CHAPTER 4

The Variation of Quota Designs and Their Origins in Latin America (1991–2015)

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Introduction

Gender quotas for legislative office are mechanisms with the stated purpose of accelerating the process of women's integration into the political system, thus compensating for potential discrimination faced by female candidates in party-led recruitment processes. This type of policy has been particularly prominent in Latin America (Quota Project 2015), where, by 2015, all but one democratic country, Guatemala, had adopted a gender quota for candidates to legislative elections.[1] Although all of these policies have been deemed "legislated candidate quotas," they display a wide array of designs.

There are various components that make up a gender quota. Differences in the ability of quotas to increase the proportion of women in parliaments have often been associated with dissimilar policy characteristics, such as the proportion of nominations reserved for women, the specification of ranking systems, and the presence of sanctions for non-compliance (Marx et al. 2007: 28–31). Although these institutional dissimilarities have been generally noted, specifications of gender quota policies have rarely been the focus of scholarly work. In other words, few works have focused on examining the origins of the existing variation in gender quota designs.

This chapter uses the cases of gender quota adoptions (and revisions) in Latin America to comprehensively explore the origins of different specifications of legislated candidate quotas in the region. Existing works on single and small-N case studies have provided excellent insights into the factors that influence the designs of individual cases of gender quota policies. For instance,

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various scholars have argued that international pressure and transnational diffusion, women's mobilization, and values-sharing and development are all important in shaping gender quota policies (Krook 2009: 20–27).

Testing the explanatory power of these theories cross-sectionally, I find that women's mobilization as legislative actors is the factor that most consistently explains legislated quota designs. Beyond being an important factor in explaining the overall strength of gender quota designs, the presence of women in the legislature is also significant in strengthening placement mandates and in closing loopholes. My other findings are more puzzling, as they do not easily conciliate with existing findings in the literature, and suggest that mid-N and large-N comparative research can contribute to the literature on gender quota designs by questioning and refining existing theories developed from case studies.

This chapter will proceed as follows: first, I briefly review the literature on gender quota designs and strength. In the second section, I derive an indicator to measure the strength of gender quotas comparatively and consecutively map their designs in Latin America. The third section focuses on examining the potential origins of policy dissimilarities; it does this by using the indicator developed, as well as its five individual components, as dependent variables. In the conclusion, the fourth section summarizes my findings and suggests potential areas for further analyses.

Gender Quota Designs: Measurement and Variation in the Region

Existing Measures of Gender Quota Designs

Many authors have contributed to the development of nuanced measures of gender quotas by suggesting frameworks that consider different designs. Given their understanding of the different configurations of gender quota legislation, Archenti and Tula (2007: 198) do not quantitatively analyze the simple presence or lack of quotas in their examination of legislated candidate quotas in Latin America. Instead, the authors operationalize this variable by differentiating "de facto quotas" (i.e. simple presence of quotas) from "effective quotas." For them, the term "effective quotas" has also been interpreted to refer to the "number of female candidates required by a given quota for each district as a proportion of the total list" (Archenti and Tula 2007: 198). The authors, however, warn about the methodological problems of this operationalization, given that it is based on the assumption that parties fully comply with quota requirements, which is often not true (Archenti and Tula 2007).

To account for quota compliance, other authors suggested frameworks that accounted for design characteristics that included sanctions. Schwindt-Bayer (2009) operationalizes quota strength by employing three characteristics of

gender quota designs as separate independent variables, namely, "quota size" (proportion of nominations reserved for women), "placement mandate" (i.e. presence of mandate that establishes that female candidates should be placed in "electable" positions), and "enforcement mechanism." Krook (2009: 11) supports this package and argues that, when analyzing the effectiveness of gender quota policies, the aspects to investigate should be ambiguity (whether language of the legislation is clear), requirements (size of quota), and presence of non-compliance regulations (economic or political sanctions). In other words, Krook and Schwindt-Bayer both emphasize the size of gender quotas, as well as placement mandates and sanctions as important aspects of gender quota designs. Other authors, such as Guldvik (2011), suggested similar classifications.

Another aspect of quota designs that has been deemed important is their office applicability. While many quotas are applicable to both lower and upper houses (in bicameral legislatures), some are only valid for lower houses. As Caminotti and Freidenberg (2016) emphasize, considering "office reach" as part of the analysis on quota designs is particularly important when it comes to *suplentes* (alternatives), given that designs that do not apply quotas to *suplentes* open the possibility that parties only nominate men as alternatives.[2] Piscopo (2015) also argues that quota applicability to party leadership is an important component of office reach, given that party leadership is an important factor influencing ballot access and candidate recruitment.

Finally, others also highlight that quota designs may contain all of the "right" types of provisions, but still fall short in strength due to loopholes. For example, Jones (2008: 62–63) categorizes gender quotas as "well-designed" or "poorly-designed" (i.e. "lax"). According to him, "lax" refer to designs with loopholes that essentially nullify or substantially diminish the application of gender quotas in practice. Aspects that render a design "lax" include provisions that allow gender quotas to be avoided in cases in which primaries are conducted. Similarly, in their recent study of subnational quotas in Argentina and Mexico, Caminotti and Freidenberg (2016) also consider "exception clauses."[3]

In sum, previous studies have characterized five main types of provisions as important for the strength of gender quota designs. They are: (1) size of quota requirements, (2) placement mandates, (3) compliance mechanisms, (4) office applicability, and (5) obstacles to implementation.[4] Although these dimensions have been examined concurrently, to the best of my knowledge, they have never been incorporated into one sole factor.[5] In the next section, I use the five types of provisions identified by the literature to develop parameters for an Index of quota strength of one sole factor. In doing so, I seek to support the scholarship of Archenti and Tula (2007), Schwindt-Bayer (2009), Caminotti and Freidenberg (2016), and Jones (2008) in their search for a more methodologically appropriate measure of gender quotas, and the works of Krook (2009) and Guldvik (2011) in their efforts to identify characteristics that are important for gender quota effectiveness.

Measuring Gender Quota Policy Designs

One of the challenges in exploring the strength of gender quota designs comparatively is precisely its operationalization. First, the five types of provisions identified do not easily render compatible scales of measurement; while size of quota requirements could be treated as an interval-level variable, it is not clear how others could be characterized. To address this issue, I create 5-point scales ranging from 0 to 4 for each type of provision. In doing so, I treat all dimensions as ordinal-level scales that assign values based on a given configuration's efficacy in increasing the proportion of women in legislative office. For instance, on the scale of compliance mechanisms, "electoral sanctions" are assigned a higher value than "financial sanctions" because studies have found that financial loss is not a deterrent in assuring that parties comply with quota laws (Maniquet et al. 2005).

Second, electoral system rules sometimes impact the type/extent of provisions that can be incorporated in a given context. For instance, one of the provisions emphasized as an important component of gender quota designs, placement mandates, can only be applied in systems with predetermined candidate lists. This type of provision is incompatible with open-list (preferential voting) systems in which list order is determined by popular vote.[6] Given that I dedicate one parameter of my Index to placement mandates, the highest value attainable for open-list and closed-list systems differs. In other words, quotas in open-list systems are bound to be weaker than those in closed-list systems, simply as an outcome of institutional design. The only way I can address this issue, while still providing a cross-country measure for the strength of gender quota designs is by advising the employment of robustness checks across two sets of cases.

Finally, it is worth noting that I do not distinguish between parity regimes and quota laws, apart from issuing them different values on the parameters measuring "size requirements" and "placement mandates." Although I recognize the debate surrounding the philosophical differences between gender quota laws and parity regimes, I still treat them equally for I consider that the five aspects of the Index for Gender Quota Strength (IGQS) may be common to both.[7]

The IGQS is summarized in Table 4.1. Although the measure may not be perfect, the Index is a step forward in allowing for the comparative analysis of gender quota policies across time and space in a way that is methodologically and theoretically manageable.

The IGQS compounds the scores of all five dimensions into a 21-point scale (in which 0 signifies the lack of a quota,[8] 1 signifies the weakest and 20 signifies the strongest gender quota designs). This is because, although the current chapter is restricted to the analysis of gender quota designs (and thus, cases in which gender quotas are present—i.e. not equal to 0), the Index has been constructed in such a way that allows for the analysis of an unrestricted sample of cases, that includes negative observations in which gender quotas have not

Table 4.1 Index for gender quota strength

Scale	*Size requirements*	*Placement mandates*	*Compliance mechanisms*	*Office applicability*	*Obstacles to implementation*
0	No quota, or no established requirements	No quota, or no type of ranking placement.	No quota, or sanctions	No quota, or no defined office applicability	No quota
1	Women should constitute between 20 percent and 29 percent of candidate nominations	Ambiguous ranking (i.e. uses phrases such as "with real chances" without specifying provisions)	Weak: financial benefits for compliance or public announcement of party infringement.	Unicameral house OR Lower house	Existence of loopholes that allow for non-application of the quota (i.e. quota exemption through use of primaries/ internal party elections; non-compliance in cases of "lack" of interested female candidates; possibility of compliance by nominating *suplentes*)
2	Women should constitute between 30 percent and 39 percent of candidate nominations	Somewhat ambiguous ranking (i.e. specifies list placement based on parties' previous electoral results, or that 1 in 4 or 5 candidates should be a woman)	Medium: financial sanctions	Unicameral house plus one other domain (i.e. internal party leadership or *suplentes*) OR Lower house plus one other domain (i.e. Upper house, internal party leadership or *suplentes*)	Provisions that substantially weaken the quota (i.e. non-permanent status/ applicable only for a determined number of electoral cycles, proportional increase of candidate nomination in such a way that it surpasses or is equal to quota, require female politicians to file own complaints with electoral courts to seek enforcement)
3	Women should constitute between 40 percent and 49 percent of candidate nominations	Clear ranking placement (i.e. establishes that 1 in every 3 positions or 2 in every 5 positions should be occupied by woman)	Strong: electoral sanctions	Unicameral house plus two other domains (i.e. internal party leadership and *suplentes*) OR Lower house plus two other domains (i.e. Upper house plus internal party leadership or *suplentes*)	Provisions that somewhat weaken the quota (i.e. gradual application of established requirements over a number of electoral cycles, application of quota to only a proportion of total seats in available)
4	Women should be 50 percent of candidate nominations	Effective ranking placement (i.e. establishes that lists should alternate between male and female candidates)	Very strong: electoral sanctions plus financial sanctions	Lower house plus three other domains (i.e. Upper house plus internal party leadership and *suplentes*)	No loopholes or provisions that weaken quota

Source: Prepared by the author. Coding based on primary sources accessed through *Global Database of Quotas for Women* www.quotaproject.org, the *Observatorio de Igualdad de Género de América Latina y el Caribe* of the Economic Commission for Latin America and the Caribbean http://www.cepal.org/oig/, as well as documents collected with national congresses.

been adopted. I perform factor analysis of all observations of policy adoption and revision in Latin America and conclude that the five parameters fall into one sole factor.[9]

To develop the Index, I first rely on secondary sources to identify all instances of gender quota adoption or revisions. These sources include the *Global Database of Quotas for Women,* the *Observatorio de Género* of the Economic Commission for Latin America and the Caribbean, as well other country-specific secondary sources. I then use primary sources (e.g. congressional decisions, executive decrees, judicial rulings) to individually hand-code each design in accordance with the operationalization guidelines outlined for the IGQS.

Mapping Gender Quota Designs in Latin America

A total of 40 gender quota designs were adopted in Latin America between 1991 and 2015. These include laws resulting from legislative processes, executive decrees, and judicial decisions. Of the 17 countries from the region that have adopted some type of gender quota, 12 have subsequently revised their respective policies at least once. I thus understand that there are two types of quota policies: original quotas and subsequent revisions.

Given that policy revisions frequently amend only one aspect of the preceding legislation, I consider cumulative quota designs (i.e. the total design of a given country's quota, after a given policy adoption/revision). In other words, policy designs are not considered in a vacuum, but, instead, in respect of how they change the status quo of gender quotas in a given country. As such, quota revisions are not independent from original quota adoptions—they depart from original designs and strength or weaken quota provisions.

Figure 4.1 provides an overview of how values of the IGQS are distributed across all 40 designs and breaks down this distribution by each policy type: original adoptions and revisions. As illustrated, the distribution of the values of the IGQS is skewed left, meaning that policies in the region most frequently score higher than lower values on the IGQS scale; the most common values for the IGQS are 5 and 14, and the distribution produces a mean of 11.5 and a median of 12, also reflecting this distributional tendency toward higher values. This suggests that, on average, quota designs in Latin America are above the midpoint of the IGQS scale—and closer to higher values that suggest strong policy designs. A closer look into these two types of policies, however, shows that original quotas have been responsible for the bulk of design strength.

Figure 4.2 disaggregates the IGQS into each of its individual components.[10] As illustrated, only two of scales of the individual components that make up the IGQS produce means above the scale midpoint (2.5). The scale for size requirements produces a mean of 2.625, while the scale of obstacles for implementation produces a mean of 2.925. This suggests that these are the scales that, on average, mostly contribute to the strength of gender quota designs in Latin America. This makes sense given that many gender quotas have been

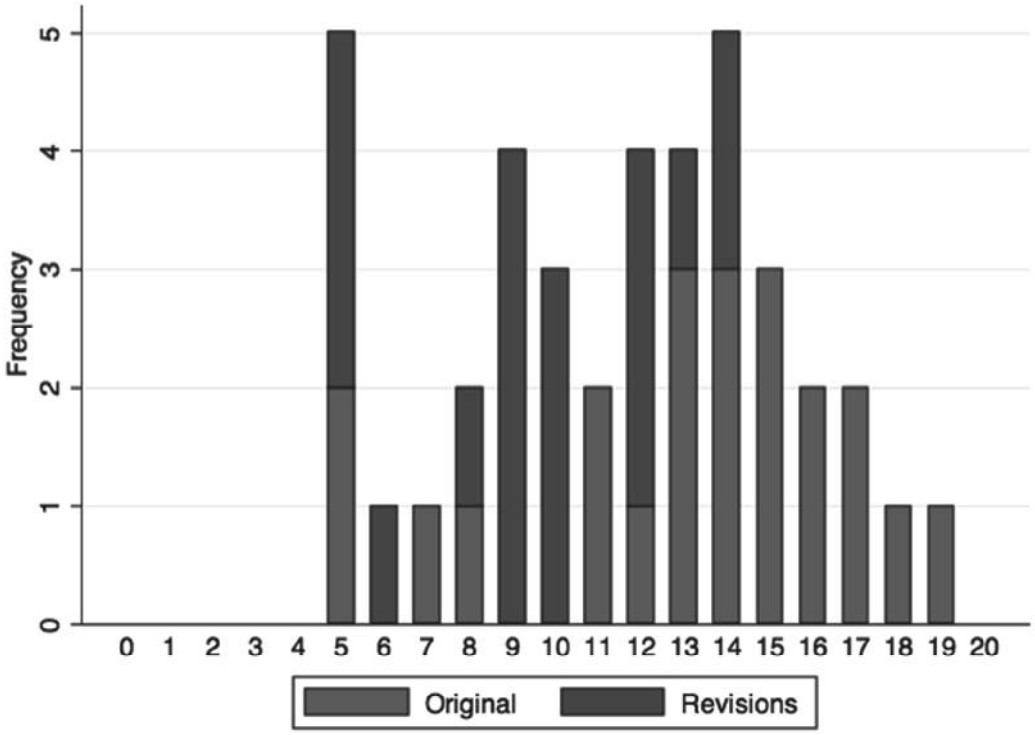

Fig. 4.1 Values of the IGQS, as distributed in Latin America.
Source: Prepared by the author

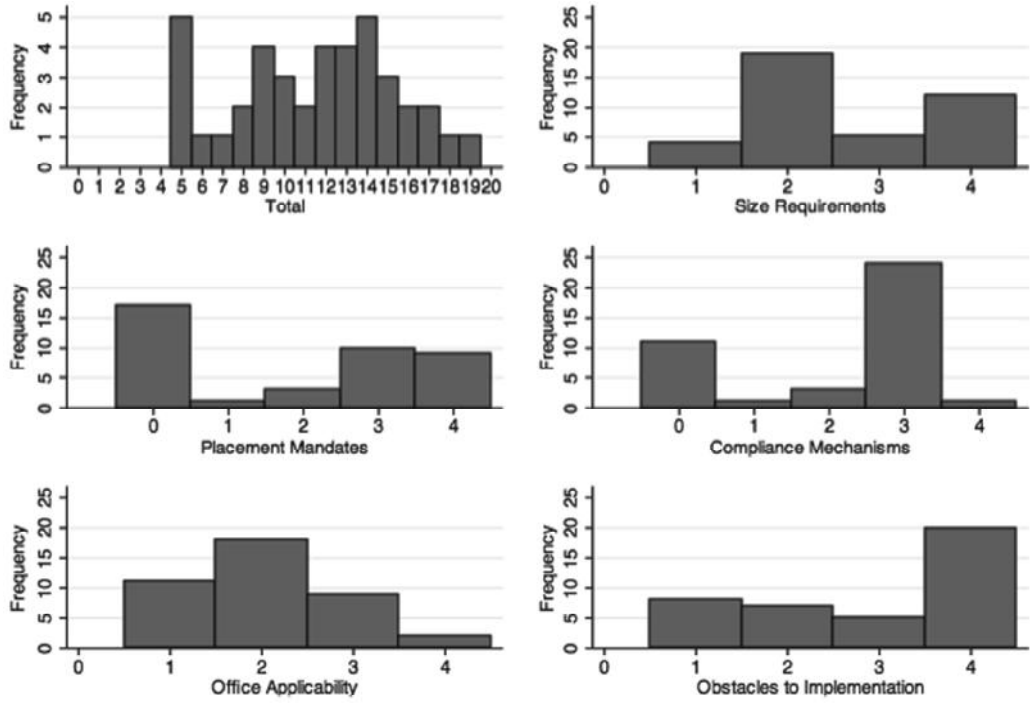

Fig. 4.2 Values of the IGQS and its individual components, as distributed in Latin America.
Source: Prepared by the author

recently transformed into parity regimes, thus increasing the size requirements of policy designs, and that many original quotas have been revised (through legislative means or by executive decrees, and court resolutions) to close design loopholes (Piscopo 2015).

The other three scales produce lower means: the placement mandates scale has a mean distribution of 1.825; for compliance mechanisms, the mean is 2.075; while for office applicability the mean is 2.050. The lower mean distributions for placement mandates and office applicability could, however, simply be a reflection of how institutional variation limits the possibilities for gender quota designs. Despite the seemingly positive snapshot for the overall strength of gender quotas, descriptive statistics suggests that disparities across the different components exist.

A number of authors have depicted early gender quota adoptions in Latin America as symbolic gestures to showcase the commitment of legislators to gender equality while avoiding increased electoral competition (Piscopo 2015; Paxton and Hughes 2015). Others have argued that, although presumably weak, early gender quota policies served as the basis of entrance for women in parliament, who could then challenge weak designs and strengthen quotas from within the system (Piscopo 2015: 36).

Figure 4.3 illustrates the strength of gender quota designs over time and identifies each case in regards to whether it was an original adoption or a subsequent revision. Although no clear pattern emerges to describe the variation in the strength of gender quota designs among early gender quota adopters in

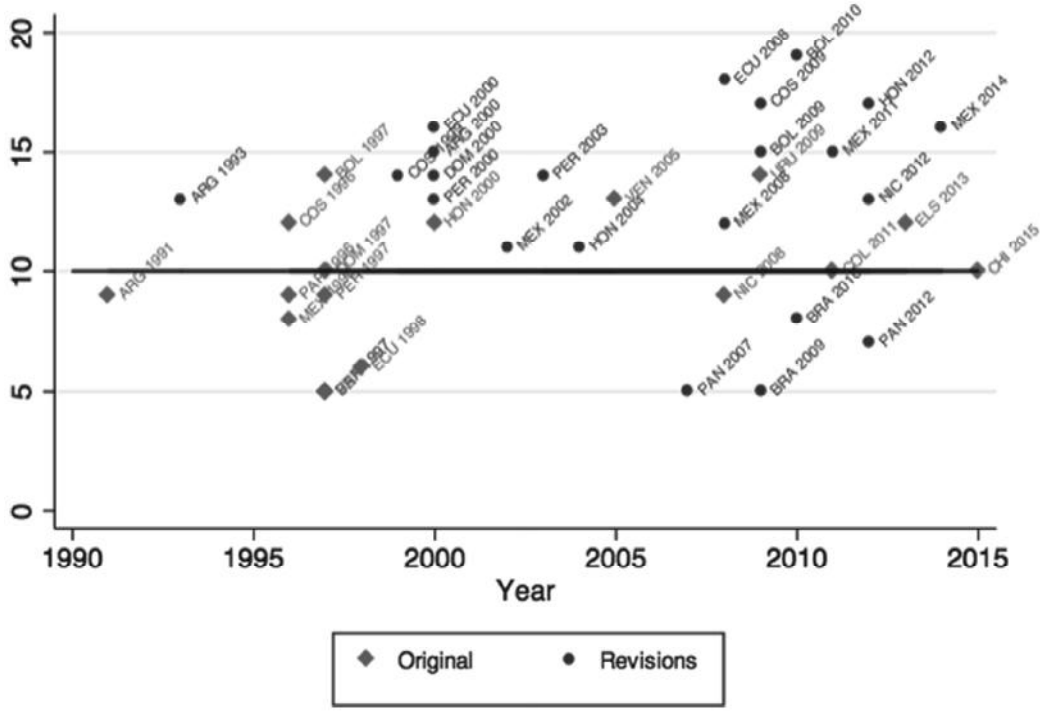

Fig. 4.3 Strength of gender quota designs overtime, as distributed in Latin America. *Source*: Prepared by the author

the period between 1991 and 2000 (the variation ranges from a value of 5 in Brazil to a value of 14 in Bolivia), a pattern does become clear for late adopters: as Fig. 4.3 shows, weak gender quota designs have indeed been more common among early adopters. No original quota designs are present in the lower right quadrant of the graph, suggesting that more recent original adoptions have been stronger than those enacted between 1990 and 2000, with no country other than Nicaragua adopting a quota design scoring less than 10 on the IGQS scale after 1998.

When also taking revisions into account, four cases are placed in the lower right quadrant, but they represent policies in two countries only: Brazil and Panama. By contrast, the upper right quadrant displays a high concentration of revisions, suggesting the recent strengthening of gender quota designs in the region. Overall, Fig. 4.2 once again illustrates the regional trend toward increasingly high values of gender quota designs.

Despite the fact that all policies in Latin America are similar, in the sense that they all determine quotas for candidate lists, a more nuanced review of the policies that disaggregates between different design dimensions reveals that variation exists both at the cumulative level (i.e. values of the IGQS), as well as across different individual components of the Index. This variation illustrates the need for further comparative studies on the origins of gender quota designs.

While individual case studies have been crucial in identifying the factors that contribute to patterns of gender quota adoption, they have been less clear about what leads some quotas to be stronger or weaker designs. The next section begins to unpack this relationship by testing the explanatory power of common theories of gender quota adoption when applied to the strength of gender quota designs.

The majority of existing theories treat the strength of gender quota designs as an extension of the process of gender quota adoption. As such, most explanations do not seek to directly explain the strength of design, *per se*. Nonetheless, because these works are concerned with finding the sources of pressures that may lead to institutional change (i.e. gender quota adoption), I grant that they are good starting points for identifying the factors that may impact the strength of gender quota designs as well.

Origins of Gender Quota Designs

A vast scholarship has engaged in providing insights into the processes that lead to the adoption and/or revision of individual quota policies. Although, as Krook (2009: 20) points out, there is not a one-size-fits-all explanation, three different frameworks stand out as the most commonly emphasized. They are: (1) international pressure and transnational diffusion; (2) mobilization of women's groups, female legislators, and female party leaders; and (3) changing normative values and development.

Most studies agree that the growing popularity of gender quotas is, at least in part, a consequence of international values that emphasize the agenda of

gender equality and transnational learning (Celis et al. 2011; Krook 2009: 25–26). Theories that follow this reasoning are based on the notion that states learn from one another and "imitate" policies implemented by their neighbors. In such explanations, policy strengthening results from the engagement of countries and policymakers in information-sharing on quota policies/design and observations of what types of policy provisions make quotas more or less effective in achieving their stated goal of increasing women's political representation (Paxton and Hughes 2015; Bush 2011; Piatti-Crocker 2011; Crocker 2007).

Women's organizations are also often mentioned as the driving force behind the proposal of gender quotas, campaigns for their adoption, as well as subsequent strengthening revisions. Banaszak et al. (2003) come together to provide comprehensive accounts of the influence of women's movements in pressuring state actors to consider proposals for gender quotas. Jenson and Valiente (2003: 90–91) argue that lobbying for gender quotas became one of the most explicit efforts of women's groups in Spain and France. They also highlight the role of these groups in strengthening quota designs by increasing party quota requirements among left-wing parties and pressuring party leaders to propose bills for the establishment of national-level quotas. Chama (2001) and Bruhn (2003) further this view by providing similar accounts of the processes of gender quota adoptions and revisions in Argentina and Mexico, respectively.

A number of scholars also point to the important role of female legislators and party leaders: Caminotti (2014), Krook (2009), Jones (2008), and Piscopo (2006) all emphasize that strategic and cohesive action by female officeholders has been crucial to the drafting and passing of gender quota legislation in a number of cases. As Baldez (2004) explains, the bargaining power of female legislators increases when they engage in cross-party mobilization. Caul (2001) also finds that the proportion of women in high positions within political parties also positively affects the likelihood of a party to support gender quotas, and Araújo (2003) attests to the role of women within parties in persuading their male colleagues to promote quotas and support female candidates. Finally, Jones (2004 on Costa Rica and 2005 on Argentina) finds that female party leaders not only impact quota adoption, but also play a crucial role in lobbying for stronger gender quotas.

Other authors have maintained that increasingly accepted notions of gender equality and the need for greater female representation in politics are what drive the adoption of gender quotas. These accounts have sometimes been based on the notion that socioeconomic development in society affects cultural orientations, which, in turn, influence policymaking. Inglehart and Norris (2003) are the most strenuous defenders of this approach. They argue that socioeconomic development impacts gender roles in a predictable way: transforming society and giving women more opportunity at all levels of governance. Furthering this view, Inglehart and Welzel (2005) argue that when a society surpasses a certain level of tolerance toward an idea that had previously been considered unacceptable (e.g. homosexuality, gender equality), an "institutional break-

through" typically takes place in order to change the rules of the game in line with cumulative value change. For instance, progressive values toward homosexuality or gender equality could result in the institutionalization of same-sex marriage and equal pay for women.

Variables and Hypotheses

As a means to test the diffusionist approach, I employ a variable that measures the proportion of countries in Latin America that have adopted a legal quota as of the year preceding the start of a given legislative cycle.[11] Data are retrieved from the *Global Database on Quotas for Women* and hand-coded. Since the adoption of gender quotas characterize an institutional innovation, the widening of institutional repertoires may be significant from a diffusionist perspective. *I therefore expect this variable to be positively related to the strength of gender quota designs.* The variable is a proportion and ranges from 0 to 1.

To measure the impact of female elites I employ a measure of the proportion of women in the single or lower house of parliament during the legislative cycle in which a gender quota bill is introduced. As previously noted, a number of scholars have pointed to the importance of female legislators in pushing for and negotiating the adoption of gender quotas. As such, *I expect the proportion of women in parliament to be positively related with the strength of gender quota designs.* This variable ranges from 0 to 1 and is measured using data from the Parline (http://www.ipu.org/parline-e/parlinesearch.asp) and the Women in National Parliaments (http://www.ipu.org/wmn-e/world.htm) databases compiled by the Inter-Parliamentary Union. I recognize that this variable is endogenous given that, while the measure may affect the first instance of gender quota adoption in a given country, gender quotas, once adopted, are also likely to influence the proportion of women in parliament. Nonetheless, models that do not control for the presence of women in parliament when assessing the strength of gender quota designs would likely suffer from omitted variable bias.

To test for the plausibility of value change theory, I employ a measure of human development. I include this variable because one of the assumptions of value change is that once societies have a social safety net that guarantees stable social goods, they become less preoccupied with material values and more concerned with the so-called postindustrial values, which include gender equality (Inglehart and Norris 2003). To test this, I use the Human Development Index (HDI) compiled by the United Nations Development Programme (UNDP).[12] The HDI is a measure of social and economic development and considers life expectancy, education, and standards of living of a given country.[13] This variable ranges from 0 to 1, wherein 1 signifies the highest level of human development and 0 the lowest. Value change theory suggests that the less preoccupied societies are with material goods, the more preoccupied they become with "postmaterial" values, including gender equality. *I thus expect HDI to be positively associated with strong gender quota designs.*

Results

This chapter explores the factors that determine the variety of 40 gender quota designs—both original and revised policies. Consequently, a number of quota designs included in my analyses are not independent of one another (i.e. they are revisions of a previous policy). As such, when I apply linear regression (OLS) to assess the potential determinants of the IGQS and its individual components, I include lagged dependent variables to address the non-independence of some of my observations.

Furthermore, since the values that a given country scores on one of the IGQS parameters (such as the variable measuring placement mandates) may be contingent upon its electoral rules, I also include a control variable for preferential voting systems. The variable is binary and a value of 0 refers to open lists and a value of 1 to closed lists. I expect this variable to be positively correlated with the IGQS, and, especially, with values on the scale of placement mandates.

Table 4.2 summarizes my results. For Model 1, which uses the IGQS as a dependent variable, only two variables produce statistically significant coefficients besides the lagged dependent variable. Surprisingly, the measure of HDI produces a negative and statistically significant coefficient. Contrary to expectations, this finding suggests that countries with higher levels of human development are more likely to enact weaker quota designs. Instead of being a result of gender egalitarian values within a given society, this relationship could instead reflect more intense international pressure placed on emerging nations that

Table 4.2 Determinants of gender quota designs (ordinary least square regression)

	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
	IGQS	*Size*	*Placement*	*Compliance*	*Office*	*Obstacles*
Lagged DV	0.373***	0.176	0.478*	0.261	0.21	0.164
	−0.089	−0.122	−0.186	−0.174	−0.137	−0.108
HDI	−19.569*	−1.939	−10.271*	−0.45	0.135	−6.734*
	−7.799	−2.666	−4.076	−3.924	−2.389	−2.9
Diffusion	−1.685	0.525	−0.245	−0.463	0.636	−2.032**
	−1.66	−0.569	−0.865	−0.841	−0.516	−0.618
Women in Parliament	18.483**	3.877	8.870**	2.908	−0.718	7.794**
	−6.323	−2.079	−3.113	−3.085	−1.724	−2.399
Closed Lists	−1.717	−0.014	−0.817	−0.755	0.417	−0.519
	−0.974	−0.334	−0.507	−0.489	−0.31	−0.365
Constant	21.827***	2.822	7.717**	2.419	1.227	7.500***
	−5.354	−1.831	−2.805	−2.689	−1.646	−1.993
R^2	0.601	0.328	0.432	0.174	0.218	0.438
N	40	40	40	40	40	40

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$

Source: Prepared by the author.

want to signal their commitment to gender equality to the international community (Bush 2011; Krook 2006: 312). Furthermore, given the low number of observations, this result could also be country-driven: Chile and Uruguay, both countries with high levels of HDI, have relatively weak quota designs.

As expected, my measure for women in parliament yields a statistically significant coefficient that is positive and that has a large magnitude. This suggests that the most important predictor of the strength of gender quota policies is pressure from female elites. The coefficient can be interpreted as follows: a 1-point increase on the scale on women's representation leads to an 18.483 increase on the scale of the IGQS. For illustrative purposes, this predicts a 10.218 value on the scale of IGQS when the proportion of women's representation in legislature is 0.025 (2.5 percent), the lowest value present in the data, and a value of 17.149 on the scale of IGQS when the proportion of women's representation in legislature is 0.400 (40 percent), the highest value present in the data, when HDI and diffusion are held at their respective means and a system has open lists (value of 0).

This relationship is in line with scholarship that points to the importance of female parliamentarians in pressing for gender quotas and often engaging in cross-partisan efforts to negotiate stronger designs, as well as accounts that narrate the efforts of female parliamentarians to reform weak policies (Piscopo 2015; Beckwith 2003; Chama 2001). My measures of diffusion and control for closed-list systems both produce negative coefficients—the opposite of what is predicted by the literature and what I hypothesized. I will come back to this later.

Model 3, assessing the determinants of placement mandates, produces results similar to those of Model 1. Again, HDI produces a negative coefficient that is statistically significant; the presence of women in parliament appears as the most important predictor of strong placement mandates, with my measure for the proportion of women in parliament producing a large and statistically significant coefficient.

Model 6, predicting the determinants of obstacles to implementation, is the one that produces the most statistically significant coefficients. HDI, diffusion, and the proportion of women in parliament all seem to impact the level of obstacles to implementation in gender quota designs. HDI, once more, produces a negative coefficient, meaning that countries with higher levels of human development are also the ones with the most loopholes or obstacles to quota implementation. For example, Chile is the country in the region with the highest level of human development at the time of a quota design and a quota design that scores a 2 on the scale of obstacles to implementation, given that its quota is temporary and only applicable for three electoral cycles.

Diffusion also produces a negative and statistically significant coefficient in Model 6. This goes against accounts that describe transnational learning and knowledge-sharing as a mechanism for strengthening quota design. In fact, the relationship suggests that learning may be leading to the opposite: knowing that gender quotas have the potential to transform the composition of elites,

incumbents design quotas with loopholes that may prevent drastic transformations and elite displacement.

This trend can be illustrated when analyzing the most recent original adoptions in the region, those of Chile (2015), El Salvador (2013), Colombia (2011), Uruguay (2009), and Nicaragua (2008). Despite the already existing trend to enact parity regimes, none of these original designs established parity: El Salvador and Colombia established quotas of 30 percent and Uruguay of 33 percent, while Chile established a quota size of 40 percent. Moreover, loopholes were present in the quota designs of three of these four cases. In Colombia, the quota was designed in such a way that it was only applicable to elections of five or more seats. In Chile and Uruguay, the quota was enacted as a temporary measure, a move that Franceschet and Piscopo (2015) deemed "problematic" and "inconsistent" with the regional policy trend.

As such, the proportion of women in parliament is the only variable that produces a statistically significant positive coefficient. This result suggests that female legislators are the main actors responsible for closing design loopholes and addressing other obstacles to the implementation of gender quotas. This finding is consistent with previous accounts of gender quota strengthening, which describe these processes as endogenous (Piscopo 2015: 39): women whose entrance in parliament was facilitated by gender quotas then work from within the system to further strengthen policy designs and tackle configurations that prevent effective policy implementation. This finding is in line with broader developments in political science literature that find that endogenous processes impact various aspects of institutional change (Rodden 2009).

Finally, Models 2, 4, and 5, predicting the determinants of size requirements, compliance mechanisms, and office applicability, respectively, do not yield any statistically significant coefficients. For Models 2 and 4, my measures for HDI, diffusion, and closed lists all produce negative, albeit not statistically significant coefficients, which conflict with my hypotheses as well as common accounts present in the literature. For Model 5, all variables produce coefficients with the direction hypothesized—except for the measure of women's descriptive representation in parliament. This may be related to the lack of controls in my models for institutional configurations relevant to this particular scale (e.g. unicameral vs. bicameral legislatures).

Furthermore, the fact that none of my variables yield significant coefficients for three of my six models suggests that some aspects of gender quota designs may not be directly influenced by any of my independent variables—or, more plausibly, that my independent variables are important for some cases, but not others. The R-squares of the models (0.328, 0.174, and 0.218, respectively) suggest that a substantial amount of the variation can be explained by the variables included in the models. Nonetheless, these are also the lowest R-squares among the models tested, meaning that there does seem to be room for considering other types of explanation that may be important in influencing levels across these scales. This may include, for instance, considering the role of non-legislative actors (Baldez 2004) and the resistance of male elites (Piscopo

2015; Paxton and Hughes 2015: 335) to the strengthening—and weakening—of gender quota designs.

Not finding statistically significant coefficients for these three models, however, is a finding in itself: Krook (2009: 20–21) poses that there may not be a single explanation for gender quota adoptions. Although it seems like there are some variables that can explain the variance in the overall strength in gender quota designs (here operationalized by the IGQS), size requirements, compliance mechanisms, and office applicability may be aspects of gender quota designs for which explanations may not be generalizable.

In sum, the only independent variable that more consistently yields statistically significant coefficients is my measure for the proportion of women in the legislature. This variable produces positive coefficients that are consistent with my expectations for all (but one) of my models and that are statistically significant for three of my six models. My other findings have been somewhat surprising. HDI produces statistically significant coefficients for three models, but the direction of the relationships found is opposite to those initially hypothesized. The measure of diffusion also produces a statistically significant coefficient for Model 6, but it has the opposite direction of that hypothesized. The binary control for closed lists, often mentioned as an institutional feature that allows for stronger gender quota designs (Schmidt 2003; Jones and Navia 1999; Jones 1998), did not confirm the anticipated results, suggesting that the existing literature may be placing too much explanatory power into an aspect that, comparatively, is not statistically relevant.

Conclusion

The first national gender quota law was introduced in Argentina in 1991. Since then, all but one country (Guatemala) in Latin America have adopted similar policies. It is widely known that although all policies in the region are instances of "legislated candidate quotas," there is great variation in the specificities of policy design. The factors that explain these divergences remain unclear, despite vast academic and public policy interest in the topic.

To allow for such analysis yet provide insight into the complexities of gender quota designs, I developed an index of gender quota strength (the IGQS) that accounts for five different aspects of gender quota designs: (1) size requirements, (2) placement mandates, (3) compliance mechanisms, (4) office applicability, and (5) obstacles to implementation. I then used this index to first map gender quota designs in the region and then test the potential explanatory power of existing explanations of gender quota design strength.

My initial suspicion was that individual aspects of gender quota policies are influenced by different sets of factors. Indeed, a pattern regarding the potential differences between individual aspects of gender quota policies seems to have emerged throughout all sections of the chapter.

When assessing the determinants of gender quota design strength, I find that my measure for women's mobilization is the one that most consistently

yields the expected results. The presence of women in parliament was found to be significantly and positively associated with the overall strength of gender quota designs, and with two characteristics deemed crucial for effective policy implementation: strengthening placement mandates and addressing design loopholes.

My other findings are more puzzling and deserve further attention. First, HDI produces negative coefficients for all of my models, except Model 5. Second, Model 2, Model 4, and Model 5 (predicting size requirements, compliance mechanisms, and office applicability, respectively) do not produce any statistically significant coefficients. Third, my measure of diffusion also produces coefficients contrary to those expected in two models. Fourth, my control variable for closed-list systems does not produce any statistically significant coefficients. These preliminary findings suggest either that the variation in the strength of gender quota designs cannot be explained in generalizable terms and that each case is rather unique to country and time contexts; or that my models are misspecified. It is possible, for instance, that explanations for the strength of original quota designs are different from those of the strength of designs resulting from revisions.

It is also plausible that my models omit important explanatory variables. For instance, some have highlighted the role of non-legislative actors in processes of gender quota adoption and strengthening. Baldez (2004) has been one of the few to place courts at the center of explanations on developments in quota policy.[14] Furthermore, the role of the executive in drafting gender quota-related legislation, providing guidance and resources to legislators supporting gender quotas, and enacting executive decrees to address policy design weaknesses has also been noted (Piscopo 2015; Krook 2009: 172; Dahlerup and Freidenvall 2011). Finally, the role of male legislators in acting strategically to prevent strong gender quotas from being designed has also been mentioned often (Piscopo 2015; Paxton and Hughes 2015: 335), but rarely empirically tested (exceptions include Bruhn 2003).

Although it may be true that there is not a one-size-fits-all formula to explain the strength of gender quota designs, four of my models show that a cross-sectional investigation of the origins of the variation in gender quota designs is a fruitful exercise that may lead to the confirmation (or refining) of existing theories developed from low-N and case study-based scholarship. The IGQS may thus present the opportunity to comparatively investigate approaches that, up to now, have not been tested widely.

Notes

1. I consider 18 democratic countries in Latin America: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

2. Possibly resulting in a situation like the one in Mexico, where parties used women as placeholders. The *Juanitas*, as they became known, would be elected and then forced to step down to give way for their male *suplentes* to take office (Vidal Correa 2014).
3. See also Baldez (2007) for a discussion of the implication of party primaries for the implementation of gender quotas in Mexico.
4. Another type of provision that could enhance candidate electability under open-list systems is the allocation of party funding for the training or campaigns of female candidates (Ferreira Rubio 2012). This type of provision is more pertinent to the campaigns of female candidates than to the process of candidate recruitment. This tendency is confirmed through factor analysis conducted with a sixth dimension for party funding.
5. Measuring the strength of subnational quotas in Argentina and Mexico, Freidenberg and Caminotti (2016) also create scales for five dimensions and assign values to each scale that range from 0 to 1, producing a measure of gender quota designs that ranges from 0 to 5, although they do not test whether this falls into one scale. My efforts and that of Freidenberg and Caminotti in creating an index to measure the strength of gender quota designs have taken place concurrently. Beyond differences in conceptualization and measurement, our indices also differ in scope: while their index addresses design characteristics of subnational quotas in two countries, mine are applied to national-level quotas across all countries in the region.
6. Observations coded as open-list systems are Argentina (1991, 1993); Brazil (1997, 2009, 2010); Chile (2015); Colombia (2011); Ecuador (2000, 2008); Peru (1997, 2000, 2003); Uruguay (2009); Venezuela (2005).
7. For a discussion on the differences between gender quotas and parity regimes, see Ibarra Cárdenas (2013) or Piscopo (2016).
8. As such, values of 0 are dropped from the current analysis. As a consequence, the current scale is 20-point and has a possible range of 1 to 20, with a midpoint of 10. Elsewhere, the Index is used to analyze both instances: cases in which gender quotas have been adopted and not been adopted; as such, the entire scale is used.
9. Factor analysis assesses the consistency of measures of complex concepts by testing whether observed variables associated with such concepts (here, gender quota designs) correlate jointly and thus fall into one sole "factor" (i.e. could potentially represent one sole latent—or unobserved—variable). It has been argued that factor analysis requires large sample sizes, given that a greater number of observations reduce the error (Comrey and Lee 1992). The total number of observations of gender quota designs in the region, however, is 40—much lower than the minimum suggested to be necessary to perform factor analysis; Gorsuch (1983) assert that the minimum sample size should be 100, Hutcheson

and Sofroniou (1999) recommend 150, and Comrey and Lee (1992) suggest a much larger minimum sample size of 500—although Arrindell and Van der Ende (1985) suggest it could be as low as 50. The data still perform well under these circumstances: the average inter-item covariance is 0.361, above the acceptable 0.300 (Tabachnick and Fidell 2007). This is particularly good given that the data are homogenous—in that they all represent positive cases of gender quotas; Kline (2014) argues that homogenous data are more likely to display lower variance and factor loadings. This is precisely what I find. When I calculate Cronbach's alpha only for (positive) cases in which gender quotas are present (N=40), I find a reliability coefficient of 0.590 and two factor loadings—the first one for which my scales of compliance mechanisms and obstacles to implementation yield factor loadings lower than the 0.500 threshold (Costello and Osborne 2005: 5). I conduct exploratory tests to assess whether these mixed results may be due to low-N and/or the homogeneity of the sample—and I find that this seems to be the case. In an exploratory test, I add just ten cases of gender quota non-adoption (representing legislative cycles during which a quota design was now enacted). This means that the N increases to 50, the very minimum Arrindell and Van der Ende (1985) argue should be used for factor analysis. In this exercise, I find that all indicators drastically improve: average inter-item covariance increases to 1.144, Cronbach's Alpha produces a scale of reliability coefficient of 0.847, and all items fall into one sole factor, with factor loadings all above 0.723 and an Eigenvalue of 3.185. The reliability of the index remains stable when I conduct factor analysis for the IGQS across 110 observations, in which the unit of analysis is legislative cycles in Latin American countries since 1990. Given this consistency, I feel confident in using the index in my analysis.

10. For the scores on individual gender quota designs and coding, see: http://www.malugatto.com.
11. This assumes that the effect of diffusion is aggregate and region-wide, and not differentiated for neighboring countries. This assumption is plausible given the various opportunities for knowledge-exchange among Latin American leaders and policymakers (e.g. Quito Consensus in 2007 and Brasília Consensus in 2010). Other authors have used similar coding schemes to operationalize variables to measure diffusion effects (e.g. Negretto 2013).
12. The data is available at http://hdr.undp.org/en/statistics/hdi/.
13. I recognize that this is a problematic proxy; HDI does not directly measure the latent concept of society-level stock of gender egalitarian values. Nonetheless, the variable has often been used as a proxy for value change theory (see, e.g.: Kouba and Poskočilová 2014; Rosen 2012; Norris 2004).
14. For further discussion on the impact of courts on quota policies, see Alanís Figueroa (in this volume).

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