the variation in women's representation that can be attributed to political culture, development does not automatically lead to gender-inclusive societies. There is no necessary link between increases in material wealth and more egalitarian values. Rather, post-materialist values spread at a different pace in various parts of the world. For example, while some Muslim countries (for example, the United Arab Emirates or Saudi Arabia) are highly developed, they remain some of the most traditional, patriarchal countries in the world. Because the indicator 'development' does not capture these cultural differences, I add one additional cultural proxy: a dummy variable for Muslim-majority states.[10]

While Islam is not inherently incompatible with gender equality, Muslim-majority states tend to be more traditional in so far as they are characterised by a hierarchical structure of society and patriarchy (Weiffen, 2004). Additionally, many Muslim-majority countries are not secular, in that there is no separation between the church and the state and legislation reflects Islamic Sharia law (Blaydes and Linzer, 2008). In some of these Muslim-majority countries, such as the United Arab Emirates and Saudi Arabia, women are not considered to be full members of society and these societies are highly patriarchal (see Fish, 2002).[11] Although these states generate high incomes, primarily as a result of natural resources, they tend to lack the other economic and social characteristics associated with development and modernity, such as a thriving civil society and a diversified workforce. Therefore, I expect that the relationship between development and the Muslim dummy variable should be negative.

Women's participation in the workforce

The fourth variable, the female activity rate, is another potential contextual determinant of women's representation. It is likely that higher female participation in the workforce increases women's opportunities of being selected as political candidates and eventually being chosen as representatives (Hughes and Paxton, 2008). Through work experience, women can gain the necessary capital to run for office. In addition, women who are professionally successful might seek access to political power. In this sense, the fairer representation of women in the workforce can create direct and indirect pressures for political parties to represent women within the party structures and in elected office (Darcy et al., 1994). This is why, despite some contradictory findings (for example, Paxton, 1997), I expect to see a positive impact between increased rates of women's economic participation and women in parliament.

Moreover, I deem it likely that the impact of this variable (women in the workforce) will be stronger in the developed world. Many women in poorer countries lack access to higher education and work in low-paid jobs in the industrial or agricultural sectors – sectors that are not considered launching points for a political career. In contrast, in developed and post-materialist societies, men and women have similar education standards and share positions of power more equally (Iversen and Rosenbluth, 2008). If, as Kenworthy and Malami (1999) argue, elected political officials are most frequently selected from professional occupations, such as journalism, law, or other political positions, then it is likely that women are only elected to political office if they are employed in these fields. I measure women's participation in the workforce by how much, compared to men, women contribute to a country's GDP.[12] In the dataset, a value of 100 means that both genders contribute equally to a country's GDP, whereas a value of 50 signifies that men contribute twice as much as women.[13]

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Regime type

Theoretically, democracy should be positively linked to increased women's participation in politics. Democracies generally (1) include gender equality in their constitutions, (2) allow women's groups and movements to mobilise in pushing for gender equality, and (3) reduce formal and informal barriers that deny women access to political power. These conditions should be conducive to the increased representation of women in parliament (Molyneux, 2002). Yet despite these characteristics, the empirical evidence in support of a positive relationship between a democratic regime type and women's representation in politics is mixed. On the one hand, Inglehart et al. (2002) find that democracies have more female parliamentarians than anocracies and dictatorships. On the other hand, more regional-level studies (for example, Nechemias, 1994) argue that, in particular, democratisation processes have frequently resulted in a decline in the number of female deputies in parliament. For example, women in Central America and Eastern Europe did not profit from the implementation of democracy in the 1980s and 1990s. Rather than gaining more political clout, women in Latin America and Eastern Europe had to struggle for visibility and representation (Jaquette and Wolchik, 1998; Saint Germain and Metoyer, 2008).[14]

The literature's contradictory findings leave it open whether, and to what degree, a democratic form of government influences women's political representation. It might well be the case that in developed countries, democracy has a positive impact on the number of female deputies, as democratic freedoms might positively interact with and reinforce an open and egalitarian political climate. However, the same relationship might not be present in developing countries, which may have other pressing priorities besides creating gender equality. I operationalise the degree to which a country is democratic by an ordinal variable. Democracies are coded as one, anocracies as two, and autocracies as three.[15]

Methodology

To gain some robust evidence on whether development by itself or indirectly through other variables in the women's representation function influences the percentage of women parliamentarians, I collected data on women's representation for the largest possible number of countries and across as many years as possible from 1995 to 2010. In a second step, I collected available data for all independent variables for all election years within this 15-year window. In total, I retrieved data that cover more than 500 elections in 151 countries. The cases for which I could not collect data on all indicators almost exclusively include tiny states such the Pacific islands (for example, Palau, Tuvalu, or Micronesia) or small African (for example, Guinea), Asian, or Latin American states.

In contrast to many prior large-*N* studies (for example, Inglehart et al., 2002), my sample is not predominately comprised of developed or OECD countries. Rather, the regression models include 191 data points from high-income countries and 326 data points from developing countries. This sample distribution reflects the real distribution of countries, including a majority of industrialising countries. There is variation in the dependent variable. Women's representation ranges from 0.0 percent for the United Arab Emirates to 56.3 percent for Rwanda. Finally, there is considerable variation in women's representation in both the developed and developing world. The range for the industrialising world is 56.3 percentage points and for the industrialised world it is 47.0 percentage points.

To get a very basic idea of the influence of development on the percentage of female deputies, I first calculate the mean number of female parliamentarians across the four development levels.

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Table 1. Average Representation Rate in Developed and Developing Countries.

	Women's representation (%)
Low-income countries	13.69
Lower middle-income countries	10.67
Higher middle-income countries	15.15
High-income countries	18.84

Table 2. One-way ANOVA Measuring the Impact of Development on Women's Representation, 1995–2010.

	Low-income countries	Medium-low- income countries	Medium-high- income countries	High-income countries
Low-income countries				
Medium-low- income countries	–3.02*			
Medium-high- income countries	1.47	4.49**		
High-income countries	6.89***	8.17***	3.68**	

Notes: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. LSD Multiple Comparison Test.

While calculating this mean representation rate in developed and developing countries, I am particularly interested to see if industrialised countries have more women in parliament than industrialising countries. To this end, I also present the results of an LSD Comparison Test, which statistically compares women's representation across the four development levels. However, even if the percentage of women representatives is greater in high-income countries, it is still necessary to determine whether this result is robust in a multivariate setting and, even more importantly, whether development interacts with other variables in the women's representation function.

In the actual regression analysis, I have condensed the ordinal development variable into a dummy variable, coded as one for highly developed countries and as zero otherwise. This modelling choice is justified given that the increase in the number of female deputies per development level is not linear across the four developmental levels; rather, there is a decrease in women's representation from countries with low development to countries with medium-to-low development (see Tables 1 and 2). If we look at Table 2, developed countries are the only category in which women's representation is significantly higher as compared to all other categories.[16] I also include a time-trend variable (coded as 0 for 1995 and as 15 for 2010) to capture the steady increase in women's representation during the past 15 years (Inter-Parliamentary Union, 2011). For instance, average women's representation in my sample stood at 11 percent in 1995 and 22 percent in 2010.

I have created two models. The first model is the pooled model; it measures the influence of development, as well as the other seven theoretically informed covariates on women's representation. The second model is an interaction model, in which I interact the dummy variable for development with all right-hand-side variables in the equation. It measures whether development interacts with any of the other predictors of women's representation. Due to autocorrelation in the errors terms and heteroscedastic variances, I run both equations as autoregressive one models (AR (1)), with White robust standard errors (White, 1980). The first regression model reads as follows

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$$Women's\ Representation = \beta_{0j} + \beta_1{}^*(Development) + \beta_2{}^*(D_Legally\ Binding\ Quotas) + \beta_{3j}{}^*(D_Self\text{-}Imposed\ Party\ Quotas) + \beta_4{}^*(D_Proportional\ Representation) + \beta_5{}^*(D_Mixed\ Electoral\ Systems) + \beta_6{}^*(D_Muslim\ Countries) + \beta_7{}^*(Women's\ Labour\ Force\ Participation) + \beta_8{}^*(Regime\ Type) + \beta_9{}^*(Time) + e$$

Results

Table 1 illustrates the aggregate mean percentage of women's representation in developed and developing countries. On average, from 1995 to 2010, women comprised 18.8 percent of all parliamentarians in high-income countries, slightly greater than 15 percent in medium-high-income countries, and around 12 percent in medium-low-income countries and low-income countries. Based on these descriptive statistics, there seems to be a rather robust positive relationship between high development and increased numbers of women in parliament. The LSD Multiple Comparison Test confirms the finding from the descriptive statistics, highlighting that affluent countries have 7–8 percentage points more women in parliament than low-income or medium-low-income countries and a 4 percentage points greater share of female deputies than medium-high-income countries. This increase is statistically significant, thus providing additional support for my initial hypothesis on the positive impact of modernisation on women's representation.

Model 1 confirms this positive relationship between higher development and higher women's representation in a multivariate framework (see Table 3). The model predicts that the percentage of women in countries with high development is approximately 5 percentage points higher as compared to the other income categories. This implies that even after controlling for the other predictors of women's representation, the AR (1) model still predicts a statistically and substantively relevant increase in the number of deputies in affluent countries. Thus, this research provides further evidence for both classical sociological approaches (for example, Burns et al., 2001) and postmodernisation theory (for example, Inglehart, 1997). Therefore, it appears true that rich(er) and more educated societies have the preconditions needed for more gender equality in political representation.

Regarding the importance of the control variables, the pooled equation further predicts that quota rules, proportional representation, and the increased presence of women in the labour force drive up women's political representation. In contrast, and as expected, my results suggest that women's representation is low(er) in Muslim-majority countries. Relatively unsurprisingly, this study finds quotas to be a strong predictor of women's representation in parliament. Holding all other variables constant, the model predicts that countries with legally imposed quotas should have approximately 5 percentage points more women in their lower houses than countries without such quotas. It also seems that many countries with high women's representation in the dataset (for example, Rwanda and Argentina) have legal quota provisions. As expected, party quotas appear to have less of an impact on the aggregate share of women parliamentarians than legally binding quotas, but still boost women's representation by approximately 2 percentage points.

For the second significant indicator, a PR electoral system, the model predicts that PR systems ought to trigger nearly 6 percentage points more women in parliament than non-PR systems. Third, the equation suggests a positive and significant relationship between women who are professionally active and increased percentages of women in parliament. This link appears moderately strong; the model predicts that for every 10 percent the gap between the contributions of women and men to a country's GDP per capita narrows, their representation should increase by approximately 1.6 percentage points. Fourth, the model suggests a rather strong negative link between Muslim-majority countries and high women's representation.

Compared to the rest of the world, Model 1 suggests that women's representation ought to be 4.4 percentage points lower in countries that are predominately Muslim. In this sense, my finding

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Table 3. The Regression Models.

Fixed effects	Model 1		Model 2	
D_Development	4.99***	(.854)	−3.41	(4.10)
D_Legally Binding Quotas	5.56***	(.973)	6.33***	(1.07)
D_Party Quotas	2.16**	(.937)	1.96*	(1.09)
D_PR	5.76***	(.803)	4.93**	(.919)
D_Mixed Electoral System	−.537	(1.10)	.994	(1.15)
D_Islam	−4.40***	(.834)	−4.85**	(.834)
Women's Labour Force Participation (WLFP)	.167***	(.029)	.080**	(.030)
Regime Type	.778	(.536)	1.95***	(.563)
Time	.415***	(.094)	.571***	(.100)
Interact_Development_Legally Binding Quotas			−3.41	(5.31)
Interact_Development_Party Quotas			−1.96	(1.09)
Interact_Development_PR			2.69	(1.66)
Interact_Development_Mixed_Systems			−7.04***	(1.77)
Interact_Development_Islam			−.603	(1.87)
Interact_Development_Women_WLFP			.327***	(.071)
Interact_Development_Regime Type			−3.31***	(1.25)
Interact_Time			−.515**	(.216)
Constant	−2.53	(1.85)	−1.06	(2.11)
R-squared	.42		.48	
Mean squared error	4.70		3.41	
N	517		517	

Notes: * p < .10; ** p < .05; *** p < .01 (two tailed).

strongly supports prior research (for example, Fish, 2002; Weiffen, 2004) that finds Muslim countries to be more traditional, more patriarchal, and less open to women entering public office. Finally, the time-trend variable displays the expected relationship. The equation predicts an average increase by approximately 0.4 percentage points in women's representation per year in the sample countries. In contrast, equation 1 finds no relationship between the two remaining variables, mixed electoral systems and regime type, and their influence on women's parliamentary representation.

While development by itself appears to have a rather solid positive impact on women's representation, the interactions between the dummy variable for development and all the other independent variables also change some of the coefficients in the interaction model. Model 2 reveals that four of the eight interaction terms are statistically significant. First and as expected, women's labour participation seems to have a much stronger impact in the developed world as compared to the developing world. The equation suggests that for every 10 percentage points that the gap closes between male and female economic activity, women's representation is expected to increase by an additional 3 percentage points in affluent countries. Therefore, Kenworthy and Malami's hypothesis (1999) seems to hold. It is plausible that richer countries create additional possibilities for professionally active women to enter politics.

Second, it appears that highly developed autocracies have fewer women deputies than the corresponding hybrid regimes and democracies. The model predicts a gap of 6 percentage points between highly developed democracies and autocracies. This finding provides interesting contextual evidence pertaining to the conditions under which development leads to greater women's representation. It seems that post-materialist societies can only develop in a democratic context,

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wherein individuals have the freedom to participate in the political process and express their views. Third, it appears that the influence of most of the institutional factors on the number of female parliamentarians does not change with development. Except for mixed electoral systems, which trigger lower levels of women's representation in developed countries, the other institutional factors, such as party quotas, do not seem contingent on development. In contrast, the time-trend variable indicates that women's representation seems to increase at a faster rate in developing nations. For one, this implies that women's representation in poorer countries continues to grow more rapidly . On the other hand, this finding supports recent evidence that in some of the richest western countries (for example, Germany and Denmark) women's representation has stagnated (Dahlerup and Leyenaar, 2013). Finally, Islam's influence does not appear to change with development. This finding confirms that despite reaching high levels of development, some Muslim-majority countries remain resistant towards more gender equality in society.

Conclusion

The findings of this research have empirical, methodological, and theoretical implications. More empirically, I have shown that the factors that explain women's representation in developed and developing countries are rather distinct. My analysis not only illustrates that development by itself has a rather strong and statistically significant positive impact on women's representation, but it also indicates that development interacts with other variables in the women's representation equation, including women's labour force participation, regime type, a mixed electoral system type, as well as time. Variables such as women's labour force participation and democratic regime types boost women's representation more in developed countries than in developing countries. In contrast, mixed electoral systems seem to decrease women's representation in developed countries and the interaction between development and time indicates that poorer nations have relatively increased their number of female deputies as compared to already developed countries during the past 15 years.

Second, the results of my study have strong methodological implications. Given that the impact of four of the eight covariates in the model is statistically different in the two samples, there is evidence that the drivers of women's representation are distinct in the two universes of cases, that is, in developed and developing countries. These differences can only be correctly captured by including an interaction term in pooled models or by building separate models. For future studies such analyses should be cautious in the interpretation of their results when they pool across developing and developed countries. In particular, if it is the researcher's goal to represent the impact of a variable correctly, he or she should subdivide the universe of cases between affluent and less affluent countries. This subdivision produces more accurate results. To evaluate the different influences of several independent variables in different geographical settings, future analyses could further split the cases into different groups (for example, by region or by the religious affiliation of the country) to see if these functions are similar or distinct.

Third and more theoretically, this research provides evidence that the causal mechanisms that connect some of the independent variables for greater women's representation might be different in the developed world as compared to the developing world. For example, the positive influence of a greater presence of women in the labour force on women's representation in western countries could relate to the fact that women in high income states have access to better-paid positions. Representation in professional careers might then serve as a springboard for woman's political careers. In contrast, women's presence in the labour market in the developing world might be restricted to low-income jobs. In addition, the finding that a democratic system of government fosters greater women's representation in developed countries allows for a rather sober conclusion. Democratic institutions do not automatically trigger a democratic and egalitarian political climate.

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Rather, values such as gender equality seem only to spread in affluent democracies. Not only might this explain why poor democracies collapse (see Kapstein and Converse, 2008), but also why women are relatively underrepresented in less affluent democracies.

As to the future representation of women in parliament, this study predicts that the percentage of women deputies will continue to grow in the coming years. As countries develop, women's workforce participation will play an increased role in fostering political representation. With development, political and individual freedoms in countries may translate into more women in parliament. Strong international pressures to include more women in public decision-making may also complement these developments. Spearheaded by national and international feminist organisations, international organisations (such as the Inter-Parliamentary Union), and the creation of parliamentary commissions on gender issues within national parliaments, legislatures around the world have seen the numbers of women representatives increase (Sawer, 2010). This increase is particularly sharp in post-conflict states, where the norm of a balanced representation of the sexes is frequently incorporated into the design of new institutions. As such, post-conflict countries such as Mozambique, South Africa, or Timor Leste have around 40 percent female representation, and in the case of Rwanda more than 50 percent. However, despite such advancement, the road to gender equality in political representation remains long. This applies even more so if we consider that in several industrialised countries women's representation has stagnated in recent elections and not grown further to reach real equality.

Notes

1. A recent global survey confirms this perception among the public: both women and men believe that more women in parliament renders a government more democratic (Schwindt-Bayer and Mishler, 2005).
2. For example, Squires (2008: 187–8) argues that female parliamentarians can speak for women by voicing women's consciously held interests and their preferences. For an alternative view, see Celis et al. (2008).
3. It is worth noting that parties did not just impose quotas on themselves; the incorporation of quotas into party rules usually came after strenuous campaigns by the women's wings of parties.
4. To retrieve these data, I used the Women in National Parliaments database from the Inter-Parliamentary Union (2011), a comprehensive database on the number of women in parliament which captures data on the percentage of women in parliament from 1946 onwards.
5. In this sense, poor countries might not have the means and logistics to track down parties that fail to comply with these legal obligations.
6. Data on quotas were gathered from the Global Database of Quotas for Women (Quota Project, 2010) established by the International Institute for Democracy and Electoral Assistance (IDEA) and the University of Stockholm.
7. There is also a counter-argument, which indicates that institutional incentives might be more important the less woman friendly the country is (Karp and Banducci, 2008).
8. I code mixed-member proportional systems as PR systems because the overall percentage of votes a country obtains is uniquely calculated by PR.
9. Data on electoral systems were collected from the Electoral System Design database provided by the International Institute for Democracy and Electoral Assistance (IDEA, 2010).
10. To determine whether a country is a Muslim-majority state or not, I use data from the Central Intelligence Agency's World Factbook (CIA, 2011). The majority-Muslim countries included in this analysis are Afghanistan, Albania, Algeria, Azerbaijan, Bahrain, Bangladesh, Burkina Faso, Chad, Djibouti, Egypt, Gambia, Guinea, Guinea Bissau, Indonesia, Iran, Iraq, Jordan, Kuwait, Kyrgyzstan, Lebanon, Malaysia, the Maldives, Mali, Mauritania, Morocco, Niger, Nigeria, Oman, Pakistan, Senegal, Sierra Leone, Somalia, Sudan, Syria, Tajikistan, Turkey, Turkmenistan, Uzbekistan, and the Yemen.
11. For example, women are restricted in their rights to initiate a divorce, are not permitted to drive vehicles, or must be accompanied by a male relative in public settings.

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12. Data for the variable regarding women in the workforce were collected from the United Nations Development Programme's development indicators (UNDP, 2010).
13. It is worth noting that women's workforce participation is a 'gendered measure'. It does not include women's and men's contribution to childcare and family care. In addition, the measure is suboptimal, considering that women and men that run for office are frequently recruited from the aforementioned well-paid positions in the business, private, and political sectors. Ideally, the measure for women's workforce participation should measure women's presence in these high-end positions and not women's presence in the workforce overall.
14. However, as a result of these decreases in women's representation, feminist activism has grown on a national, regional, and international basis. In particular, the movement for electoral gender quotas, as a way to combat the democratic deficit caused by low women's representation rates, became strong and the number of countries with some kind of quota provisions (that is, either party quotas or legal quotas) rose from approximately 20 to approximately 100 within one decade (see Quota Project, 2010).
15. The degree of democracy is measured by the Polity IV index, a 21-point democracy index whose scores range from –10 to 10. As recommended by Polity IV, I code all countries that are ranked 6 or higher in any given year as democracies, those that score between –5 and 5 as anocracies, and states with a ranking of –6 or below as autocracies (Marshall et al., 2002).
16. This modelling choice is also justified theoretically, as both classical sociological approaches and post-modernisation theory would predict that peoples' values shift only at high levels of development.

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