GLOBAL GENDER QUOTA ADOPTION, IMPLEMENTATION AND REFORM*

Melanie M. Hughes
University of Pittsburgh

Pamela Paxton
University of Texas at Austin

Amanda B. Clayton
Vanderbilt University

Pär Zetterberg
Uppsala University

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* Correspondence should be addressed to Melanie M. Hughes, Department of Sociology, University of Pittsburgh, 2405 WWPH, 230 S. Bouquet St., Pittsburgh, PA 15260, hughesm@pitt.edu. A previous version of this paper was presented at the 2016 American Political Science Association annual meeting in Philadelphia, PA.
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ABSTRACT

Over the last fifty years, gender quotas have transformed the composition of national legislatures worldwide. But a lack of systematic cross-national longitudinal data limits the questions researchers are able to ask about quotas. This article introduces a new dataset – QAROT (Quota Adoption and Reform Over Time) – the first global dataset on gender quota adoption, implementation, and reform over time. Theoretically, we clarify important issues in extant quota research. The dataset moves beyond traditional categorizations of quota policies with new measures of quota design, quota thresholds, placement mandates, sanctions for non-compliance, and quota effectiveness. We also create a single-variable measure of the presence of an effective quota to be used by comparative politics researchers to control for this powerful institutional feature.
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Quotas for women are among the widest reaching electoral reforms of the last thirty years. Whereas gender quotas existed in only a handful of countries in the 1970s, today more than 130 countries worldwide have modified constitutions, electoral laws, or party rules to mandate that a certain proportion of women be included as candidates or legislators. Because quotas transform the composition of parliaments, their potential impact is wide-ranging.1 Quotas have been shown to influence party strategy, legislative behavior, public opinion, political engagement and the aspirations, education, and political efficacy of women and girls.2

Paralleling their influence in politics, scholarship on gender quotas has exploded.3 Research exploring the adoption and influence of gender quotas now appears regularly in the journals of all social scientific disciplines. Still, apart from some gender scholars, social scientists have not yet fully addressed the global phenomenon of gender quotas. This may be because unlike other similarly important concepts in comparative politics such as electoral systems and human rights protections, we do not currently conceptualize or measure gender quota adoption over time. Further, existing studies that code gender quotas for several countries rely heavily on a tripartite distinction among quotas – reserved seats, candidate quotas, and party quotas.4 But gender quotas are more complicated than this simple distinction would suggest.

We argue for a new approach to the conceptualization and measurement of gender quotas that operate nationally to regulate legislatures. Our approach is global, longitudinal, and precise in addressing the increasingly diverse nature of quotas. Looking globally, we systematically review the institutional features of gender quotas across 190 states. Thinking longitudinally, we conceptualize quota adoption and reform as a contested and unfolding process. And by measuring precisely, we are able to make distinctions among quotas by type, timing, strength,
and features. Finally, we theorize and operationalize an effective quota – a quota with institutional features that should influence numeric legislative representation – that can be used by researchers interested in modelling quota impact, or by comparative researchers wishing to control for this consequential phenomenon. These advances are realized via our new dataset Quota Adoption and Reform Over Time (QAROT) that measures quota adoption, implementation, and reform worldwide from 1947 to 2015.

Our approach provides comparative politics scholars with the tools to study gender quotas both as an outcome of interest, and as a driver of change. Researchers will be able to test a wide-range of theories related to diffusion of policies, elite negotiation, policy innovation, policy implementation, policy feedback, and the influence of gender quotas on outcomes for women, men, and society. No longer constrained by traditional quota typologies, researchers using these data can, for example, test what specific features of quotas are best for a particular outcome or examine whether effective quotas are more difficult than weak quotas to implement. Further, a nuanced understanding of quota adoption, implementation, and reform as an ongoing process will aid policymakers, practitioners, IGOs, and INGOs as they design and reform quotas.

Even for comparative politics researchers who are not interested in gender quotas specifically, our single measure of an effective quota will serve as a useful variable in quantitative analyses. Quotas have become a pervasive institutional feature of modern polities that – like presidential vs. parliamentary systems, or different degrees of proportionality in electoral systems – fundamentally changes political competition. Researchers can no longer legitimately study parties, legislatures, legislative outcomes, or even democracy, without controlling for quotas. QAROT’s measure of the simple presence of an effective quota can thus
be used by comparative politics researchers to control for this powerful institutional feature when explaining a range of other outcomes.

THE BASICS: WHAT ARE GENDER QUOTAS?

At their most basic, gender quotas require that women (or men) make up a minimum share of some group, list, or institution. Quotas go beyond goals, targets, or objectives to specify a threshold – a number of percentage of women – that must be selected or nominated. Our focus is national electoral gender quotas, which regulate (s)election to national legislatures through constitutional provisions or national laws that require some share of general election candidates or legislators to be women. Limiting study to national quotas excludes party quotas, which are adopted voluntarily by political parties, regulated through internal party rules, and enforced by party leadership.

National electoral quotas come in two main types: reserved seats and candidate quotas. Reserved seats set aside a certain seat share for women, regardless of the number of women candidates or nominees. The second type, candidate quotas, require all political parties in a country to field a certain percentage of women candidates, but they do not guarantee that any share of women will ultimately be elected. To ensure that political parties follow the law, some quotas impose sanctions on non-compliant parties through fines or by precluding them from participating in elections until they comply. In countries with party list electoral systems, quotas may also include placement mandates that set the order of men and women candidates on electoral lists. Placement mandates are designed to prevent political parties from skirting the spirit of quota laws by consigning women to unwinnable positions at the bottom of candidate lists.
INTRODUCING OUR APPROACH: GLOBAL, LONGITUDINAL AND PRECISE

A Global Approach

Although comparative and global research on quotas is increasing, the vast majority of scholarship on quota adoption and effects looks at single countries or a small set of countries. Indeed, of the more than 200 studies on gender quotas published in peer-reviewed journals between 1990 and 2005, 74% studied one or a handful of countries, whereas just 7% took a cross-regional or global approach.  

Country case studies have illuminated quota debates, drivers of quota adoption, challenges to quota implementation, and quota impacts. Yet, a global approach presents an important counterpoint to case scholarship. Global research affords researchers the opportunity to test insights from case study research, and to explore effects that operate regionally or globally.  

Case study research also focuses overwhelmingly on countries that have adopted quotas, telling us little about the many countries that continue to resist quota adoption. Moreover, because most countries are experiencing gains in women’s political representation over time – with or without quotas – we must be able to compare change in countries with and without quotas in order to really understand quotas’ effects.

Of course, we are not the first to conceptualize and measure gender quotas globally. Some work describes and categorizes gender quotas from different parts of the world. A smaller but growing number of studies have developed cross-national measures of gender quotas for analysis of quota adoption or impact. This work draws extensively from the Global Database of Quotas for Women (hereafter Quota Database). Initiated in 2003 and updated regularly, the Quota Database is an indispensable public resource for information about current gender quotas around the world. The Quota Database has informed the ways that researchers
categorize quotas, the types of research questions about quotas that have been asked and answered, and the specific institutional features of quotas that have received the most attention. We hope to build upon and extend the Quota Database to advance research on quotas and to enable the investigation of a new set of research questions through an explicitly longitudinal approach.

**A Longitudinal Approach**

One principal advancement of our approach is that we take time seriously. We conceptualize and measure gender quota adoption and implementation as a multi-stage process that unfolds temporally within each country. To illustrate some of the complexities involved, consider the cases of Mexico and Tunisia, which as of 2015, both have candidate gender quotas with 50% thresholds, placement mandates, and sanctions for noncompliance. Mexico’s national candidate quota was first adopted in 2002, when a previous recommendation for 30% women candidates became a requirement, and was implemented the following year in national elections.\(^{15}\) In 2008, the threshold was increased to 40%, but it did not apply if candidates were selected through a primary election.\(^{16}\) This loophole was closed a few years later by the federal election court. In 2014, the quota threshold was upped again to 50% and a new placement mandate required alternation of women and men on electoral lists. Tunisia arrived at the same place as Mexico but in just one move. In 2011, Tunisia adopted and implemented its first quota – a 50% candidate quota requiring men and women to alternate on lists. Comparing Mexico and Tunisia show how a cross-sectional analysis of quotas may mask important differences in the varied trajectories that countries have taken to where they are today, differences that could shape the impacts quotas have on politics and societies.
In order to better understand gender quotas and their development across time, we distinguish among adoption, implementation, and reform. *Quota adoption* refers to the first time a quota appears as enforceable in the law; this could be the ratification of a constitution, a decree by a monarch, or the passing of secondary law (mainly the electoral law).\(^{17}\) Quota adoption dates are especially important for research on the causes, and diffusion, of gender quota policies. In these studies, the question is when quota legislation is adopted, regardless of whether or when the measure is applied in an election, or has any impact whatsoever.\(^{18}\)

*Quota implementation* refers to when a quota policy was first “on the books” during an election. Implementation may occur in the same year as adoption (e.g., Algeria in 2012), several years later (e.g., Belgium’s 1994 quota was not implemented until 1999), or never (e.g., Colombia’s 1999 quota was overturned in the same year). We consider quota implementation to occur regardless of whether the policy was complied with by political parties or others, and thus regardless of whether the policy generated intended effects on women’s political representation.\(^{19}\) The year of quota implementation – the year of the first election after quotas were adopted – is the crucial piece of information for analyses on the consequences of quota policies worldwide.\(^{20}\) Researchers might ask, for example, whether quota implementation significantly changes the gender composition of parliaments.

*Quota reform* refers to instances in which the laws or regulations of a quota change. Similar to other policies that require maintenance to function well, quotas often need to be – and have been – revised and updated in various ways.\(^{21}\) One common quota reform is to progressively increase quota thresholds, such as in the Mexican case mentioned above. Quotas are also reformed through changes in rules. Countries with candidate quotas can adopt new sanctions and/or placement mandates. For instance, Costa Rica’s 1996 quota legislation passed
without placement mandates—a conscious decision on the part of lawmakers.\textsuperscript{22} But, unsatisfactory electoral results in 1998 (a 40\% quota returned only 19\% women) and intense lobbying by quota advocates helped fuel a 1999 court ruling that instituted placement mandates.\textsuperscript{23} Sanctions and placement mandates may also themselves be reformed. For example, Croatia’s first gender quota included monetary sanctions, but a 2015 reform allowed party lists to be nullified if parties did not comply with the quota. Not all reforms involve strengthening rules. For instance, Albania’s 2012 reform removed provisions that allowed the electoral commission to throw out non-compliant party lists.

Systematic attention to reforms shows that enacting quotas is usually not a one-time event. Indeed, looking just at the last decade, our data show that 53 percent of major changes to quotas were reforms of existing polices. Yet, cross-national research has largely ignored quota reform. Indeed, to our knowledge, there are no quantitative studies predicting reforms to initial quota laws. Research has also not considered whether the iterative process of reform shapes the impacts of quotas. We suggest that when comparative researchers concentrate their attention to initial adoption, they increasingly provide an incomplete picture of the diffusion of quotas and of their effects.

**A Precise Approach**

A third improvement in our approach is to be precise in our measurement of quotas. One such way we introduced already: we distinguish between adoption, implementation, and reform. We advance research through our precise measurement of three other features of quotas – the strength of enforcement mechanisms for candidate quotas, methods for filling reserved seats, and quota thresholds – and we also introduce a new single measure of effective quotas.
Candidate quota rules matter. Sanctions for non-compliance and placement mandates have been shown to increase the impact of gender quotas on women’s legislative representation. The strongest sanctions require electoral commissions to reject candidate lists that fail to comply with quota regulations. Monetary sanctions, such as fines or restricted access to public campaign funds, have proved to be easier to circumvent. For example, upon its introduction France’s parity quota included only a mild financial penalty for noncompliance, which most parties paid instead of running 50% women. Although differences in the strength of sanctions are often acknowledged in the case study literature, rarely are they measured in cross-national studies of quota adoption or impacts. Consistent with case study literature, we see the strongest sanctions as those that invalidate lists, whereas weaker sanctions are monetary in nature.

Similarly, some placement mandates are stronger than others. Objectively, countries like Tunisia have the strongest placement mandates; they require alternation between men and women (sometimes called a zipper or zebra system). Countries like Iraq have less stringent requirements, mandating that a woman occupy one out of every three positions on candidate lists. Yet these differences between Tunisia and Iraq are largely a function of their thresholds – Tunisia sets its target at 50%, whereas Iraq’s target is only 25%.

We suggest that the strength of a placement mandate should be measured relative to a country’s stated threshold. If the required ordering should reasonably produce a share of women that is on par with the legislative threshold or better, we consider the placement mandate to be strong. Iraq’s placement mandate of one out of every three positions could reasonably result in 33% women, which is higher than the mandated minimum of 25%. Under our rule, Iraq has a
strong placement mandate. Contrast Iraq with Poland, which requires that at least one woman be included among each list’s first three candidates. This mandate only applies to the top of the list, therefore falling short of ensuring compliance with Poland’s 35% quota. Overall, distinguishing between strong and weak placement mandates will allow researchers to better measure the impact of quota rules.

**Methods for Filling Reserved Seats**

Better precision in measurement could also be applied to reserved seats, which have received much less scholarly attention in comparative research. Single country studies suggest that how reserved seats are filled might influence their impact. For example, in Lesotho, Clayton (2015) finds that citizens react negatively to single-member districts reserved for only women candidates. Not all reserved seat systems limit voters’ choice to only women candidates, however.

We identify three different ways that reserved seat systems operate. In countries with special women’s electoral districts or lists, women are separated out and compete only against other women (e.g., Kenya). Under “best-loser” systems, women compete against men through regular channels, but unelected women who receive the most votes fill the quota seats (e.g., Afghanistan). Reserved seats can also be filled indirectly: National leaders appoint a specified number of women (e.g., Saudi Arabia) or, after elections, political parties or legislators select women (e.g., Bangladesh). Coding these differences will allow researchers to understand patterns in reserved seat mechanisms over time, and whether these differences matter for various outcomes.

In some cases, countries have laid out plans for reserved seats in their constitutions, but
never passed electoral laws specifying how the quota would be met (e.g., Haiti). When countries do not specify a mechanism for filling reserved seats, we consider it to be a weaker quota than when countries specify one of three mechanisms above.

*Stated Thresholds & De Facto Thresholds*

If we care about quota effects, we also have to care about the quota threshold – the level at which representation is set. Samoa, for example, has a 10% quota, whereas countries such as Bolivia and Libya have set the bar at 50% women. Research demonstrates that quota thresholds may be one of the most important features of a quota for predicting its effects on women’s political representation. It makes sense that quotas legislating higher percentages of women as candidates or legislators should, in general, produce more women legislators.

Yet, thresholds are not always simple, and we are not currently measuring them very well. Some countries use different thresholds for different parts of their electoral system. For instance, South Korea uses a 50% threshold in its proportional representation (PR) tier but a 30% quota for single member districts. Or, consider Algeria, where the candidate threshold varies between 20% and 50%, depending on the number of seats in each electoral district. Particularly important for understanding quota effects is understanding that quotas may not apply to all candidates or seats. For example, Libya’s 50% threshold only applies to 40% of its seats – in practice a 20% quota.

Understanding this, we argue that we need to acknowledge differences in the threshold *in practice* – what we call the *de facto threshold*. In our approach we therefore distinguish between the stated threshold and the de facto threshold within each country. The former identifies the stated target of the quota in the constitution or national law, whereas the de facto threshold
adjusts the stated threshold to account for quota’s breadth. For instance, Venezuela’s 1997 30% quota, because it applied to 32% seats, has a de facto threshold of 10%. As of 2015, this distinction is important; our data show that 15% of countries with candidate quotas have a de facto threshold that differs from their stated threshold.

**An Effective Quota**

What makes a quota effective? Existing research has generally used two different approaches. One set of research puts the focus on legislative outcomes – looking at the share of women in the legislature or the percent change in representation before and after the quota was adopted.\(^{36}\) A quota associated with a 10% increase in women’s representation is considered more effective than one associated with a 5% gain. An alternative approach considers whether a quota was effective at meeting its target.\(^{37}\) A quota with a 20% threshold that produces 19% women in the legislature would be considered more effective than a quota with a 30% threshold that produces only 19% women.

We suggest a different approach to measure an effective quota, one based on whether the quota is written with features that should produce results. Based on the discussion above, as well as existing research, we know that quotas with some features should be more effective at reaching stated goals and increasing women’s representation. Other quotas are written without provisions to help achieve stated goals. Thus, we define an effective quota as either a candidate quota with strong placement mandates and/or strong sanctions, or a strong reserved seat quota (one that specifies some mechanism to fill the reserved seats). Further, the threshold is important to a quota’s effectiveness. De facto thresholds of 10% or lower are largely “window dressing,” often producing negligible shifts in women’s numbers. Previous research also identifies 10% as
an important milestone in women’s political representation. By our definition, therefore, an effective quota is one that reaches a minimum 10% de facto threshold.

The idea of an effective quota acknowledges that some researchers aren’t interested in quotas per se. Instead, given the influence of quotas on a wide range of outcomes, they recognize that including a control for the presence of gender quotas is increasingly important. Our single measure of an effective quota gives such researchers the tool to include a single variable in their models. Our measure differs markedly from the current standard control measure which is simply a dummy variable measuring the presence of a quota of any type. Hopefully the above discussion makes it clear that substantial differences across quotas mean that many would not be expected to influence the legislature.

THE QAROT DATASET: VARIABLES AND METHODOLOGY

The QAROT data begin in 1947 with the first national legislative gender quotas (China and Pakistan) and extend through 2015. We include a dummy variable to indicate each country-year for which a country has a gender quota as part of its constitution or secondary law [ADOPTED QUOTA] and each country-year after it has implemented this quota in an election [IMPLEMENTED QUOTA]. Adoption is the first instance of the quota in a constitution or secondary law. Implementation is recorded as the first election when the quota was in effect under law, whether or not the law was followed. We also include dummy variables that indicate the first year of quota adoption for each country [FIRST ADOPT FLAG] and the first year of implementation [FIRST IMPLEMENT FLAG]. With quota type [TYPE], we distinguish between national quotas that reserve seats in the legislature for women and those that require all parties to field women candidates or nominees. Not all quotas fit neatly into one of two
categories. In recent years, countries have begun to adopt hybrid quotas, using a mix of rules. For instance, Rwanda, reserves about one-third of seats in the Chamber of Deputies for women, but political parties contesting the other two-thirds of seats must also include 30% women candidates on their party list. As of 2015, we code 2 countries as having these hybrid measures.\textsuperscript{39}

QUOTA REFORM NUMBER is a variable recording reforms to the original quota. It runs from zero to seven. By the end of 2015, close to half of all quota adopting countries (44 percent) had reformed their existing quotas at least once. Reforms include changing the quota threshold; adding or strengthening placement mandates; and/or adding or strengthening sanctions for noncompliance. IMPLEMENTED REFORM NUMBER acknowledges that, like the original adoption of quotas, dates of implementation of quota reforms may differ from the adoption date.\textsuperscript{40}

For all quotas, we record the legislative threshold stipulated by the quota [PERCENT STATED THRESHOLD], the percent of legislative seats to which the quota applies [PERCENT OF SEATS], and the product of these two figures which creates the de facto threshold [DE FACTO THRESHOLD].

QAROT also codes candidate quota rules. We indicate whether the quota includes sanctions for non-compliance [SANCTIONS] and whether it includes placement mandates [PLACEMENT]. For both types of rules, we distinguish between strong and weak policies. We operationalize placement mandates as strong if they specify an order that meets or exceeds the threshold set by the quota [PLACEMENT STRENGTH]. For example, if a quota with a 30% threshold requires that women are on every third position on a party list (33%), the placement mandate would be coded strong. Alternatively, placement mandates are weak if they are vague (e.g., “place in winnable positions”) or require a lower share of women than the legislated
threshold (e.g., every 10 candidates for a 15% quota). We code sanctions as strong if parties are stopped from participating in the election if they do not comply with the quota rules; if parties are fined or lose state funding, we code sanctions as weak [SANCTIONS STRENGTH].

For reserved seats, we code three general mechanisms through which seats are filled: special women’s electoral districts or lists [SEPARATE TIER]; “best-loser” systems [BEST LOSER], and indirect elections [INDIRECT]. Where countries do not legislate a mechanism for filling seats, we code as ‘unspecified’ [UNSPECIFIED].

We code a quota as effective [EFFECTIVE QUOTA] if it reaches a 10 percent de facto threshold for either candidate or reserved seat quotas. Candidate quotas are coded as effective if they have strong sanctions for noncompliance and/or strong placement mandates. Reserved seats are coded as effective if they have a legal mechanism specified to fill the reserved seats. We have created this variable to indicate what we believe counts as a minimally functioning quota for use in a wide range of models to control for an important structural feature of political competition. Of course, the disaggregated data we provide allow researchers to create their own operationalized variables to fit specific research needs.

The QAROT dataset is the result of harmonizing data from two independent coding efforts. Hughes and Paxton began collecting data on quotas in 2006, and provide data on quota reforms and placement mandates. In 2014, Clayton and Zetterberg independently collected a second dataset on quota adoption and effects. Both datasets had information on the timing of first quota adoption and implementation. In the few cases where the data disagreed, we followed up with additional research. Together, we also coded reserved seat mechanisms and ensured the data were complete through December 2015.
Sources of data on quotas include: the Global Database of Quotas for Women and associated reports; national constitutions and secondary laws; local newspapers; reports from local, regional, and international NGOs and election observers; academic research; consultation with country experts; as well as our own case-specific knowledge, including in-country interviews.\(^{44}\) We gratefully acknowledge data collected by Bush (2011), Krook (2009), and Dahlerup et al. (2014).\(^{45}\) QAROT is distinct from these efforts in its provision of the years of quota adoption, implementation, and reform.

A DESCRIPTIVE ANALYSIS OF QUOTA ADOPTION AND IMPLEMENTATION

QAROT allows new questions about quotas to be asked and answered. For example, we can consider the global distribution of effective quotas vs. quotas that would not be considered effective. At the end of 2015, 75 countries had adopted national gender quotas but only 54 of these were effective quotas. Figure 1 displays this geographically, where countries with effective quotas are shaded in the top panel, and all other quotas are shaded in the bottom panel. Reserved seats and mixed quotas appear in black, and candidate quotas appear in grey.

The distribution candidate quotas and reserved seats in Figure 1 replicates previous findings on quotas: quota types are differentially distributed around the world. In 1991, Argentina became the first country in the world to adopt a sizeable candidate quota, and other Latin America countries followed suit.\(^{46}\) In Figure 1, almost all countries in Central and South America are shown as having adopted candidate quotas in 2015. In Europe, where Scandinavian countries pioneered voluntary party quotas, voluntary quotas are still most common, and therefore are unshaded in Figure 1. Finally, reserved seats were first adopted in Asia, Africa, and the Middle East and Figure 1 shows them to remain clustered in those regions. Interestingly,
Figure 1 also suggests that effective and ineffective quotas can appear anywhere in the world. Latin America has the highest proportion of effective quotas, while sub-Saharan Africa has the largest number of ineffective quotas; 11 of the 21 ineffective quotas are on the subcontinent.

**Figure 1: Quota Adopting States at the End of 2015; Effective Quotas v. All Other Quotas**

**Effective Quotas**

[Map showing effective quotas around the world]

**All Other Quotas**

[Map showing all other quotas around the world]

Note: Candidate quotas appear in grey, and reserved seats appear in black.
Next, we describe how quota adoption unfolded over time. Figure 2 summarizes the numbers of countries adopting and reforming quotas from the first quota adoption in 1947 to the end of 2015. The left-hand panel displays counts of quota adoptions and reforms by year. In total, we code 63 candidate quota adoptions, 35 candidate quota reforms, 31 reserved seat adoptions, and 25 reserved seat reforms. The 60 reforms are spread out across countries: 28 percent of countries that adopted a quota subsequently reformed their quota once and another 16 percent adopted two or more reforms. Over two-thirds of reforms to reserved seat are concentrated in four countries – Tanzania (7 reforms), Uganda (4), Pakistan (3), and Sudan (3) – and overwhelmingly are reforms to the percent threshold.

**Figure 2: Quota Adoption and Reform Over Time**

The right-hand panel of Figure 2 shows the cumulative trends of adoption and reform over time. The spread of all quota types, but particularly candidate quotas, increased dramatically
after the 1995 UN World Conference for Women in Beijing. Generally, we see increasing rates of adoption and reform over time, with the most active years between 2006 and 2012. In 2011 alone, 17 countries newly adopted or reformed candidate quota rules. One particularly striking feature of Figure 2 is the nearly parallel trends of adoption and reform over time. Almost as soon as quotas began to be adopted, they began to be reformed. Although not displayed in Figure 2, it is worth noting that twelve countries legally removed quotas (although many adopted them again subsequently), namely: Bangladesh, China, Colombia, Egypt, Ghana, Italy, North Korea, Pakistan, Philippines, Somalia, Sudan, and Venezuela.

QAROT allows a precise understanding of quota adoption by type. Table 1 shows descriptive statistics by quota type, including features specific to candidate list and reserved seat quotas, from 1985 to 2015. Focusing on overall quota adoption, we have already observed dramatic growth. But the first few rows indicate different trends for effective quotas and other quotas. For instance, in 1985 only 20% of quotas are effective. By 2015, that percentage had increased dramatically to 72%. Over time, policymakers have learned how to craft and adopt more effective quotas.47

Table 1 also reiterates that reserved seat quotas – and only reserved seat quotas - appear until the early 1990s. Nepal was the first country to adopt a candidate list quota in 1990, applying to just five percent of the total parliamentary seats (see also Figure 2). Yet, reserved seats and candidate quotas did not follow the same pattern of implementation over time. The number of countries using reserved seats grew mainly between 2000 and 2005, whereas the rise of candidate quotas was more continuous after 1995.

Among candidate quotas, sanctions appeared for the first time with Nepal’s candidate list quota adoption in 1990. Placement mandates first appeared the following year in Argentina
(although the 1991 policy was never implemented). Over time, countries are generally less likely to implement quotas with only sanctions for noncompliance, which likely reflects a growing understanding that sanctions can be less effective than other types of rules. In contrast, the percentage of countries using placement requirements or a combination of placement rules and sanctions (both rules) has grown over time. In 1995, 25% of countries used placement requirements in combination with sanctions. By 2015, 48% of countries were using placement rules either alone (7%) or in combination with sanctions (41%). Although not shown in Table 1, it is also noteworthy that strong sanctions and strong placement mandates are more frequent than their weak counterparts, suggesting that if a country is going to include these measures in the quota design, they often do so forcefully.

Table 1: Descriptive Statistics of Types of Quotas Over Time

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*Note: One country had both reserved seats and candidate quotas in 2010, and two countries had both types in 2015.

Table 1 also shows the distribution of the types of reserved seat quotas over time. Generally, Indirect Selection is declining in its share of reserved seat quotas, while Separate Tier is increasing. The first Best Loser quota appeared in Afghanistan in 2004, and since 2005 between 20 and 25 percent of countries with reserved seat systems use this mechanism to fill seats. The percent of reserved seat quotas that do not specify the system by which seats are assigned (which we consider to be a less-effective quota) has declined over time.

Have quota thresholds increased over time? Table 2 presents the de facto threshold for all quotas, reserved seats, and candidate quotas over time. It is immediately apparent that de facto thresholds have increased for all types of quotas over time. In 1985, the mean de facto threshold was 7%; this figure more than quadrupled to 30% in 2015. Table 2 also shows that candidate quota thresholds have increased more dramatically than have reserved seat thresholds. In 2015, the mean threshold for candidate quotas is nearly 8 percentage points higher than the threshold for reserved seats. Keep in mind, however, that reserved seat quotas are more likely to produce a share of elected women that is at least at the stated threshold, whereas candidate quotas may fall short of stated goals if, for example, parties do not comply with the quota.48

The increasing trend in thresholds is also visible in Figure 3, which plots de facto quota thresholds for quota adoptions and reforms over time, such that the size of each dot is proportional to the number of overlapping observations. The increase in de facto thresholds, along with the popularity of 30 percent as a threshold, are both striking. Also visible in Figure 3 are the cluster of seven countries that adopted quotas with 50 percent de facto thresholds.
Table 2. De Facto Thresholds, 1985-2015

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<td>7</td>
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<td>17.7</td>
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<tbody>
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<td>Mean (%)</td>
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<td>18.3</td>
<td>23.6</td>
<td>26</td>
<td>31.6</td>
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<td>Standard Deviation</td>
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<td>(13.7)</td>
<td>(13.0)</td>
<td>(11.6)</td>
<td>(12.2)</td>
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Figure 3. Change in De Facto Quota Threshold Over Time
Given our emphasis on the difference between quota adoption and implementation, we also consider the extent of a time lag between the two. Figure 4 shows the frequency of the number of years between quota adoption and implementation for all quota implementing countries. Most common is to apply the quota in an election one year after quota adoption: 55 quota implementing countries do that. Another 26 countries implement a quota two to three years after adoption. Eight countries adopted but had yet to implement quotas by 2015.49

**Figure 4: Frequency of Years between Adoption and Implementation**

![Bar chart showing frequency of years between quota adoption and implementation](chart.png)

**QUOTA IMPLEMENTATION AND WOMEN’S DESCRIPTIVE REPRESENTATION**

In this section, we consider quota implementation and women’s descriptive representation by merging our QAROT dataset with data on women’s representation from the Inter-Parliamentary Union (IPU). We find that as of 2015, countries which had implemented quotas of any type or effectiveness have, on average, 24.7 percent women’s legislative representation, whereas those
without quotas have, on average, 18.4 percent – a statistically significant difference (p < 0.001). There is no difference in women’s descriptive representation between countries with reserved seats (24.3 percent) and those with candidate list quotas (25.3 percent).

Where we do see a difference in women’s legislative representation is between our operationalization of effective quotas versus all other quotas, a difference we visualize in Figure 5. The left-hand panel shows the change in women’s descriptive representation following the implementation of effective quotas, centering each country’s timeline on the year of quota implementation. The right-hand side of Figure 5 shows the same trends for all other quotas.

**Figure 5: Women in Parliament Before and After Quota Implementation**

![Graph showing the change in women's representation before and after quota implementation. The left panel displays data for effective quotas, while the right panel shows data for all other quotas.](image-url)
For effective quotas (left), we often see a sharp break before and after quota implementation demonstrating “quota shocks,” or sudden changes in women’s presence resulting from a quota.\textsuperscript{51} Indeed, the average change in women’s descriptive representation following effective quotas is 8.1 percentage points. Increases in women’s numbers also continue in elections after the initial implementation of effective quotas, which is likely due, at least in part, to reforms that further strengthen already effective quotas. All other quotas (shown on the right) show immediate gains in women’s representation that are half those of effective quotas, a bump of only 4.1 percentage points, on average, in the first election after adoption.

CONCLUSION

The global proliferation of quotas for women is a remarkable and consequential political development. Yet, compared to other important political developments such as the rise of neoliberal policies, gender quotas remain understudied. We argue that this comparative lack of research is partially due to the lack of theoretically operationalized measures of quotas designed to account for global reach and historical process, measured at an adequate level of precision, and that acknowledge the variety of research questions to which such measures could be put.

We present such measures here, and release them to the comparative politics community as the QAROT dataset. In this article, we discuss the issues involved in understanding quotas, arguing in particular for a global, longitudinal and precise approach that includes distinctions in measurement that have heretofore gone unacknowledged, such as between adoption and implementation, stated threshold and de facto threshold, and variations within reserved seats. Acknowledging that a subset of researchers simply need to control for the institutional features of national legislatures, we also theorize an effective quota: a single variable measuring the
presence of a gender quota with features that should produce effects on the number of women in the legislature.

Our approach offers several advantages for researchers. The precision in measurement that we propose and implement is helpful in understanding causal mechanisms. Whether studied as adoption (dependent/outcome variable), or as implementation (independent/causal variable), we need to focus on particular features of these sometimes complex policies. Building on the work of the international organizations and academics that have thus far compiled data on quotas, QAROT is the first dataset to produce global, longitudinal data at a precise level of detail.

Longitudinal measurement is critical: assessing any impact of a quota policy requires tracking countries’ progress through time. And, as existing quotas are increasingly reformed, these changes, when tracked over time and measured with adequate precision, allow us to understand which features of a quota lead to outcomes, and which features leave things unchanged. With our longitudinal and precise measures, questions of the impact of gender quotas on a range of outcomes are finally amenable to empirical tests.

To demonstrate these possibilities, we included descriptive analyses showing that (1) there are often delays between gender quota adoption and implementation, although delays are typically fairly short. (2) Nearly half of countries reform their quotas after they are first adopted, and over-time trends of adoption and reform are nearly parallel, indicating that almost as soon as quotas began to be adopted, they began to be reformed. (3) Over time, countries using candidate quotas are less likely to implement quotas with only sanctions for noncompliance and more likely to use placement requirements or a combination of placement rules and sanctions. (4) For reserved seats, Indirect Selection is declining in its share of reserved seat quotas over time.
whereas Separate Tier is increasing. (5) De facto thresholds have increased dramatically over time. (6) Generally, quotas are being written in more effective ways over time. (7) Still, while countries tend to adopt quotas in regional patterns, effective and ineffective quotas can appear anywhere in the world. (8) We show the utility of our conceptualization by demonstrating that countries implementing effective quotas show significantly larger increases in women’s representation than countries that implement ineffective quotas, an effect that persists over time.

Taken together, a global, historical, and rigorously conceptualized approach to the measurement of gender quotas will provide academic researchers and policy practitioners with the tools to better understand, evaluate, or at a minimum control for, this astonishing but understudied trend in global politics.
NOTES


3 Hughes, Paxton, and Krook 2017.


5 We use the term ‘gender quotas,’ which is typical of the vast majority of research on these policies to date. However, gender quotas as they are currently conceived use a binary concept of gender that is tightly linked to biological sex and does not engage with contemporary understandings of gender as fluid or as a principle of social organization.

6 Our definition excludes rules that solely impact the political pipeline, without requiring women to be on the final roster of candidates or legislators. For instance, Panama regulates women’s inclusion only in primary and internal party elections. Such pipeline measures ultimately offer no guarantee that women will appear on the ballot in the general election. Tricia J. Gray, “Quota Mechanics in Panamá, 1999-2014: ‘Se obedece, pero no se Cumple.’” *Bulletin of Latin American Research*, 34 (July 2015), 289–304.

7 Data on party quotas cannot be created for all years in the QAROT dataset. Reliable data on party quotas prior to the 1990s for all parties and all countries is simply not available. Because individual political parties, large and small, introduce these measures, information on exact years of their adoption is often not available. Further, coding party quotas at the country level introduces numerous challenges. For instance, party quotas may be used by dominant parties, on the fringes by small parties, at the same time that thresholds for women’s inclusion may vary across political parties. For a recent cross-sectional snapshot of party quotas around the world, researchers should use the Quota Database. International IDEA, “Quota Database,” http://www.quotaproject.org, 2016.

8 Of the remaining articles, 6% were regional studies, and the remaining 13% were theoretical, conceptual, or review articles. Hughes, Paxton, and Krook 2017.


International IDEA 2016.


In some cases, quota rules are included both in the constitution and in secondary law: the general rule is established in the constitution and the details are specified in the electoral law or in a law on political parties, etc. Whenever quotas are included both in constitution and in secondary law and the years of adoption vary, we code adoption in the first of the two years.

Our use of quota implementation differs from some others. Although there is agreement that quota implementation refers to the process of applying the quota rule, and that this process follows quota adoption, scholars’ operationalization of quota implementation varies. Some scholars focus on political parties’ level of compliance with the law. Others equate implementation with the outcome of quota provisions, that is, how well quota laws increase women’s political representation in different countries. Dahlerup 2006; Krook 2009; Susan Franceschet, Mona Lena Krook, and Jennifer M. Piscopo, The Impact of Gender Quotas (New York: Oxford University Press, 2012). We prefer to refer to quota implementation as the year in which the quota policy was first applied in an election and determine empirically whether quotas of different types produce gains in women’s representation, changes in policy, or other outcomes.

One way to think about quota adoption vs. implementation in research is as dependent vs. independent variables. Quota adoption dates are most likely to be used as the dependent variable, whereas quota implementation dates are more likely to be used as an independent variable.


Paxton and Hughes 2015; Schwindt-Bayer 2009.

Paxton and Hughes 2015.


Some countries are also beginning to use the carrot instead of the stick, offering financial incentives to parties for fielding women candidates. Jennifer M. Piscopo, “State as Gender Equality Activists: The Evolution of Quota Laws in Latin America,” Latin American Politics and Society 57 (Fall 2015), 27–49. Not all incentives are tied to quotas, however; Georgia has no national quota but offers public funding to parties to run women candidates.

For a notable exception, see Schwindt-Bayer 2009.

The effects of fines and the withdrawal of public funds likely vary across parties. For instance, less institutionalized and newer parties may be harder hit by fines than well-established or incumbent parties.

See, however, Bjarnegård and Zetterberg 2014.


In the dataset we make even finer-grained distinctions among these three major reserved seat types. For example, for indirect reserved seats we distinguish between appointments and political party elections.

Paxton and Hughes 2015.


Clayton and Zetterberg 2015.


Paxton, Hughes, and Green 2006.

In 2014, the *Atlas of Electoral Gender Quotas* reported five countries with both reserved seats and legislated candidate quotas. Drude Dahlerup, Zeina Hilal, Nana Kalandadze, and Rumbidzai Kandawasvika-Nhundu, *Atlas of Gender Quotas* (Stockholm: IDEA, 2014). In addition to Rwanda and Mauritania, they also code Algeria, Iraq, and Kenya. They appear to code Kenya as both because of a requirement that other reserved seats (e.g. for youth, people with disabilities, etc.) also comprise half women. We do not count this type of quota within a quota. Algeria and Iraq are differences in judgement / coding rules.

If a quota is repealed or otherwise ceases to be a part of the codified electoral process, we code any subsequent quota adoptions as new adoptions rather than reforms. This applies to the following cases: Bangladesh, Bolivia, China, Colombia, Egypt, Ghana, Pakistan, Sudan, and Venezuela.

Vague placement mandates may make it easier for parties to fail to meet quota targets, or may delay compliance if parties contest what is a “winnable position.”

Paxton, Hughes, and Painter 2010; Paxton and Hughes 2015.

Clayton and Zetterberg 2015.

International IDEA 2016.

Krook 2009; Bush 2011; Dahlerup et al. 2014.


Paxton and Hughes 2015.
Namely: Chile, El Salvador, Eritrea, Ireland, Nicaragua, Samoa, Togo, and Vietnam.

Notably, our “no quota group” includes cases with substantial political party quotas, such as Sweden, South Africa, and Mozambique, which all have over 40 percent women’s representation. Excluding countries with voluntary party quotas from the “no quota group” would make the observed discrepancy between the quota and no quota groups even more pronounced.

Clayton and Zetterberg 2015.