

**Where are the Women? Examining the Gender Gap in the Percentage of Women Elected  
to Latin American and Caribbean National Parliaments.**

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***Abstract:***

Women remain a large minority in National Parliaments across the world. Latin America and the Caribbean remain at the forefront for some of the highest percentages of women in National Parliaments in the world, making this region worthy of examination. I expect that the percentage of women elected to lower chambers of National Parliaments is contingent upon the percentage of female mayors, presence of a proportional representation system, presence of Single Member District Plurality (SMDP) rule, adoption of legally mandated and regulated gender quotas, and adoption of voluntary political party gender quotas. I find four out of five of these explanatory variables result in an increase in the percentage of women elected to lower chambers of National Parliaments. This study encourages women to get involved in lower levels of government in order to help close the gender gap in politics.

## ***Introduction: Explaining the Variation in Percent of Parliamentary Seats Held by Women:***

Throughout the history of women's participation in politics, scholars have duly noted women's underrepresentation at all levels of government and decision-making (Durverger, 1955, Kirpatrick, 1974, Epstein & Coser, 1981, Lovenduski & Hills, 1981). More recently, research on this topic has dramatically increased, especially within the past 20 years (Paxton, Kunovich, and Hughes, 2007). This increased interest and the resulting research on women's underrepresentation is a consequence of increasingly divergent levels of political participation and representation both across, and even within countries (Paxton, Kunovich, and Hughes, 2007). There is widely documented variation in regional representation; for example, Nordic countries have 42.1% of women in parliament, the Americas with 25%, and the Pacific with only 13.1% ([www.ipu.org](http://www.ipu.org)). A large amount of the existing literature seeks to explain the differentiating percentages within Latin America. Latin American countries have been the forefront of such research due to their large adoption of gender quotas in the 1990's (Zetterberg, 2009). However, large variation in women's representation does occur in Latin America and the Caribbean, for example in Argentina in 2009 40% of the lower house was composed of women, while in Belize in 2008, only 3.3% of the lower house was represented by women ([www.ipu.org](http://www.ipu.org)). This study seeks to answer the question, "what explains the variation in percentage of women elected to lower chambers in Latin America and the Caribbean?"

The literature on gender in politics takes many forms, addressing gender inequality in voting, campaigning, as well as differences in women's political knowledge, place in political theory, and lastly the institutional impact on women's representation. This paper will focus on

the last stated theory of the insitutionalist impact. The insitutionalist view looks at three main causal factors in explaining the variance of women's representation. First, it examines the type of electoral system (Durverger, 1955). Paxton (2007) finds is more likely for women to get elected in proportional representation system than in other systems. Secondly, scholars have also found plurality systems make it more difficult for women to be elected because there can only be one winning candidate per district (Caul 1999, Kenworthy & Malami, 1999). Third others have focused on gender quotas; Paxton, Kunovich and Hughes (2007) found that national gender quota laws do not always generate significant increases in women's representation, which indicates different gender quotas are more successful than others. Schwindt-Bayer (2009) found legally mandated and regulated quotas result in significantly higher percentages of women elected to National Parliaments, compared to voluntarily adopted quotas.

For the purpose of this case study, I examine 25 countries in Latin America and the Caribbean. I look at lower chambers (also referred to as a lower house), which is defined as the chamber (house) within the government that must receive a majority of votes to remain in office. In addition to the previous literature, I hypothesize as the percentage of females elected as mayor increases, the percentage of women elected to lower chambers in National Parliaments will also increase. This study finds that the percentage of females elected as mayor does increase the percentage of women elected to lower chambers of National Parliament.

This study will consist of five main sections, first, a literature review on previous and current findings when explaining the variation of women's representation in parliament. Secondly, my hypothesis and theory section, where I use existing literature to hypothesize, as the percentage of women elected as mayor increases, the percentage of women in lower chambers of National Parliaments will also increase. Then, I discuss my reasoning for using OLS regression,

discussion of results, and implications. I confirm my hypothesis and find as the percentage of women as mayor's increase, the percentage of women in lower chambers of National Parliaments also increases. While previous literature states once a candidate is involved in lower levels of government it become easier for them to be involved in higher levels, this study improves our understanding of which offices impact women's political representation, by focusing on an important, specific office.

### ***Current Literature Debate: Explaining the Variation of Women's Representation In***

#### ***Parliament:***

The insitutionalist view looks at three main arguments when explaining women's underrepresentation; this section will be divided into these three main arguments. I will first examine the importance of proportional representation systems. Secondly, I will look at literature on electoral system arrangements, and lastly I will analyze the impacts of different kinds of gender quota implementations.

#### ***Proportional Representation:***

The most documented and consistent finding in research on women in politics is the importance of the countries electoral system (Paxton, Kunovich, and Hughes, 2007). Such documentation began in 1955 with Durverger's seminal article on women in politics examines the impact of institutions on women's representation. Durverger (1955) found proportional representation (PR) systems tend to favor women more than single-member systems. Therefore, it suggests it is easier for women to get on the ballot in PR systems compared to single-member

systems. Proportional representation systems result in higher percentages of women candidates and elected female officials.

More recent literature emphasizes the importance of the electoral system for women's representation. Electoral systems play such a large role because they determine how the votes cast in an election get translated into seats won by parties (Paxton, Kunovich, and Hughes, 2007). A basic distinction is between plurality-majority electoral systems and PR systems (Paxton, Kunovich, and Hughes, 2007). In plurality-majority electoral systems voters are allowed to normally vote for only one person, and the candidate with the most votes wins (Paxton, Kunovich, and Hughes, 2007). In comparison, PR systems typically ask voters to vote for a party with a designated list of candidates, and parties win legislative seats in proportion to the number of votes they receive (Paxton, Kunovich, and Hughes, 2007).

Sawer (2000) found in PR systems, parties inherently have the ability to put women on the ballot to appeal to different sections of the population. This indicates women do better in gaining political office in countries that use PR electoral systems (Rule, 1981, Norris, 1985, Rule & Zimmerman, 1994, Paxton, 1997, Kenworthy & Malami, 1999, McAllister & Studlar, 2002, Paxton, 2007). As well, women do better under PR systems due to their higher district magnitude, which measures how many politicians are on average elected within a district (Salmond, 2000, Paxton, Kunovich, and Hughes, 2007). The higher the district magnitude, the larger number of representatives a party sends to the national legislature, therefore increasing the chance for a woman to be on the ballot and get elected (Rule 1987, Matland & Montgomery, 2003, Paxton, Kunovich, and Hughes, 2007). A large amount of literature indicates the importance of the type of electoral system and district magnitude when explain the variance in women elected to National Parliaments.

*Electoral System Importance:*

The second previously emphasized institution expands on the idea that proportional representation systems lead to more women in national legislatures. Salmond (2000) argues the key difference between systems of proportional representation and majoritarian electoral arrangements lies in their district magnitude (DM). Again, the District Magnitude (DM) measures how many politicians are on average elected within a district. This literature supports the importance of the legislative type and different plurality systems.

In single member districts (SMD) or majoritarian systems there is a DM of one, where only one politician is put on the ballot per party (Salmond, 2000). However, in all proportional representation systems each individual has the ability to elect more than one politician (Salmond, 2000). Salmond (2000) concludes any SMD system, “creates an incentive for party bosses to stand lowest-common-denominator candidates in geographical districts; these rarely turn out to be women or minorities” (Durverger, 1955; Rule, 1981; Salmond, 2000). As well, in SMD districts, getting on the ballot is a zero-sum process in which female candidates displaces a male (Paxton, Kunovich, and Huges, 2007). When the DM is at one, that means only one person can be put on the ballot, which is unlikely to be a woman (Salmond, 2000). When the DM is more than one, in multi-member districts, it increases the likelihood of a woman getting on the ballot (Salmond, 2000). In multi-member districts, party gatekeepers feel pressure to balance their published lists of candidates across interest groups or within their own party, inherently increasing women within party lists (Paxton, Kunovich, and Hughes, 2007). As DM increases ticket balancing becomes easier and allows for more representation by women (Darcy, Welch, and Clark 1994, 115; Lakeman 1976, 161; Matland 1993).

Other scholars have recently started to consider other institutional factors to explain the variance of women elected into the political sphere, including analysis of gender quotas. The importance of women's representation in the political sphere has greatly increased as a topic of study over the past thirty years (Pateman, 1989). More specifically, the literature looks at classifying types of gender quotas, explaining why they are adopted, and which quota provisions are most effective. Sawer (2000) expounds on the importance and emergence of gender quotas.

#### *Gender Quotas:*

Sawer (2000) finds international pressure increases women's political representation, which encourages institutions to set gender quotas. At the Beijing Platform for Action, governments were encouraged to, "review the differential impact of electoral systems on the political representation of women in elected bodies and consider, where appropriate, the adjustment or reform of those systems" (Sawer, 2000). Therefore, gender quotas were adopted, in order to improve the representation of women internationally. However, the adoption of quotas has not solved the underrepresentation of women in elected offices across the world; rather, it has simply "tamed" the public into believing men and women are equally represented (Sawer, 2000). Schwindt-Bayer (2009) also finds that even though quotas are intended to increase women's representation, the extent to which they do so varies significantly across countries.

The literature in Davidson-Schmich's (2006) study identified three different types of categories of gender quotas, which will be used for the purpose of this study. The first type of quota is called a 'constitutional quota,' in which the country's constitution mandates a particular kind of gender representation (Davidson-Schmich, 2006). This specific quota has been adopted

by fourteen countries and can also be referred to as reserved seats, which are seats set aside to ensure a specific amount of women in parliament (Bush, 2010). If the specific percentage of women designed within the quota is not met in an election cycle, then there the state has the ability to fine or punish specific political parties however the state sees fit (Bush, 2010, Davidson-Schmich, 2006). The second type of quota is ‘election law quotas,’ or legislative quotas of which thirty-one countries have adopted; this quota uses rules governing elections to ensure some representation of women (Davidson-Schmich 2006). Similar to constitutional quotas, this quota has the sanctioning power of the state. If set quota mandates are not met, then the state have to power to penalize political parties (Bush, 2010). The third type of quota is the ‘political party quotas,’ or voluntary quotas which is present in 130 parties in sixty-one countries and involves each party setting different rule or targets for gender balance of those elected into office (Davidson-Schmich, 2006). Under political party quotas, parties simply promise to improve the gender balance of their elected officials, but there is no official punishment for failing to meet set requirements. It is important to note that party quotas are different from constitutional quotas and election law quotas in that they lack the sanctioning power of the state. Additionally, constitutional quotas and election law quotas have placement mandates and enforcement mechanisms (Bush, 2010, Davidson-Schmich, 2006, Schwindt-Bayer, 2009).

Davidson-Schmich’s statistical findings show a large amount of variance in the different kinds of quotas adopted and their success. Davidson-Schmich’s statistical results confirm the importance of both structure and agency to the success of voluntary political party gender quotas. The results indicate the larger the percentage of seats filled by PR, the more successful gender quotas will be. In addition, the longer the electoral lists, in terms of number of candidates, the more likely parties are to meet their quotas. Davidson-Schmich’s study also provides evidence

that competitive electoral politics hinder the success of gender quotas, finding, the more competitive state party systems are, the less successful quotas will be. Furthermore, Davidson-Schmich's findings suggest a party's ideology shapes the willingness to adopt gender quotas, and also makes a difference in terms of whether parties actually implement their quotas. Paxton, Kunovich, and Hughes (2007) published a study, which further added to the literature on gender quotas. They found national gender quota laws do not always generate significant increases in women's representation (Paxton, Kunovich, and Hughes, 2007).

More recently, gender quota research has examined why some gender quota laws are more successful than others (Dahlerup, 2006). Scholars have found that placement mandates, such as two women required among the top five candidates, may also prevent parties from putting women at the bottom of the party lists (Jones, 2004). In addition, sanctions are set in place to ensure all party leaders comply with quota regulations, which encourages parties to fulfill gender quotas and avoid consequences (Dahlerup, 2006). Schwindt-Bayer (2009), found without placement and enforcement within gender quotas, significantly fewer women get elected. In fact, the percentage of women in office is only one-third of what the quota size requires for party ballots, which is a significant less amount than mandated (Schwindt-Bayer). Thus, quotas without placement and enforcement lead to fewer women elected (Schwindt-Bayer, 2009). On the other hand, Schwindt-Bayer (2009) finds, "quotas with placement and enforcement lead to an almost one-to one increase in the percentage of women elected to office (p.20). However, scholars argue the outcome of quota legislation depends on the context in which it was adopted, implying gender quotas and their implications differ depending on each specific adoption (Schmidt & Saunders 2004, Jones 2005).

Paxton, Kunovoich, and Hughes (2007), argue gender quotas in general have an impact on increasing the percent of parliament seats held by women. However, in 2008, Allen and Dean published a study that discussed the large and very noticeable gender gap in British politics and argue gender quotas have the opposite affect. Moreover, they find quotas have not always been a catalyst for increasing women representation. In addition they state quotas can prompt political backlash from both sexes; from men who feel discriminated against and women who object to being treated as charity (Allen & Dean, 2008). Furthermore, the study expands on the ineffective use of quotas, finding no quota implementation results in fifty-fifty gender representation (Allen & Dean, 2008). Allen & Dean (2008) find quotas tend to encourage people to ignore the principle of equality, further skepticism on women in office, and treat women as a cohesive group that appears to have the same ideals and interest (Allen & Dean, 2008). The study concludes there will always be a gender gap in politics even with the use of gender quotas (Allen & Dean, 2008).

This study has reviewed previous literature regarding the importance of institutions and explaining the variance of women elected into political offices. Durverger's (1955) and Pateman's (1989) findings indicate there are two important types of institutions; the electoral system and gender quotas. While examining the effects of institutions, other than electoral systems, I ask if the percentage of female mayors has an impact on the percentage of women elected to lower chambers of National Parliament in Latin America and the Caribbean. The percentage of female mayors has thus far not been addressed; I consider the affect of such precedence in this paper.

### ***Hypothesis and Theory:***

H1: I hypothesize as the percentage of female mayor's increases, the percentage of women in National Parliaments also increases.

Paxton, Kunovich, and Hughes (2007) find that women face prejudice as leaders because people tend to assume that leadership is a masculine trait. Cultural and ideological beliefs against women's right to participate in politics create a substantial barrier to women's political participation (Paxton, Kunovich, Hughes, 2007). Historical beliefs that women are not equipped or capable to participate in politics were systemized into political thought (Okin 1979, Coole 1988, Pateman, 1989, Paxton, Kunovich, and Hughes, 2007). Today, 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 (Paxton, Kunovich, and Hughes, 2007). Therefore, if the political culture is socialized to believe that women are just as viable candidates as men, then it is more likely that women will be apart of all levels of the political sphere. This literature suggests that if women are involved in lower levels of political representation then we are more likely to see women involved in higher levels of representation, such as National Parliaments.

H2: I hypothesize that the presence of a proportional representation system increases the percentage of women in lower chambers of National Parliaments.

The most documented and consistent finding in research on women in politics states women do better in gaining political office in countries that use Proportional Representation (PR) electoral systems (Rule, 1981, Norris, 1985, Rule & Zimmerman, 1994, Paxton, 1997,

Kenworthy & Malami, 1999, McAllister & Studlar, 2002, Paxton 2007). Additionally, proportional representation (PR) systems tend to favor women more than single-member systems. Therefore, it suggests it is easier for women to get on the ballot in PR systems compared to single-member systems. Proportional representation systems result in higher percentages of women candidacies and elected officials.

Additionally, Sawyer (2000) found in PR systems, parties inherently have the ability to put women on the ballot to appeal to different sections of the population. This indicates women do better in gaining political office in countries that use PR electoral systems (Rule, 1981, Norris, 1985, Rule & Zimmerman, 1994, Paxton, 1997, Kenworthy & Malami, 1999, McAllister & Studlar, 2002, Paxton, 2007, Paxton 2007).

H3: I hypothesize that the presence of a Single Member District Plurality (SMDP) electoral system decreases the percentage of women elected to lower chambers of National Parliament.

Salmond (2000) argues the key difference between systems of proportional representation and majoritarian electoral arrangements lies in their district magnitude (DM). In single member districts (SMD) or majoritarian systems there is a DM of one, where only one politician is put on the ballot per party (Salmond, 2000). However, in all proportional representation systems each individual has the ability to elect more than one politician (Salmond, 2000). Salmond (2000) concludes any SMD system, “creates an incentive for party bosses to stand lowest-common-denominator candidates in geographical districts; these rarely turn out to be women or minorities” (Durverger, 1955; Rule, 1981; Salmond, 2000). When the DM is only at one only one person can be put on the ballot, it is unlikely to be a woman (Salmond, 2000). Therefore, the

lower the DM, which is only one in SMD, the lower the percentage of women elected, meaning SMD decrease the percentage of women elected.

H4: I hypothesize the adoption of legally mandated and regulated gender quotas increases the percentage of women elected to lower chambers of National Parliaments.

Previous literature finds, that sanctions are set in place to ensure all party leaders comply with quota regulations, which encourages parties to fulfill gender quotas and avoid consequences (Dahlerup, 2006). Schwindt-Bayer (2009), finds, “quotas with placement and enforcement lead to an almost one-to one increase in the percentage of women elected to office (p.20). Election law quotas utilize rules governing elections to ensure some representation for women (Davidson-Schmich, 2006). This quota law has the authority by the state to punish parties for failing to live up to specific gender quotas (Davidson-Schmich, 2006). quotas and election law quotas have placement mandates and enforcement mechanisms (Bush, 2010, Davidson-Schmich, 2006, Schwindt-Bayer, 2009). Sanctions are set in place to ensure all party leaders comply with quota regulations, which encourages parties to fulfill gender quotas and avoid consequences (Dahlerup, 2006). Schwindt-Bayer (2009), finds, “quotas with placement and enforcement leads to an almost one-to one increase in the percentage of women elected to office (p.20). Therefore, showing placement mandates and enforcement mechanisms that are used under this gender quota do increase the percentage of women.

H5: I hypothesize the adoption of voluntary political party gender quotas will decrease the percentage of women elected to lower chambers of National Parliaments.

Political party quotas are quotas in which parties set out rules or targets for the gender balance of the individuals they place in office (Davidson-Schmich, 2006). Political party quotas are different from constitutional quotas and election law quotas in that they lack the sanctioning power of the state (Davidson-Schmich, 2006). Under this quota, parties simply promise to improve the gender balance of their elected officials, but there are no official punishments for failing to live up to these promises (Davidson-Schmich, 2006). Moreover, since parties are allowed to voluntarily adopt such gender quotas, there are no enforcement mechanisms or placement mandates, therefore there are no consequences if the party doesn't meet quota. Schwindt-Bayer (2009), found without placement and enforcement within gender quotas, significantly fewer women get elected. In fact, the percentage of women in office is only one-third of what the quota size requires for party ballots, which is a significant less amount than mandated (Schwindt-Bayer). Thus, quotas without placement and enforcement lead to fewer women elected (Schwindt-Bayer, 2009).

***Data:***

I use data collected from 25 different countries in Latin America and the Caribbean from the Inter-Parliamentary Union, the United Nations, and Bormann and Golder (2013). The dataset includes the percentage of women elected to lower chambers of National Parliament and percentage of female mayors from 2000-2011, with gaps, given that elections are not held each year in each country. The dataset also includes dichotomous variables, looking at the presence of a proportional representation system, single member district plurality (SMDP) electoral rule, legally mandated and regulated gender quotas, and voluntarily adopted gender quotas. *Appendix I* shows the specific countries and percentage of women elected to lower chambers of National

Parliament and percentage of female mayors according to election year. I regress the percentage of women in lower chambers of National Parliament from 2000-2011 on my independent variable of interest, percentage of female mayors from 2000-2011. Additionally, I test the validity of my hypotheses by looking at the following variables: proportional representation system, single member district plurality rule (SMDP) electoral rule, legally mandated and regulated gender quotas, and voluntarily adopted gender quotas.

My dependent variable is from the Inter-Parliamentary Union dataset on Women in National Parliaments (<http://www.ipu.org/wmn-e/classif.htm> accessed 2/17/14). This variable looks at the percentage of seats held by women in national parliament from 25 different countries over the years 2000-2011. This time series data contains 71 observable years, which signifies the percentage of women in a lower chambers of National Parliaments within a specific election year. More statistical descriptions for this variable can be found in table 1 below. Furthermore, it is important to note not all countries are accounted for between the years of 2000-2011, due to elections not being held every year, which leaves a gap in my data.

My independent variable of interest is the percentage of women elected as mayor from 2000-2011. This data is from the United Nations Economic Commission for Latin America and the Caribbean: Gender Equality Observatory. This variable looks at the percentage of women elected as mayor within its respective country and the year of the election and contains 65 observations. Specific percentages and years for each country can be found in *appendix 1*. More statistical descriptions on this variable can be found in *appendix 2*.

My second hypothesis uses a dichotomous variable, which looks at the presence of a proportional representation system. This variable comes from Bormann and Golder's (2013) study of "Democratic Electoral Systems Around the World, 1946-2011." This is a dichotomous

variable, showing “0” for no proportional representation system and “1” for yes the country uses proportional representation. When plotting this variable on a histogram, the vast majority of the cases fall on the right-hand side corresponding with “0” which represents yes; a majority of countries in this dataset use a proportional representation system. More statistical descriptions can be found on this variable in *appendix 2*.

The third hypothesis tests a country’s electoral rule, which specifically looks to see if a county uses Single Member District Plurality (SMDP). This variable comes from Bormann and Golder’s (2013) study of “Democratic Electoral Systems Around the World, 1946-2011.” This is a dichotomous variable, showing “0” for no and “1” for yes to represent a country that has SMDP electoral rule. When plotting this variable on a histogram the majority of the cases fall on the left-hand side of the histogram under “0”, showing the majority of countries do not use the SMDP rule. Only a few countries fall on the right-hand side, signifying the SMDP rule is not widely used. It is important to account for this since previous literature shows the Single-Member-District-Plurality systems are less likely to result in women being elected. More statistical descriptions can be found on this variable in *appendix 2*.

My fourth hypothesis looks at legally mandated and regulated gender quotas and comes from the United Nations Statistics Division: Gender Info (<http://data.un.org/Explorer.aspx> accessed 1/23/13). This is a dichotomous variable where “0” is no and “1” is yes, depending on which country adopted this quota. When plotting it on a histogram, the vast majority of the cases fall on the right-hand side corresponding with “1” which represents yes; the majority of countries in this dataset have legally mandated and regulated gender quotas. More statistical descriptions can be found on this variable in *appendix 2*.

The fifth and final hypothesis looks at voluntarily adopted gender quotas. This is a dichotomous variable where “0” is no and “1” is yes, depending on which country adopted this quota. When plotting it on a histogram, the cases on the left and right-hand side are almost equal, however there are more on the right-hand side, indicating there are slightly more voluntarily adopted quotas in this dataset. More statistical descriptions can be found on this variable in *appendix 2*.

***Method:***

I use Ordinary Least Squares (OLS) regression with country clusters for 25 countries for the years 2000-2011. The dataset is primarily cross-sectional with observations from 2000-2011 in most countries, with a total of 51 observations. Because of the gaps between election years in the countries, I was not able to use panel standard corrected errors for my time-series data. Instead, I clustered the standard errors by country to account for the lack of independent observations within that country. Other scholars have come across this same issue with regards to data on Latin America, therefore I am following the same statistical practice (Schwindt-Bayer, 2009). Additionally for good statistical practice, I ran a correlation table, and found none of my variables were correlated at the 0.7 level or above.

## Results

**Table 1**  
**OLS Regression Results**  
**Percentage of Women in Lower Chambers**

Variable	Model 1 OLS Regression
Percentage of Female Mayors	.925** (.277)
Proportional Representation	.0737 (3.28)
Electoral Rule-SMDP	20.97*** (4.65)
Legally Mandated Gender Quota	14.08*** (2.99)
Voluntary Gender Quota	8.58** (3.43)
Constant	-7.10 (5.46)
R2	.4324
N Size	51

^Significant at the 90% confidence level (0.1)  
\*\*Significant at the 95% confidence level (.05)  
\*\*\*Significant at the 99% confidence level (.01)

Table 1 shows OLS regression results. Four out of five explanatory variables were found significant, with only the proportional representation measure not supported. My independent variable of percentage of female mayors was found significant at the 95% level. This finding confirms my hypothesis that as the percentage of women as mayor's increase, the percentage of women in lower chambers of National Parliaments also increases. Additionally, this variable has an extremely low standard error and falls within the 95% confidence interval, The findings suggest that for every one percent increase in the number of female mayors, we see a similar one

percent increase in the number of women elected to the lower chamber of their National Parliament.

With regards to my other hypotheses, I find that countries with Single Member District Plurality (SMDP) rule have on average 21% more women elected to lower chambers of their National Parliament. Previous literature has not found this variable significant in increasing the percentage of women in lower chambers of National Parliaments. Additionally, countries with legally mandated gender quotas have on average 14% more women elected to the lower chamber of their National Parliament. Lastly the data implies, countries with voluntary adopted gender quotas have on average 9% more women elected to the lower chamber of their National Parliament. However, regarding these three hypotheses' findings, I must report they have high standard errors and fall out of the 95% confidence interval, indicating these variables are not an accurate representation of the actual population. Overall, the model explained 43.24% of the variance within the phenomenon, giving me confidence in these findings.

### ***Conclusions and Implications:***

This study has discussed previous literature to furthermore explain the variation of women elected to lower chambers of National parliaments in Latin America and the Caribbean. This study found the percentage of female mayors does increase the percentage of women elected to lower chambers of National Parliaments in Latin America and the Caribbean. Additionally, the model had an R-squared of .4324, explaining 43.25% of the variance in this model, making it statically significant. The data suggests that for every one percent increase in the number of female mayors, we see a similar one percent increase in the number of women elected to the lower chamber of their National Parliament. In order to create a more gender equal

National Parliament, there needs to be a significant increase in the percentage of women. This study encourages women to get involved in lower levels of government, in order to help close the gender gap. However, these results further the literature on this topic, due to the fact that previous literature states once a candidate is involved in lower levels of government, it become easier for them to be involved in higher levels. Moreover, these results look specifically at Latin America and the Caribbean and the specific impact of the percentage of female mayors.

Additionally, contrary to previous literature, the data suggests that countries with Single Member District Plurality (SMDP) electoral rule have on average 21% more women elected to lower chambers of their National Parliament. Furthermore, contradicting with previous scholars, this data finds that countries with voluntarily adopted gender quotas have 9% more women in lower chambers of their National Parliaments. This finding suggests that through the quotas' voluntary nature they are effective in increasing the percentage of women to lower chambers of National Parliaments, which previous studies have not found. Additionally, in this model the presence of a proportional representation system was not found significant.

Lastly, while my independent variable of interest was found significant, it is not a surprising result. This study failed to identify the causal variables to explain this phenomenon; this study leaves significant room for further analysis to better explain the phenomenon. Further studies should look at these same variables and should include more extensive data from a larger amount of cases (countries) and larger timespan.

My independent variable of interest, percentage of female mayors had a low standard error, which indicated it represented the actual population and explains the phenomenon more precisely. Therefore, this study encourages other scholars to compile better data sets with a great amount of countries and years to better explain variance within this phenomenon. This study did

provide statistical significance and continues the discussion on the topic of women's representation in National parliaments. Until the day has come that women share equal representation in the lower chamber parliaments around the world, the study of unequal gender representation will be warranted. This paper furthers the literature on this topic and emphasizes the importance of examining this phenomenon to create help foster gender equal parliaments around the globe.

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*Appendix 1:*

CCODE	Country	Year	Percentage of Women in National Parliaments	Percentage of women elected as Mayor
1	Antigua & Barbuda	2004	5.3	
1	Antigua & Barbuda	2009	10.5	
2	Argenti	2001	26.5	7.4
2	Argenti	2003	30.7	7.4
2	Argenti	2005	33.7	7.4
2	Argenti	2007	35	8.6
2	Argenti	2009	40	10
2	Argenti	2011	38.5	10.2
3	Bahamas	2002	15	
3	Bahamas	2007	20	
4	Belize	2003	6.9	22.2
4	Belize	2008	3.3	22.2
5	Bolivia	2002	11.5	6.1
5	Bolivia	2005	19.2	6.1
5	Bolivia	2009	16.9	6.1
6	Brazil	2002	11.5	5.7
6	Brazil	2006	8.6	7.3
6	Brazil	2010	8.8	9.2
7	Chile	2001	10.8	12.3
7	Chile	2005	12.5	12.2
7	Chile	2009	15	12.5
8	Colombia	2002	11.8	6.1
9	Costa Rica	2002	19.3	8.6
8	Colombia	2006	12.1	7.8
9	Costa Rica	2006	35.1	11.1
8	Colombia	2010	8.4	9
9	Costa Rica	2010	36.8	11.1
10	Dominica	2005	19.4	0
10	Dominica	2009	18.8	0
11	Dominican Republic	2002	16.1	7.2
11	Dominican Republic	2004	17.3	7.2
11	Dominican Republic	2006	17.3	11.9
11	Dominican Republic	2010	19.7	7.7
12	Ecuador	2002	14.6	2.8

12	Ecuador	2006	16	5.9
12	Ecuador	2009	27.6	5.9
13	El Salvador	2003	9.5	6.5
13	El Salvador	2004	10.7	6.5
13	El Salvador	2006	10.7	8.4
13	El Salvador	2009	19	10.7
14	Grenada	2003	26.7	
14	Grenada	2008	26.7	
15	Guatemala	2003	8.8	0.9
15	Guatemala	2007	8.2	2.7
15	Guatemala	2011	12	1.8
16	Honduras	2005	5.5	9.1
16	Honduras	2009	23.4	3.4
17	Jamaica	2002	13.3	23.1
17	Jamaica	2007	11.7	7.1
17	Jamaica	2011	13.3	7.1
18	Mexico	2003	16	3.5
18	Mexico	2006	24.2	3.8
18	Mexico	2009	23.2	5.1
19	Panama	2004	9.9	9.3
19	Panama	2009	16.7	9.3
20	Paraguay	2003	2.5	5.4
20	Paraguay	2008	10	6
21	Peru	2006	18.3	2.9
21	Peru	2011	27.5	3.9
22	Suriname	2000	15.7	0
22	Suriname	2010	25.5	30.8
23	Trinidad and Tobago	2000	11.1	0
23	Trinidad and Tobago	2001	16.7	0
23	Trinidad and Tobago	2007	19.4	0
23	Trinidad and Tobago	2010	26.8	20
24	Uruguay	2004	12.1	0
24	Uruguay	2009	12.1	0
25	Venezuela	2000	12.1	6.7
25	Venezuela	2005	9.7	7.2
25	Venezuela	2006	17.4	7.2
25	Venezuela	2010	17.5	17

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*Appendix 2:*

*Descriptive Statistics on Dependent Variable “Type of Political Institution”*

<b>Variable</b>	<b>Observations</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Min</b>	<b>Max</b>
<b>Percentage Women in Parliament</b>	71	17.10	8.60	2.5	40
<b>Percentage of Female Mayors</b>	65	7.70	5.99	0	30.8
<b>Proportional Representation</b>	68	.573	.498	0	1
<b>Electoral Rule- SMDP</b>	68	.25	.436	0	1
<b>Legally Mandated Quota</b>	54	.666	.475	0	1
<b>Voluntary Quota</b>	54	.537	.503	0	1