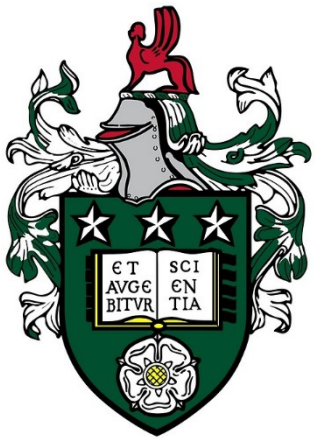

A quantitative analysis of the country level factors influencing female representation in national legislatures of electoral democracies

Student Number: [redacted]

Supervisor: [redacted]

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"Gender equality is essential to build and strengthen our communities. When women engage in political process, societies thrive and prosper" - Justin Trudeau (Women Political Leaders, 2020)

"Equal representation in positions of power is a fundamental precondition for truly effective and accountable democracy" - (Inter-Parliamentary Union, 2017)

Abstract:

The current world population is approximately 49.6% female (World Bank, 2020) while the average percentage of women in national parliaments is 24.7% (Inter-parliamentary Union, 2020). A.H. Birch argues that without representation that reflects the demographics of a country, true democracy cannot be achieved (A.H. Birch, 1971). This study aims to evaluate factors which create conditions where more women occupy seats in the lower house of 105 electoral democracies through an aggregate level analysis of structural, socio-economic and historical factors. Arguing that discrimination is the largest obstacle to women's election to the national legislature, this study models six variables in an Ordinary Least Squares (OLS) regression to determine the most important driving forces. The primary conclusion is that specific structural, socio-economic and historical factors do affect the percentage of women in parliament, notably the use of gender quotas a higher percentage of women in paid work and a large number of years since the first woman was elected to parliament are found in this study to be important. Previous literature which stressed the influential role that the type of voting system had on increasing the percentage of women in parliament have been shown to have far less strength than previously thought. Overall, this study serves to highlight the complicated nature of female representation in national legislatures and the multitude of forces at play.

Contents:

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List of Tables, Figures and Graphs:

I. Introduction:

Throughout history, positions of power have largely been occupied by men and this has influenced many parts of society, its norms, and laws. In particular, the political environment is largely male with far fewer women represented. This raises questions regarding how democratic a country can be, if half of its citizens are not represented to the same extent that the other half are.

In 2020, the average percentage of women represented in national parliaments was 24.7% (Inter-Parliamentary Union, 2020) while the global percentage of women in the world was 49.5% (World Bank, 2020). Within this, there is great country variance, for example Micronesia has no women represented in its national parliament, while Bolivia has 53.08% of seats occupied by women (Inter-Parliamentary Union, 2020). This study aims to assess the factors that create an environment that encourages a higher percentage of women in parliament in the lower houses of national legislatures, using data from 105 electoral democracies.

A.H. Birch's theory of *demographic* representation argues that the most democratic government represents the needs of all citizen (Birch, 1971). The best way to do this is for a country's parliament to match the demographic of their country, to be a "microcosm of the population" (Lovenduski, 1995, p. 94). By this thinking, this study will argue that more women need to be in parliament, to match the 49.5% that they occupy the world. The basis of demographic representation comes from the idea that those in the same group, represent their interests best and was supported by Jeremy Bentham and Utilitarianism in the 1820s, on the idea that the people could not be represented by a political elite who didn't understand them (Lovenduski, 1995).

Power structures and the status quo have historically marginalized women, and other groups, and it is this entrenched belief system that stops women globally from being represented to the same degree that they occupy society (Paxton, 1997). This belief system manifests itself in the form of discrimination against voting for women and/or discriminatory processes that reduce the likelihood women will put themselves forward. This study will focus on historical, structural, and socio-economic factors that are helping to break down the barriers of discrimination to get more women into national parliaments.

There are several studies that have considered factors that affect the percentage of women in national parliaments. However, many of these studies were carried out a number of years ago, for example (Duverger, 1955), (Currell, 1974) and (Bogdanor, 1985), while other studies focus on specific regions, (Yoon, 2004) and (Rittberger, 2014). As a result, this study hopes to fit into the literature as a look at global trends, taking the theory from smaller and now somewhat outdated studies to see if they are still relevant.

An OLS regression of 105 electoral democracies will be employed to assess the importance of structural, socio-economic and historical variables on the percentage of women in parliament, as of the most recent election (Inter-parliamentary Union, 2020). These independent variables are electoral system, quota for women, development level, percentage of women in paid work, years since universal suffrage and years since the first woman was elected to parliament (Inter-parliamentary Union, 2020) (UN Stats, 2020) (International Institute for Democracy and Electoral Assistance, 2020) (World Bank, 2020) (Women's Suffrage and Beyond, 2017). This study will only consider the lower houses or single houses for

unicameral structures, as this is where most power is held (Mughan, 2001). Electoral democracies have been chosen using the Freedom in the World 2020 electoral democracy index to ensure this study measures effects on democracy (Freedom House, 2020).

Overall, this study aims to better understand what factors facilitate an environment where more women are elected to the national legislature. This allows for consideration of factors that may need to be implemented in countries where representation is far lower than it should be to achieve representative democracy.

II. The Importance of Representation

By 2020 women are expected to hold $72 trillion, 32%, of the world's total wealth (Economist, 2018), meanwhile they drive 70-80% of all consumer purchasing through their buying power and influence (Bloomberg, 2018). Notwithstanding their economic contributions, women are also the primary caregiver in many societies and often occupy multiple roles in and outside the home (UN Women, 2019). This growing influence in the world demands greater representation in the political environment to satisfy Birch's theory.

Results from the World Economic Forum 2020 Global Gender Gap report suggests that while the gender gap globally is decreasing, the largest gap remains in the political empowerment index and this includes political representation (World Economic Forum, 2019). 108 out of 149 countries have decreased this gap in recent years by increasing the number of women represented in their parliament (World Economic Forum, 2019). Indeed, in 1890 no women in the world could vote in

democratic elections, while in 2006, all women living in states which held elections, could vote (Hughes, 2006). Additionally, as of June 2019, 11 women were serving as head of state and 12 as head of government (UN Women, 2019).

Despite these recent leaps forward, The United Nations (UN) argues that in order for women to make a meaningful difference in politics, they must occupy 30% of the total space which is also referred to as the Critical Mass theory (Kunovich, 2003). This means that while there has been a steady increase in women's representation over time, the current global average of 24.7% (Inter-Parliamentary Union, 2020) suggests that for some countries there is a long way to go before true representative democracy is achieved.

Burnet argued that increased female representation lays the path for meaningful participation in genuine democracy and a "transformation in political subjectivity" (Burnet, 2008, p. 361). Research by the United Nations lends support to this idea, demonstrating that when more income is put into the hands of women, child nutrition, health and education improve (UN Women, 2012). Additionally, other areas of business and environmental protections flourish as evidence from 25 developed and developing countries suggests (UN Women, 2012). This indicates that countries with higher female parliamentary representation are more likely to set aside protected land areas for either environmental protections, protection of indigenous communities or cultural sites (UN Women, 2012).

Indeed, Paxton highlighted the dangers of a lack of female representation which can lead to the state legislating in the male interest (Paxton, 1997). This is because women are more likely than their male colleagues to represent women's interests because they understand their own needs bettern (Jones, 1998). This can

mean that groups not represented can be side-lined and possibly put in danger. For example, in the United States, a bill was passed in Alabama in 2019 to ban abortion in virtually all circumstances, including rape and incest (BBC News, 2019). The bill was voted for by all male senators and none of the 4 female senators voted in favour of this bill which has widely been regarded as a step backwards for female reproductive rights (BBC News, 2019). Without female voices in positions of power, women's opinions are not heard to the same extent.

Caroline Lucas, MP and previous co-leader of the Green party, stresses the importance of women having a voice in parliament through her experience in the parliament of the United Kingdom (UK). She pointed to the rising female presence in the Lower House of the UK as a catalyst for "major steps forward in tackling gender discrimination" both in parliament and in civil society (The Guardian, 2017). All in all, better representation in national parties of all members of society will lead to better democracy. This is what Birch and others argue for and is widely agreed as necessary for a suitable democracy to function (Lovenduski, 1995).

III. Review of the Literature

Discrimination:

To better understand which factors aid or inhibit women's representation in national legislatures it is first important to understand why women are being elected at a far lower proportion than men. The primary obstacle to women's representation is the existing discrimination against women which exists in most societies around the globe.

This discrimination can be defined in two ways. *Direct discrimination* is defined by Lovenduski as the unjust or prejudicial treatment of different categories of people, especially on the grounds of race, age, or sex (Lovenduski, 1995, p. 14). This is different to *Imputed Discrimination* defined as when selectors in the party discriminate against a candidate because they do not believe that the electorate will vote for them (Lovenduski, 1995, p. 14). Both types of discrimination are at play when considering the representation of women.

Tremblay and Acker have explored the origins of democracy and its power structures, both convincingly concluding that much of Western democracy has historically excluded women (Tremblay, 2007, p. 533) (Acker, 1990). Tremblay examined democracy in ancient Greece and the societal influences of the time that created rigid gender roles, where women worked in the home and were often kept out of the political sphere (Tremblay, 2007). Later, theorists of the social contract and popular sovereignty, which informed developments of democracy that we see today, also denigrated women to the spheres of private and family life (Kunovich, 2003). It is therefore not only modern structural factors that must be examined and dismantled to increase equal representation, but also ideological and historical factors. Indeed, Bano discussed the obstacles to women's participation in politics as "[residing] in prevailing social and economic regimes as well as in existing political structures" (Bano, 2009, p. 29).

In a similar vein, exploration into modern power structures and the effects they have on women are also important. Acker argues that power in modern democratic systems is designed to be gender neutral and thus existing structures have been adapted in the hope that more people can access these positions (Acker,

1990). However, because women struggle more than men to hide their gender through pregnancy, the sexualisation of their body, menstruation etc. they struggle to fit into this non-gendered environment (Acker, 1990). Indeed, Burrell and Acker described how the “suppression of sexuality is one of the first tasks bureaucracy sets itself” (Burrell, 1984, p. 98). This suggests that women by purely being women, are discriminated against and kept out of positions of power in the political sphere. This in turn, means that there are far fewer women represented in parliament.

Further investigation into discrimination considers the stereotypical characteristics of good leaders. Crawford described good “leadership characteristics” as being charismatic, economically successful and in control of your emotions which are often stereotyped as male features (Crawford, 2011, p. 99). This stereotype has been proven to limit women’s ability to represent themselves in positions in parliament. Women in the Australian parliament in Crawford’s study described their experiences receiving negative press when returning to work after having a child because they were not abiding by traditional gender norms (Crawford, 2011). Acker highlighted the dangers of these gender identities in encouraging other forms of social segregation (Acker, 1990) and this certainly seems the case when viewing the social segregation of women from power structures.

This distinction between the female and the male ties into Puwar’s research into physical characteristics (Puwar, 2004). Puwar defined this as a Somatic Norm which is the concept that there are “ideal physical characteristics” that are accepted by a group as being desired for a role (Puwar, 2004, p. 8). Puwar argues that looking and being a man are the ideal physical characteristics for a politician and this creates challenges for women entering parliament (Puwar, 2004).

Despite all these challenges, Rule (1981) suggested that once women do apply for election, they face no more obstacles than men in being selected (Rule, 1981). However, this study focused on the United States and so its usefulness is limited when looking at the global picture. An additional criticism of Rule's conclusion is evidence that once women do get into positions of power they are often placed into "nurturing portfolios" like healthcare and education which are often deemed less important by the public (Crawford, 2011). This means that women have less 'real' power to represent their constituents' needs (Crawford, 2011). Therefore, while evidence suggests that barriers to women's discrimination are not uniform across countries, this serves to highlight what this study aims to learn, why there is such country variance.

Overall, while there are a range of studies that examine a small sample of countries, there are very few studies that examine the global picture. With discrimination in its broadest sense being the main cause of a lack of female representation, it is important to quantify this and explore how this manifests itself. In the next section of the discussion, the factors which help to limit this discrimination are evaluated in relation to existing literature.

Structural:

A commonly agreed factor influencing higher representation for women in national legislatures are structural factors of the political environment. These include Rule's (1987) analysis of the impact of different types of electoral systems on the

percentage of women in parliament (Rule, 1987). Rule (1987) tested the importance of the Proportional Representation (PR) voting system that had previously been identified by older studies as facilitating better representation (Duverger, 1955) (Currell, 1974) (Bogdanor, 1985). She identified that Proportional Representation (PR) as a voting system and a higher number of women elected to parliament is strongly correlated using data from 23 advanced democracies (Rule, 1987).

The reason PR systems are so conducive to a higher percentage of women in parliament is that they normally include a list system to achieve this proportionality whereas plurality/majority systems do so less frequently (Rule, 1987). With a PR list system parties are still more likely to choose a male to be put on the ballot, but will also choose a female representative alongside them, to appeal to a wider audience (Rule, 1987). In systems without a list the party are more likely to choose a male, as they believe, due to existing discriminatory structures, that they are more likely to win with a male representative, this is an example of imputed discrimination (Lovenduski, 1995).

The number of studies that suggest a PR system is conducive to a higher number of female MPs representing their constituents in the national legislature suggests that this is an element to explore further. Matland and Montgomery, found support for Rule's theory, concluding that "the electoral system directly affects female legislative representation" because it shapes how people are recruited and who is chosen to be put on the ballot (Tremblay, 2007, p. 537). The problem with the studies of Rule and Matland is that they were carried out over 25 years ago and since then female representation has, for the most part, increased in national legislatures and so this needs to be reconsidered in the current climate.

More recent investigation into the relationship between a PR vote system and the percentage of women represented in parliament comes from Rittberger (2014) and Yoon (2004). Rittberger considered the effect of PR voting systems on women's election to the European parliament and found substantial evidence to suggest that the PR system used in European parliament elections does encourage more women when compared with member states' parliaments who don't use a PR system (Rittberger, 2014). Yoon found a similar relationship in her exploration of Sub-Saharan African countries (Yoon, 2004). Her study found that multi-member proportional representation systems were more favourable than single member or plurality systems in this region to a higher percentage of seats occupied by women (Yoon, 2004). This is due to the wider appeal that having a woman on the ballot brings in in multimember PR systems (Yoon, 2004, p. 450).

However, it is important to keep in mind the conditions under which both Yoon and Rittberger's studies were carried out. Notably, in the case of Rittberger, the European parliament is a relatively new institution without the entrenched male hierarchies which many national parliaments have therefore the relationships may be different (Rittberger, 2014). Additionally, study of the European parliament falls victim to the Second Order Election theory in which voters often vote differently in elections they deem less important (Cutler, 2008). Therefore, Rittberger's study is useful in tandem with others, but cannot provide conclusive suggestions of the global picture. Similarly, Yoon's research is compelling as a start point, however its focus on Sub-Saharan Africa suggests that more multi-country studies need to be carried out to determine whether this trend extends globally.

In this way, this study aims to assess the strength of Rittberger and Yoon's conclusions on a global scale and reassess previous findings from Matland, Montgomery and Rule on how important PR vote system is in a changed global climate. This led to the creation of hypothesis 1:

Hypothesis 1. Countries that have Proportional Representation voting systems will have a higher percentage of women in parliament than countries without PR systems

Another structural factor for which its usefulness has widely been debated is gender quotas. The International Institute for Democracy and Electoral Assistance identifies three main types found in national parliaments: (1) reserved seats, (2) legislated candidate quotas, (3) voluntary party quotas. The first two are either written into electoral law, or the constitution (International Institute for Democracy and Electoral Assistance, 2020) making them legally binding. The final type, voluntary party quotas, is not uniform across the country but specific to a party which may choose to implement a quota (International Institute for Democracy and Electoral Assistance, 2020).

Other differences in relation to quotas includes the amount to which the quota demands. Some countries have followed the Critical Mass Theory, and installed quotas for 30% of seats or 30% of candidates while others have gone for ambitious 50% quotas (International Institute for Democracy and Electoral Assistance, 2020). All these differences highlight the challenges faced when researching them.

The usefulness of quotas in increasing women's representation has widely been debated. Jones was one of the early scholars to explore the use of quotas through his research into the impact of the Argentine quotas in the 1990s (Jones, 1998). He found that the implementation of a quota increased representation of

women in the national legislature, and Argentina became an anomaly compared with most other Latin American countries which still had low levels of female representation (Jones, 1998). Bano similarly encourages the use of quotas, writing that they are “one of the most effective affirmative actions in increasing women’s political representation” in his research into the Pakistani parliament from 1947-2008 (Bano, 2009, p. 30).

Since Bano and Jones’ writing, more and more countries have implemented some form of electoral quota. In 2020, out of the 190 countries recognised as having elections by the IPU, 104 of them had installed some form of electoral quota (Inter-Parliamentary Union, 2020). This compared with only 5 countries that had adopted quotas in the 1970s suggests a sharp increase in the past 50 years (Bush, 2011). However, these 104 countries include all three types of quota which is problematic for research. While legislated candidate quotas and reserved seat quotas are often compulsory by law, voluntary party quotas are entirely dependent on the party therefore are harder to study.

Research by Studlar and McAllister suggests that the positive increase in women’s representation that quotas bring is in part due to the way that they force structures to change (Studlar, 2002). Quotas target existing discrimination in the structures of democracy by making a clear space for women and a prerogative for political parties to work with them. Quotas are also useful in increasing women’s representation because they signal an admission of the barriers that women do face and an active effort to tackle them (Yoon, 2004). It is this idea that bought the creation of our second hypothesis.

Hypothesis 2. Countries with a quota implemented by law will have a higher percentage of women in their parliament than countries with no legal quota

However, Bush examined the rise in use of quotas in developing nations and found that some implemented quotas to adhere to structural adjustment packages but did not implement the quota effectively (Bush, 2011). This is a key challenge with investigations into quotas. In some countries, parties either do not adhere to them and pay a fine or there is no consequence at all suggesting that the quota is an attempt to burnish the country's standing in the international arena rather than indicating commitment to real change (International Institute for Democracy and Electoral Assistance, 2020). This creates a major challenge when considering the effect on women in parliament as some are implemented successfully, and some not.

Additionally, quotas are often found in less developed countries because more developed countries have a higher level of representation already (Pourgerami, 1988). Indeed, Western Europe is the origin of traditional democracy today and has an average percentage of women in parliament of 37%, over 10% above the global average (Inter-parliamentary Union, 2020). Here, many believe that non-voluntary quotas constrict who can be elected and so do not support them in their political system, believing they are undemocratic (Studlar, 2002) (Bano, 2009).

As a result, it is likely that the relationship between having a quota and the development level is interlinked and measures should be taken to explore this further. This led to the creation of hypothesis 2a.

Hypothesis 2a: the impact of a gender quota on the percentage of women in parliament will differ dependent on the development level. Less developed countries will find quotas increase the percentage of women in parliament more than gender quotas do for more developed countries which already have relatively high levels of development

Much of the literature focuses on the effect of structural factors, and only briefly considers the effect of socio-economic considerations. Rule suggests that structural factors are far more important due to the way that they create the conditions for women to be elected, while socio-economic factors only consider motivations (Rule, 1987). Indeed, Rittberger noted that structural factors were more important in the European parliament than macro-societal factors (Rittberger, 2014).

While considering all the factors that influence women's representation in national legislatures it is important to consider what the most important factors are. This focus on structural factors in the existing literature has led to the creation of hypothesis 3:

Hypothesis 3. Structural variables have a more significant effect on the percentage of women in parliament than socio-economic or historical variables

Socio-economic:

Nevertheless, Paxton and Kunovich argued that even if structural factors do enable women to get elected, if you don't have the women going forward in the first place because of discriminatory processes in their socio-economic background, you are unlikely to have many women elected (Kunovich, 2003). It is important to see World Polity Theory in relation to the effect of social factors and their impact. World

Polity Theory argues that social change is the result of external social and ideological factors that influence state decisions (Hughes, 2006, p. 900). With more women occupying areas in society, more women will influence state decisions in parliament.

Yoon argued that a socio-economic environment which does not promote women or denigrates them, like a structural political system, will stop women participating in the parliaments of their national legislatures (Yoon, 2004). Indeed, one socio-economic factor which is believed to affect women's representation in national legislatures is that of the level of development of the country.

Matland's exploration into the relationship between development level and percentage of women in parliament was one of the first of its kind and is still one of the few papers looking at the relationship today (Matland, 1998). His research offers some insight into the impact of the development level of a country, however some countries explored by him have changed development level and therefore it is useful to reassess these conclusions (Matland, 1998).

Matland found that "increased development leads to weakening of traditional values … and attitudinal changes in perceptions of the appropriate roles for women" (Matland, 1998, p. 114). With development comes a shift in culture, towards one that welcomes more women into politics. This argument has merit as research suggests as countries become more economically developed, they too become more democratic and women have a larger role (Pourgerami, 1988). It is therefore suitable to conclude that a developed country is likely to have a higher percentage of female politicians in their national parliaments, than developing countries.

This argument has been disputed by Yoon who in her exploration of countries in Sub-Saharan Africa, suggested there was no statistically significant relationship between the development level of the country and the percentage of women in the national parliaments (Yoon, 2004). However, Yoon's study focused on Sub-Saharan Africa where many countries are not electoral democracies. Therefore, while Yoon's comments are helpful when considering the Sub-Saharan Africa region, in a larger cross-national study, it is likely that there will be some impact of the development level of a country on the percentage of women represented in the national parliament. This led to the identification of hypothesis 4.

Hypothesis 4. Developed countries will have a higher percentage of women in their national legislatures than developing countries

Another socio-economic factor that is widely agreed to correlate positively with better representation in national legislatures is the percentage of women in the labour force. If women are participating in the labour force, they have more financial independence to run for office (Yoon, 2004). It is convincing to conclude that more women are likely to be elected if they have more economic capital and more financial independence. Indeed, Rule found that there was some correlation between the percentage of women in the workforce and the percentage of women in parliament in her studies into democracies in the 1980s (Rule, 1987).

Another reason the labour force is so important is because politicians emerge disproportionately from certain professions, such as law or academia (Lovenduski, 1995), (Rittberger, 2014). These professions, regardless of gender, engender skills and contacts that help when getting elected and once the individual has a role in parliament (Tremblay, 2007). As a result, more women participating in these

professions will create more women with the skills and contacts required for election to office and lead to a higher percentage of women in parliament.

However, the relationship between labour force and women's representation has limitations. As Yoon pointed out, this relationship can be skewed in some circumstances where a large percentage of women work, but in the low skilled industry where they have little economic capital and little opportunity to learn skills that would help them get elected to office (Yoon, 2004). As a result, it is important to consider other ways that the percentage of women in the labour force and the percentage of women in national legislature is recorded. This study uses an indicator for the percentage of women in paid work which will be described in more detail in the methodology.

Hypothesis 5. The percentage of women in paid work will be positively correlated with the percentage of women in the national legislature

Historical:

One factor explored far less in the literature, is the impact of historical factors. Matland described how most research focuses on socioeconomic and institutional factors with little on historical considerations (Matland, 1993). One reason for this is because it is hard to quantify in a cross-national study as every country has a vastly different history.

However, historical factors are important to consider due to the historical nature of discrimination affecting women's election to the national legislature. In particular, if women have been active in politics for longer, whether that be in official positions or through women's groups, the electorate are more comfortable seeing a

woman in parliament and therefore are more likely to vote for a woman. Additionally, historical support of women in the national legislature leads to more policies that help women to reach these positions, furthering the percentage of women in parliament.

Country	Year Suffrage
Denmark	1915
Finland	1906
Iceland	1915
Norway	1913
Sweden	1921

Figure 1: Years Suffrage acheived Nordic countries:

(Women's Suffrage and Beyond, 2017)

This relationship can be seen in Nordic countries shown in Figure 1. This groups of countries have the highest number of women in their parliaments and were some of the first to achieve women's suffrage and have a female member of parliament (Inglehart, 2001). The average year for current electoral democracies to achieve universal suffrage is 1947 while for Nordic countries it is 1914 (Women's Suffrage and Beyond, 2020).

It is these egalitarian views that take time to synthesise into countries and ideologies. Therefore it is convincing to conclude that those countries with more years since women's suffrage would also have more women represented in their national parliament as women have had more time to prove themselves and the country is making moves to encourage more equal representation. This conclusion led to the creation of Hypothesis 6.

Hypothesis 6. The greater number of years since women's suffrage, the higher the percentage of women elected to parliament in the year of the most recent election

One aspect explored in more regional level studies is the effect of women's rights movements on bringing women into positions of power in business and the government. Evidence suggests that if women have had more of a role in politics, through women's rights movements or interest, there are likely to be more women in parliament. This is because, with women assisting in the political sphere, even if they are not elected in seats in parliament, this breaks down both structural and ideological assumptions which can limit women's ability to get elected. This relationship is similar to the years since women's suffrage, as time helps to change viewpoints of the public to elect more women.

Research into Rwanda which has the highest percentage of women in their parliament globally at 61.25%, suggests that women's rights movements are particularly important (Burnet, 2008). Following the Rwandan genocide, there were thousands of female refugees and their families whose male relatives had been killed and now had no means of income (Burnet, 2008). It was in refugee camps that organisations to promote women to get back on their feet grew, funded by NGOs. These groups are widely regarded as providing women with the confidence and skills to run for government and get elected in Rwanda (Burnet, 2008). This case study demonstrates the impact that women have when they are involved in the political sphere through rights groups. Having a history of women in these roles increases the percentage of women in parliament because they create conditions where women are more likely to be elected.

Campbell explored the relationship between the number of female politicians and the young women in their constituents' interest in politics. Campbell found that where there are more female MPs there are also more young women talking about politics which brings more women to apply to be members of parliament (Campbell, 2007). This suggests that countries with a longer history of women in parliament, will likely have female constituents who are more interested in politics due to having suitable role models.

Campbell's study suggests that there is some form of cyclical relationship between the independent variable and predictor variable in this case. This is a weakness of the investigation however this is already a complicated issue with many facets. While this cyclical relationship needs to be considered, it is still appropriate to conclude that the more years since the first woman was elected to parliament, the more women will be in the national legislature and so this led to the creation of hypotheses 7.

Hypothesis 7. The greater number of years since the first woman was elected to parliament, the greater the percentage of women represented in the lower house of the national legislatures

One set of variables that are important to consider but that have not been included in the final models are ideological variables. These may include religion, egalitarian values, and views on the role of women. The usefulness of these as indicators has been debated as they rarely create statistically significant relationships in the studies that use them (Tremblay, 2007) (Studlar, 2002), yet it is hard to deny their importance in affecting the way voters and selectors view women they may be electing to parliament.

Paxton and Kunovich did explore ideological factors using data from the World Values Survey (Kunovich, 2003). They found that ideology was important to some degree in their analysis but cautioned against using measures such as “dominant religion” which mask many other variables with sweeping generalisations. Because ideology is so varied this study does not consider it in the statistical analysis but does accept that they exist and may explain some of the variance not accounted for. To some degree, the historical variables account for some ideological variance as they demonstrate the extent of egalitarian views.

IV. Methodology

Research Question: What country level factors create conditions in which more women are elected to national parliaments?

Formation of the data set:

The data for this study has been collated from a collection of resources (Inter-parliamentary Union, 2020) (UN Stats, 2020) (International Institute for Democracy and Electoral Assistance, 2020) (World Bank, 2019) (Women's Suffrage and Beyond, 2017). The dataset has information for the most recent elections (as of March 2020), looking at 105 electoral democracies. The aim is to create an up to date study of factors affecting women's representation in national legislatures and determine whether a) factors important 25 years ago are still important and b) the strength of historical variables which have been explored far less.

The analysis only includes figures for the percentage of women in the lower house or single house of the national legislature. The reason for this decision is the lower house often has greater legislative powers than the upper house therefore is more important when considering the issue of representation and women's ability to make an impact (Kunovich, 2003). Additionally, the lower house is directly elected by citizens of the country while some upper houses are chosen by the executive (Mughan, 2001). The inclusion of the upper houses in analyses such as this, risks Second Order election theory that people who believe an election is less important, vote differently to if they believe it has direct influence on them therefore is not useful for this kind of analysis (Rittberger, 2014).

Moreover, the focus of the study is on electoral democracies as it is the promotion of democracy that this study is examining. Yoon concluded that legislative elections in countries that are not true democracies are meaningless and are likely to produce different outcomes (Yoon, 2004). As a result, all non-electoral democracies were removed, using the Freedom House electoral Democracy database before starting any analysis. Freedom House distinguishes an electoral democracy by considering a legal basis for protections of civil liberties and democratic freedoms and the implementation of these measures (Freedom House, 2020).

The Freedom House data was taken from the 2020 study which showed electoral democracies as of 2019 (Freedom House, 2020). Therefore, for countries whose elections occurred in 2020, therefore after the cut off point for being included in the report, they were cross referenced with news reports to determine whether they could still be included. For all countries which had an election in 2020 and were 'electoral democracies' in 2019, I found that they all were still electoral democracies in 2020.

The Dependent Variable:

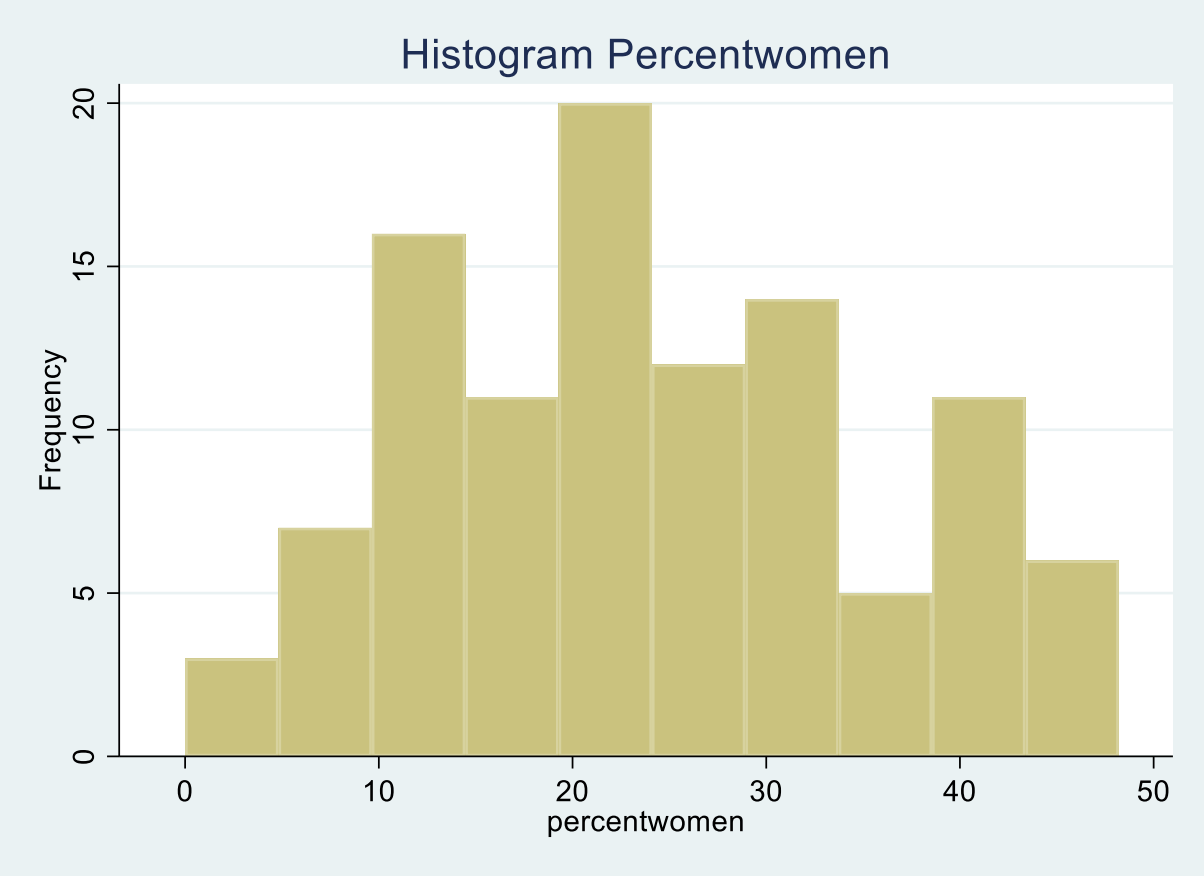
The dependent variable is labelled *percentwomen*, which is a percentage of the seats occupied by women in the lower house of the national legislature, as of March 2020 (Inter-Parliamentary Union, 2020). The Inter-Parliamentary Union is an excellent resource as it provides up to date, extensive and reliable information on countries and their parliaments. "Women" is defined as those that are women in

national census' or governmental documentation, so those who by governmental records are defined as women (Inter-parliamentary Union, 2020).

Countries with parliaments that have recently been dissolved were not included on the IPU database. Of these countries those classed as electoral democracies were added into the dataset, as of the most recent election before the parliament was dissolved to have as representative a sample as possible. This information was taken from the country specific page with historical data (Inter-Parliamentary Union, 2020).

Figure 2 is a histogram of the frequency of the dependent variable. The graph shows the normal distribution, with the mean being at 23.87%. This is close to the global average of 24.7%, including non-electoral democracies therefore suggests that my sample is representative of the world. The histogram also shows that no country has a representation of women above 55% and three have a representation of women at 0%. This demonstrates the country variance which this study aims to explain.

Figure 2: Histogram percent women:



Explanatory Variables:

The explanatory variables were taken from the Inter-Parliamentary Union, United Nations, UN Stats, the World Bank, IDEA and Women's Suffrage and beyond (Inter-parliamentary Union, 2020) (UN Stats, 2020) (International Institute for Democracy and Electoral Assistance, 2020) (World Bank, 2019) (Women's Suffrage and Beyond, 2017). In line with the hypotheses described above, I have grouped the independent variables to better understand how structural, socio-economic, and historical factors affect the percentage of women represented in national legislatures.

Structural:

The first structural variable is a binary variable *PR*. This was transformed from a categorical variable, *votesystem*, which listed the four key types of voting system from the IPU database (Inter-Parliamentary Union, 2020). These are (1) Mixed system, (2) other system, (3) Plurality/majority, (4) Proportional Representation (PR). When diagnostic tests were undertaken and outliers were removed, there was only one observation for some of the categories. Because this study's focus is on the effect of PR system, a binary variable looking at PR was employed as there cannot be categories with only one observation.

This variable will have its own model in a bivariate regression because the study hopes to evaluate the usefulness of PR which older studies suggested was most important. To accept hypothesis 1 there would be a significant relationship when comparing PR to all other systems. We would expect countries with PR systems to have a higher percentage of women in parliament.

The quota variable was exported from the IDEA database (International Institute for Democracy and Electoral Assistance, 2020). It originally was labelled *quotatype* and included three categories of no quota, legislated candidate quota and reserved seats quota. The study only uses quotas that were written into the constitution or the electoral law because the use of voluntary party quotas varies so much within countries that they would not offer suitable results.

The reserved seats variable in *quotatype* only has 1 observation therefore, like the *votesystem* variable, it cannot be used. Instead, a binary variable coded 0 "no quota" and 1 "constitutional or legal quota" will be used in the models to consider the effect of the implementation of a quota by law rather than the type of quota. In a

similar vein, the study is not concerned with the size of the quota as this is more suitable in smaller regional level studies. The validity of hypothesis 2 will be determined by considering the coefficients, p-values and AIC of the models produced using quota variables.

Hypothesis 3 will be investigated by comparing the AIC and r-squared of models 1, 2 and 4. For me to accept hypothesis 3 I would expect the r-squared to increase only a small amount and the AIC to decrease marginally, when the additional variables are added to the model with structural variables.

Socio-economic:

The year of the most recent election was taken from the IPU database to allow for the lagged effects of socio-economic variables to be included (Inter-Parliamentary Union, 2020). This was not necessary for historical or structural variables due to the nature of them.

The first variable considered to examine socio-economic effects was GDP as enough of the existing literature had suggested that there was some link between the economic situation of the country and the percentage of women in parliament. However, in initial diagnostic tests no linear relationship was found and no significance level with GDP. It is possible this is due to the nature of inequality in some countries where high GDP does not translate to development level. Because of the relationship found by Pourgerami between higher levels of development and higher levels of democracy (Pourgerami, 1988) the study turned to looking at development indicators instead of GDP.

The development scale variable is ordinal ranging from “least developed” (1), “developing” (2), “developed” (3) coded *devscale*, taken from the UN Stats database (UN Stats, 2020). This allowed for the examination of the economic and social effects that come into play in this relationship.

The development level of the country is cross-referenced to check that the development level indicated in the dataset imported from UN Stats (UN Stats, 2020) is accurate for the year of the last election from the IPU database (Inter-Parliamentary Union, 2020). We would expect a more developed country to have more women represented in their parliament compared to developing countries.

The second socioeconomic variable considered is the percentage of women in official paid jobs, i.e. the government had formal record that they were being paid from data taken from the World Bank (World Bank, 2020). This was coded *lagpaid*, taken from the year before the election to ensure a causal effect can be measured. Using this indicator attempts to solve some of the issues described by Yoon when considering the effect of a standard women in work on the percentage of women in national legislature. Because it is important for women to work in paid jobs in order to gain the skills they need, using a simple percentage of women in work indicator often brings bias in less developed countries where the percentage of women in work is high but in the informal sector where they are less able to gain the skills and resources needed to get elected to parliament (Yoon, 2004).

Instead, the *lagpaid* measure considers the percentage of women in paid jobs and therefore is a better indicator of the percentage of women gaining the knowledge and resources. In this way, this study aims to explore the relationship between

women in work and women in parliament while accounting for possible bias that other studies have experienced.

For the 15 missing values in the *lagpaid* variable these were recoded with the mean for the entire dataset. For me to accept this hypothesis I would expect a significant relationship with a positive correlation between *percentwomen* and *lagpaid*.

Historical:

Women's suffrage over history is complicated. For example, in the United Kingdom women over the age of 30 first got the vote in 1918, but men could vote if they were over the age of 21 at this time, universal suffrage was not achieved until 1928 (Women's Suffrage and Beyond, 2017). In countries with recent histories of racism, for example South Africa, white women received the vote in 1930 however black south Africans, male or female did not gain suffrage until 1994 (Women's Suffrage and Beyond, 2017). In this case, to include the year that universal suffrage was achieved could show race issues, rather than women's issues. However, due to the complex nature of many countries' histories this study will use the years since universal suffrage was achieved assuming that the size of the dataset should still show overall trends.

The study calculates the years between suffrage and the election modelled to create a continuous variable *yrssuffrage*. This variable has been taken from the Women's' Suffrage and Beyond database (Women's Suffrage and Beyond, 2017) showing years each country achieved suffrage and cross-referenced with the information on the IPU database.

A two-way scatter plot to test for linearity between *percentwomen* and *yrssuffrage* showed some variables that had not been correctly merged from the original *suffrage* dataset. This was rectified before continuing.

The second historical variable to be modelled is the number of years since the first woman was elected to parliament and the election being examined for each individual country coded *femparl*. Year the first woman entered parliament was taken from the IPU database (Inter-parliamentary Union, 2020), and calculated using the year of the election being modelled. For the hypothesis to be accepted the higher the number of years since the first woman was elected, the higher the percentage of women elected in parliament, compared with other countries.

V. Results and Analysis

The principle argument of this analysis is that historical factors are often overlooked by the effect of structural factors in explaining the percentage of women represented in the national legislature of electoral democracies globally. Also, this paper seeks to explore the importance of structural factors that have previously been important in explaining the percentage of women and better understand socio-economic factors.

Descriptive Statistics:

Figure 4 shows the descriptive statistics for the 105 electoral democracies in the dataset and the independent variables being used. The largest number of

countries in the dataset come from Europe, but this is unsurprising as this region has many electoral democracies. The smallest number of countries comes from Asia, which again represents the global spread of electoral democracies relatively well.

Figure 3: Summary of Statistics:

Variable	Observations	Mean	Standard Deviation
Percentwomen	105	23.87	11.73
PR	105	0.53	0.50
Quota	105	0.36	0.48
Development Scale	105	2.32	0.67
Percentage of women in paid work	105	68.64	23.98
Years since universal suffrage was achieved	105	73.49	18.96
Years since first woman elected to parliament	105	57.49	27.17

Diagnostic Tests:

To test for outliers, Cooks Distance[1] test was used which can be found in Graph 1 of the appendix. This test showed eight outliers, and when removed, the r-squared improved dramatically and there was some change to the coefficients and p-values. As a result, these 8 countries were removed creating the dataset of 105 observations. It was this test that produced categories for *votesystem* and *quotatype* with only one observation and so binary variables were created from these to manage this.

[1] First a normal regression was run with 113 observations. Cooks Distance test was then run, which found 8 observations that exceeded the boundary 4/113=0.04. When these were removed, r-squared improved dramatically and so 105 observations were used instead.

One assumption of OLS that is important to note is that it assumes a linear relationship (Fidell, 2013). This was explored using two-way scatter plots that can be found in graphs 2-5 of the appendix. The relationship on the variables is linear and so an OLS regression is appropriate.

To test for multi-collinearity VIF test on all models can be found in the appendix, table 2. All values were below 10, the threshold for linear dependency (Alin, 2010), therefore the data is appropriate. The Breusch Pagan test was used to test for heteroskedasticity. The chi-2 produced was significant in some of the models and so robust standard errors were employed to account for this.

Multivariate Regression:

Table 1 shows the five nested models with their coefficients, significance levels, r-squared and AIC.

Firstly, it is important to consider the r-squared and the AIC in relation to all the nested models in Table 1. Models 4 and 5 both have an equal r-squared at 0.45 suggesting that these models and their variables both account for 45% of the variance in *percentwomen*. This is relatively high for a study such as this therefore demonstrates the strength of the models. When comparing the AIC for parsimony, it is easier to determine which is the better model. Notably model 4 achieves the lowest AIC score of all the models at 767.43 while Models 1, 2, 3 and 5 all have an AIC exceeding 770. This leads us to the conclusion that Model 4 is the most parsimonious model.

Table 1 – All nested Models:

Nested OLS Regression of Percentage Women in Parliament

	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4	(5) Model 5
PR	8.64***	7.36**	3.07	2.21	2.20
	(2.15)	(2.42)	(2.12)	(2.18)	(2.35)
quota		4.32	6.06**	6.20**	6.95*
		(2.50)	(2.10)	(2.16)	(3.12)
Least Developed			-8.36*	-4.71	-3.46
			(3.98)	(4.12)	(5.17)
Developing			-5.49*	-3.29	-2.96
			(2.37)	(2.70)	(3.83)
lagpaid			0.13*	0.10*	0.10*
			(0.05)	(0.05)	(0.05)
femparl				0.11**	0.12**
				(0.04)	(0.04)
yrssuffrage				0.06	0.06
				(0.05)	(0.05)
1.quota#1.devscale					-4.22
					(4.67)
1.quota#2.devscale					-0.78
					(4.93)
_cons	19.27***	18.39***	14.77**	4.69	4.28
	(1.61)	(1.53)	(4.71)	(6.61)	(7.79)
AIC	802.61	801.08	777.06	767.43	771.03
N	105.00	105.00	105.00	105.00	105.00
Rsquared	0.14	0.16	0.37	0.45	0.45

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

When considering the relationship with PR and *percentwomen* in Model 5, there is no statistically significant relationship, despite the coefficient being in a positive direction. As a result, we cannot accept hypothesis 1 with any confidence that a PR system facilitates an environment with a higher percentage of women in parliament than using other systems. However, it is important to note here that in the simple bivariate regression of model 1 and the multivariate regression of all structural variables in model 2, this relationship between *PR* and *percentwomen* is significant at a $p<0.001$ level in model 1 and $p<0.01$ level in model 2. This suggests that a proportional representation vote system is significant to a degree on its own, however when other variables are considered, the variance that this variable accounts for is covered by other variables. With this in mind we can also conclude that older studies which previously saw the voting system as the most important determiner of the percentage of women in parliament no longer hold as much weight and it is correct to reassess other variables, as models 4 and 5 do.

The other structural variable is the binary *quota* variable. This variable is significant at the $p<0.05$ level in model 5, leading us to conclude that we can be 90% confident that having a quota written into the constitution or electoral law has a positive impact on the percentage of women in parliament, compared with not having a quota and therefore accept hypothesis 2. It is interesting to note here that in model 1, the quota variable has no significance but with the addition of socio-economic variables it gains significance, reaching the highest significance in model 4 of $p<0.01$ with a positive coefficient. Because of this relationship and because we had already tested for multi-collinearity with no concerning VIFs, we chose to run an interaction term on quota and development scale to see if there was any interaction here. Indeed, as the literature suggests, often it is countries which are more developed

that have a higher level of democracy that do not believe in quotas, like in the Nordic case (Studlar and McAllister, 2002) (Bano, 2009).

However, in the case of the interaction term in model 5, none of the coefficients reach the lowest significance level of $p<0.01$. Therefore, we cannot accept hypothesis 2a that there is an interaction between development level and having a quota at any level on the development scale.

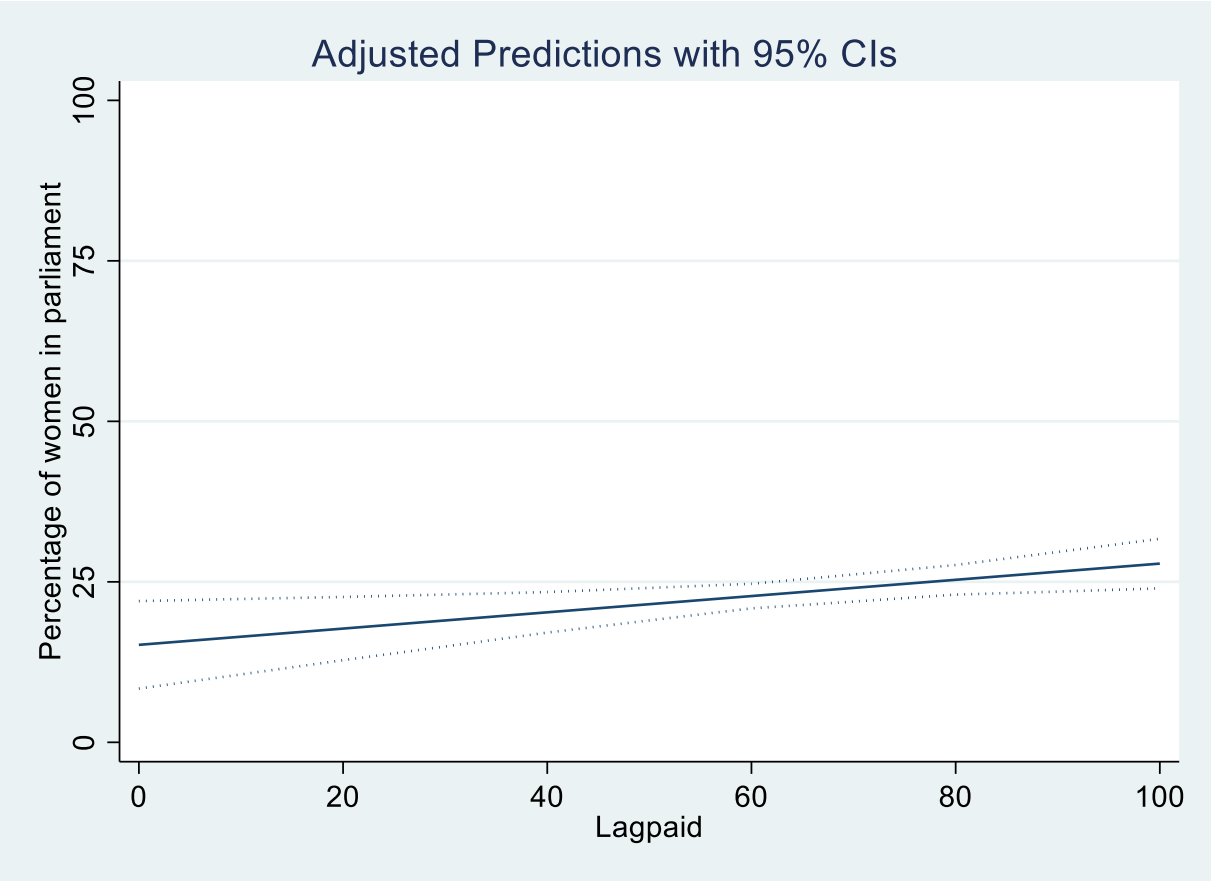
When looking at socio-economic variables their relationship to *percentwomen* is varied and does not always agree with the literature. For development scale, the highest level of development "developed" is used as the base line against the lower tiers of development. In model 5, both coefficients are negative but do not satisfy any of the significance levels therefore we cannot accept hypothesis 4 with any confidence that the level of development influences the percentage of women in parliament.

However, like with *PR,* this relationship is significant at a $p<0.05$ level in model 3 where only structural and socio-economic variables are considered. While this is a relatively low significance level, it does suggest that some of the relationship between *devscale* and *percentwomen* is accounted for by the historical variables that are added in models 4 and 5. However, this significance level is so low that we have chosen not to take this relationship any further.

Lagpaid is also included in models 3, 4 and 5 and is the only socio-economic variable that reaches significance level above $p<0.01$ in all models. This leads us to accept hypothesis 5 with 90% confidence that as the percentage of women in paid work increases, so does the percentage of women in parliament.

The relationship between *lagpaid* and *percentwomen* is shown graphically in figure 5 where there is a positive relationship between the percentage of women in paid work and the percentage of women in parliament. However, the slope of this graph is relatively shallow suggesting that this has a small effect, only increases by 6%. Indeed, with a one unit increase in *lagpaid* we can expect a 0.10 unit increase in the percentage of women in parliament. While this is a relatively low coefficient, it still highlights the positive driving force that more women in paid work leads to more women entering politics because of the skills, confidence, and resources they gain from this employment, strengthening hypothesis 5.

Figure 4: Margins *Lagpaid* with all others held at the mean

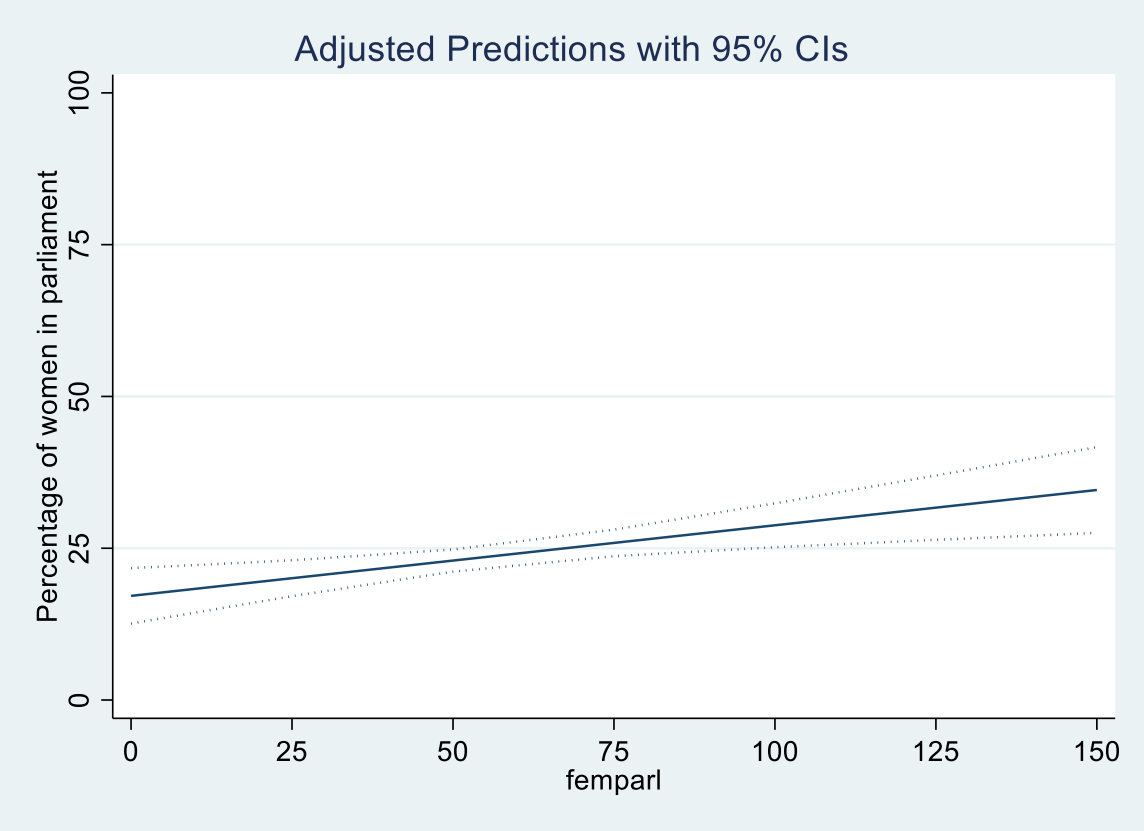


The r-squared in model 3 has increased to 0.37, compared with 0.16 of model 2. This suggests that model 3 now accounts for 37% of the total variance of *percentwomen*. Also, the AIC has dropped significantly to be lower than both models 1 and 2 suggesting that with the addition of the socio-economic variables the model improves in parsimony. This demonstrates the strength of considering both structural and socio-economic variables in an investigation such as this. Previous literature has suggested that structural variables are far more important than socio-economic variables in explaining the percentage of women in parliament (Rule, 1987). However, the results of this study demonstrate that socio-economic variables and structural variables are equally important in explaining the variance in *percentwomen* and both must be considered to understand the full picture, this leads to the rejection of hypothesis 3.

Moreover, the change in r-squared and AIC from models 3 to models 4 suggest that historical variables should also be considered on the same level as structural and socio-economic as the addition of these groups of variables raise the variance accounted for to 45% and makes it a more parsimonious model than just using one grouping of variables.

When considering historical variables in model 4, *femparl* is significant at the $p<0.05$ level with a positive coefficient. While the coefficient is small at 0.10, the relationship gives 95% confidence that with a one unit increase in *femparl*, we can expect a 0.10 unit increase in the percentage of women in parliament. This offers support to hypothesis 7, leading us to accept with 95% confidence this hypothesis. This relationship is shown graphically in figure 6, a margins plot with all other variables, held at their means.

Figure 5: Margins at *femparl* with all others held at means



The confidence intervals on figure 5 are wide at either end of the number of years since the first woman entered parliament. This is likely due to the lower number of cases at either end of *femparl* and therefore does not suggest any weaknesses with the relationship. The line is clearly steeper than the line for *lagpaid* suggesting that this relationship is steeper than the relationship between *percentwomen* and this socio-economic variable.

In the case of the other historical variable, *yrssuffrage*, there is no statistically significant p-value on any of the models. When examining model 4 the coefficient is positive but small. As a result, we cannot accept hypothesis 6 with any certainty that the higher number of years since universal suffrage was achieved suggests more

women will be in parliament and instead accept the null. One reason for this is the weaknesses of using the universal suffrage year. As discussed earlier, this may bring bias when it comes to race rights therefore demonstrates the challenges of exploring historical data.

Model 5 incorporates all base variables previously discussed with an interaction term between development scale and whether a country has a quota or not. As discussed, this was included to explore the increase in significance of *quota* with the addition of the *devscale* variable. However, this relationship satisfies no significance levels at any development scale, despite the negative coefficient. As a result, we cannot accept hypothesis 2a that there is an interaction between having a quota and a lower development level with any significance.

Overall, the models suggest great variation in factors affecting the percentage of women in national legislatures. Structural variables are clearly important and account for 16% variance on their own, however, the strength of PR over other voting systems has clearly changed since research on these in the 1980s when PR was particularly important. Also, these models stress the strength of having a quota which literature has previously debated the usefulness. Similarly, socio-economic variables are important if not more so than structural factors which also shows a difference from older studies where socio-economic variables were thought of as less important than structural factors. When considering historical factors, universal suffrage is a challenging measure to use and one which has drawn few conclusions. However, the number of years since the first woman entered parliament does suggest that those countries who have made an earlier move towards equality, are reaping the benefits of more women in parliament more than those who took longer.

Maximum Theoretical Impact:

It is also important to consider the difference in effect size on the dependent variable to determine which has a greater effect. Due to the categorical nature of some of the variables, standardised beta coefficients are not suitable. Instead, Maximum Theoretical Impact allows for comparison between variables and their effect sizes by looking at the ranges and coefficients[2]. The coefficients used are taken from model 4 which includes all variables without interactions to see the full impact of the variables when all others are held at 0. These have been calculated by hand and can be found in the table below:

Figure 7 – Maximum Theoretical Impact Values:

Variable	*Maximum Theoretical Impact Value*
PR	2.21
Quota	6.20
1 Dev scale compared with developed 3	-4.71
2 Dev scale compared with developed 3	-3.29
Lagpaid	9.03
Femparl	12.32
yrssuffrage	5.46

Looking at the Maximum theoretical impact we can conclude that *femparl* has the largest possible effect on the percentage of women in parliament, compared with any other variables with a figure of 12.32. This further suggests the strength of historical factors that have previously been overlooked and strengthens hypothesis 7 that the more years passed since the first woman entered parliament, the higher percentage of women in parliament.

[2] Maximum Theoretical Impact was calculating by multiplying the coefficients in Model 4 with the ranges of the variables. Results found in figure 7.

In the case of structural factors, the value for *quota* is relatively high in a positive direction however *PR* has the weakest impact on *percentwomen*. This leads us to reject hypothesis 3 that structural factors have more impact than other on *percentwomen* and instead see this change from previous studies. *Lagpaid* is relatively high, second highest figure, suggesting that elements of structural, socio-economic, and historical are all important together, not one more than the other. This also suggests that it is better to see individual factors in relation to *percentwomen*, not in groups as structural, socio-economic, and historical.

Weaknesses of the data:

Firstly, the binary nature of *PR* and *quota* variables miss out other information that may be involved in *votesystem* and *quotatype*. In this study this was impossible to change due to only having one observation for some of the categories. However, in future studies it would be interesting to investigate other types of vote system or quota to better understand the relationship of these to the percentage of women in parliament.

Moreover, while a strength of this study is that it examines many countries, 105 electoral democracies, which has rarely been attempted before, the number of countries introduces far more variance. This is a weakness to some degree as the models produce far fewer statistically significant relationships than some other studies. However, it also demonstrates the variance in a multi-national study which fits this study within the scope of other literature.

Additionally, some may criticise the use of the Freedom House electoral democracy list over other ratings of democracy, like the Economist Intelligence Unit or the Gastil Index. The Freedom House index for electoral democracies was chosen for this study because Freedom House is well regarded as being accurate and up to date and focuses on structural factors of democracy which are essential in enabling more women to be represented. Therefore, while some may dispute the use of some observations as “democracies” it allows for the creation a larger dataset, using structural aspects of democracy.

One aspect this study does not look too deep into is the internal factors of each individual country. Several scholars have investigated regional social and ideological factors in much more detail and this is perhaps where much of the variance not accounted for in this model lies (Yoon, 2004) (Kunovich, 2003) (Rittberger, 2014). I chose not to include these indicators as they are hard to quantify and are better suited to regional level analyses.

Finally, it is important to understand that this research can only go so far. Women in parliament are important if power is also there. In some societies, there are many women represented, but little actual power given to them and in this case the percentage of women becomes irrelevant. Moreover, even if there are more women in national legislatures, there will still be a major gap in privilege (Acker, 1992). These female MPs are likely to be cis- gendered, white, upper/middle class, well-educated and able-bodied women (June Eric Udorie, Guardian 2017). As a result, it is important to see this work as part of the wider debate and investigation into women’s role in society and its power structures.

VI. Conclusion

In conclusion, this study has shown that the percentage of women occupying seats in national legislatures is an issue of global importance and one which affects the entire population of the world. There is substantial evidence from gender studies and international organisations that more women in national parliaments make an impact on the women they represent and other areas of society, helping to make the system of that country fairer and more democratic. However, women cannot occupy positions in society to make a difference if the existing discriminatory structures and access to resources are not dealt with. Certain variables have influenced the dismantling of this discrimination.

Existing literature has shown the variation between countries of the percentage of women occupying seats in parliament. The literature led to the creation of three key areas for further analysis structural factors, socio-economic factors, and historical factors. The results from this study demonstrate the variation between countries in the percentage of women in parliament.

The results suggest that having a PR vote system is important in contributing to more women entering parliament as the literature suggests, however when combined with socio-economic and historical variables, the strength of this relationship becomes weaker. Socio-economic conditions are more important on a global scale than the literature expected them to be in a regional level analysis, suggesting the differences between these types of study. When considering the influence of historical factors, the amount of years passed since the first woman was elected to parliament, is important in explaining *percentwomen*. However, yrssuffrage is a problematic variable.

The OLS regression carried out has allowed for the acceptance of hypotheses 2, 4, and 7 but with no more than 95% confidence for each. The results suggest that the issue of female representation in national parliaments is extremely complicated with multiple different factors. Creating a model with over 45% variance accounted for by 6 variables suggests that Models 4 and 5 are explaining a high amount of the variance in the dependent variable. However, there is a relatively low number of statistically significant relationships. This is comparable with other studies on similar themes and therefore shows the challenges associated with doing global analysis.

The issue of women's representation in national legislatures is complicated and multi-faceted. The literature that considers specific regions can help to explain more general global trends but cannot prove them. The importance of quotas, the percentage of women in paid work and the years since the first woman was elected to parliament has been shown in this study to be especially important. However, the variation in factors suggests that the issues here are country specific and few broad trends can be drawn with any certainty. The quota variable is also one which has far more impact on individual countries and make it hard to consider on a global scale.

This analysis certainly helps to stress the importance of structural and historical factors when considering the representation of women in national legislatures. This is a particularly important aspect of political life that many governments have turned their focus to in the last couple of years to improve democracy. This research can also be used to suggest ways in which conditions can be created for other marginalised groups to also gain better representation so that

A.H. Birch's idea of "demographic" representation can be achieved for all (Birch, 1971).

Word Count: 10,822

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VIII. Appendix

Key Words and Abbreviations:

Direct discrimination - the unjust or prejudicial treatment of different categories of people, especially on the grounds of race, age, or sex (Norris et al, 1995)

Imputed discrimination - selectors discriminate against a candidate and do not choose them to represent the party because they don't believe that the electorate will vote for them because they hold specific characteristics (Norris et al, 1995)

IPU - Inter-Parliamentary Union

PR – Proportional Representation

Somatic Norm - complex of physical characteristics that are accepted by a group as the norm (Puwar, 2004)

UN - United Nations

Table 2 – List of Hypotheses

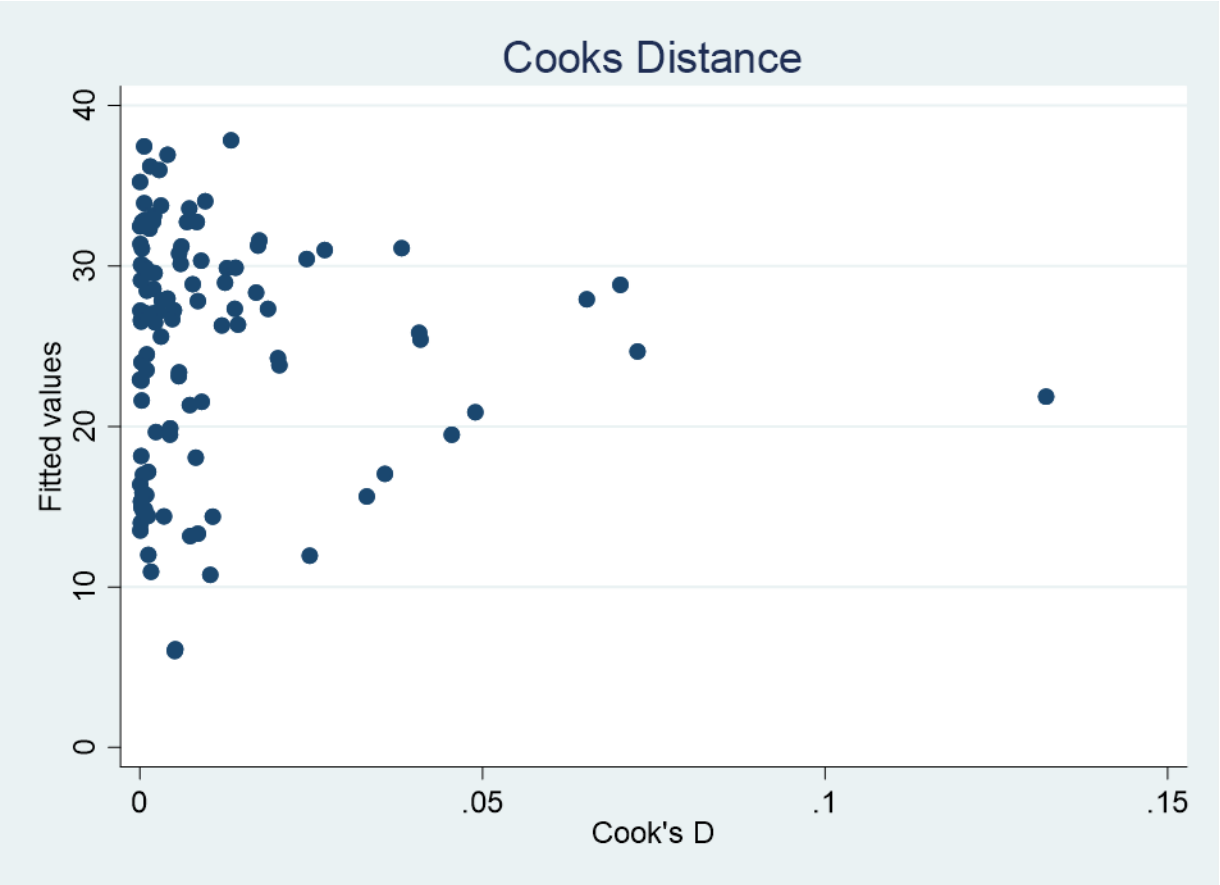
LIST OF HYPOTHESES:

H1	Countries that have Proportional Representation voting systems will have a higher percentage of women in parliament than countries without PR systems
H2	Countries with a quota implemented by law will have a higher percentage of women in their parliament than countries with no legal quota
H2A	The impact of a gender quota on the percentage of women in parliament will differ dependent on the development level. Less developed countries will find quotas increase the percentage of women in parliament more than gender quotas do for more developed countries
H3	Structural variables have a more significant effect on the percentage of women in parliament than socio-economic or historical variables
H4	Developed countries will have a higher percentage of women in their national legislatures than developing countries
H5	The percentage of women in paid work will be positively correlated with the percentage of women in the national legislature
H6	The greater number of years since women's suffrage, the higher the percentage of women elected to parliament in the year of the most recent election
H7	The greater number of years since the first woman was elected to parliament, the greater the percentage of women represented in the lower house of the national legislature

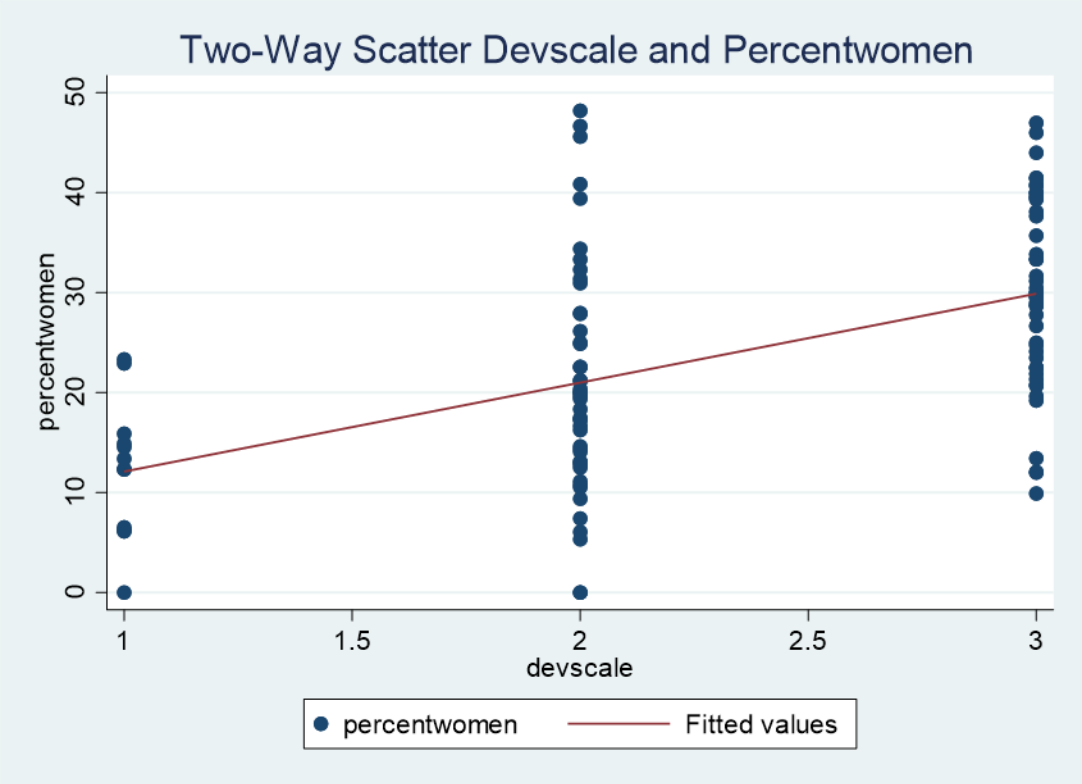
Table 3 VIF Models 1-4:

VARIABLES	VIF	1/VIF
PR	1.33	0.752633
QUOTA	1.20	0.832899
DEVSCALE 1	2.74	0.365216
DEVSCALE 2	1.98	0.506145
LAGPAID	2.39	0.418536
FEMPARL	1.69	0.591981
YRSSUFFRAGE	1.65	0.605733
MEAN VIF	1.85	

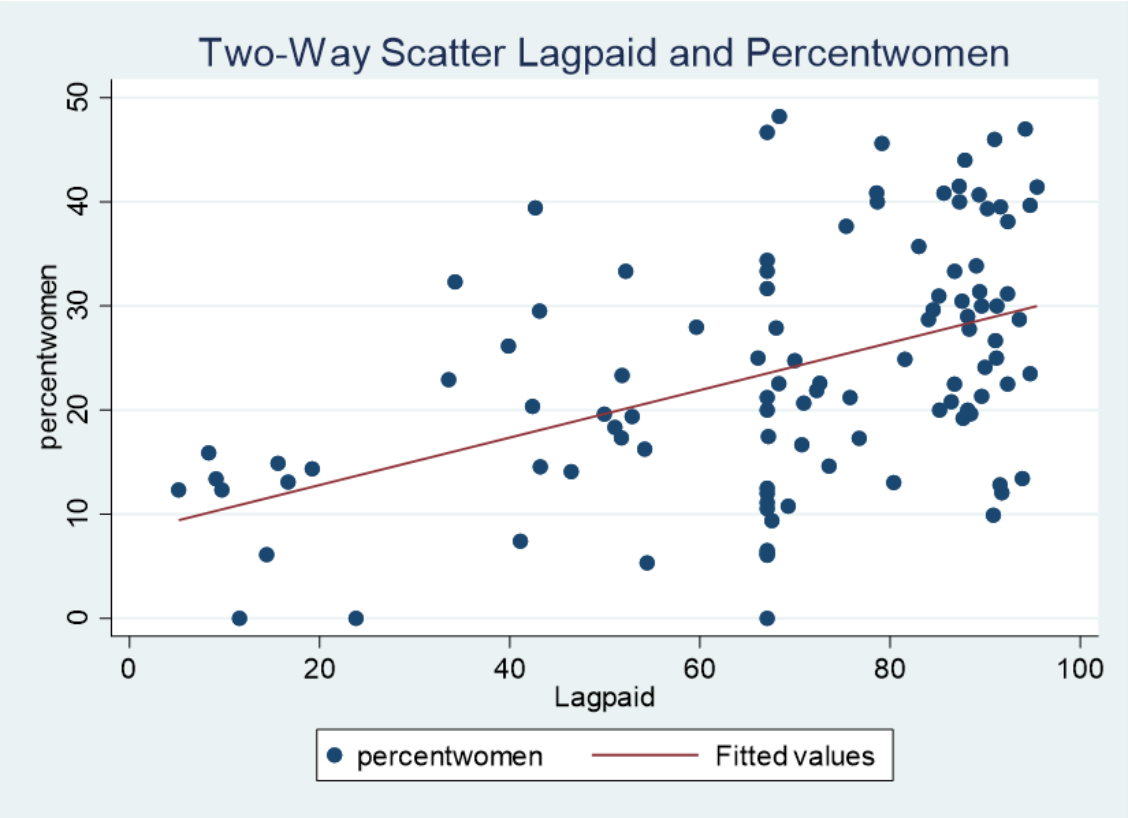
Graph 1 – Cooks Distance



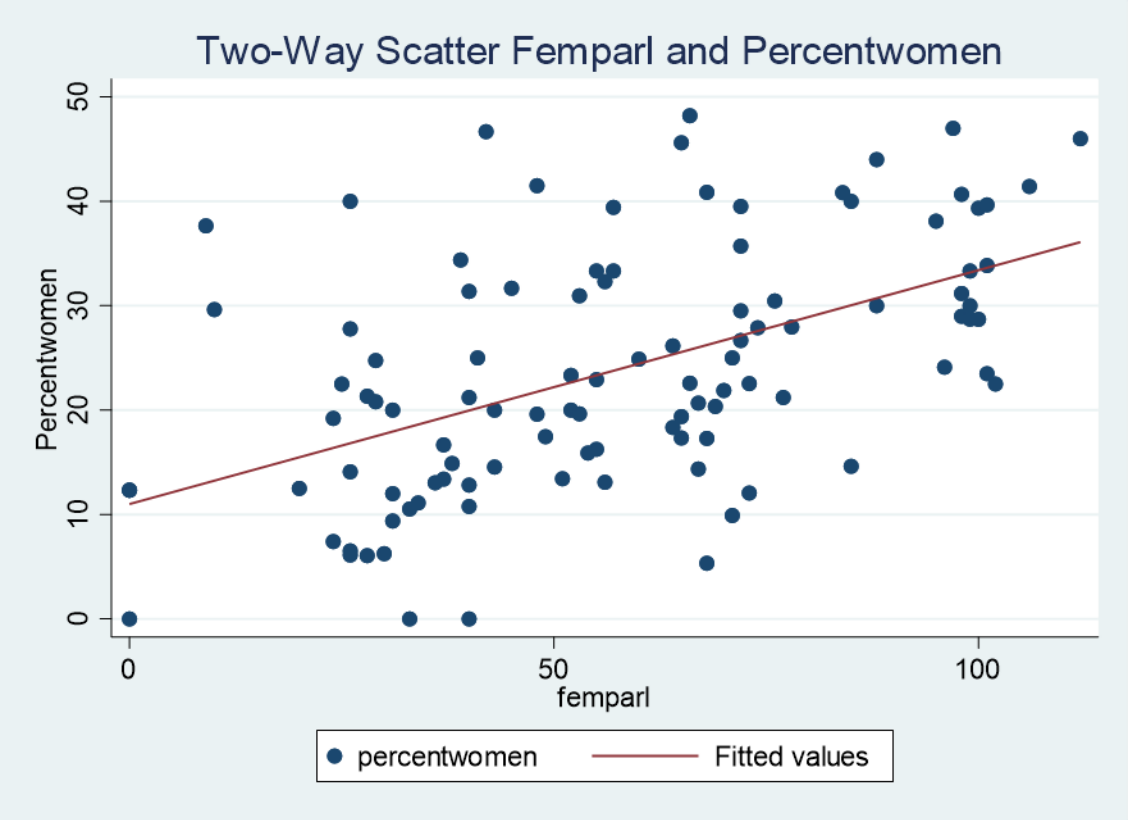
Graph 2 – Two way scatter plot percentwomen devscale



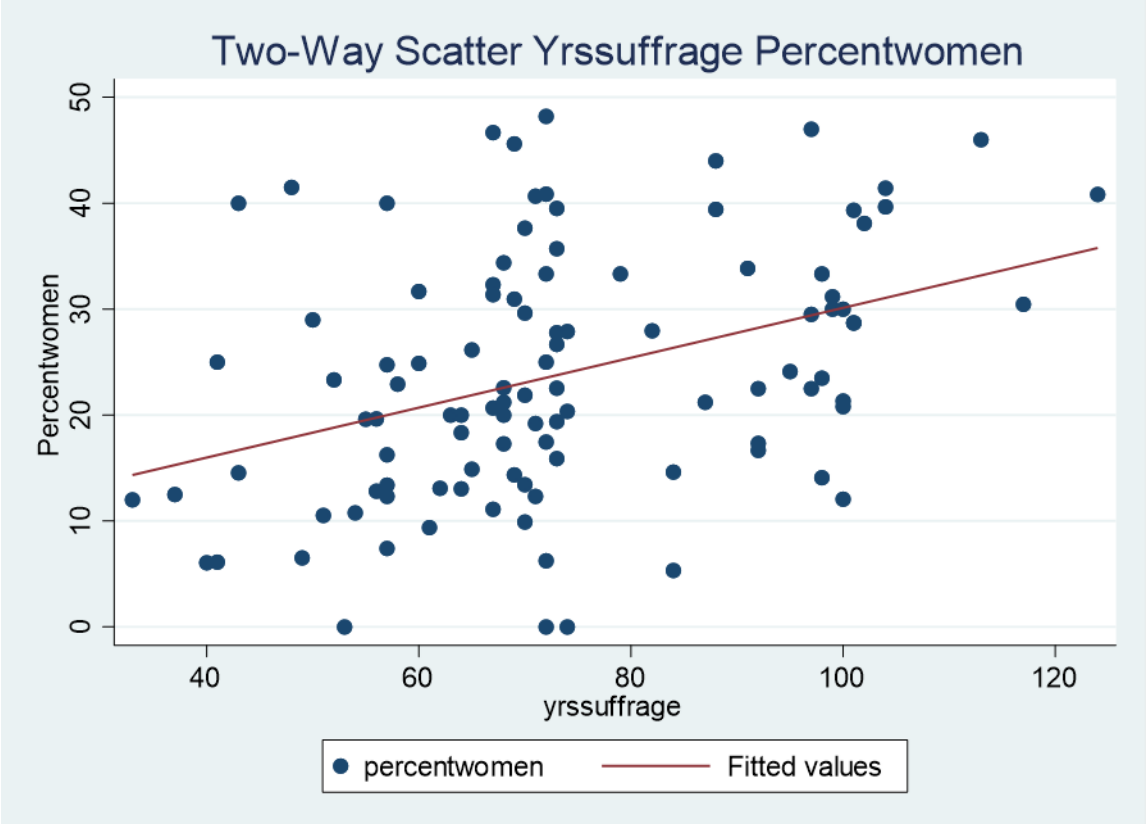
Graph 3 – Two way scatter plot percentwomen lagpaid



Graph 4: Two way scatter plot percentwomen femparl



Graph 5: Two way Scatter Plot percentwomen Yrssuffrage



Log File:

```
-------------------------------------------------------------------------------
------
      name:  <unnamed>
       log:  C:\Users\andre\Documents\9.Pip\Dissertation\final1.log
  log type:  text
 opened on:  12 May 2020, 15:49:34

.
. insheet using "C:\Users\andre\Documents\9.Pip\Dissertation\DV.csv"
(6 vars, 196 obs)


. *** need to drop titles, rename variables and capitalise countries
.
. drop in 1/6
(6 observations deleted)

. drop v1

. rename v2 country

. rename v3 chamber

. rename v4 percentwomen

. rename v5 structure

. drop v6

. drop in 1
(1 observation deleted)
.
. *** Made country names upper case as this will make it easier when combining with
other datasets:


. replace country=upper(country)
(189 real changes made)

.
*** Now I have a consistent data set that has all the countries' IPU data I want to
add in the electoral democracy dataset from Freedom in the World 2020 (2019).
.
. *** First I clear my IV and input FIW dataset so that I can make sure this
dataset is also clean.
.
. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
(note: file final1.dta not found)
file final1.dta saved

. clear

. insheet using "C:\Users\andre\Documents\9.Pip\Dissertation\electoraldems.csv"
(2 vars, 197 obs)

.
. browse

. drop in 1
(1 observation deleted)

. rename v1 country
```

```
. rename v2 electoraldem

. drop in 1
(1 observation deleted)

. replace country=upper(country)
(195 real changes made)

. sort country

. saveold electoraldems.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file electoraldems.dta saved

. clear

. use final1.dta

. sort country

. merge m:m country using electoraldems.dta
(note: variable country was str37, now str53 to accommodate using data's values)

    Result                           # of obs.
    -----------------------------------------
    not matched                             48
        from master                         21  (_merge==1)
        from using                          27  (_merge==2)

    matched                                168  (_merge==3)
    -----------------------------------------

.
. *** In this merge, some of the countries have been named as different things,
e.g. "The Gambia" and "(THE) Gambia". I want to make sure these are all coded the
same so that countries match together and will use the IPU database as my
reference, recoding all other country names as the IPU calls them.
.
. tab country if _merge == 1 | _merge == 2

                                 country |      Freq.     Percent        Cum.
-----------------------------------------+-----------------------------------
                                 BOLIVIA |          1        2.08        2.08
       BOLIVIA (PLURINATIONAL STATE OF) |          1        2.08        4.17
                                  BRUNEI |          1        2.08        6.25
                      BRUNEI DARUSSALAM |          1        2.08        8.33
                                   CONGO |          1        2.08       10.42
                     CONGO (BRAZZAVILLE) |          1        2.08       12.50
                        CONGO (KINSHASA) |          1        2.08       14.58
                           COTE D'IVOIRE |          1        2.08       16.67
                           CÔTE D'IVOIRE |          1        2.08       18.75
  DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA |          1        2.08       20.83
       DEMOCRATIC REPUBLIC OF THE CONGO |          1        2.08       22.92
                                ERITREA |          1        2.08       25.00
                             GAMBIA (THE) |          1        2.08       27.08
                                   GUYANA |          1        2.08       29.17
                                    HAITI |          1        2.08       31.25
                                     IRAN |          1        2.08       33.33
             IRAN (ISLAMIC REPUBLIC OF) |          1        2.08       35.42
                                   KOSOVO |          1        2.08       37.50
       LAO PEOPLE'S DEMOCRATIC REPUBLIC |          1        2.08       39.58
                                     LAOS |          1        2.08       41.67
                                MICRONESIA |          1        2.08       43.75
       MICRONESIA (FEDERATED STATES OF) |          1        2.08       45.83
                                  MOLDOVA |          1        2.08       47.92
                              NORTH KOREA |          1        2.08       50.00
```

```
                     REPUBLIC OF KOREA |          1        2.08       52.08
                   REPUBLIC OF MOLDOVA |          1        2.08       54.17
                                RUSSIA |          1        2.08       56.25
                    RUSSIAN FEDERATION |          1        2.08       58.33
                  SAINT KITTS AND NEVIS |          1        2.08       60.42
                           SAINT LUCIA |          1        2.08       62.50
       SAINT VINCENT AND THE GRENADINES |          1        2.08       64.58
                           SOUTH KOREA |          1        2.08       66.67
                  ST. KITTS AND NEVIS |          1        2.08       68.75
                               ST. LUCIA |          1        2.08       70.83
         ST. VINCENT AND THE GRENADINES |          1        2.08       72.92
                                 SUDAN |          1        2.08       75.00
                                 SYRIA |          1        2.08       77.08
                  SYRIAN ARAB REPUBLIC |          1        2.08       79.17
                                TAIWAN |          1        2.08       81.25
                              TANZANIA |          1        2.08       83.33
                             THE GAMBIA |          1        2.08       85.42
           UNITED REPUBLIC OF TANZANIA |          1        2.08       87.50
                         UNITED STATES |          1        2.08       89.58
              UNITED STATES OF AMERICA |          1        2.08       91.67
                             VENEZUELA |          1        2.08       93.75
    VENEZUELA (BOLIVARIAN REPUBLIC OF) |          1        2.08       95.83
                             VIET NAM |          1        2.08       97.92
                               VIETNAM |          1        2.08      100.00
-------------------------------------+-----------------------------------
                                 Total |         48      100.00

. clear

. use electoraldems.dta

. replace country = "BOLIVIA (PLURINATIONAL STATE OF)" in 21
(1 real change made)

. replace country = "BRUNEI DARUSSALAM" in 25
(1 real change made)

. replace country = "CONGO" in 39
(1 real change made)

. replace country = "CôTE D'IVOIRE" in 42
(1 real change made)

. replace country = "DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA" in 127
(1 real change made)

. replace country = "DEMOCRATIC REPUBLIC OF THE CONGO" in 40
(1 real change made)

. replace country = "GAMBIA (THE)" in 174
(1 real change made)

. replace country = "IRAN (ISLAMIC REPUBLIC OF)" in 78
(1 real change made)

. replace country = "LAO PEOPLE'S DEMOCRATIC REPUBLIC" in 92
(1 real change made)

. replace country = "MICRONESIA (FEDERATED STATES OF)" in 111
(1 real change made)

. replace country = "REPUBLIC OF MOLDOVA" in 112
(1 real change made)

. replace country = "RUSSIAN FEDERATION" in 142
(1 real change made)

. replace country = "REPUBLIC OF KOREA" in 158
```

```
(1 real change made)

. replace country = "SAINT KITTS AND NEVIS" in 162
(1 real change made)

. replace country = "SAINT LUCIA" in 163
(1 real change made)

. replace country = "SAINT VINCENT AND THE GRENADINES" in 164
(1 real change made)

. replace country = "SYRIAN ARAB REPUBLIC" in 169
(1 real change made)

. replace country = "UNITED REPUBLIC OF TANZANIA" in 172
(1 real change made)

. replace country = "UNITED STATES OF AMERICA" in 187
(1 real change made)

. replace country = "VENEZUELA (BOLIVARIAN REPUBLIC OF)" in 191
(1 real change made)

. sort country

. saveold electoraldems.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file electoraldems.dta saved

.
. clear

. use final1.dta

. browse

. replace country = "VIETNAM" in 186
(1 real change made)

. sort country

. merge m:m country using electoraldems.dta
(note: variable country was str37, now str53 to accommodate using data's values)

    Result                           # of obs.
    -----------------------------------------
    not matched                             6
        from master                         0  (_merge==1)
        from using                          6  (_merge==2)

    matched                               189  (_merge==3)
    -----------------------------------------

. tab country if _merge == 1 | _merge == 2

                                country |      Freq.     Percent        Cum.
----------------------------------------+-----------------------------------
                                ERITREA |          1       16.67       16.67
                                 GUYANA |          1       16.67       33.33
                                  HAITI |          1       16.67       50.00
                                 KOSOVO |          1       16.67       66.67
                                  SUDAN |          1       16.67       83.33
                                 TAIWAN |          1       16.67      100.00
----------------------------------------+-----------------------------------
                                  Total |          6      100.00
```

```
.
. *** of the countries that did not merge, Haiti, Sudan, and Eritrea are not
electoral democracies, we will be deleting them anyway so no need to take further
action. Kosovo and Taiwan have disputed rule with Serbia and China respectively and
so IPU has no data on them, therefore they also will not be used. Guyana is a state
and the data is just missing from the data set I imported. I have found data on
Guyana from the IPU website and so will add this in now:
.
. drop in 190
(1 observation deleted)

. drop in 191/194
(4 observations deleted)

. replace chamber = "Parliament of the Co-operative Republic of Guyana" in 190
variable chamber was str42 now str49
(1 real change made)

. replace structure = "Unicameral" in 190
(1 real change made)

. replace percentwomen = "32.31" in 190
(1 real change made)

. sort country

.
. *** Now I will drop those countries that are not rated as electoral democracies:
.
. encode electoraldem, generate(electdemoc)

. tab electdemoc

 electdemoc |      Freq.     Percent        Cum.
------------+-----------------------------------
         No |         77       40.53       40.53
        Yes |        113       59.47      100.00
------------+-----------------------------------
      Total |        190      100.00

. tab electdemoc, nol

 electdemoc |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         77       40.53       40.53
          2 |        113       59.47      100.00
------------+-----------------------------------
      Total |        190      100.00

. drop if (electdemoc == 1)
(77 observations deleted)

. drop electoraldem

. rename _merge merge1

. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved

.
. *** Now I have a dataset of only electoral democracies, with the most up to date
percentage of women in their parliament. I will now start adding in the other
variables I intend on using and will delete countries that are not being used in my
sample - not electoral democracies.
.
```

```
. ** Electoral system:
.
. clear

. insheet using "C:\Users\andre\Documents\9.Pip\Dissertation\Elecsystem.csv"
(2 vars, 191 obs)

. rename v1 country

. rename v2 elecsystem

. drop in 1
(1 observation deleted)

. sort country

. saveold Elecsystem.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata
      formats)
file Elecsystem.dta saved

. clear

. use final1.dta

. merge m:m country using Elecsystem.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                             77
        from master                          0  (_merge==1)
        from using                          77  (_merge==2)

    matched                                113  (_merge==3)
    -----------------------------------------

. tab country if _merge == 1 | _merge == 2

                                    country |      Freq.     Percent        Cum.
--------------------------------------------+-----------------------------------
                                AFGHANISTAN |          1        1.30        1.30
                                    ALGERIA |          1        1.30        2.60
                                     ANGOLA |          1        1.30        3.90
                                    ARMENIA |          1        1.30        5.19
                                 AZERBAIJAN |          1        1.30        6.49
                                    BAHRAIN |          1        1.30        7.79
                                 BANGLADESH |          1        1.30        9.09
                                    BELARUS |          1        1.30       10.39
                                      BENIN |          1        1.30       11.69
                  BOSNIA AND HERZEGOVINA |          1        1.30       12.99
                       BRUNEI DARUSSALAM |          1        1.30       14.29
                                  BURUNDI |          1        1.30       15.58
                                 CAMBODIA |          1        1.30       16.88
                                 CAMEROON |          1        1.30       18.18
                                     CHAD |          1        1.30       19.48
                                    CHINA |          1        1.30       20.78
                                  COMOROS |          1        1.30       22.08
                                    CONGO |          1        1.30       23.38
                                     CUBA |          1        1.30       24.68
                           CÃ´TE D'IVOIRE |          1        1.30       25.97
  DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA |          1        1.30       27.27
       DEMOCRATIC REPUBLIC OF THE CONGO |          1        1.30       28.57
                                DJIBOUTI |          1        1.30       29.87
                                   EGYPT |          1        1.30       31.17
                          EQUATORIAL GUINEA |          1        1.30       32.47
                                ERITREA |          1        1.30       33.77
```

```
                            ESWATINI |          1        1.30       35.06
                            ETHIOPIA |          1        1.30       36.36
                               GABON |          1        1.30       37.66
                          GAMBIA (THE) |          1        1.30       38.96
                              GUINEA |          1        1.30       40.26
                         GUINEA-BISSAU |          1        1.30       41.56
                               HAITI |          1        1.30       42.86
                            HONDURAS |          1        1.30       44.16
          IRAN (ISLAMIC REPUBLIC OF) |          1        1.30       45.45
                                IRAQ |          1        1.30       46.75
                              JORDAN |          1        1.30       48.05
                          KAZAKHSTAN |          1        1.30       49.35
                               KENYA |          1        1.30       50.65
                              KUWAIT |          1        1.30       51.95
                           KYRGYZSTAN |          1        1.30       53.25
     LAO PEOPLE'S DEMOCRATIC REPUBLIC |          1        1.30       54.55
                             LEBANON |          1        1.30       55.84
                               LIBYA |          1        1.30       57.14
                            MALAYSIA |          1        1.30       58.44
                            MALDIVES |          1        1.30       59.74
                                MALI |          1        1.30       61.04
                          MAURITANIA |          1        1.30       62.34
                             MOROCCO |          1        1.30       63.64
                          MOZAMBIQUE |          1        1.30       64.94
                             MYANMAR |          1        1.30       66.23
                           NICARAGUA |          1        1.30       67.53
                               NIGER |          1        1.30       68.83
                             NIGERIA |          1        1.30       70.13
                                OMAN |          1        1.30       71.43
                            PAKISTAN |          1        1.30       72.73
                               QATAR |          1        1.30       74.03
                  RUSSIAN FEDERATION |          1        1.30       75.32
                              RWANDA |          1        1.30       76.62
                        SAUDI ARABIA |          1        1.30       77.92
                           SINGAPORE |          1        1.30       79.22
                             SOMALIA |          1        1.30       80.52
                           SOUTH SUDAN |          1        1.30       81.82
                            TAJIKISTAN |          1        1.30       83.12
                             THAILAND |          1        1.30       84.42
                                 TOGO |          1        1.30       85.71
                               TURKEY |          1        1.30       87.01
                           TURKMENISTAN |          1        1.30       88.31
                               UGANDA |          1        1.30       89.61
                UNITED ARAB EMIRATES |          1        1.30       90.91
          UNITED REPUBLIC OF TANZANIA |          1        1.30       92.21
                           UZBEKISTAN |          1        1.30       93.51
     VENEZUELA (BOLIVARIAN REPUBLIC OF) |          1        1.30       94.81
                             VIET NAM |          1        1.30       96.10
                                YEMEN |          1        1.30       97.40
                               ZAMBIA |          1        1.30       98.70
                             ZIMBABWE |          1        1.30      100.00
-------------------------------------+-----------------------------------
                                Total |         77      100.00

. drop in 114/190
(77 observations deleted)

. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved


. ****************** QUOTAS: ******************
.
. clear
```

```
. insheet using "C:\Users\andre\Documents\9.Pip\Dissertation\quota+.csv"
(6 vars, 84 obs)

. browse

. rename v1 country

. drop v2

. rename v3 volpolparty

. rename v4 quotaype

. rename v5 constitutional

. rename v6 electoral

. drop in 1
(1 observation deleted)

. replace country=upper(country)
(83 real changes made)

. sort country

. saveold quotas.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file quotas.dta saved

.
. clear

. use final1.dta

. rename _merge merge2

. merge m:m country using quotas.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                           120
        from master                        75  (_merge==1)
        from using                         45  (_merge==2)

    matched                                38  (_merge==3)
    -----------------------------------------

. tab country if _merge==1

                                country |      Freq.     Percent        Cum.
----------------------------------------+-----------------------------------
                                ANDORRA |          1        1.33        1.33
                    ANTIGUA AND BARBUDA |          1        1.33        2.67
                              AUSTRALIA |          1        1.33        4.00
                                AUSTRIA |          1        1.33        5.33
                                BAHAMAS |          1        1.33        6.67
                               BARBADOS |          1        1.33        8.00
                                 BELIZE |          1        1.33        9.33
                                 BHUTAN |          1        1.33       10.67
       BOLIVIA (PLURINATIONAL STATE OF) |          1        1.33       12.00
                               BOTSWANA |          1        1.33       13.33
                               BULGARIA |          1        1.33       14.67
                             CABO VERDE |          1        1.33       16.00
                                 CANADA |          1        1.33       17.33
                                 CYPRUS |          1        1.33       18.67
                         CZECH REPUBLIC |          1        1.33       20.00
```

```
                                DENMARK |          1        1.33       21.33
                               DOMINICA |          1        1.33       22.67
                                ESTONIA |          1        1.33       24.00
                                   FIJI |          1        1.33       25.33
                                FINLAND |          1        1.33       26.67
                                GEORGIA |          1        1.33       28.00
                                GERMANY |          1        1.33       29.33
                                  GHANA |          1        1.33       30.67
                                GRENADA |          1        1.33       32.00
                              GUATEMALA |          1        1.33       33.33
                                HUNGARY |          1        1.33       34.67
                                ICELAND |          1        1.33       36.00
                                  INDIA |          1        1.33       37.33
                                 ISRAEL |          1        1.33       38.67
                                JAMAICA |          1        1.33       40.00
                                  JAPAN |          1        1.33       41.33
                               KIRIBATI |          1        1.33       42.67
                                 LATVIA |          1        1.33       44.00
                                LIBERIA |          1        1.33       45.33
                            LIECHTENSTEIN |          1        1.33       46.67
                              LITHUANIA |          1        1.33       48.00
                             LUXEMBOURG |          1        1.33       49.33
                             MADAGASCAR |          1        1.33       50.67
                                 MALAWI |          1        1.33       52.00
                                  MALTA |          1        1.33       53.33
                        MARSHALL ISLANDS |          1        1.33       54.67
                              MAURITIUS |          1        1.33       56.00
       MICRONESIA (FEDERATED STATES OF) |          1        1.33       57.33
                                 MONACO |          1        1.33       58.67
                                NAMIBIA |          1        1.33       60.00
                                  NAURU |          1        1.33       61.33
                            NETHERLANDS |          1        1.33       62.67
                            NEW ZEALAND |          1        1.33       64.00
                          NORTH MACEDONIA |          1        1.33       65.33
                                 NORWAY |          1        1.33       66.67
                                  PALAU |          1        1.33       68.00
                          PAPUA NEW GUINEA |          1        1.33       69.33
                            PHILIPPINES |          1        1.33       70.67
                       REPUBLIC OF KOREA |          1        1.33       72.00
                     REPUBLIC OF MOLDOVA |          1        1.33       73.33
                                ROMANIA |          1        1.33       74.67
                    SAINT KITTS AND NEVIS |          1        1.33       76.00
                             SAINT LUCIA |          1        1.33       77.33
       SAINT VINCENT AND THE GRENADINES |          1        1.33       78.67
                  SAO TOME AND PRINCIPE |          1        1.33       80.00
                              SEYCHELLES |          1        1.33       81.33
                            SIERRA LEONE |          1        1.33       82.67
                                SLOVAKIA |          1        1.33       84.00
                            SOUTH AFRICA |          1        1.33       85.33
                               SRI LANKA |          1        1.33       86.67
                                SURINAME |          1        1.33       88.00
                                  SWEDEN |          1        1.33       89.33
                             SWITZERLAND |          1        1.33       90.67
                                   TONGA |          1        1.33       92.00
                       TRINIDAD AND TOBAGO |          1        1.33       93.33
                                  TUVALU |          1        1.33       94.67
                                 UKRAINE |          1        1.33       96.00
                          UNITED KINGDOM |          1        1.33       97.33
                   UNITED STATES OF AMERICA |          1        1.33       98.67
                                 VANUATU |          1        1.33      100.00
-------------------------------------------+-----------------------------------
                                   Total |         75      100.00

.
. clear

. use quotas.dta
```

```
. replace country = "BOLIVIA (PLURINATIONAL STATE OF)" in 9
(1 real change made)

. replace country = "CABO VERDE" in 14
(1 real change made)

. replace country = "REPUBLIC OF KOREA" in 37
(1 real change made)

. replace country = "NORTH MACEDONIA" in 52
(1 real change made)

. replace country = "REPUBLIC OF MOLDOVA" in 45
(1 real change made)

. sort country

. saveold quotas.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file quotas.dta saved

. clear

.
. use final1.dta

. rename _merge merge2

. merge m:m country using quotas.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                           110
        from master                        70  (_merge==1)
        from using                         40  (_merge==2)

    matched                                43  (_merge==3)
    -----------------------------------------

. drop in 114/153
(40 observations deleted)

. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved

.
. *** now have the quota information, just need to make it easier to run the
analysis:
.
. tab quotaype

                     quotaype |      Freq.     Percent        Cum.
------------------------------+-----------------------------------
    Legislated Candidate Quotas |         40       93.02       93.02
                Reserved seats |          3        6.98      100.00
------------------------------+-----------------------------------
                         Total |         43      100.00

. tab quotaype, nol

                     quotaype |      Freq.     Percent        Cum.
------------------------------+-----------------------------------
    Legislated Candidate Quotas |         40       93.02       93.02
```

```
                Reserved seats |          3        6.98      100.00
-------------------------------+-----------------------------------
                         Total |         43      100.00

. encode quotaype, gen(quotatype)

. tab quotatype

                  quotatype |      Freq.     Percent        Cum.
----------------------------+-----------------------------------
Legislated Candidate Quotas |         40       93.02       93.02
             Reserved seats |          3        6.98      100.00
----------------------------+-----------------------------------
                      Total |         43      100.00

. tab quotatype, nol

  quotatype |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         40       93.02       93.02
          2 |          3        6.98      100.00
------------+-----------------------------------
      Total |         43      100.00

. recode quotatype .=0
(quotatype: 70 changes made)

. tab quotatype

                  quotatype |      Freq.     Percent        Cum.
----------------------------+-----------------------------------
                          0 |         70       61.95       61.95
Legislated Candidate Quotas |         40       35.40       97.35
             Reserved seats |          3        2.65      100.00
----------------------------+-----------------------------------
                      Total |        113      100.00

. tab quotatype, nol

  quotatype |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |         70       61.95       61.95
          1 |         40       35.40       97.35
          2 |          3        2.65      100.00
------------+-----------------------------------
      Total |        113      100.00

.
. **** now have a quota variable with only quotas implemented by electoral law or
constiutional law, a categorical variable that deliniates between the two types I
am concerned with (not voluntary party quotas)
.
. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved

.
. *** Date of most recent election, of which the percentage of women is taken from
(IPU):
.
. clear

. insheet using "C:\Users\andre\Documents\9.Pip\Dissertation\recentelec.csv"
(4 vars, 193 obs)

. rename v1 country
```

```
. rename v2 election

. rename v3 electionyr

. rename v4 nextelec

. drop in 1
(1 observation deleted)

. replace country=upper(country)
(192 real changes made)

. sort country

. saveold recentelec.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file recentelec.dta saved

. clear

. use final1.dta

. rename _merge merge4

. merge m:m country using recentelec.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                             79
        from master                          0  (_merge==1)
        from using                          79  (_merge==2)

    matched                                113  (_merge==3)
    -----------------------------------------

. drop in 114/192
(79 observations deleted)

. rename _merge merge5

. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved

.
. ****************** DEVELOPMENT SCALE: (UN Stats) ******************
.
. clear

. insheet using "C:\Users\andre\Documents\9.Pip\Dissertation\Development.csv"
(9 vars, 250 obs)

. browse

. rename v1 country

. rename v2 region

. drop v3 v4

. rename v5 LDC

. rename v6 LLDC
```

```
. rename v7 SIDS

. rename v8 Develop

. drop in 1
(1 observation deleted)

. replace country=upper(country)
(249 real changes made)

. sort country

. saveold development.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file development.dta saved

.
. clear

. use final1.dta

. merge m:m country using development.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                           140
        from master                         2  (_merge==1)
        from using                        138  (_merge==2)

    matched                               111  (_merge==3)
    -----------------------------------------

. tab country if _merge==1

                                country |      Freq.     Percent        Cum.
----------------------------------------+-----------------------------------
                         CZECH REPUBLIC |          1       50.00       50.00
                         UNITED KINGDOM |          1       50.00      100.00
----------------------------------------+-----------------------------------
                                  Total |          2      100.00

.
. clear

. use development.dta

. browse

. replace country = "CZECH REPUBLIC" in 60
(1 real change made)

. replace country = "UNITED KINGDOM" in 234
(1 real change made)

. sort country

. saveold development.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file development.dta saved

.
. clear
```

```
. use final1.dta

. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata  formats)
file final1.dta saved

. merge m:m country using development.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                           136
        from master                         0  (_merge==1)
        from using                        136  (_merge==2)

    matched                               113  (_merge==3)
    -----------------------------------------

.
. *** the 113 countries we are modelling are now matched so I will delete the other
regions/countries as they do not fit into what we want to model.
.
. drop in 114/249
(136 observations deleted)

. rename _merge merge6

. drop v9

. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved

.
. *** now need to clean up this bit of the dataset and destring the variables
imported. First, create a dichotomous variable for least developed 1, other 0:
.
. tab LDC

                            LDC |      Freq.     Percent        Cum.
--------------------------------+-----------------------------------
                              x |         15      100.00      100.00
--------------------------------+-----------------------------------
                          Total |         15      100.00

. tab LDC, nol

                            LDC |      Freq.     Percent        Cum.
--------------------------------+-----------------------------------
                              x |         15      100.00      100.00
--------------------------------+-----------------------------------
                          Total |         15      100.00

. encode LDC, gen(leastdev)

. tab leastdev

   leastdev |      Freq.     Percent        Cum.
------------+-----------------------------------
          x |         15      100.00      100.00
------------+-----------------------------------
      Total |         15      100.00

. tab leastdev, nol
```

```
   leastdev |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         15      100.00      100.00
------------+-----------------------------------
      Total |         15      100.00

. recode leastdev .=0
(leastdev: 98 changes made)

. tab leastdev

   leastdev |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |         98       86.73       86.73
          x |         15       13.27      100.00
------------+-----------------------------------
      Total |        113      100.00

.
. *** Next, landlocked developing:
.
. tab LLDC

                                       LLDC |      Freq.     Percent        Cum.
--------------------------------------------+-----------------------------------
                                          x |         11      100.00      100.00
--------------------------------------------+-----------------------------------
                                      Total |         11      100.00

. tab LLDC, nol

                                       LLDC |      Freq.     Percent        Cum.
--------------------------------------------+-----------------------------------
                                          x |         11      100.00      100.00
--------------------------------------------+-----------------------------------
                                      Total |         11      100.00

. encode LLDC, gen(landlockdev)

. tab landlockdev

landlockdev |      Freq.     Percent        Cum.
------------+-----------------------------------
          x |         11      100.00      100.00
------------+-----------------------------------
      Total |         11      100.00

. tab landlockdev, nol

landlockdev |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         11      100.00      100.00
------------+-----------------------------------
      Total |         11      100.00

. recode landlockdev .=0
(landlockdev: 102 changes made)

. tab landlockdev

landlockdev |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        102       90.27       90.27
          x |         11        9.73      100.00
------------+-----------------------------------
      Total |        113      100.00

.
```

```
. *** Next, small island developing:
.
. tab SIDS

                                  SIDS |      Freq.     Percent        Cum.
---------------------------------------+-----------------------------------
                                     x |         31      100.00      100.00
---------------------------------------+-----------------------------------
                                 Total |         31      100.00

. tab SIDS, nol

                                  SIDS |      Freq.     Percent        Cum.
---------------------------------------+-----------------------------------
                                     x |         31      100.00      100.00
---------------------------------------+-----------------------------------
                                 Total |         31      100.00

. encode SIDS, gen(islanddev)

. tab islanddev

  islanddev |      Freq.     Percent        Cum.
------------+-----------------------------------
          x |         31      100.00      100.00
------------+-----------------------------------
      Total |         31      100.00

. tab islanddev, nol

  islanddev |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         31      100.00      100.00
------------+-----------------------------------
      Total |         31      100.00

. recode islanddev .=0
(islanddev: 82 changes made)

. tab islanddev

  islanddev |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |         82       72.57       72.57
          x |         31       27.43      100.00
------------+-----------------------------------
      Total |        113      100.00

.
. *** developed/developing:
.
. tab Develop

                        Develop |      Freq.     Percent        Cum.
--------------------------------+-----------------------------------
                     Developed |         47       41.59       41.59
                    Developing |         66       58.41      100.00
--------------------------------+-----------------------------------
                         Total |        113      100.00

. tab Develop, nol

                        Develop |      Freq.     Percent        Cum.
--------------------------------+-----------------------------------
                     Developed |         47       41.59       41.59
                    Developing |         66       58.41      100.00
--------------------------------+-----------------------------------
                         Total |        113      100.00
```

```
. encode Develop, gen(developed)

. tab developed

  developed |      Freq.     Percent        Cum.
------------+-----------------------------------
  Developed |         47       41.59       41.59
 Developing |         66       58.41      100.00
------------+-----------------------------------
      Total |        113      100.00

. tab developed, nol

  developed |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         47       41.59       41.59
          2 |         66       58.41      100.00
------------+-----------------------------------
      Total |        113      100.00

. recode developed 2=0
(developed: 66 changes made)

. tab developed

  developed |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |         66       58.41       58.41
  Developed |         47       41.59      100.00
------------+-----------------------------------
      Total |        113      100.00

.
. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved

.
. *** Create an ordinal variable for development level by collapsing the developed
dichotomous and least developed dichotomous variables into one another. This is
shown here and now we have a development variable which shows much more about the
difference in development and the effect this has on the percentage of women:
.
. gen devscale=developed

. tab devscale

   devscale |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |         66       58.41       58.41
          1 |         47       41.59      100.00
------------+-----------------------------------
      Total |        113      100.00

. recode devscale 1=2
(devscale: 47 changes made)

. recode devscale 2=3
(devscale: 47 changes made)

. recode devscale 0=2
(devscale: 66 changes made)

. tab devscale
```

```
   devscale |      Freq.     Percent        Cum.
------------+-----------------------------------
          2 |         66       58.41       58.41
          3 |         47       41.59      100.00
------------+-----------------------------------
      Total |        113      100.00

.
. *** Once I had developing and developed on a scale, I wanted to add the
information for least developed from the other "leastdev" variable. I couldn't do
this automatically so I recoded it by hand, using the information in the data file
.
. replace devscale = 1 in 11
(1 real change made)

. replace devscale = 1 in 16
(1 real change made)

. replace devscale = 1 in 50
(1 real change made)

. replace devscale = 1 in 52
(1 real change made)

. replace devscale = 1 in 53
(1 real change made)

. replace devscale = 1 in 57
(1 real change made)

. replace devscale = 1 in 58
(1 real change made)

. replace devscale = 1 in 69
(1 real change made)

. replace devscale = 1 in 90
(1 real change made)

. replace devscale = 1 in 91
(1 real change made)

. replace devscale = 1 in 94
(1 real change made)

. replace devscale = 1 in 97
(1 real change made)

. replace devscale = 1 in 104
(1 real change made)

. replace devscale = 1 in 108
(1 real change made)

. replace devscale = 1 in 113
(1 real change made)

.
. tab devscale

   devscale |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         15       13.27       13.27
          2 |         51       45.13       58.41
          3 |         47       41.59      100.00
------------+-----------------------------------
      Total |        113      100.00
```

```
. tab devscale, nol

   devscale |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         15       13.27       13.27
          2 |         51       45.13       58.41
          3 |         47       41.59      100.00
------------+-----------------------------------
      Total |        113      100.00

. label define devscale 1 "leastdeveloped" 2 "developing" 3 "developed"

.
. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved

.
. ********************** LAG PAID (World Bank) **********************
.
. *** Having looked at GDP and percentage of women in work, I want to look more at
the % of women in paid in work so inputting World Bank information taken from 2019
for the work figures:
.
. clear

. insheet using "C:\Users\andre\Documents\9.Pip\Dissertation\%paid.csv"
(56 vars, 265 obs)

. rename v1 country

. rename v2 yr2011

. rename v3 yr2012

. rename v4 yr2013

. rename v5 yr2014

. rename v6 yr2015

. rename v7 yr2016

. rename v8 yr2017

. rename v9 yr2018

. rename v10 yr2019

. drop in 1
(1 observation deleted)

. replace country = upper(country)
(264 real changes made)

. sort country

. saveold paid.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file paid.dta saved

.
. clear
```

```
. use final1.dta

. merge m:m country using paid.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                           171
        from master                        10  (_merge==1)
        from using                        161  (_merge==2)

    matched                               103  (_merge==3)
    -----------------------------------------

. tab country if _merge == 1

                                country |      Freq.     Percent        Cum.
----------------------------------------+-----------------------------------
                                BAHAMAS |          1       10.00       10.00
       BOLIVIA (PLURINATIONAL STATE OF) |          1       10.00       20.00
       MICRONESIA (FEDERATED STATES OF) |          1       10.00       30.00
                      REPUBLIC OF KOREA |          1       10.00       40.00
                    REPUBLIC OF MOLDOVA |          1       10.00       50.00
                  SAINT KITTS AND NEVIS |          1       10.00       60.00
                             SAINT LUCIA |          1       10.00       70.00
       SAINT VINCENT AND THE GRENADINES |          1       10.00       80.00
                               SLOVAKIA |          1       10.00       90.00
              UNITED STATES OF AMERICA |          1       10.00      100.00
----------------------------------------+-----------------------------------
                                  Total |         10      100.00

.
. clear

. use paid.dta

. replace country = "BAHAMAS" in 15
(1 real change made)

. replace country = "BOLIVIA (PLURINATIONAL STATE OF)" in 25
(1 real change made)

. replace country = "MICRONESIA (FEDERATED STATES OF)" in 157
(1 real change made)

. replace country = "REPUBLIC OF KOREA" in 125
(1 real change made)

. replace country = "REPUBLIC OF MOLDOVA" in 162
(1 real change made)

. replace country = "SAINT KITTS AND NEVIS" in 224
(1 real change made)

. replace country = "SAINT LUCIA" in 225
(1 real change made)

. replace country = "SAINT VINCENT AND THE GRENADINES" in 227
(1 real change made)

. replace country = "SLOVAKIA" in 213
(1 real change made)

. replace country = "UNITED STATES OF AMERICA" in 252
(1 real change made)

. sort country

. saveold paid.dta, replace
```

```
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file paid.dta saved

.
. clear

. use final1.dta

. merge m:m country using paid.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                           151
        from master                         0  (_merge==1)
        from using                        151  (_merge==2)

    matched                               113  (_merge==3)
    -----------------------------------------

. drop in 114/264
(151 observations deleted)

. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved

.
. drop _merge

. drop v56

. drop yr2011 yr2012 yr2013 yr2014 yr2015 yr2016 yr2017 yr2018 yr2019 v11 v12 v13
v14 v15 v16 v17 v18 v19 v20 v21 v22 v23 v24 v25 v26 v27 v28 v29 v30 v31 v32 v33 v34
v35 v36 v37 v38 v39 v40 v41 v42 v43 v44 v45 v46 v47 v48 v49 v50 v51 v52 v53 v54 v55

. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved

.
. **** I used excel to copy the lagged percentage over in this case because it is
easier to recode by hand on excel than on dta.
.
. **** The first bit of this was making sure I had the right countries and years to
copy over, not including electoral democracies. Now I go onto merge these into a
dataset all together:
.
. clear

. insheet using "C:\Users\andre\Documents\9.Pip\Dissertation\paid%.csv"
(2 vars, 113 obs)

. saveold paid.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata  formats)
  note: variable label "country" contains unicode and thus may not display well in
        Stata 13.
file paid.dta saved

. clear
```

```
. use final1.dta

. merge m:m country using paid.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                             0
    matched                               113  (_merge==3)
    -----------------------------------------

. rename _merge merge7

.
. *** replaced lagpaid missing values with the mean of the dataset to be able to
include it in the model

mean lagpaid

Mean estimation                   Number of obs   =         98

--------------------------------------------------------------
             |       Mean   Std. Err.     [95% Conf. Interval]
-------------+------------------------------------------------
     lagpaid |   67.06831   2.692242      61.72495    72.41166
--------------------------------------------------------------

.
. recode lagpaid .=67.068
(lagpaid: 15 changes made)

. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved

.
. *************************** FEM PARL (IPU) ****************************
.
. *** insert first woman in parliament variable (IPU)
. clear

. insheet using "C:\Users\andre\Documents\9.Pip\Dissertation\firstfempar.csv"
(2 vars, 182 obs)

. replace country=upper(country)
(182 real changes made)

. sort country

. saveold firstfempar.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file firstfempar.dta saved

. clear

.
. use final1.dta

. merge 1:1 country using firstfempar.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                            75
        from master                         3  (_merge==1)
        from using                         72  (_merge==2)
```

```
    matched                               110  (_merge==3)
    -----------------------------------------

. tab country if _merge == 1

                                country |      Freq.     Percent        Cum.
----------------------------------------+-----------------------------------
                                LIBERIA |          1       33.33       33.33
       MICRONESIA (FEDERATED STATES OF) |          1       33.33       66.67
                           SIERRA LEONE |          1       33.33      100.00
----------------------------------------+-----------------------------------
                                  Total |          3      100.00

.
. *** Liberia, Micronesia and Sierra Leona don't have dates for this because they
have not yet had a female member of parliament, I will recode these 0. I can also
drop the other variables that didn't match because these are not electoral
democracies.
.
. drop in 114/185
(72 observations deleted)

. rename _merge merge8

. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved

.
. gen femparl = electionyr - firstwomaninparliament
(3 missing values generated)

. replace femparl = 0 in 53
(1 real change made)

. replace femparl = 0 in 63
(1 real change made)

. replace femparl = 0 in 94
(1 real change made)

.
. *** replaced missing values with 0 as this is the true value, 0 years since the
first woman in parliament as there has never been one.
.
. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved

.
. ****************** SUFFRAGE (women's suffrage and beyond) ****************
.
. *** Insert year Universal Suffrage was achieved:
.
. *** I have already looked at using the year of first suffrage (discussed in
methodology) and did not find this a suitable measure so I have used the year of
universal suffrage.
.
. clear

. insheet using "C:\Users\andre\Documents\9.Pip\Dissertation\suffrage.csv"
(2 vars, 189 obs)
```

```
. rename v1 country

. rename righttovote suffrage

. replace country=upper(country)
(189 real changes made)

. sort country

. saveold suffrage.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file suffrage.dta saved

. clear

. use final1.dta

. merge m:m country using suffrage.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                           100
        from master                        12  (_merge==1)
        from using                         88  (_merge==2)

    matched                               101  (_merge==3)
    -----------------------------------------

. tab country if _merge == 1

                                country |      Freq.     Percent        Cum.
----------------------------------------+-----------------------------------
                                ANDORRA |          1        8.33        8.33
                    ANTIGUA AND BARBUDA |          1        8.33       16.67
                                BAHAMAS |          1        8.33       25.00
       BOLIVIA (PLURINATIONAL STATE OF) |          1        8.33       33.33
                                  CHILE |          1        8.33       41.67
       MICRONESIA (FEDERATED STATES OF) |          1        8.33       50.00
                             MONTENEGRO |          1        8.33       58.33
                         NORTH MACEDONIA |          1        8.33       66.67
                    REPUBLIC OF MOLDOVA |          1        8.33       75.00
                                 SERBIA |          1        8.33       83.33
                            TIMOR-LESTE |          1        8.33       91.67
                                VANUATU |          1        8.33      100.00
----------------------------------------+-----------------------------------
                                  Total |         12      100.00

.
. clear

. use suffrage.dta

. replace country = "ANDORRA" in 4
(1 real change made)

. replace country = "ANTIGUA AND BARBUDA" in 6
(1 real change made)

. replace country = "BOLIVIA (PLURINATIONAL STATE OF)" in 22
(1 real change made)

. replace country = "CHILE" in 36
(1 real change made)

. replace country = "MICRONESIA (FEDERATED STATES OF)" in 112
(1 real change made)
```

```
. replace country = "NORTH MACEDONIA" in 103
(1 real change made)

. replace country = "REPUBLIC OF MOLDOVA" in 114
(1 real change made)

. replace country = "VANUATU" in 186
(1 real change made)

. sort country

. saveold suffrage.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file suffrage.dta saved

.
. clear

. use final1.dta

. merge m:m country using suffrage.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                             90
        from master                          7  (_merge==1)
        from using                          83  (_merge==2)

    matched                                106  (_merge==3)
    -----------------------------------------

. tab country if _merge == 1

                                country |      Freq.     Percent        Cum.
----------------------------------------+-----------------------------------
                                BAHAMAS |          1       14.29       14.29
                             MADAGASCAR |          1       14.29       28.57
                                 MEXICO |          1       14.29       42.86
                                 MONACO |          1       14.29       57.14
                             MONTENEGRO |          1       14.29       71.43
                                 SERBIA |          1       14.29       85.71
                            TIMOR-LESTE |          1       14.29      100.00
----------------------------------------+-----------------------------------
                                  Total |          7      100.00

.
. replace suffrage = 1961 in 7
(1 real change made)

. drop in 114/196
(83 observations deleted)

. mean suffrage

Mean estimation                   Number of obs   =        107

------------------------------------------------------------------------------
             |       Mean   Std. Err.     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    suffrage |   1945.841   1.972172      1941.931    1949.751
------------------------------------------------------------------------------

.
. *** Bahamas Universal suffrage year is in the dataset so that is just recoded
(line 7)
```

```
.
. *** All other countries with missing universal suffrage years use the mean
average for the entire suffrage year:
.
. replace suffrage = 1946 in 57
(1 real change made)

. replace suffrage = 1946 in 62
(1 real change made)

. replace suffrage = 1946 in 64
(1 real change made)

. replace suffrage = 1946 in 66
(1 real change made)

. replace suffrage = 1946 in 92
(1 real change made)

. replace suffrage = 1946 in 104
(1 real change made)

.
. destring, replace
country: contains nonnumeric characters; no replace
chamber: contains nonnumeric characters; no replace
percentwomen: all characters numeric; replaced as double
structure: contains nonnumeric characters; no replace
merge1 already numeric; no replace
electdemoc already numeric; no replace
elecsystem: contains nonnumeric characters; no replace
merge2 already numeric; no replace
volpolparty: contains nonnumeric characters; no replace
quotaype: contains nonnumeric characters; no replace
constitutional: contains nonnumeric characters; no replace
electoral: contains nonnumeric characters; no replace
merge4 already numeric; no replace
quotatype already numeric; no replace
election: contains nonnumeric characters; no replace
electionyr already numeric; no replace
nextelec: contains nonnumeric characters; no replace
merge5 already numeric; no replace
region: contains nonnumeric characters; no replace
LDC: contains nonnumeric characters; no replace
LLDC: contains nonnumeric characters; no replace
SIDS: contains nonnumeric characters; no replace
Develop: contains nonnumeric characters; no replace
merge6 already numeric; no replace
leastdev already numeric; no replace
landlockdev already numeric; no replace
islanddev already numeric; no replace
developed already numeric; no replace
devscale already numeric; no replace
lagpaid already numeric; no replace
merge7 already numeric; no replace
firstwomaninparliament already numeric; no replace
merge8 already numeric; no replace
femparl already numeric; no replace
suffrage already numeric; no replace
_merge already numeric; no replace

. gen yrssuffrage = electionyr - suffrage

. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved
```

```
.
. **** Elecystem is still string so need to recode this to be numerical:
.
. encode elecsystem, gen(votesystem)

*******************************************************************************

** Now I have a complete dataset I will run diagnostic tests:


. *** COOKS DISTANCE ***:
.
. reg percentwomen ib4.votesystem i.quotatype ib3.devscale c.lagpaid c.femparl
c.yrssuffrage

      Source |       SS           df       MS      Number of obs   =       113
-------------+----------------------------------   F(10, 102)      =      5.48
       Model |  6029.47646        10  602.947646   Prob > F        =    0.0000
    Residual |  11225.8812       102  110.057659   R-squared       =    0.3494
-------------+----------------------------------   Adj R-squared   =    0.2856
       Total |  17255.3576       112  154.065693   Root MSE        =    10.491

------------------------------------------------------------------------------
-----
          percentwomen |      Coef.   Std. Err.      t    P>|t|     [95% Conf.
Interval]
-----------------------+------------------------------------------------------
-----
            votesystem |
         Mixed system  |   1.205668   2.792714     0.43   0.667    -4.333668
6.745004
        Other systems  |   2.489368   11.11235     0.22   0.823    -19.55192
24.53065
   Plurality/majority  |  -6.255392   2.802439    -2.23   0.028    -11.81402   -
.6967663
                       |
             quotatype |
Legislated Candidat..  |   4.567149   2.360363     1.93   0.056    -.1146204
9.248918
       Reserved seats  |   4.780274    6.66657     0.72   0.475    -8.442837
18.00338
                       |
              devscale |
                    1  |  -4.040491   5.086814    -0.79   0.429    -14.13016
6.04918
                    2  |  -3.163662    2.81651    -1.12   0.264    -8.750197
2.422873
                       |
               lagpaid |   .0657736   .0651382     1.01   0.315    -.0634277
.1949749
               femparl |   .1146488   .0475303     2.41   0.018     .0203726
.208925
           yrssuffrage |  -.0134993   .0630636    -0.21   0.831    -.1385857
.1115871
                 _cons |   16.74071   7.494422     2.23   0.028     1.875559
31.60586
------------------------------------------------------------------------------
-----

. predict d, cook

. predict y
(option xb assumed; fitted values)

. scatter y d, scheme(plottig)
(note: scheme plottig not found, using s2color)
```

```
. graph save "Graph" "C:\Users\andre\Documents\9.Pip\Dissertation\Cooks D.gph",
replace
(file C:\Users\andre\Documents\9.Pip\Dissertation\Cooks D.gph saved)
do "C:\Users\andre\AppData\Local\Temp\STD2fc8_000000.tmp"

. list if d>0.04

     +-------------------------------------------------------------------------
-----+
  2. |                           country   |                   chamber   |
percen~n   |
     |                           ANDORRA   |           General Council   |
46.43   |
     |-----------------------------------+---------------------------+---------
-----|
     |  structure |      merge1 | electd~c |                  elecsystem |
merge2  |
     | Unicameral | matched (3) |      Yes |                Mixed system | matched
(3)  |
     |-------------------------------------------------------------------------
-----|
     | volpol~y |                    quotaype | consti~l | electo~l  |
merge4  |
     |          |                             |          |           | master only
(1)  |
     |-------------------------------------------------------------------------
-----|
     |                   quotatype |                  election | electi~r  |
nextelec  |
     |                           0 |                07-Apr-19 |     2019  | 30-
Apr-23  |
     |-----------------------------------------------------+-------------------
-----|
     |      merge5 |   region | LDC | LLDC | SIDS |    Develop |      merge6 |
leastdev |
     | matched (3) |   Europe |     |      |      |  Developed | matched (3) |
0 |
     |---------------------------------------------+---------------------------
-----|
     | landlo~v | island~v | developed | devscale | lagpaid  |      merge7  |
firstw~t  |
     |        0 |        0 | Developed |        3 |  67.068  | matched (3)  |
1993  |
     |-------------------------------------------------------------------------
-----|
     |       merge8   |   femparl   |   suffrage   |            _merge   |
yrssuf~e   |
     |  matched (3)   |        26   |       1970   |       matched (3)   |
49   |
     |-------------------------------------------------------------------------
-----|
     |                       votesystem      |             d      |             y
|
     |                     Mixed system      |      .0726321      |      24.67708
|
     +-------------------------------------------------------------------------
-----+

     +-------------------------------------------------------------------------
-----+
 12. |                           country   |                   chamber   |
percen~n   |
     |  BOLIVIA (PLURINATIONAL STATE OF)   |       Chamber of Deputies   |
53.08   |
     |-----------------------------------+---------------------------+---------
-----|
```

```
     |  structure |      merge1 | electd~c |                  elecsystem |
merge2  |
     |  Bicameral | matched (3) |      Yes |                Mixed system | matched
(3)  |
     |-------------------------------------------------------------------------------
-----|
     | volpol~y |                    quotaype | consti~l | electo~l  |
merge4  |
     |      Yes | Legislated Candidate Quotas |       No |      Yes  |     matched
(3)  |
     |-------------------------------------------------------------------------------
-----|
     |                   quotatype |                   election | electi~r  |
nextelec  |
     | Legislated Candidate Quotas |                 20-Oct-19 |     2019  | 03-
May-20  |
     |-----------------------------------------------------------+-------------------
-----|
     |      merge5 |   region | LDC | LLDC | SIDS |    Develop |      merge6 |
leastdev |
     | matched (3) | Americas |     |    x |      | Developing | matched (3) |
0 |
     |-------------------------------------------+-------------------------------
-----|
     | landlo~v | island~v | developed | devscale | lagpaid  |      merge7  |
firstw~t  |
     |        x |        0 |         0 |        2 |  34.379  | matched (3)  |
1956  |
     |-------------------------------------------------------------------------------
-----|
     |       merge8   |   femparl   |   suffrage   |            _merge   |
yrssuf~e   |
     |  matched (3)   |        63   |       1952   |       matched (3)   |
67   |
     |-------------------------------------------------------------------------------
-----|
     |                        votesystem      |             d      |             y
|
     |                      Mixed system      |      .0652124      |      27.92951
|
     +-------------------------------------------------------------------------------
-----+

     +-------------------------------------------------------------------------------
-----+
 67. |                           country   |                   chamber   |
percen~n   |
     |                           NAMIBIA   |         National Assembly   |
42.71   |
     |-----------------------------------+-----------------------------+---------
-----|
     |  structure |      merge1 | electd~c |                  elecsystem |
merge2  |
     |  Bicameral | matched (3) |      Yes | Proportional representation | matched
(3)  |
     |-------------------------------------------------------------------------------
-----|
     | volpol~y |                    quotaype | consti~l | electo~l  |
merge4  |
     |          |                             |          |           | master only
(1)  |
     |-------------------------------------------------------------------------------
-----|
     |                   quotatype |                   election | electi~r  |
nextelec  |
     |                           0 |                 27-Nov-19 |     2019  | 30-
Nov-24  |
```

```
     |-------------------------------------------------------+-------------------
-----|
     |      merge5 |   region | LDC | LLDC | SIDS |    Develop |      merge6 |
leastdev |
     | matched (3) |   Africa |     |      |      | Developing | matched (3) |
0 |
     |---------------------------------------------+---------------------------------
-----|
     | landlo~v | island~v | developed | devscale | lagpaid  |      merge7  |
firstw~t  |
     |        0 |        0 |         0 |        2 |  65.082  | matched (3)  |
1989  |
     |-------------------------------------------------------------------------------
-----|
     |       merge8   |   femparl   |   suffrage   |            _merge   |
yrssuf~e   |
     |  matched (3)   |        30   |       1989   |       matched (3)   |
30   |
     |-------------------------------------------------------------------------------
-----|
     |                        votesystem      |             d      |             y
|
     |      Proportional representation       |      .0489518      |      20.89221
|
     +-------------------------------------------------------------------------------
-----+

     +-------------------------------------------------------------------------------
-----+
 69. |                            country   |                   chamber   |
percen~n   |
     |                              NEPAL   |  House of Representatives   |
32.73   |
     |-----------------------------------+-----------------------------+---------
-----|
     |  structure |      merge1 | electd~c |                  elecsystem |
merge2  |
     |  Bicameral | matched (3) |      Yes |                Mixed system | matched
(3)  |
     |-------------------------------------------------------------------------------
-----|
     | volpol~y |                    quotaype | consti~l | electo~l  |
merge4  |
     |       No |              Reserved seats |      Yes |      Yes  |     matched
(3)  |
     |-------------------------------------------------------------------------------
-----|
     |                   quotatype |                  election | electi~r  |
nextelec  |
     |              Reserved seats | 26 Nov 2017 - 07 Dec 2017 |     2017  | 30-
Nov-22  |
     |-------------------------------------------------------+-------------------
-----|
     |      merge5 |   region | LDC | LLDC | SIDS |    Develop |      merge6 |
leastdev |
     | matched (3) |     Asia |   x |    x |      | Developing | matched (3) |
x |
     |---------------------------------------------+---------------------------------
-----|
     | landlo~v | island~v | developed | devscale | lagpaid  |      merge7  |
firstw~t  |
     |        x |        0 |         0 |        1 |   9.093  | matched (3)  |
1952  |
     |-------------------------------------------------------------------------------
-----|
     |       merge8   |   femparl   |   suffrage   |            _merge   |
yrssuf~e   |
```

```
     |  matched (3)   |        65   |       1951   |       matched (3)   |
66   |
     |-------------------------------------------------------------------------
-----|
     |                        votesystem      |             d      |             y
|
     |                      Mixed system      |      .0407511      |      25.84546
|
     +-------------------------------------------------------------------------
-----+

     +-------------------------------------------------------------------------
-----+
 88. |                            country   |                   chamber   |
percen~n   |
     |                              SAMOA   |      Legislative Assembly   |
10   |
     |-----------------------------------+---------------------------+---------
-----|
     |  structure |      merge1 | electd~c |                  elecsystem |
merge2  |
     | Unicameral | matched (3) |      Yes |          Plurality/majority | matched
(3)  |
     |-------------------------------------------------------------------------
-----|
     | volpol~y |                    quotaype | consti~l | electo~l  |
merge4  |
     |          |              Reserved seats |      Yes |           |     matched
(3)  |
     |-------------------------------------------------------------------------
-----|
     |                   quotatype |                  election | electi~r  |
nextelec  |
     |              Reserved seats |                 04-Mar-16 |     2016  | 31-
Mar-21  |
     |-----------------------------------------------------+-------------------
-----|
     |      merge5 |   region | LDC | LLDC | SIDS |    Develop |      merge6 |
leastdev |
     | matched (3) |  Oceania |     |      |    x | Developing | matched (3) |
0 |
     |---------------------------------------------+-------------------------------
-----|
     | landlo~v | island~v | developed | devscale | lagpaid  |      merge7  |
firstw~t  |
     |        0 |        x |         0 |        2 |  63.106  | matched (3)  |
1964  |
     |-------------------------------------------------------------------------
-----|
     |       merge8   |   femparl   |   suffrage   |            _merge   |
yrssuf~e   |
     |  matched (3)   |        52   |       1990   |       matched (3)   |
26   |
     |-------------------------------------------------------------------------
-----|
     |                        votesystem      |             d      |             y
|
     |               Plurality/majority      |      .1322632      |      21.86339
|
     +-------------------------------------------------------------------------
-----+

     +-------------------------------------------------------------------------
-----+
 91. |                            country   |                   chamber   |
percen~n   |
     |                            SENEGAL   |         National Assembly   |
43.03   |
```

```
     |-------------------------------------+----------------------------+---------
-----|
     |  structure |      merge1 | electd~c |                  elecsystem |
merge2  |
     | Unicameral | matched (3) |      Yes |               Mixed system | matched
(3)  |
     |-------------------------------------------------------------------------
-----|
     | volpol~y |                    quotaype | consti~l | electo~l  |
merge4  |
     |       No | Legislated Candidate Quotas |       No |      Yes  |     matched
(3)  |
     |-------------------------------------------------------------------------
-----|
     |                   quotatype |                  election | electi~r  |
nextelec  |
     | Legislated Candidate Quotas |                30-Jul-17 |     2017  | 31-
Jul-22  |
     |-----------------------------------------------------+------------------
-----|
     |      merge5 |   region | LDC | LLDC | SIDS |    Develop |      merge6 |
leastdev |
     | matched (3) |   Africa |   x |      |      | Developing | matched (3) |
x |
     |---------------------------------------------+--------------------------------
-----|
     | landlo~v | island~v | developed | devscale | lagpaid  |      merge7  |
firstw~t  |
     |        0 |        0 |         0 |        1 |  26.302  | matched (3)  |
1963  |
     |-------------------------------------------------------------------------
-----|
     |       merge8   |   femparl   |   suffrage   |            _merge   |
yrssuf~e   |
     |  matched (3)   |        54   |       1945   |       matched (3)   |
72   |
     |-------------------------------------------------------------------------
-----|
     |                       votesystem      |             d      |             y
|
     |                     Mixed system      |      .0409477      |       25.4221
|
     +-------------------------------------------------------------------------
-----+

     +-------------------------------------------------------------------------
-----+
 98. |                           country   |                   chamber   |
percen~n   |
     |                      SOUTH AFRICA   |         National Assembly   |
46.58   |
     |-------------------------------------+----------------------------+---------
-----|
     |  structure |      merge1 | electd~c |                  elecsystem |
merge2  |
     |  Bicameral | matched (3) |      Yes | Proportional representation | matched
(3)  |
     |-------------------------------------------------------------------------
-----|
     | volpol~y |                    quotaype | consti~l | electo~l  |
merge4  |
     |          |                             |          |           | master only
(1)  |
     |-------------------------------------------------------------------------
-----|
     |                   quotatype |                  election | electi~r  |
nextelec  |
```

```
     |                          0 |                 08-May-19 |     2019  | 31-
May-24  |
     |----------------------------------------------------------+-------------------
-----|
     |      merge5 |   region | LDC | LLDC | SIDS |    Develop |      merge6 |
leastdev |
     | matched (3) |   Africa |     |      |      | Developing | matched (3) |
0 |
     |---------------------------------------------+--------------------------------
-----|
     | landlo~v | island~v | developed | devscale | lagpaid  |      merge7  |
firstw~t  |
     |        0 |        0 |         0 |        2 |  87.145  | matched (3)  |
1933  |
     |-------------------------------------------------------------------------------
-----|
     |       merge8   |   femparl   |   suffrage   |            _merge   |
yrssuf~e   |
     |  matched (3)   |        86   |       1994   |       matched (3)   |
25   |
     |-------------------------------------------------------------------------------
-----|
     |                       votesystem      |             d      |             y
|
     |      Proportional representation      |      .0701299      |       28.8312
|
     +-------------------------------------------------------------------------------
-----+

     +-------------------------------------------------------------------------------
-----+
104. |                           country   |                   chamber   |
percen~n   |
     |                       TIMOR-LESTE   |       National Parliament   |
38.46   |
     |-------------------------------------+-----------------------------+---------
-----|
     |  structure |      merge1 | electd~c |                  elecsystem |
merge2  |
     | Unicameral | matched (3) |      Yes | Proportional representation | matched
(3)  |
     |-------------------------------------------------------------------------------
-----|
     | volpol~y |                    quotaype | consti~l | electo~l  |
merge4  |
     |       No | Legislated Candidate Quotas |       No |      Yes  |     matched
(3)  |
     |-------------------------------------------------------------------------------
-----|
     |                   quotatype |                  election | electi~r  |
nextelec  |
     | Legislated Candidate Quotas |                12-May-18 |     2018  | 31-
May-23  |
     |----------------------------------------------------------+-------------------
-----|
     |      merge5 |   region | LDC | LLDC | SIDS |    Develop |      merge6 |
leastdev |
     | matched (3) |     Asia |   x |      |    x | Developing | matched (3) |
x |
     |---------------------------------------------+--------------------------------
-----|
     | landlo~v | island~v | developed | devscale | lagpaid  |      merge7  |
firstw~t  |
     |        0 |        x |         0 |        1 |  18.961  | matched (3)  |
2001  |
     |-------------------------------------------------------------------------------
-----|
```

```
     |       merge8   |   femparl   |   suffrage   |            _merge   |
yrssuf~e   |
     |  matched (3)   |        17   |       1946   |   master only (1)   |
72   |
     |-------------------------------------------------------------------------
-----|
     |                       votesystem      |             d      |             y
|
     |      Proportional representation      |      .0455121      |      19.49158
|
     +-------------------------------------------------------------------------
-----+

. reg percentwomen ib4.votesystem i.quotatype ib3.devscale c.lagpaid c.femparl
c.yrssuffr
> age if d<0.04

      Source |       SS           df       MS      Number of obs   =       105
-------------+----------------------------------   F(10, 94)       =      8.19
       Model |  6659.00963        10  665.900963   Prob > F        =    0.0000
    Residual |  7646.50695        94  81.3458187   R-squared       =    0.4655
-------------+----------------------------------   Adj R-squared   =    0.4086
       Total |  14305.5166       104  137.553044   Root MSE        =    9.0192

------------------------------------------------------------------------------
-----
          percentwomen |      Coef.   Std. Err.      t    P>|t|     [95% Conf.
Interval]
-----------------------+------------------------------------------------------
-----
            votesystem |
         Mixed system  |  -2.448786   2.605308    -0.94   0.350    -7.621687
2.724115
        Other systems  |   8.117758   9.656736     0.84   0.403    -11.05592
27.29143
   Plurality/majority  |  -2.943765   2.530698    -1.16   0.248    -7.968525
2.080995
                       |
             quotatype |
Legislated Candidat..  |   5.847145   2.151078     2.72   0.008     1.576129
10.11816
       Reserved seats  |   17.40805   9.618872     1.81   0.074    -1.690448
36.50654
                       |
              devscale |
                    1  |    -4.9156   4.695914    -1.05   0.298    -14.23945
4.408247
                    2  |  -3.140019   2.505684    -1.25   0.213    -8.115113
1.835076
                       |
               lagpaid |   .1085669   .0578633     1.88   0.064     -.006322
.2234558
               femparl |   .1030685   .0427906     2.41   0.018     .0181068
.1880302
          yrssuffrage  |   .0662486   .0612026     1.08   0.282    -.0552706
.1877678
                 _cons |   6.562605   6.856636     0.96   0.341    -7.051406
20.17662
------------------------------------------------------------------------------
-----


. *** Removing the 8 countries identified as outliers, the variance goes up and
there are some changes to the coefficients and significance levels. Therefore, I
have removed these countries from future analysis.
.
. drop if d>0.04
(8 observations deleted)
```

```
. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved

.
. *** with the 8 countries removed, for categories "other" in votesystem and
"reserved seats" in quotas, there is only one observation. Therefore, I have
created dummy variables which will be used in the analysis instead as I cannot have
a category with only one observation:
.
. tab votesystem

                votesystem |      Freq.     Percent        Cum.
---------------------------+-----------------------------------
             Mixed system |         17       16.19       16.19
            Other systems |          1        0.95       17.14
       Plurality/majority |         31       29.52       46.67
Proportional representation |         56       53.33      100.00
---------------------------+-----------------------------------
                     Total |        105      100.00

. gen systemelec=votesystem

. tab systemelec

 systemelec |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         17       16.19       16.19
          2 |          1        0.95       17.14
          3 |         31       29.52       46.67
          4 |         56       53.33      100.00
------------+-----------------------------------
      Total |        105      100.00

. recode systemelec 2=1 3=1
(systemelec: 32 changes made)

. tab systemelec

 systemelec |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         49       46.67       46.67
          4 |         56       53.33      100.00
------------+-----------------------------------
      Total |        105      100.00

. recode systemelec 4=2
(systemelec: 56 changes made)

. tab systemelec

 systemelec |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         49       46.67       46.67
          2 |         56       53.33      100.00
------------+-----------------------------------
      Total |        105      100.00

. label define systemelec 1 "other" 2 "Proportional Representation"

. reg percentwomen systemelec

      Source |       SS           df       MS      Number of obs   =       105
-------------+----------------------------------   F(1, 103)       =     16.25
       Model |  1948.88497         1  1948.88497   Prob > F        =    0.0001
```

```
    Residual |  12356.6316       103  119.967297   R-squared       =    0.1362
-------------+------------------------------------   Adj R-squared   =    0.1278
       Total |  14305.5166       104  137.553044   Root MSE        =    10.953

------------------------------------------------------------------------------
percentwomen |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  systemelec |   8.635663   2.142565     4.03   0.000     4.386391    12.88494
       _cons |    10.6376   3.454782     3.08   0.003     3.785856    17.48935
------------------------------------------------------------------------------

. generate PR=systemelec

. tab PR

         PR |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         49       46.67       46.67
          2 |         56       53.33      100.00
------------+-----------------------------------
      Total |        105      100.00

. recode PR 1=0
(PR: 49 changes made)

. tab PR

         PR |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |         49       46.67       46.67
          2 |         56       53.33      100.00
------------+-----------------------------------
      Total |        105      100.00

. recode PR 2=1
(PR: 56 changes made)

. tab PR

         PR |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |         49       46.67       46.67
          1 |         56       53.33      100.00
------------+-----------------------------------
      Total |        105      100.00

. label define PR 0 "other" 1 "proportional representation"

.
. tab quotatype

                  quotatype |      Freq.     Percent        Cum.
----------------------------+-----------------------------------
                          0 |         67       63.81       63.81
Legislated Candidate Quotas |         37       35.24       99.05
            Reserved seats |          1        0.95      100.00
----------------------------+-----------------------------------
                      Total |        105      100.00

. gen quota=quotatype

. recode quota 2=1
(quota: 1 changes made)

. tab quota

      quota |      Freq.     Percent        Cum.
------------+-----------------------------------
```

```
          0 |         67       63.81       63.81
          1 |         38       36.19      100.00
------------+-----------------------------------
      Total |        105      100.00

. label define quota 0 "no quota" 1 "legal quota"

.
. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata formats)
file final1.dta saved

. reg percentwomen PR quota ib3.devscale c.lagpaid c.femparl c.yrssuffrage

      Source |       SS           df       MS      Number of obs   =       105
-------------+----------------------------------   F(7, 97)        =     11.29
       Model |  6421.68288         7  917.383269   Prob > F        =    0.0000
    Residual |   7883.8337        97  81.2766361   R-squared       =    0.4489
-------------+----------------------------------   Adj R-squared   =    0.4091
       Total |  14305.5166       104  137.553044   Root MSE        =    9.0154

------------------------------------------------------------------------------
percentwomen |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          PR |   2.214445   2.032796     1.09   0.279    -1.820093    6.248983
       quota |   6.200308   2.006098     3.09   0.003     2.218759    10.18186
             |
    devscale |
          1  |  -4.706967   4.575834    -1.03   0.306    -13.78873    4.374796
          2  |   -3.28638   2.487008    -1.32   0.189    -8.222402    1.649641
             |
     lagpaid |   .0964093     .05698     1.69   0.094    -.0166803    .2094989
     femparl |   .1119759   .0422917     2.65   0.009     .0280386    .1959132
 yrssuffrage |   .0641428    .059897     1.07   0.287    -.0547361    .1830218
       _cons |   4.694504   6.715847     0.70   0.486    -8.634593     18.0236
------------------------------------------------------------------------------

. estat vif

    Variable |       VIF       1/VIF
-------------+----------------------
          PR |      1.33    0.752633
       quota |      1.20    0.832899
    devscale |
          1  |      2.74    0.365216
          2  |      1.98    0.506145
     lagpaid |      2.39    0.418536
     femparl |      1.69    0.591981
 yrssuffrage |      1.65    0.605733
-------------+----------------------
    Mean VIF |      1.85

. estat hettest, iid

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of percentwomen

         chi2(1)      =     0.15
         Prob > chi2  =   0.7030


. ******************** SUMMARY STATS ********************

graph box percentwomen
```

```
. graph save "Graph"
"C:\Users\andre\Documents\9.Pip\Dissertation\percentwomenbox.gph"
file C:\Users\andre\Documents\9.Pip\Dissertation\percentwomenbox.gph already exists
r(602);

. graph box lagpaid


. histogram devscale
(bin=10, start=1, width=.2)


. histogram devscale, frequency
(bin=10, start=1, width=.2)


. graph box yrssuffrage


. graph box femparl


. scatter percentwomen lagpaid


. **** GRAPHS AND TABLES ****
.
. hist percentwomen, frequency
(bin=10, start=0, width=4.82)

.
end of do-file

. do "C:\Users\andre\AppData\Local\Temp\STD2fc8_000000.tmp"

. sum percentwomen

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
percentwomen |        105    23.87895     11.7283          0       48.2

. sum PR

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
          PR |        105    .5333333    .5012804          0          1

. sum quota

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
       quota |        105    .3619048    .4828563          0          1

. sum devscale

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
    devscale |        105     2.32381    .6721841          1          3

. sum lagpaid

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
     lagpaid |        105     68.6436    23.98154       5.17     95.454

. sum femparl

    Variable |        Obs        Mean    Std. Dev.       Min        Max
```

```
-------------+---------------------------------------------------------
     femparl |        105    57.48571    27.16797          0        112

. sum yrssuffrage

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
 yrssuffrage |        105    73.48571    18.96359         33        124


. *** TWO WAY SCATTER - linear relationships:
.
. twoway (scatter percentwomen devscale) (lfit percentwomen devscale)

. twoway (scatter percentwomen lagpaid) (lfit percentwomen lagpaid)

. twoway (scatter percentwomen femparl) (lfit percentwomen femparl)

. twoway (scatter percentwomen yrssuffrage) (lfit percentwomen yrssuffrage)


. *** Spearman stats:
.
. spearman percentwomen PR quota devscale lagpaid femparl yrssuffrage, stats (rho
p)
(obs=105)

+-----------------+
|  Key            |
|-----------------|
|   rho           |
|   Sig. level    |
+-----------------+

             | percen~n       PR    quota devscale  lagpaid  femparl yrssuf~e
-------------+------------------------------------------------------------------
percentwomen |   1.0000
             |
             |
          PR |   0.3874   1.0000
             |   0.0000
             |
       quota |   0.2815   0.3072   1.0000
             |   0.0036   0.0014
             |
    devscale |   0.5200   0.3748   0.0068   1.0000
             |   0.0000   0.0001   0.9448
             |
     lagpaid |   0.4533   0.2220  -0.1352   0.7545   1.0000
             |   0.0000   0.0229   0.1691   0.0000
             |
     femparl |   0.5249   0.2696   0.0883   0.4511   0.4966   1.0000
             |   0.0000   0.0054   0.3704   0.0000   0.0000
             |
 yrssuffrage |   0.3825   0.2140  -0.0802   0.4462   0.4554   0.5633   1.0000
             |   0.0001   0.0284   0.4163   0.0000   0.0000   0.0000
             |

.
. *************************** REGRESSION OUTPUTS **************
.
. *Model 1 - PR:
.
. reg percentwomen PR

      Source |       SS           df       MS      Number of obs   =       105
-------------+----------------------------------   F(1, 103)       =     16.25
```

```
       Model |  1948.88497         1  1948.88497   Prob > F        =    0.0001
    Residual |  12356.6316       103  119.967297   R-squared       =    0.1362
-------------+------------------------------   Adj R-squared   =    0.1278
       Total |  14305.5166       104  137.553044   Root MSE        =    10.953

------------------------------------------------------------------------------
percentwomen |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          PR |   8.635663   2.142565     4.03   0.000     4.386391    12.88494
       _cons |   19.27327   1.564708    12.32   0.000     16.17004     22.3765
------------------------------------------------------------------------------

. estat vif

    Variable |       VIF       1/VIF
-------------+----------------------
          PR |      1.00    1.000000
-------------+----------------------
    Mean VIF |      1.00

. estat hettest, iid

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of percentwomen

         chi2(1)      =     0.19
         Prob > chi2  =   0.6642


. ** no VIF values above 2 and so not of note
. ** chi2 is not significant so don't need to use robust standard errors.
.
. *Model 2 - Structural:
. reg percentwomen PR quota

      Source |       SS           df       MS      Number of obs   =       105
-------------+------------------------------   F(2, 102)       =     10.07
       Model |  2357.95052         2  1178.97526   Prob > F        =    0.0001
    Residual |  11947.5661       102  117.133001   R-squared       =    0.1648
-------------+------------------------------   Adj R-squared   =    0.1485
       Total |  14305.5166       104  137.553044   Root MSE        =    10.823

------------------------------------------------------------------------------
percentwomen |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          PR |   7.358459   2.224686     3.31   0.001     2.945805    11.77111
       quota |   4.316069   2.309572     1.87   0.065    -.2649567    8.897094
       _cons |   18.39243   1.616364    11.38   0.000     15.18638    21.59848
------------------------------------------------------------------------------

. estat vif

    Variable |       VIF       1/VIF
-------------+----------------------
          PR |      1.10    0.905622
       quota |      1.10    0.905622
-------------+----------------------
    Mean VIF |      1.10

. estat hettest, iid

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of percentwomen

         chi2(1)      =     0.00
         Prob > chi2  =   0.9948
```

```
. *** Chi2 is significant so need to use robust standard errors and will need to do
so for all models.
.
. *Model 3 - Structural and socio-economic:

. reg percentwomen PR quota ib3.devscale c.lagpaid

      Source |       SS           df       MS      Number of obs   =       105
-------------+----------------------------------   F(5, 99)        =     11.75
       Model |   5329.1313         5  1065.82626   Prob > F        =    0.0000
    Residual |  8976.38529        99  90.6705584   R-squared       =    0.3725
-------------+----------------------------------   Adj R-squared   =    0.3408
       Total |  14305.5166       104  137.553044   Root MSE        =    9.5221

------------------------------------------------------------------------------
percentwomen |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          PR |   3.071826   2.132483     1.44   0.153    -1.159482    7.303135
       quota |   6.061784   2.076916     2.92   0.004     1.940733    10.18284
             |
    devscale |
           1 |  -8.355559   4.690776    -1.78   0.078    -17.66308    .9519585
           2 |  -5.486765   2.522512    -2.18   0.032    -10.49198   -.4815544
             |
     lagpaid |   .1265884   .0594656     2.13   0.036     .0085956    .2445811
       _cons |   14.76828   5.578561     2.65   0.009     3.699201    25.83735
------------------------------------------------------------------------------

. estat vif

    Variable |       VIF       1/VIF
-------------+----------------------
          PR |      1.31    0.762958
       quota |      1.15    0.866881
    devscale |
           1 |      2.58    0.387706
           2 |      1.82    0.548862
     lagpaid |      2.33    0.428693
-------------+----------------------
    Mean VIF |      1.84

. estat hettest, iid

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of percentwomen

         chi2(1)      =     0.07
         Prob > chi2  =   0.7936

.
. *Model 4 - Structural, socio-economic and historical:

. reg percentwomen PR quota ib3.devscale c.lagpaid c.femparl c.yrssuffrage

      Source |       SS           df       MS      Number of obs   =       105
-------------+----------------------------------   F(7, 97)        =     11.29
       Model |  6421.68288         7  917.383269   Prob > F        =    0.0000
    Residual |   7883.8337        97  81.2766361   R-squared       =    0.4489
-------------+----------------------------------   Adj R-squared   =    0.4091
       Total |  14305.5166       104  137.553044   Root MSE        =    9.0154

------------------------------------------------------------------------------
percentwomen |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          PR |   2.214445   2.032796     1.09   0.279    -1.820093    6.248983
```

```
       quota |   6.200308   2.006098     3.09   0.003     2.218759    10.18186
             |
    devscale |
           1 |  -4.706967   4.575834    -1.03   0.306    -13.78873    4.374796
           2 |   -3.28638   2.487008    -1.32   0.189    -8.222402    1.649641
             |
     lagpaid |   .0964093     .05698     1.69   0.094    -.0166803    .2094989
     femparl |   .1119759   .0422917     2.65   0.009     .0280386    .1959132
 yrssuffrage |   .0641428    .059897     1.07   0.287    -.0547361    .1830218
       _cons |   4.694504   6.715847     0.70   0.486    -8.634593     18.0236
------------------------------------------------------------------------------

. estat vif

    Variable |       VIF       1/VIF
-------------+----------------------
          PR |      1.33    0.752633
       quota |      1.20    0.832899
    devscale |
           1 |      2.74    0.365216
           2 |      1.98    0.506145
     lagpaid |      2.39    0.418536
     femparl |      1.69    0.591981
 yrssuffrage |      1.65    0.605733
-------------+----------------------
    Mean VIF |      1.85

. estat hettest, iid

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of percentwomen

         chi2(1)      =     0.15
         Prob > chi2  =   0.7030


. **** I will use robust standard errors in my regressions due to the significant
chi-2 in the early models. No VIF is above 10 so I do not need to be concerned
about multicollinearity and will continue as normal.


. *Model 5 - Interaction:
. reg percentwomen PR quota##ib3.devscale c.lagpaid c.femparl c.yrssuffrage, robust

Linear regression                               Number of obs     =        105
                                                F(9, 95)          =      10.68
                                                Prob > F          =     0.0000
                                                R-squared         =     0.4511
                                                Root MSE          =     9.0912

------------------------------------------------------------------------------
             |               Robust
  percentwomen |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
---------------+--------------------------------------------------------------
            PR |   2.196162   2.346707     0.94   0.352    -2.462641    6.854964
      1.quota |   6.946269   3.123059     2.22   0.029     .7462129    13.14633
              |
     devscale |
           1  |  -3.462914   5.166483    -0.67   0.504    -13.71968    6.793851
           2  |  -2.959939   3.831909    -0.77   0.442    -10.56724    4.647361
              |
quota#devscale |
          1 1  |  -4.218879   4.674096    -0.90   0.369    -13.49813    5.060374
          1 2  |  -.7776378   4.934272    -0.16   0.875    -10.57341     9.01813
              |
       lagpaid |   .0964929   .0484347     1.99   0.049     .0003378     .192648
       femparl |   .1162511   .0371611     3.13   0.002     .0424769    .1900252
```

```
   yrssuffrage |   .0623969   .0524956     1.19   0.238      -.04182    .1666138
         _cons |   4.284043   7.786893     0.55   0.584    -11.17489    19.74298
------------------------------------------------------------------------------

.
. ****************************************** MODELS TO STORE:
.
. *Model 1 - Vote System:
.
. quietly reg percentwomen PR, robust

. estat ic

Akaike's information criterion and Bayesian information criterion

------------------------------------------------------------------------------
       Model |          N   ll(null)  ll(model)      df        AIC        BIC
-------------+----------------------------------------------------------------
           . |        105  -406.9967  -399.3079       2   802.6158   807.9237
------------------------------------------------------------------------------
Note: BIC uses N = number of observations. See [R] BIC note.

. est store Model1

.
. *Model 2 - Structural:
.
. quietly reg percentwomen PR quota, robust

. estat ic

Akaike's information criterion and Bayesian information criterion

------------------------------------------------------------------------------
       Model |          N   ll(null)  ll(model)      df        AIC        BIC
-------------+----------------------------------------------------------------
           . |        105  -406.9967  -397.5405       3    801.081   809.0428
------------------------------------------------------------------------------
Note: BIC uses N = number of observations. See [R] BIC note.

. est store Model2

.
. *Model 3 - Structural and socio-economic:
.
. quietly reg percentwomen PR quota ib3.devscale c.lagpaid, robust

. estat ic

Akaike's information criterion and Bayesian information criterion

------------------------------------------------------------------------------
       Model |          N   ll(null)  ll(model)      df        AIC        BIC
-------------+----------------------------------------------------------------
           . |        105  -406.9967  -382.5291       6   777.0583    792.982
------------------------------------------------------------------------------
Note: BIC uses N = number of observations. See [R] BIC note.

. est store Model3

.
. *Model 4 - Structural, socio-economic and historical:
.
. quietly reg percentwomen PR quota ib3.devscale c.lagpaid c.femparl c.yrssuffrage,
robus
> t

. estat ic
```

```
Akaike's information criterion and Bayesian information criterion

------------------------------------------------------------------------------
       Model |          N   ll(null)  ll(model)      df        AIC        BIC
-------------+----------------------------------------------------------------
           . |        105  -406.9967  -375.7155       8   767.4311   788.6627
------------------------------------------------------------------------------
Note: BIC uses N = number of observations. See [R] BIC note.

. est store Model4


. *Model 5 - Interaction:
.
. quietly reg percentwomen PR quota##ib3.devscale c.lagpaid c.femparl
c.yrssuffrage, robust

. estat ic

Akaike's information criterion and Bayesian information criterion

------------------------------------------------------------------------------
       Model |          N   ll(null)  ll(model)      df        AIC        BIC
-------------+----------------------------------------------------------------
           . |        105  -406.9967  -375.5016      10   771.0031   797.5427
------------------------------------------------------------------------------
Note: BIC uses N = number of observations. See [R] BIC note.

. est store Model5

.
. *** EXPORT TO WORD:
.
. esttab Model1 Model2 Model3 Model4 Model5 using Tbs.rtf, replace title(Nested OLS
Regre
> ssion of Percentage Women in Parliament) b(%9.2f) se(%9.2f) pr2 mtitle("Model 1"
"Model
>  2" "Model 3" "Model 4" "Model 5") varwidth(15) modelwidth(5 5) stats(AIC N
Rsquared, f
> mt(%9.2f %9.2f %9.0f))
(output written to Tbs.rtf)

.
end of do-file

. tab quota

      quota |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |         67       63.81       63.81
          1 |         38       36.19      100.00
------------+-----------------------------------
      Total |        105      100.00


. ********************** FITTED PROBABILITY PLOTS ********************
.
. ssc install estout, replace
checking estout consistency and verifying not already installed...
all files already exist and are up to date.

. *** Marginsplot for Lagpaid, predicted probabilities (Model 4):
.
. quietly reg percentwomen PR quota ib3.devscale c.lagpaid c.femparl c.yrssuffrage,
robust
```

```
. margins, at(lagpaid=(0(20)100)) atmeans

Adjusted predictions                            Number of obs     =        105
Model VCE    : Robust

Expression   : Linear prediction, predict()

1._at        : PR              =    .5333333 (mean)
               quota           =    .3619048 (mean)
               1.devscale      =    .1142857 (mean)
               2.devscale      =     .447619 (mean)
               3.devscale      =    .4380952 (mean)
               lagpaid         =           0
               femparl         =    57.48571 (mean)
               yrssuffrage     =    73.48571 (mean)

2._at        : PR              =    .5333333 (mean)
               quota           =    .3619048 (mean)
               1.devscale      =    .1142857 (mean)
               2.devscale      =     .447619 (mean)
               3.devscale      =    .4380952 (mean)
               lagpaid         =          20
               femparl         =    57.48571 (mean)
               yrssuffrage     =    73.48571 (mean)

3._at        : PR              =    .5333333 (mean)
               quota           =    .3619048 (mean)
               1.devscale      =    .1142857 (mean)
               2.devscale      =     .447619 (mean)
               3.devscale      =    .4380952 (mean)
               lagpaid         =          40
               femparl         =    57.48571 (mean)
               yrssuffrage     =    73.48571 (mean)

4._at        : PR              =    .5333333 (mean)
               quota           =    .3619048 (mean)
               1.devscale      =    .1142857 (mean)
               2.devscale      =     .447619 (mean)
               3.devscale      =    .4380952 (mean)
               lagpaid         =          60
               femparl         =    57.48571 (mean)
               yrssuffrage     =    73.48571 (mean)

5._at        : PR              =    .5333333 (mean)
               quota           =    .3619048 (mean)
               1.devscale      =    .1142857 (mean)
               2.devscale      =     .447619 (mean)
               3.devscale      =    .4380952 (mean)
               lagpaid         =          80
               femparl         =    57.48571 (mean)
               yrssuffrage     =    73.48571 (mean)

6._at        : PR              =    .5333333 (mean)
               quota           =    .3619048 (mean)
               1.devscale      =    .1142857 (mean)
               2.devscale      =     .447619 (mean)
               3.devscale      =    .4380952 (mean)
               lagpaid         =         100
               femparl         =    57.48571 (mean)
               yrssuffrage     =    73.48571 (mean)

------------------------------------------------------------------------------
             |            Delta-method
             |     Margin   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         _at |
          1  |   17.26107   3.207585     5.38   0.000     10.89491    23.62724
          2  |   19.18926    2.31428     8.29   0.000     14.59605    23.78246
```

```
          3  |   21.11744   1.483179    14.24   0.000     18.17374    24.06114
          4  |   23.04563   .9057545    25.44   0.000     21.24796     24.8433
          5  |   24.97381    1.10345    22.63   0.000     22.78377    27.16386
          6  |     26.902   1.841589    14.61   0.000     23.24696    30.55704
------------------------------------------------------------------------------

. marginsplot, ylabels(0 25 50 75 100) recast(line) recastci(rline)
ci1opts(lpattern(dot)) ytitle("Percentage of women in
>  parliament")

  Variables that uniquely identify margins: lagpaid


. *** Marginsplot for femparl, predicted probabilities (Model 4):
.
. quietly reg percentwomen PR quota ib3.devscale c.lagpaid c.femparl c.yrssuffrage,
robust

. margins, at(femparl=(0(25)150)) atmeans

Adjusted predictions                            Number of obs     =        105
Model VCE    : Robust

Expression   : Linear prediction, predict()

1._at        : PR              =    .5333333 (mean)
               quota           =    .3619048 (mean)
               1.devscale      =    .1142857 (mean)
               2.devscale      =     .447619 (mean)
               3.devscale      =    .4380952 (mean)
               lagpaid         =     68.6436 (mean)
               femparl         =           0
               yrssuffrage     =    73.48571 (mean)

2._at        : PR              =    .5333333 (mean)
               quota           =    .3619048 (mean)
               1.devscale      =    .1142857 (mean)
               2.devscale      =     .447619 (mean)
               3.devscale      =    .4380952 (mean)
               lagpaid         =     68.6436 (mean)
               femparl         =          25
               yrssuffrage     =    73.48571 (mean)

3._at        : PR              =    .5333333 (mean)
               quota           =    .3619048 (mean)
               1.devscale      =    .1142857 (mean)
               2.devscale      =     .447619 (mean)
               3.devscale      =    .4380952 (mean)
               lagpaid         =     68.6436 (mean)
               femparl         =          50
               yrssuffrage     =    73.48571 (mean)

4._at        : PR              =    .5333333 (mean)
               quota           =    .3619048 (mean)
               1.devscale      =    .1142857 (mean)
               2.devscale      =     .447619 (mean)
               3.devscale      =    .4380952 (mean)
               lagpaid         =     68.6436 (mean)
               femparl         =          75
               yrssuffrage     =    73.48571 (mean)

5._at        : PR              =    .5333333 (mean)
               quota           =    .3619048 (mean)
               1.devscale      =    .1142857 (mean)
               2.devscale      =     .447619 (mean)
               3.devscale      =    .4380952 (mean)
               lagpaid         =     68.6436 (mean)
               femparl         =         100
```

```
               yrssuffrage     =    73.48571 (mean)

6._at          : PR            =    .5333333 (mean)
                 quota         =    .3619048 (mean)
                 1.devscale    =    .1142857 (mean)
                 2.devscale    =     .447619 (mean)
                 3.devscale    =    .4380952 (mean)
                 lagpaid       =     68.6436 (mean)
                 femparl       =         125
                 yrssuffrage     =    73.48571 (mean)

7._at          : PR            =    .5333333 (mean)
                 quota         =    .3619048 (mean)
                 1.devscale    =    .1142857 (mean)
                 2.devscale    =     .447619 (mean)
                 3.devscale    =    .4380952 (mean)
                 lagpaid       =     68.6436 (mean)
                 femparl       =         150
                 yrssuffrage     =    73.48571 (mean)

------------------------------------------------------------------------------
             |            Delta-method
             |     Margin   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         _at |
          1  |   17.44194   2.216171     7.87   0.000     13.04345    21.84042
          2  |   20.24134   1.453309    13.93   0.000     17.35692    23.12575
          3  |   23.04073   .9230147    24.96   0.000      21.2088    24.87266
          4  |   25.84013   1.063467    24.30   0.000     23.72944    27.95082
          5  |   28.63953   1.717302    16.68   0.000     25.23116     32.0479
          6  |   31.43892   2.511263    12.52   0.000     26.45476    36.42309
          7  |   34.23832   3.347076    10.23   0.000      27.5953    40.88134
------------------------------------------------------------------------------

. marginsplot, ylabels(0 25 50 75 100) recast(line) recastci(rline)
ci1opts(lpattern(dot)) ytitle("Percentage of women in
>  parliament")

  Variables that uniquely identify margins: femparl
. saveold final1.dta, replace
(saving in Stata 13 format)
(FYI, saveold has options version(12) and version(11) that write files in older
Stata
      formats)
file final1.dta saved
.
end of do-file

. log close
      name:  <unnamed>
       log:  C:\Users\andre\Documents\9.Pip\Dissertation\final1.log
  log type:  text
 closed on:  12 May 2020, 16:17:42
-------------------------------------------------------------------------------
------
```