Gender Quotas in the Constitution: A method to achieve gender equality?

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Drawing on earlier research and theories regarding female political representation and its effects on gender equality, the attempt in this study is to investigate whether political gender quotas, legislated in the constitution, has a positive association and effect on gender equality in a society. A substantial number of studies supports the notion that quotas increase female representation in the political context. Yet, few studies examine gender quotas effect on women’s everyday life. The study investigates the variation in gender equality amongst new democracies where countries with gender quotas are compared to countries without. The overall findings appoint that political gender quotas demonstrate more far-reaching effects than to increase the number of women elected. Having a high female representation does affect women’s everyday life and a quota will increase gender equality in a society. This should be regarded as a solid argument in favour of an implementation of a gender quota. Additionally, the results from this study indicate that Anne Phillips theory the Politics of Presence, which points out the importance of having high female representation, does exert an effect.

Keywords: Political Representation; Gender Equality; Gender Quotas; Constitution; Female Representation; Substantial Representation; Politics of Presence.
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1. Introduction

On January 1, 2016, the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs) came into effect.¹ The United Nations places the full realisation of gender equality at the heart of the agenda by including Sustainable Development Goal no. 5 which aspire to end all forms of discrimination against women and girls both in the private and public sphere. Furthermore, the goal aims to “ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.”² The 2030 Sustainable Development Agenda, alongside other international conventions and declarations, serve as tools for reconstructing constitutions and creating a world where women are valued and empowered. It is with these values and goals in mind that this paper seeks to address the way constitutions, and in particular, how gender quotas legislated in the constitution can be used to realise this end.

A construction of a new constitution usually takes place in the transition from an authoritarian regime to democracy or after the end of a conflict. Today it is widely accepted that if a government no longer considers and respects its residents’ interests, or generates injustice and inequality, a reconstruction of the constitution should take place. Nonetheless, there are very few constitutions that consider and respects gender-related issues.³ Recently, constitutions and laws have been recognised by feminists as a platform where decision-making, power and influence are exercised and organised.⁴ Helen Irving points out that the constitution implicates the right to justice, honesty, recognition and respect. Moreover, its influence results in inclusion, access to, and effective participation in legislation, both in the public/legal and the individual sphere. Furthermore, the constitution includes how the power in a country is structured. The author states that equality, equity and agency are central to who gets included in the constitutional community and that women for decades, even centuries, have struggled for the right to belong or to be recognised by the constitution and the safety it offers.⁵ She further

⁵ Irving. (2008) p. 3
states that legal systems are characterised by a patriarchal structure and more often than not it fails women, even in the most democratic and developed countries.⁶

Given that laws contribute to shaping gender attitudes and values they can act as tools through which changes can be created.⁷ The evidence that indicates that female political participation is met by obstacles and that it affects women’s representation and the extent to which women participate in politics is substantial. To address and increase the representation, efforts concerning economic, social, cultural, religious and political obstacles are required. An often suggested solution is the implementation of gender quotas. Expectations on the quota as an instrument to rapidly increase the female representation in politics are usually high.⁸ Even though many feminist scholars state that quotas and constitutions cannot provide a change alone, they recognise the importance of certain laws and proclaim that legislation concerning gender is essential.⁹ On the contrary some scientist states that the effect constitutions offer are overrated and even negligible, moreover, they proclaim that social change takes place irrespective of the existence of certain laws and the constitution.¹⁰

Although constitutions are expected to ameliorate the female representation, the committee for the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW) states that the constitution makers need to take into account that the mere recognition of the equality principle is not enough to redress the exclusion of women and enable their participation in political life. Furthermore, they state the following: “the principle of equality of women and men has been affirmed in the constitutions and laws of most countries and in all international instruments. Nonetheless, in the last 50 years, women have not achieved equality, and their inequality has been reinforced by their low level of participation in public and political life.”¹¹ Conclusively, they have affirmed that although it is highly necessary to remove impediments in law, this is not enough, thus the constitution makers need to adopt affirmative action measures to realise equality of participation,¹² namely quotas.

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⁸ International Institute for Democracy and Electoral assistance. Gender Quotas Database - Quotas.
⁹ Irving. (2009) p. 76
Legislations concerning gender equality, as CEDAW states, are today nearly inevitable. Nevertheless, the equality between the sexes is still not fulfilled. Since it appears that certain legislation does not make women more equal to men it fosters questions regarding what can? Do the obstacles that elected women meet make it impossible to increase the equality? And if that is the case, how can the absence of gender equality be encountered? Is the most frequently suggested solution credible? Do gender quotas create gender equality and allow it to develop? Although gender quotas are expected to increase the female representation in politics there is little knowledge of whether quotas in extension create and develop gender equality. It is in this spirit that this study aims to examine whether political gender quotas, legislated in the constitution, have an association with increased gender equality in a society.

The following questions will assist in the investigation of gender quotas and gender equality:

- How large portion of the new democracies\textsuperscript{13} have a gender quota legislated in their constitution?
- How does the gender equality in the countries with implemented gender quotas differ from the countries without quotas?
- How do gender quotas, and in extent, a higher female representation in politics affect gender equality in other aspects of society?

\textbf{1.1 Disposition}

The following study is structured into five sections. First and foremost an introduction to the field of study take place, additionally, a presentation of the problem and purpose follows. Second, the theoretical background is set forth. Thirdly, the study’s choice of statistical approaches as a method is concretised by presenting indexes, material, the variables and their operationalisation. Thereafter the empirical material is presented and interpreted. Lastly, a discussion and several conclusions with base in the empirical findings and the theoretical framework takes place.

\textsuperscript{13} A definition and operationalisation of the term will be presented later in the study.
2. Explaining variation in gender equality

This section of the paper will address the assertion that having a high number of women elected to office help to strengthen the position of women in societies and thus increases gender equality. It will be outlined according to the following: first a presentation of descriptive representation, meaning the actual number of women in politics. Thereafter a presentation of substantial representation, which can be understood as the possibility for women to address women’s issues once they are elected to political office. The substantial representation will be pinned down by the theory *Politics of Presence* and will be strengthened by highlighting earlier research in the question of matter. Finally, gender equality and the demarcations necessary to define the concept will be presented.

2.1 Do quotas increase the number of elected women?

The proportion of women and other minorities represented in elected political bodies is often referred to as descriptive representation. Descriptive representation can thus be understood as “mirror” representation. Usually, the approach includes counting the number of group members with respect to different social categories, making the assumption that higher percentages of e.g. women indicate greater inclusiveness in the political system.\(^{14}\)

At first glance, it seems quite obvious that gender quotas should increase the descriptive representation of women in political office, but it is not as simple as that. Some scientists and their earlier research argue that neither can the quota itself explain the percentage of women in politics nor can it generate meaningful change for women. However, they do not wish to undermine the importance of gender quotas.\(^{15}\) Even though the descriptive outcome of gender quotas is somewhat debatable the research field, in general, agrees on that political gender quotas help to overcome constraints on women’s representation. Furthermore, they mean that gender quotas are effective to drastically and positively increase female representation.\(^{16}\)

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\(^{14}\) Franceschet, Krook, and Piscopo. “Conceptualizing the Impact of Gender Quotas”. In *The Impact of Gender Quotas*. (2012) p. 25


Therefore, in line with earlier research, the following paper makes the assumption that political gender quotas will increase female descriptive representation, meaning an increase in the percentages of women in politics. Below follows a presentation and discussion regarding the political outcome and consequences of the female representation.

2.2. Do the elected women make a difference?

Addressing substantial representation is not essential until the descriptive representation has been established, as a key concern to substantial representation is to determine whether women make a difference in politics. Therefore, quite obviously, there need to be women represented. However, some researchers question whether an increased descriptive representation guarantees increased substantial representation even though they state that an increased descriptive representation increases the probability and hold the promise of enhanced substantial representation.\(^{17}\) The contradictions lead to the question most frequently asked when researching substantial representation; do women seek and are able to promote “women’s issues” once they are elected to political office? Thus, exploring if women pursue alternative political objectives than men.\(^{18}\) In this paper, substantial representation will be concretised by the theory established by author Anne Phillips named \textit{The Politics of Presence}.

2.2.1. The Politics of Presence

In her influential book \textit{The Politics of Presence}, Anne Phillips states, in accordance with major parts of the field, that the under-representation of women in politics is a problem. She suggests that in today’s society there is no obvious “public interest”. Instead, there is a multiplicity of different and potentially conflicting interests which must be recognised. Phillips states that in a political context dominated by men the particular interests, needs and concerns that emerge from women’s experiences will be inadequately addressed. She argues that women, in general, occupy a certain position within a society where they carry the primary responsibility for the unpaid work of caretaking and are additionally concentrated in lower paid jobs. Furthermore, she proclaims that “Equal rights to a vote have not proved strong enough to deal with this problem; there must also be equality among those elected to office.”\(^{19}\)

\(^{17}\) Carroll. “Representing Women: Women State Legislators as Agents of Policy-related Change”. In \textit{Impact of Women in Public Office}. (2001) p.4
\(^{18}\) Franceschet, Krook, and Piscopo. (2012) p. 8
Phillips notes that there is an obvious difference in the interests of men and women. For instance, women have a distinct interest in child-bearing. Furthermore, she argues that as the society is constituted today, women also share interests that arise from an unequal position in unpaid and paid labour, exposure to sexual violence and harassment plus their exclusion from power (economic and political).\(^\text{20}\) Despite what is mentioned above, the theory falls short of establishing a set of shared interests among all women. Phillips proclaims that even though not all women share the same interests, the variation in women’s interests does not falsify the claim that interests are gendered. Pregnancy is, as today, an experience exclusively related to women, similarly, women’s interests in abortion differ but its legal availability concerns all women. The argument of interest is not based on an establishment of shared interests between all women, but contrarily, an establishment of different interests between men and women. Furthermore, Phillips does not wish to proclaim that men do not share any of the interests belonging to women but instead wishes to point out that the election of more female representatives will introduce a new range of issues – many of which will be ones that men will be happy to endorse. If the political agenda in countries has not been constructed in reference to certain areas of concern or does not delineate particular interests and therefore lacks fresh thinking, Phillips declares that the only option is to include the people who represent those interests.\(^\text{21}\)

2.2.2. Do female representatives help strengthen the position of women in society?

This study wishes to investigate if gender quotas increase gender equality in societies and if \textit{The Politics of Presence} capture the conditions where female representatives can/will introduce interests and questions in politics that otherwise would not be given as much attention. A great many studies indicate that the theory appears to capture reality. At the macro level, Inglehart’s and Norris’ study provides evidence that indicates that societies with a large number of women elected tend to be more gender equal in other regards than societies that elect fewer women.\(^\text{22}\)

At the micro level, evidence indicates that women in political office display a greater interest in women’s rights, gender equality and furthermore, debates and prioritises issues of particular importance to women citizens, for example, family-, healthcare- and child policy.\(^\text{23}\) Moreover,


\(^{21}\) Ibid p. 70


evidence indicates that including a higher number of women makes a difference in the extent to which legislators’ respects how legislation will affect women as a group. Additionally, a legislation with a higher number of women represented will introduce more bills reflecting female’s interests than a legislation with a lower number of female representatives.\(^{24}\) In addition, studies of the Nordic countries, where the number of women in elected office has long been high, indicates that an increased female participation tends to shift the political agenda and women’s interests seem to be given a greater scope and therefore becoming more central in the agenda.\(^{25}\)

Some studies have focused on exploring what kind of political change women can bring, once elected for political office. For example, Svaleryd’s study from 2009 examines whether the percentage of female representatives in Swedish local councils affect public expenditure patterns. The result confirms that an increased number of elected women increases spending on childcare and education.\(^{26}\) Likewise, Bratton and Ray investigate the relationship between descriptive and substantial representation by examining if female representation increases policy outputs in childcare coverage. The results line up with Svaleryds, the descriptive representation affects policy outcome and the relationship varies according to the level of female representation.\(^{27}\) The problem with descriptive and substantial representation and its consequences are highlighted by Wängnerud and Sundell in their study: “The tendency to focus on areas such as childcare provision or parental leave legislation merits discussion. Though these areas are important for women’s opportunities to participate in public affairs, this focus could give a one-sided impression of the driving forces of gender equality processes.”\(^{28}\) Schwindt-Bayer and Mishler try to deal with this tendency by executing a study of women in 31 democracies where the indicators are weeks of maternity leave, indexes capturing women’s social and political equality and marital equality in law. The result indicates that a high descriptive representation increases the legislature’s responsiveness to women’s policy

concerns and enhances perceptions of legitimacy. On the other hand, the effect of substantial representation is much less than theory anticipates.29

When observing the studies cited above, it gets possible to make the assumption that female representatives indeed help strengthen the position of women in society. While most of these studies rely on questionnaires asking elected politicians and representatives about their priorities and attitudes and therefore focusing on the input side of the political system, this study aims to examine the outcome on citizen’s everyday life as a consequence of the political system. In Wängnerud’s and Sundell’s study “Do Politics Matter? Women in Swedish Local Elected Assemblies 1970-2010 and Gender Equality in Outcomes” they aim to do exactly that by using the theory *The Politics of Presence*. Their overall findings indicate that having a high number of women elected does affect female citizens everyday life (the outcome) and thus making the equality between women and men higher in terms of factors. Meaning that *The Politics of Presence* does demonstrate an effect but that the effect needs to be specified.30

2.3. Definition of Gender Equality

It goes without saying that the concept of gender equality is difficult to define. The theory *Politics of Presence* suggests that the interests of female citizens will be best represented by female politicians. Furthermore, Phillips argument is built on the idea that women in elected office share, to a certain extent, the same experiences as other women, therefore she makes the assumption that men and women differ in their everyday lives. Moreover, Phillips stresses context, meaning that how societies are currently constituted affects women’s interests.31 Therefore, the contextual approach implies that gender equality and women’s interests are changeable over time, meaning that a more exact definition needs to be worked out in this study.

Since gender equality is such a contested concept, international organisations often carry out relevant cross-country comparative research32 and thereafter submit indexes capturing different aspects of gender equality. This study will make use of indexes retrieved from different international organisations and submerge them into a bigger one capturing the aspects the study wishes to investigate. In Wängnerud’s and Sundell’s study, they state that United Nations and

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32 Wängnerud and Sundell. (2012) p. 102
other international organisations perceive gender equality as opportunities for self-determination. In line with Wängnerud’s and Sundell’s study and international organisations, this study also views gender equality in that manner. Since this study aims to investigate the effects of a greater political equality it becomes obvious that this study’s definition of gender equality need to include social and economic aspects of gender equality and not political since that will create a bias. Therefore, the variables that are chosen to define gender equality are Fertility Rate, Maternal Mortality Rate, Female Percent Share of Labour Force and Gender Parity Index (GPI). They will define gender equality through the construction of an index, which will be systematically explained later in the study.

Fertility Rate
To make use of this variable as an aspect of gender equality is desirable because, as Mary Caprioli states, “…it represents a complex combination of interrelated social, political and economic aspects of women’s lives”. In societies where women have low social status their lives are often described in terms of motherhood and therefore fertility rate helps to measure women’s opportunities beyond motherhood. In general, the lower fertility rate, the higher empowerment for women. If they can choose and have control over their own reproduction, and in extension, their own bodies it enables them to participate more in public life and gain more free-time. Additionally, high fertility rates result in lower levels of education, health, employment and decision-making both in the community and in the family.

Gender Parity Index
This variable is included to represent the level of education and how the proportion of girls and boys starting school differ. Sustainable development goal no.5 states that: “providing women and girls with equal access to education… will fuel sustainable economies and benefit societies and humanity at large.” In addition to fuel economies and benefit societies, education is connected to the other aspects of gender equality that are included in this study, a high level of education do for example result in a lower level of fertility rate. Thereby making it more equal between the sexes.

33 Wängnerud and Sundell. (2012) p. 103
Maternal Mortality Rate

Women’s reproductive years range from puberty to menopause, and during this period, in general, women’s health status is dominated by issues related to reproductive and sexual health. Additionally, one of the leading female causes of death on the global level is maternal conditions, even though most maternal deaths could be prevented. Therefore, the maternal mortality rate is a good measure of women’s access to health care.

Percentages of Female in Labour Force

There is no perfect measurement method of women’s economic access cross-nationally which makes labour force the most reliable, mainly because labour statistics are widely available. However, labour statistic does not present information as to whether women have control over their wages, additionally, it does not measure the type of employment, average wage or unpaid labour such as housework and childrearing. Yet, the index does measure women’s access to work outside the home and it is tied to fertility rate since women who participate in labour force are more likely to have control over their reproduction.

2.4. Summary

The theoretical framework presented above lays the foundation for the rest of the study and given that earlier research appoints that a gender quota will increase the descriptive representation and thus enhance the substantial representation in legislation, an assumption can be made. Female representation in the political sphere will help to strengthen women’s position in society. This is the assumption that is interesting to further investigate. Founded in the theory *the Politics of Presence* the study additionally makes the assumption that female representatives will introduce a new range of issues and thereby improve and develop gender equality. Even though this study’s purpose is to investigate the relationship between gender quotas and gender equality, the study will also, to some extent, use theory testing. Meaning, that the result will additionally provide knowledge on whether the theory *Politics of Presence* capture reality. Moreover, the assumptions lined out above enables the investigation of gender quotas and their possible effect on an increased gender equality. In order to achieve statistical and quantifiable

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40 Caprioli. (2000) p. 60
41 Ibid p. 59
results, the next section of the study will present the chosen method and motivate the choice of variables.

3. Studying variation amongst new democracies

The preferable method to investigate whether political gender quotas legislated in the constitution and the actual outcome in societal gender equality have a correlation or causality is multivariate analysis. Even though a qualitative research of the presented problem would help to receive deeper understanding regarding certain cases this study wish to receive a broader understanding to be able to capture a generalised reality. The study aims to be able to express knowledge about gender quotas effect in different countries, specifically in democracies founded during 1990-2015. This is exactly what a statistical survey aims to do, to generalise and draw conclusions about a population by examining a sample. Furthermore, the result of the sample estimate to what extent the result actually captures the condition in the population.

The results provided by a statistical analysis will illustrate generalised knowledge, therefore it does not provide profound knowledge about the specific countries. When performing a statistical analysis there are two concepts that need to be acknowledged: validity and reliability. Validity concern whether and to which degree the study measures what it claims to measure. In this case, whether the chosen material and method measures gender equality or not. Reliability regards whether the measurement performed is reliable or not. Meaning, can the result and material in the study be trusted? Could another researcher perform the same study and receive the same result or have this study suffered from systematic errors and is the result a coincidence?

In the following study, the population is new democracies, meaning democracies founded during the period 1990-2015. The reason for choosing to examine only newly founded democracies and not all of them are grounded in the fact that a reconstruction or founding of a constitution usually takes places in the transformation towards a democracy or after the end of a conflict. In this stage of transformation, it is possible to study the effect of the transition towards democracy and a new constitution in a way that would not be possible if the chosen population were all democracies. Furthermore, Schwindt-Bayer and Squire state that

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44 Nilsson. (2014) p. 170
“Countries with relatively few women in office are, by definition, countries where representative democracy has not reached its full potential.”45 Which can be interpreted as new democracies. Since the aim of the study is to be able to advance knowledge about whether quotas increase gender equality the intended recipients of the knowledge and the ones who could actually implement the knowledge would be newly founded democracies. The chosen democracies are the ones that were founded between the years 1990-2015, primarily because of the explosion of democracies after the end of the cold war. After an operationalisation of the concept a number of 45 countries was received, how the sample was extracted will be further explained later.

3.1. Operationalisation and variables

When investigating whether constituted political gender quotas and actual outcome in gender equality have a causality or correlation it gets necessary to construct indexes to capture the different aspects. Moreover, since the subject in this study is a not directly observable phenomenon (gender equality) several indexes constructed by international organisations will be submerged to create an index. There are numerous benefits of constructing indexes, first and foremost, it is a lot easier to analyse an index instead of analysing all its different components. Second, to submerge several variables to an index is a convenient way of data reduction which will facilitate the analysis and further on the presentation of the results.46 The definitions of the different variables used in this study and their operationalisation are outlined below.

**Dependent variable**

**Gender equality**

To construct this variable, material and databases from different international organisations was used. From the World Bank the variables *Fertility Rate* which measures an average of total births per women47 and *Female Percent Share of Labour Force*48 was collected. Data over *Maternal Mortality Rate* referring to deaths due to complications from pregnancy or childbirth measured by the number of deaths per 100,000 live births49, was extracted from UNICEF.

45 Schwind-Bayer and Squire. "Legislative Power and Women’s representation". (2014) p. 647
47 The World Bank Group. *Fertility Rate, Total (Births per Women).* The World Bank Data.
Lastly, \( GPI \), a measurement of the difference between the proportion of girls and boys starting school\(^50\) was extracted from UNESCO.

To enable a construction of a submerged index over gender equality the indexes needed to be encoded to the same type of measurement as all of the collected indexes uses different types of measurements and different scales. Firstly, the indexes were divided in accordance with their quartiles. Second, since a low value in \( Fertility \) \textit{Rate, Maternal Mortality Rate} and \( GPI \) indicates a higher degree of gender equality but on the contrary, indicates a lower degree of gender equality in \textit{Female Percent of Labour Force} the indexes needed to be encoded into the same values but differently. The three first indexes were encoded as following:

- Quartile one received a value of 2,5.
- Quartile two received a value of 1,66.
- Quartile three received a value of 0,833.
- Quartile four received a value of 0.

The last index, \textit{Female Percent of Labour Force} were encoded in accordance with the following:

- Quartile one received a value of 0.
- Quartile two received a value of 0,833.
- Quartile three received a value of 1,66.
- Quartile four received a value of 2,5.

The higher value, the higher degree of gender equality, meaning that if a country receives a value of 2,5 they have a higher degree of gender equality than a country that receives 0,833. The decision to encode the quartiles in accordance with these specific numbers were chosen to facilitate the analysis of the constructed index. Since the constructed index is a sum up of all four different indexes all valued between 0-2,5 the degree of gender equality, which the constructed \textit{Gender Equality Index} measures, range from 0-10. Where 10 is the highest value of gender equality.

The operationalisation of the \( GPI \) index needs a further explanation since its initial measurement differs significantly from the others. The index ranges from negative values to positive where a value of 1 indicates complete gender equality between how many girls and

boys that start school. A negative number indicates that more boys than girls start school and a positive indicates the opposite. Since this study perceives gender equality as equal opportunities and does not aim to investigate gender equality in favour of any of the sexes a value of – 0,8 from 1 is exactly as unequal as a value of + 0,8 from 1. Hence, the index was encoded before it was encoded according to its quartiles. According to the original index, gender equality is met if a country receives a value between 0,97-1,03\textsuperscript{51}, meaning in the range 0,3 from 1. The index was coded into values displaying how far from 0 the countries values places, where 0 represent total gender equality (in the original index valued as 1). Afterward, it was divided after its quartiles. The original index states that a country is gender equal if they do not receive a value greater than 0,3 from 1 (in either direction) and not a lot of countries received values significantly greater than that. Therefore, the two first quartiles and the third quartile, to some extent, captures countries which have values that identify as gender equal according to the original index. Nevertheless, it is still possible to rank the countries, meaning that countries closer to 0 are more gender equal than the ones receiving a higher value even though they still lie in the 0,3 range from 1.

Furthermore, there was some statistical loss mainly from GPI, where there were values missing for seven of the countries in the sample, this problem was solved by using the last existing data for that country, resulting in additional data from 2010, 2012, 2013 and 2014. In the end, there were missing data for Iraq, Kosovo and Taiwan. Data over Taiwan and Kosovo were missing in the other indexes as well and data over Paraguay was missing in Maternal Mortality Rate resulting in a total number of 41 countries.

Two indexes of gender equality
In the creation of an index, it is common to do a Cronbach Alpha test on the different indexes that are to be included in the bigger one. This is because it is important to investigate whether they measure similar aspects. Problematically, the indexes used to create a new index in this study measures aspects that do not correlate, possibly because of two of the indexes measures values in the number of persons, one in percent and one in decimals. Inevitably, the Cronbach Alpha value is too low. This is slightly problematic, however, the index constructed is theoretically driven, meaning that the aspects that this study wishes to include in the index have a theoretical foundation and measure aspects of gender equality, therefore making it acceptable.

\textsuperscript{51} United Nations Educational, Scientific and Cultural Organization. UNESCO eAtlas of Gender Inequality in Education.
to use. But since the first index is not empirically correct a second index was created. This index includes fertility rate and maternal mortality rate and has an approved value of Cronbach Alpha. Like the first index, it ranges from 0-10 and will be used for statistical analysis.

**Independent variables**

**New democracies and gender quotas**

This independent variable takes the form of a dummy variable. The dummy variable is a binary variable that takes the value 0 or 1. The construction of a dummy variable makes it possible to include category variables in a regression model. Moreover, the variable indicates the absence or presence of some categorical effect that is expected to shift the outcome. To construct this variable the “Polity IV Project” data was used and retrieved from Center of Systematic Peace together with “Gender Quotas Database” retrieved from IDEA (International Institute for Democracy and Electoral Assistance).

First, the democracies that emerged during the chosen period of time (1990-2015) was extracted. The Polity IV Project covers all major independent states in the world over the period 1800-2015, a total of 167 countries, and provide several indexes capturing different aspects of democratic and autocratic states. Moreover, the project monitors all regime changes in an annual review and update the data yearly. This study takes advantage of their index “Polity Score” which capture the regimes’ level of authority on a 21-point scale (-10 classifies as hereditary monarchy and +10 as consolidated democracy). Furthermore, they classify the score into three regime categories whereas regimes classify as democracies if they receive a score between +6 to +10. Extracting the countries that classified as democracies year 2015 and 1990 enabled a subtraction of the countries that appeared on both lists and thereby receive the number of countries that had evolved into democracies. To elucidate, a country could be democratic on the paper but not be classified as a democracy according to the dataset. Therefore, this study does not take into account the year the country became a democracy on paper but instead the year that they first classified as a democracy according to their performance. The method used enabled the exclusion of several countries that classified as democracies in 1990 but not in 2015 as well as the countries that were classified as democracies both 1990 and 2015 since they could not be viewed as new democracies. In the end, a number of 45 countries was received, and in this study, they represent the sample and will be referred to as the new democracies.

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52 Edling and Hedström. (2003) p. 105
The next step in constructing the dummy variable was to classify the 45 countries according to whether they have gender quotas legislated in their constitution or not. To gather information IDEA’s “Gender Quota Database” was used where only countries that have gender quotas are included. The data sort the countries geographically, by quota type, by quota source and political level. This made it possible to extract the countries that have gender quotas legislated in their constitution. The 45 countries distributed as follows: 11 countries with gender quotas and 34 without. The countries with quotas was assigned with the number 1 and the ones without with number 0.

**Time Since the First Democratic Election**

Since it is slightly problematic to analyse a sample where the different countries emerged into democracies different years, meaning that they all have had a different amount of years to evolve gender equality, it gets pivotal to include a control variable over the amount of time since the first democratic election. To illustrate an example, Estonia, according to the polity score, became democratic 1991 and had their first election 1992 which means that they have had 23 years to evolve gender equality in contrast to Burkina Faso which became democratic in 2015 and had their first election the same year. Additionally, since this study aims to investigate how elected women can provide a change in gender equality, they need to have had a chance to be elected to office, and therefore an election must have been held. Furthermore, there is a reason to believe that the longer a democracy the more gender equal thereby making it necessary to control for.

To create this variable, Polity IV Project was used to obtain the year in which the countries became democratic, thereafter, a dataset called NELDA was used to extract which year the country had its first democratic election. NELDA dataset provides information on all election events from 1945-2012. Since the NELDA dataset only ranges to 2012 it was required to collect information over the elections in the countries that evolved into democracy during 2011-2015 from elsewhere. Namely, from the Inter-Parliamentary Union (IPU) which is a database

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54 International Institute for Democracy and Electoral Assistance (IDEA). *Gender Quotas Database - Search the Database.*


of national parliaments all over the world. The variable constructed illustrates the number of years since the first democratic election and range from 0-23.

The countries that become democratic 2011-2015 and whose data are collected from IPU are Burkina Faso, Cabo Verde, Kyrgyzstan, Madagascar, Nigeria and Tunisia.

GDP per capita
To elaborate the study the control variable GDP/capita will be included as an independent variable. The gender equality tends to increase in wealthier states which makes it interesting to control for since there might be a significant effect on gender equality. This control variable for wealth was extracted from the World Bank. The variable measures current wealth in U.S. dollars and is the gross domestic product divided by midyear population. The measurement includes all resident producers plus any product taxes in the economy minus any subsidies divided by population. Information over GDP per capita for Niger is the only statistical loss.

3.2. Multiple linear regression
The following section will outline the benefits of a multivariate regression analysis and aims to justify the choice of method. The statistical method that best help to capture reality is multivariate regression analysis, first and foremost because it allows an investigation of the relationship between more than two variables. The method allows this study to not only examine the relationship between gender quotas and gender equality but it enables the study to include other variables that might affect the dependent variable, such as Time Since the First Democratic Election and GDP per capita. A multivariate regression analysis thus has the ability to estimate the equation that best reflects the relationship between the dependent variable and the independent variables. Meaning the possibility to estimate the effects of more than one independent variable on the dependent variable. Since the years of democracy and the wealth of the country might affect the degree of gender equality it is pivotal to control for them. Meaning that if they are included in the model the model is able to investigate gender quotas effect on gender equality when wealth and years of democracy are kept constant and does not affect the country’s degree of gender equality.

57 Inter-Parliamentary Union. PARLINE Database on National Parliament.
58 Caprioli. (2000) p. 61
60 Hjerm. “Multivariat analys”. In Introduktion till samhällsvetenskaplig analys. (2014). p. 133
Before a regression analysis is carried through, an analysis of the correlation between the variables is necessary. Mainly, to observe how the association between the different variables appear and because multicollinearity makes the estimation of the regressions coefficients less reliable. The correlation coefficient (r) will always receive a value between -1 and 1 and thus indicating that variables that receive values closer to 0 are less correlated to each other. A correlation around 0.7, either negative or positive indicates a relatively strong correlation between the variables and praxis tell that variables that correlate around 0.8 are not to include in the same regressions analysis. However, even if a correlation is strong and significant it cannot provide enough evidence that there is more than a relationship, meaning that there are a significant correlation or causality between the variables. In the same time, a low correlation does not mean that it is not worth investigating, it might be other variables that affect both of the variables in the correlation matrix. The theoretical framework presented in this study makes it reasonable to assume that there is a connection between gender quotas and gender equality, therefore making it useful to adopt a regression analysis that can examine the presumed causality between the dependent and independent variables.

Before a regression analysis is performed an investigation of the confidence interval is interesting since it might help to appoint the presumed relationship. Since this study uses estimations from the same sample the intervals can be calculated, investigated and compared. If the confidence intervals overlap it is possible to accept the null hypothesis. If they do not the difference between the means in the groups are statistically significant and the null hypothesis is rejected. Meaning that there is a significant difference in gender equality between the two groups. This is a convenient way to investigate whether there is a significant difference between the groups. However, even though the confidence intervals overlap the difference between the groups mean might still be statistically significant therefore making a regression analysis necessary.

There are several approaches in how to analyse the regressions results, one is to measure the regressions goodness of fit through the value of $R^2$. The value range from 0 to 1, and the closer

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63 Hjerm. "Bivariat analys". In Introduktion till samhällsvetenskaplig analys. (2014) p.128
64 Edling and Hedström. (2003) p. 78
65 Ibid p. 48
to 1 the less are the deviations between observed and expected values of the dependent variable.\textsuperscript{66} A problem with using $R^2$ is that it will always increase when a new variable is added to the equation. But solving this problem is easily done, instead of observing $R^2$ the appropriate value to observe is the adjusted $R^2$; $R^2_{\text{adj}}$. In practice, however, the adjusted $R^2$ is only important when the analysis is based on few numbers of observations since $R^2$ and $R^2_{\text{adj}}$ will approach each other when the number of observations increases.\textsuperscript{67} But since this study’s sample have a relatively low number of observations, the adjusted $R^2$ is appropriate to use. A second approach is to construe the regression coefficient according to following: $B_1$ is the average change in Y when $X_1$ changes by one unit and the value on all the other independent variables are kept constant, meaning how well the $X_1$ variable can predict the $Y$ variable.\textsuperscript{68} To highlight an example from this study, $B_1$ would be the average change in gender equality ($Y$) when gender quotas ($X_1$) increase with one unit and years of democracy ($X_2$) and wealth ($X_3$) are kept constant, thereby not affecting the gender equality ($Y$). However, the independent variable that is investigated in this study is a dummy variable which makes the analysis a bit different. The regression coefficient is read from the value of 1, which means having a gender quota in this study. If the regression coefficient is positive it means that the gender equality will increase when a quota is implemented. Group 0, meaning countries without quotas will receive a lower value on the coefficient.\textsuperscript{69}

Lastly, it is desirable if the regression analysis is statistically significant and therefore enables a rejection of the null hypothesis saying that there is no association between the variables. If the study has a hypothesis about the associations direction it gets vital to perform a single tail test or one-sided test.\textsuperscript{70} Thus dividing the p-value received in the regression by two. Doing a two-sided test express knowledge regarding both of the directions in the association. Thus, also investigating if a gender quota decreases gender equality. The theory in this study strengthens the assumption that gender quotas will increase gender equality, to perform a two-sided test is thus irrelevant. When the performed analysis uses a random sampling the level of significance (p-value) can be interpreted as a measure of the likelihood that there is an effect of the independent variable on the population and not only in the sample.

\textsuperscript{66} Esaiasson, Gilljam, Oscarsson and Wängnerud (2012). p. 384
\textsuperscript{67} Ibid p. 384
\textsuperscript{68} Edling and Hedström. (2003) p. 97
\textsuperscript{69} Ibid p. 105
\textsuperscript{70} Ibid p. 125
When performing a statistical analysis, a significant loss may occur, which then require a failure analysis. The size of a statistical loss that can be accepted depends, not only on the size of the loss but also on whether the loss is systematic. To investigate the loss, a comparison between the group were information is available against the group with missing information is performed. Do the observation with missing information appear to share qualities that might affect the loss? If the observations with missing information differ from the group with information available, it might generate a problem with generalisation.71

To help with the study’s investigation the statistical program SPSS (Statistical Package for the Social Sciences) is used to perform the statistical analysis. The program provides all necessary information regarding p-values, confidence intervals, R², coefficients and similar.

3.3.Material

The empirical material used in this paper is mainly retrieved from major international organisations such as the World Bank, UNICEF, IPU, United Nations and IDEA. Data retrieved from these sources are widely accepted and thereby increases the study's reliability. Moreover, data has been collected from Polity IV and NELDA, both of which are smaller sources that are frequently used by larger organisations or institutions. The Polity IV Project received indirect sponsorship from the Central Intelligence Agency (CIA), which can be criticised, however, the website states that the views expressed are the authors' alone and that they do not represent the views of the United States.

In general, the empirical materials reliability should be considered to be high. The sources have been selected because they help to fulfil the purpose of this study and capture what the study which to observe, thus, they have high validity. Nevertheless, it is impossible to ignore the fact that the study explores a complex term (gender equality) and thus the material will have limitations. However, the theoretical framework of the study helps to clarify how gender equality is viewed in this study and thus the sources used have filled the features sought after.

71 Nilsson. (2014) p. 182
4. Do quotas explain the variation in gender equality?

This section of the study presents the results from the statistical analysis. Thus, investigating whether gender quotas legislated in the constitution increases gender equality. Additionally, the study uses the control variables Time Since the First Democratic Election and GDP/capita. To investigate the presumed correlation the following hypothesis will be tested.

Null hypothesis (H=0): There is no association between having a gender quota and having a higher degree of gender equality.

Hypothesis (H > 0): A gender quota legislated in the constitution will result in a higher degree of gender equality.

The statistical analysis in this paper builds upon a sample of 45 countries identified as new democracies. The countries are distributed according to whether they have a gender quota legislated in the constitution or not. The distribution can be read in table one.

<table>
<thead>
<tr>
<th>Quota legislated in the constitution</th>
<th>Number of countries</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>11</td>
<td>Croatia, Iraq, Kenya, Kosovo, Mexico, Moldova, Nepal, Senegal, Serbia, Taiwan, Tunisia.</td>
</tr>
</tbody>
</table>

*Table 1. The new democracies and quotas.*

Table two provides an overview of the variables and their definition, additionally, it provides descriptive statistics regarding mean value, median, standard deviation, minimum- and maximum value. In most of the variables the mean and the median does not differ much,
additionally, the standard deviation is not high, thereby indicating that the normal distribution is acceptable. The exception is found in GDP/capita where the median and mean values differ, moreover, the standard deviation is high and so indicates that the observations dispersion around the mean value is high. The existence of the exception is most likely because the analysis capture countries that have more wealth than the others and thus raise the average. The minimum- and maximum value shows that Malawi has a value of 362,657 GDP/capita which are far from the maximum value of 20873,16 that belong to Slovenia. A similar distribution can be found in the variable Time Since the First Democratic Election, where the standard deviation is around seven years were Estonia have had 23 years of democracy and Burkina Faso zero.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Mean</th>
<th>Median</th>
<th>Std. deviation</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender Equality Index 1</td>
<td>An index including fertility rate, female percent of labour force, maternal mortality rate and GPI.</td>
<td>5,0741</td>
<td>4,1600</td>
<td>2,61999</td>
<td>0,83</td>
<td>10,0</td>
</tr>
<tr>
<td>Gender Equality Index 2</td>
<td>An index including fertility rate and maternal mortality rate</td>
<td>7,2085</td>
<td>8,2367</td>
<td>2,67935</td>
<td>0,00</td>
<td>10,0</td>
</tr>
<tr>
<td>Gender Quota</td>
<td>Whether the democracies have gender quotas legislated in their constitution. 0=No, 1=Yes.</td>
<td>0,2444</td>
<td>0</td>
<td>0,43461</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Time Since the First Election</td>
<td>Years since the country had its first democratic election.</td>
<td>11,8889</td>
<td>11</td>
<td>7,62240</td>
<td>0</td>
<td>23</td>
</tr>
</tbody>
</table>

72 Edling and Hedström (2003) p.26
Table 2. Descriptive statistics.

The tables and graphs presented below illustrate the differences between the groups (divided after whether a country has a quota or not) and both of the gender equality indexes. When the groups are compared the results illustrates that regardless of which of the indexes that are investigated, it seems like the countries with quotas receive both a higher mean and median of gender equality than those without quotas. Thus, indicating that it seems to exist an association between quotas and gender equality. The bar charts demonstrate similar results, independent of which index is chosen, the countries with quotas seem to have a higher degree of gender equality. It appears as more women elected to political office raises the degree of gender equality. Yet, to determine whether the results presented in the tables below are correct and significant they need to be further investigated.

### Gender Equality Index 1

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>95% Confidence interval for mean</th>
<th>Skewness</th>
<th>Std.Error</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower Bound</td>
<td>Upper Bound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Quota</strong></td>
<td>5,9298</td>
<td>5,4130</td>
<td>3,8089</td>
<td>8,0506</td>
<td>-0,275</td>
</tr>
<tr>
<td><strong>No Quota</strong></td>
<td>4,8667</td>
<td>4,1530</td>
<td>3,9323</td>
<td>5,8012</td>
<td>0,536</td>
</tr>
</tbody>
</table>

Table 3. Descriptive statistics for each group with Gender Equality Index 1.

### Gender Equality Index 2

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>95% Confidence interval for mean</th>
<th>Skewness</th>
<th>Std.Error</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower Bound</td>
<td>Upper Bound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Quota</strong></td>
<td>8,1189</td>
<td>8,9050</td>
<td>6,7587</td>
<td>9,4792</td>
<td>-0,907</td>
</tr>
<tr>
<td><strong>No Quota</strong></td>
<td>6,9407</td>
<td>8,0720</td>
<td>5,9512</td>
<td>7,9303</td>
<td>-0,786</td>
</tr>
</tbody>
</table>

Table 4. Descriptive statistics for each group with Gender Equality Index 2.
The 95% confidence intervals for the different groups, depending on the chosen index, can be read in tables three and four. It appears as regardless of which index is chosen the groups’ confidence intervals overlap. Meaning that this method cannot determine if there is a statistically significant difference in gender equality between the countries with and without quotas. However, the differences in mean values between the groups might be statistically significant, thus requiring further investigation. Meaning that a higher number of female representatives might still provide changes in gender equality. The first step towards investigating whether the differences in mean value between the groups are statistically significant is to examine the correlations between all the variables that are to be included in the regression analysis. In table five and six, the correlation between the independent variables and the two different indexes can be read.
<table>
<thead>
<tr>
<th></th>
<th>Gender Equality Index 1</th>
<th>Dummy-variable over quotas</th>
<th>Time Since the First Election</th>
<th>GDP/Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender Equality Index 1</td>
<td></td>
<td>0.163</td>
<td>0.435*</td>
<td>0.719*</td>
</tr>
<tr>
<td>Dummy-variable over quotas</td>
<td>0.163</td>
<td></td>
<td>-0.129</td>
<td>-0.047</td>
</tr>
<tr>
<td>Time Since the First Election</td>
<td>0.435*</td>
<td>-0.129</td>
<td></td>
<td>0.529*</td>
</tr>
<tr>
<td>GDP/Capita</td>
<td>0.719*</td>
<td>-0.047</td>
<td>0.529*</td>
<td></td>
</tr>
</tbody>
</table>

*= correlation is significant at the 0.01 level (two-tailed)

*Table 5. Correlation matrix with Gender Equality Index 1.*

<table>
<thead>
<tr>
<th></th>
<th>Gender Equality Index 2</th>
<th>Dummy-variable over quotas</th>
<th>Time Since the First Election</th>
<th>GDP/Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender Equality Index 2</td>
<td></td>
<td>0.186</td>
<td>0.477*</td>
<td>0.621*</td>
</tr>
<tr>
<td>Dummy-variable over quotas</td>
<td>0.186</td>
<td></td>
<td>-0.129</td>
<td>-0.047</td>
</tr>
<tr>
<td>Time Since the First Election</td>
<td>0.477*</td>
<td>-0.129</td>
<td></td>
<td>0.529*</td>
</tr>
<tr>
<td>GDP/Capita</td>
<td>0.621*</td>
<td>-0.047</td>
<td>0.529*</td>
<td></td>
</tr>
</tbody>
</table>

*= correlation is significant at the 0.01 level (two-tailed)

*Table 6. Correlation matrix with Gender Equality Index 2.*
Analysing the correlation between the variables provides information concerning whether the regression model is good and reliable. Additionally, it provides information on whether there exists multicollinearity amongst the variables. Since none of the variables have a correlation value which exceeds a positive or negative value of 0,8 they can all be included in a regression model. In reality, this study’s only interest lays in investigating the presumed association between gender quotas and gender equality. However, gender equality has, as can be read in the tables, a statistically significant correlation with time since the first election and GDP/capita. Thus, indicating that the theories stating that wealthier states and states that have been democratic for longer will be more gender equal might be veracious. Therefore, the correlation matrixes provide evidence that to be able to investigate the association between quotas and societal gender equality the variables need to be included in the regression model as control variables. Meaning that the study wishes to investigate the relationship between gender equality (Y) and gender quotas (X₁) when the variables X₂ (Time Since the First Election) and X₃ (GDP/capita) are kept constant and thereby not affecting Y. After an investigation of correlation, the next step is to answer whether there is a statistically significant association between having a gender quota and a higher degree of gender equality when GDP/capita and Time Since the First Election are controlled for. Thus, investigating if descriptive representation enables and increases substantial representation and in extension, if a higher female representation in politics leads to an advanced societal gender equality.

Table seven illustrate the multiple regression analysis for Gender Equality Index 1 and the independent variables. The B-coefficients are the most interesting results that can be read from the tables below, as they illustrate the extent to which a change in the independent variable affects the dependent variable. In the models below, the first B-coefficient presented is the effect of a gender quota on gender equality. Additionally, model two, three and four illustrates gender quotas effect on gender equality when the other variables are kept constant and are controlled for. These coefficients are the main result of the regression analysis and first and foremost it is interesting to investigate whether they are positive or negative. Furthermore, it is important to examine if the coefficient is significant. The standard p-value in a statistical analysis is 0,05 which, if significant, establishes that the coefficient is reliable with 95% certainty. This study will provide results that indicate if the coefficients are significant at the 99%, 95% or 90% level. It is pivotal to emphasise that testing for significance is mainly designed to generalise random samples to larger populations. Thus, the significance is dependent on the number of samples and since this study uses a small sample it might be
difficult to determine the level of significance. Additionally, since this study’s hypothesis tests a one-way association a single tail test or one-sided test will be used, meaning that the p-values over the gender quota variable from the regression analysis will be divided by two. If the coefficients are significant it enables the model to establish a statistically significant association between a gender quota and a higher degree of gender equality.

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender quota</td>
<td>1,063</td>
<td>1,284*</td>
<td>1,137**</td>
<td>1,152**</td>
</tr>
<tr>
<td></td>
<td>(1,032)</td>
<td>(0,934)</td>
<td>(0,699)</td>
<td>(0,710)</td>
</tr>
<tr>
<td>Time Since the First Election</td>
<td>0,158***</td>
<td>0,014</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0,05)</td>
<td>(0,046)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP/capita</td>
<td></td>
<td>0,000365***</td>
<td>0,000345***</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0,00056)</td>
<td>(0,00068)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>41</td>
<td>41</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>R² (R² adj.)</td>
<td>0,027 (0,002)</td>
<td>0,227 (0,187)</td>
<td>0,549 (0,525)</td>
<td>0,55 (0,513)</td>
</tr>
</tbody>
</table>

* p<0,10 ** p<0,05 *** p<0,01

Table 7. Results from regression analysis with Gender Equality Index 1. Unstandardised coefficients and standard error in parenthesis.

Model one in table seven is a regression analysis of the dependent variable Gender Equality Index 1 (Y) and the independent variable gender quotas (X₁). The result indicates that even though the B-coefficient is positive and illustrates a positive association, it is not significant. Moreover, the R² or R² adj does not produce a high goodness of fit, meaning that a gender quota alone, when not controlled for other factors that might affect gender equality, can only explain around 0,2% of the variation in gender equality. The result from model one makes it interesting to further investigate the presumed association by examining what happens when the control variables are included since they are expected to affect gender equality.

When carrying out additional regressions the results differ. Model two indicates that Time Since the First Election does have a positive, relatively large, effect on gender equality and when controlled for the B-coefficient for gender quotas increase and the result is significant on the 90% level. Additionally, the R² and R² adj increases, meaning that gender quotas explanatory degree enhances from 0,2% to nearly 19%. To clarify, a gender quota can explain around 19%
of the variation in increased gender equality when the time since the first election is controlled for. Likewise, model three illustrate that when GDP/capita is controlled for the results are significant and the explanatory effect of gender quotas increases, although, not as much as when the time since the first election was controlled for. However, when wealth is controlled for the goodness of fit, meaning the $R^2$ and $R^2_{adj}$ increases rapidly thus presenting that having a gender quota can explain nearly 53% of the variation in gender equality between the groups. To further investigate the explanatory degree of gender quotas on gender equality a final regression model was carried out with all of the three variables included.

Model four illustrates that when both years of democracy ($X_2$) and wealth ($X_3$) are controlled for the coefficient for gender quotas increases, although, not as much as when only years of democracy was controlled for. However, the coefficient is significant on the 95% level, meaning that the result with a 95% certainty captures the real effect of gender quotas in the total population of new democracies. Moreover, when wealth and years of democracy are kept constant the result presents that having a gender quota can explain around 51% of the variation in gender equality between the groups. It is slightly problematic that when both control variables are included, the variable Time Since the First Election does no longer get significant. However, since the study does not use a random sampling and thus has a small sample the level of significance can be treated with caution. Nonetheless, this study aims to explain the relationship between gender equality and gender quotas and thus makes it less essential whether the Time Since the First Election variable is significant. Conclusively, what factors that might explain the other 50% of the variance cannot be read from this model.

In the regressions with Gender Equality Index 1, the number of observations decreased from 45 to 40 which indicate that a failure analysis needs to be performed. The missing values are over Kosovo, Taiwan, Iraq, Paraguay and Niger. The loss of observations is small and since the countries differ, both in geographical position, length of democracy and wealth there is no reason to believe that the loss is systematic. The loss is most likely dependent on different factors in the different countries. Thus, meaning that the generalisation of the sample to the population is not a problem.

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73 Another explanation could be that the variables Time Since the First Election and GDP/capita correlates. Although the correlation is below 0.8 and thus acceptable, it might affect the level of significance.
The results presented above indicate that the variation in gender equality can, to some extent, be explained by whether a country has a gender quota legislated in their constitution or not. Since the first gender equality index is not empirically correct a regression analysis with the Gender Equality Index 2 was performed. Like the first gender equality index, the significance level for the index will be divided by two since the hypothesis in the study is one-sided.

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender quota</td>
<td>1,178 (0,958)</td>
<td>1,780** (0,837)</td>
<td>1,190** (0,719)</td>
</tr>
<tr>
<td>Time Since the First Election</td>
<td>0,186*** (0,047)</td>
<td></td>
<td>0,084* (0,047)</td>
</tr>
<tr>
<td>GDP/capita</td>
<td></td>
<td>0,000328*** (0,000063)</td>
<td>0,000260*** (0,000072)</td>
</tr>
<tr>
<td>N</td>
<td>44</td>
<td>44</td>
<td>43</td>
</tr>
<tr>
<td>(R^2 (R^2_{adj}))</td>
<td>0,035 (0,012)</td>
<td>0,304 (0,270)</td>
<td>0,425 (0,396)</td>
</tr>
</tbody>
</table>

* \(p<0,10\)  ** \(p<0,05\)  *** \(p<0,01\)

*Table 8. Results from regression analysis with Gender Equality Index 2. Unstandardised coefficients and standard error in parenthesis.*

The results presented in table eight nearly replicates the results presented in table seven. Model one receives a low degree of \(R^2\) and \(R^2_{adj}\) and the coefficient for gender quota is not significant. On the contrary, the degree of \(R^2\) and \(R^2_{adj}\) are higher than in table seven and likewise is the explanatory level of gender quotas. In model two and three, the results are significant and similar to table seven. The variable *Time Since the First Election* increases the gender quota variable’s explanatory effect more than *GDP/capita* does. Moreover, similar to table seven, the variable *GDP/capita* produces a higher \(R^2\) and \(R^2_{adj}\) than when years of democracy are controlled for. In the last model, where both wealth and years of democracy are controlled for and kept constant all of the variables are significant but on different levels.74 The goodness of fit indicates that a gender quota can explain around 43% of the variation in increased gender equality. Meaning that the other 57% of the variation is not captured by this regression model. Similar to the regression with Gender Equality Index 1 there is a decrease in the number of

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74 Time Since the First Election is only significant on a 90% level. The reason is believed to be the same as the ones discussed in model four of table seven.
observations from 45 to 43. In the final model, there are missing values for Taiwan and Niger and similar to the statistical loss in the regression with Gender Equality Index 1 there is no reason to believe that the loss is systematic.

Lastly, to receive significant coefficients and a goodness of fit with the value of 51% and 43% is highly beneficial. The result establishes that legislating a gender quota in a country’s constitution results in a higher degree of gender equality. The results capture the real conditions in the population with a 95% certainty when wealth and years of democracy are controlled for.

5. Discussion

Even though legislation concerning gender equality gets more common, equality between the sexes is not fulfilled. The possible solution to the problem fluctuates in the research field and its discussions. This study further investigated one of the solutions, namely, whether political gender quotas legislated in the constitution illustrate a positive effect on gender equality. The statistical survey performed indicate that gender quotas legislated in the constitution have a statistically significant positive effect on societal gender equality, although it cannot explain all the variation in the variable. Consequently, quotas can act as a solution to the lack of gender equality.

Even though the statistical survey offers significant results it is needful to point out the complexity with the concept of gender equality thereby meaning that the factors affecting the concept are many and that they might affect to what extent the quota produces societal gender equality. Furthermore, independent of whether a country has a quota or not, the problem facing women in politics might still be grand and thereby diminish their influence on gender equality. Yet, this study used two different indexes to measure the concept and it did not make a vast difference in the effect that a gender quota generates. Even though the first gender equality index does not fulfil the statistical criteria it has theoretical anchoring and it produces significant results like the second gender equality index does. In conclusion, regardless of the complexity of gender equality, the results from this study indicate that gender quotas generate a higher degree of gender equality although the concept need to be specified. In conclusion, the study’s results might have been different if other factors were used to define gender equality.

Since this study used statistical methods it did not investigate to what extent female politicians discuss other issues than their male colleagues or how many more bills regarding gender
equality that passes the legislation. Instead, it used its theoretical framework to make the assumption that a higher female representation in politics will increase gender equality in other aspects of society. Furthermore, political gender quotas can be defined as a higher female representation in the political sphere. The study’s result indicates, in line with Sundell’s and Wångnerud’s result, that the theory the Politics of Presence capture reality and that a higher number of women elected to political office helps strengthen women’s position in society. Thus, making the equality between women and men higher in terms of factors. Meaning, the Politics of Presence does capture reality, but it might depend on how gender equality, or which factors that are measured, are defined. Since this statistical survey generates significant results it is safe to say that a higher number of women elected to office will increase gender equality when wealth and length of democracy are controlled for. Moreover, contrary to what some feminist’s researchers claim, this study’s results appoint that quotas and constitution can provide a significant change and are not to be seen as overrated or negligible.

When wealth and time of democracy are controlled for the independent variable over quotas receive a higher explanatory degree and the results are mainly significant. Thereby presenting the result that a political gender quota can explain some of the variations in gender equality. Since the goodness of fit does not exceed 50% it would be intriguing to further investigate what variables that could enhance the model, for example, religion. Another approach for further research could be to discuss and investigate gender equality over time, thus investigating if a gender quota works as a fast track to gender equality, which this study’s results indicate. Furthermore, it would be fascinating to investigate other types of political gender quotas and their effect on gender equality since this study only considers quotas in the constitution.

Lastly, the prospective population in the study is new democracies, this population is difficult to define since it is dependent on the chosen time series and definition of democracy. The basic assumptions that this study made in the definition of new democracies nearly resulted in a total survey. As there were only a few missing values over a few countries, the results make it possible to express knowledge about the population new democracies. A quota legislated in the constitution have a statistically significant association with high gender equality. Meaning that a new democracy with a gender quota in the constitution will receive a higher degree of gender equality than a country without a quota. The results capture the real conditions in the population of new democracies with a 95% certainty. This knowledge is of interest to decision makers and constitution makers, mainly in the development of a new democracy or constitution where one
of the desired effects is to increase the gender equality. The results from this study appoint that political gender quotas have more far-reaching positive effects than increasing the number of women elected. It helps to increase gender equality which should be regarded as a solid argument in favour of an implementation of a political quota.
References


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