PRESIDENTAS RISE: CONSEQUENCES FOR WOMEN IN CABINETS?

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Abstract: Much literature has theorized on factors contributing to women's entry into executive cabinets (Escobar-Lemmon and Taylor-Robinson 2005; Krook and O'Brien 2012; Reynolds 1999), yet no study has examined the potential impact of *presidentas*. Since 1999, women have democratically won the presidency in Latin America seven times and have named hundreds of ministers. I argue that *presidentas'* prefer to name more female ministers than male presidents, but they face a major informal constraint: the supply of female ministerial candidates. Because this supply is finite (Dewan and Myatt 2010), *presidentas* most effectively advance women's representation in cabinets under two conditions: 1. at the beginning of their terms; 2. when they are appointing a minister to a ministry associated with stereotypically feminine characteristics. I test this argument with an original dataset of 1,890 ministers of all democratically elected presidents since 1999. Model results are consistent with the theory that the impact of *presidentas* depends on these supply constraints. These findings contribute to our understanding of the conditions under which women in office "make a difference."

Although much literature has focused on women's growing representation in executive cabinets (Escobar-Lemmon and Taylor-Robinson 2005; Krook and O'Brien 2012; Reynolds 1999), one of the most understudied trends in politics and gender is the rise of *presidentas*. Since 1999, women have democratically won the presidency seven times in Latin America. This phenomenon could have a large impact on women's representation in cabinets. Much research shows that women in office "make a difference" in terms of promoting pro-women change, and a variety of explanations suggest that *presidentas* may seek to name more female ministers. Furthermore, Latin American presidents are constitutionally unconstrained in appointing ministers (Shugart and Carey 1992; Payne 2007). This leads to the general expectation that *presidentas* will nominate more *ministras* than male presidents.

How well does this expectation hold up in light of the data? Under what conditions might *presidentas* appoint more *ministras* than male presidents? To explore these questions and test predictions, I created an original dataset of 1,890 ministers appointed by all democratically elected presidents in Latin America from 1999-2014. Because cabinet shuffling is common (Escobar-Lemmon and Taylor-Robinson 2009), the dataset features two types of appointees: "inaugural" ministers nominated right after the president is elected and "end-of-term" ministers who serve immediately before the president hands power off to the successor.

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I argue that *presidentas* have preferential, network and strategic reasons to appoint more women, but they face a major informal constraint: the supply of female ministerial candidates. The "talent pool" of both male and female candidates is finite (Dewan and Myatt 2010), and the female pool is shallower than the male pool. This is not only because there are fewer women in elite politics, but also because definitions of "competency" are gendered. Thus, the female candidate pool is more likely to deplete as executives replace ministers who underperform.

These constraints on the supply of female ministerial candidates imply that *presidentas* are most effective in naming more *ministras* than male presidents under two conditions: 1. at the beginning of their administrations; 2. when the ministry portfolio is associated with stereotypically feminine portfolios. In sum, I contend that *presidentas* may have constitutional autonomy to name whoever they want to their cabinets, but they appear informally constrained by the realities of the female candidate pool. These findings contribute to our understanding of the conditions under which female leaders promote pro-women change in politics (Carroll 2001).

EXPECTED AFFINITIES BETWEEN *PRESIDENTAS* AND *MINISTRAS*

Ministerial positions offer national-level visibility and power to Latin American politicians. Latin American ministers draft, promote and execute legislation, and cabinets are recruiting grounds for future presidential candidates. Today women comprise approximately 20 percent of the region's ministerial posts. Enhanced descriptive representation in cabinets could have important impacts on other forms of women's representation (Pitkin 1967). Theorists and empiricists have long emphasized relationships between a greater female presence in government, policy outcomes favoring women and increased political engagement among female citizens (Atkeson 2003; Mansbridge 2003; Schwindt-Bayer 2010; Schwindt-Bayer and Mishler 2005). It therefore is substantively important to study the gender composition of executive cabinets because an enhanced female presence could improve women's representation more generally.

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Several studies suggest that barriers to women's entry into cabinets are slowly eroding (Krook and O'Brien 2012; Reynolds 1999). In part because female presidents are a relatively new phenomenon, research on ministerial appointments has not yet explored how presidents' gender could affect their decisions to name female ministers. Three factors – preferences, networks and strategies – explain why *presidentas* may accelerate the trend towards greater female incorporation into presidential cabinets.

First, existing literature – developed primarily from Western European cases of parliamentary systems – suggests that (implicitly male) executives' personal preferences are key to understanding their appointment decisions. Executives face high levels of uncertainty about appointees' future performance. Problems of adverse selection and moral hazard arise when executives delegate major responsibilities to their ministers (Huber and Martinez 2008; Indridason and Kam 2008). Because of these problems, extant scholarship tends to conclude that executives seek loyal, like-minded ministers – that is, ministers who share their policy concerns. Perceptions of "like-mindedness" may vary according to politicians' gender. Female politicians often share common experiences because they are members of a historically marginalized group – a group that was (and often continues to be) excluded from politics (Williams 1998). Elite female politicians therefore may be more likely to share similar policy stances with *presidentas*, and thus *presidentas* may prefer to female to male ministers a priori.

Secondly, *presidentas'* political networks may contain a greater proportion of women than male presidents' networks. The sociological principle of homophily leads to this prediction (Marsden 1988; McPherson and Smith-Loving 1986) as well as a literature on gender and political recruiting networks (Crowder-Meyer 2013). Latin American presidents in multi-party and coalition settings often have to allocate cabinet positions according to party membership or in exchange for political favors (Amorim Neto 2006; Gallardo-Martinez 2012). The fact that appointment decisions are based on informal rules of patronage and cronyism further suggests the relevance of personal ties. Thus, even if *presidentas* do not prefer *a priori* to name women, they may end up appointing more than male presidents because of the different gender composition of their political networks.

Finally, strategic factors also lead to the expectation that *presidentas* are more likely to appoint *ministras*. Since *presidentas* are democratically elected by popular vote, they may interpret their own mandates as demands for a greater presence of women in politics. Male presidents would find it difficult interpret their mandates in a similar fashion. *Presidentas* – to a greater extent than their male counterparts – may strategically appoint more *ministras* in order to satisfy a perceived popular demand for enhanced female leadership.

In sum, preferential, network and strategic explanations all lead to the general prediction that *presidentas* will attempt to name more *ministras* than male presidents. Importantly, *presidentas* have no constitutional restrictions impeding their attempts to name more women (Shugart and Carey 1992; Payne 2007).[i] Latin American presidents – in contrast to U.S. presidents – are not required to obtain approval from Congress.[ii] *Presidentes* can choose their ministers from anywhere – unlike prime ministers who often have to draw ministers exclusively from parliament. *Presidentas*, nevertheless, are not free to name as many women as they would like. The next section will outline the major informal constraint on their appointment decisions: the female supply.

EXPECTED CONSTRAINTS: CHARACTERISTICS OF THE FEMALE SUPPLY

In this section, I contend that the supply of female ministerial candidates depends on three factors: 1. the quantity of women with elite political experience; 2. whether the president is recently elected or about to hand off power; 3. gender stereotypes associated with the ministerial portfolio. First, executives tend to seek ministerial candidates with political experience. Measures of the supply of elite female politicians have proven to be some of the best predictors of women's presence in executive cabinets (Arriola and Johnson 2014; Escobar-Lemmon and Taylor-Robinson 2005; Krook and O'Brien 2012). From 1999-2014, women occupied about 19 percent of lower-house seats and 20 percent of ministerial posts in Latin America (IPU 2014; Central Intelligence Agency 2000-2014). Figure 1 shows a slight upward trend in both indicators.

<Insert Figure 1>

In addition to the overall quantity of elite female politicians, the supply of ministerial candidates varies over the course of a presidential administration. Executives routinely replace ministers who unexpectedly underperform or become implicated in a scandal. Escobar-Lemmon and Taylor-Robinson (2009) found that ministerial careers in Latin America last on average about 2.2 years. Dewan and Myatt (2010) have formalized the argument that the pool for all ministerial candidates is largest at the beginning of executive terms and eventually can deplete. They argue that this tendency toward depletion affects the overall quality of ministers. Because replacements happen relatively quickly and the candidate pool is finite, by the end of their administrations, executives are often forced to substitute some of their once-preferred ministers with their second- and third-choice candidates. For *presidentas* who may seek to name more women, this would be particularly problematic. The pool of female candidates is usually shallower than the pool of male candidates and thus more likely to diminish quickly.

Third, the gendered nature of a ministerial portfolio affects the size of the female candidate pool specific to that ministry. Executives seek "competent" appointees (Huber and Martinez 2008), and "competency" can be interpreted in gendered ways. Certain ministerial portfolios are more closely associated with stereotypically feminine characteristics – such as education and health – while other ministries are more associated with stereotypically masculine characteristics – such as finance and agriculture (Escobar-Lemmon and Taylor-Robinson 2009; Krook and O'Brien 2012). Women are more likely to be deemed competent or well-suited to lead "feminine" ministries. This may be because women actually do have more expertise in stereotypically feminine areas, or because political elites infer this without much objective evidence and thus discriminate unfairly. Regardless, "feminine" ministries are more likely to have a deeper pool of female candidates than "masculine" or "neutral" ministries.

The theory outlined generates three observable implications. Preferential, network and strategic explanations all converge on this paper's general prediction: *presidentas* are more likely to name *ministras* than male presidents. Under what conditions are *presidentas* most likely to appoint more *ministras* than male presidents? I have argued that *presidentas* are more likely to differ from male presidents in terms of their tendency to name *ministras* when the supply of female ministerial candidates

is greatest. The supply of all ministerial candidates diminishes as executives fire, shuffle and replace ministers. Therefore the theory's second implication is that *presidentas* will "make a difference" right after their election – when they decide on appointing ministers to their inaugural cabinets. *Presidentas* are less likely to differ from male presidents at the end of their terms when the overall supply of female ministerial candidates approximates or has reached depletion. Finally, women are more likely to be deemed competent in "feminine" policy areas, and thus the pool of female ministerial candidates for "feminine" ministries is larger. The third observable implication of my theory therefore is that *presidentas* are more likely to differ from male presidents when deciding whom to appoint to this kind of ministry.

MODELING AND DATA

This study features an original dataset of ministers appointed by all democratically elected presidents in 18 Latin American countries from 1999-2014. The online CIA World Leaders Factbook lists minister names and ministries by monthly intervals, and I sampled both inaugural and end-of-term cabinets (Central Intelligence Agency 2000-2014). Table 1 lists the presidents included in the study. Eight presidents were re-elected during the 15-year period.[iii] To help preserve balance among the number of observations per president, I only include the first inaugural term for each president and their ministers who appear right before they hand power off to their successor.[iv]

<Insert Table 1>

The main objectives are to answer two questions: 1. Are *presidentas* more likely to appoint women than male presidents? 2. Do *presidentas* appoint more women? The first set of models estimates the impact of the presence of a *presidenta* on the probability of observing a female minister. I employ logistic regression since the dependent variable is the minister's gender coded as 0 for male and 1 for female. The unit of analysis here is the minister, and these models allow examination of minister-level variation, such as whether the gendered nature of a ministry (feminine, masculine or neutral) affects the impact of a *presidenta* on the probability of observing a female minister. Because the same presidents

appoint all of their ministers, models feature random intercepts for presidents. Fifty-four is a large enough number to consider the sample of presidents as random and approximately normally distributed.[v]

Since almost all male presidents in the dataset appoint at least one female minister, the second question – whether *presidentas* appoint more *ministras* – is perhaps more relevant for this study. The second set of models estimates the impact of *presidentas* on the number of women in an executive cabinet. These models employ Poisson regression because the dependent variable is a count of women. The unit of analysis is the cabinet, and therefore these models cannot be used to examine minister-level variation, such as the type of ministry.

For both sets of models, I control for variables that could mediate or confound the relationship between *presidentas* and *ministras*. First, female presidents could be elected in times and places characterized by greater quantities of elite female politicians. Thus, models that fail to control for the female supply may detect a spurious relationship. I operationalize "female supply" with two variables: the percent female in the lower house and the percent female of the predecessor's end-of-term cabinet. Including the latter variable is routine in models of female appointments (Arriola and Johnson 2014; Escobar-Lemmon and Taylor-Robinson 2005; Krook and O'Brien 2012). Data on the percent female in the lower house comes from the Inter-Parliamentary Union (IPU 2014). I include the second measure of supply because most of the *presidentas* in the sample were ministers in their predecessors' cabinets and identified with the same party. It is likely that *presidentas* come from countries that were already on a path toward greater female presence in cabinets, and it is therefore crucial to control for this variable.

Models also control for certain ministry characteristics. Table 2 lists the ministries according to prestige and gender categories. Women are more likely to be appointed to low-prestige ministries – that is, ministries with fewer resources and less media attention. To create the variable *ministry prestige*, I coded low prestige ministries as "1," medium prestige ministries as "2" and high prestige ministries as "3" according to Escobar-Lemmon and Taylor-Robinson's (2005) classification. Second, women are also more likely to be appointed to ministries with portfolios aligned with traditional stereotypes of women. I used Krook and O'Brien's (2012) gender stereotype classification and coded each ministry as -1 if

"feminine," 0 if "neutral" and 1 if "masculine" to create the variable *ministry gender*. Only the logit models – which feature minister-level data – employ the *ministry prestige* and *ministry gender* variables. These categories tend to overlap, but do not perfectly correlate (p=0.53).

<Insert Table 2>

The Poisson models contain exclusively cabinet-level data and thus require slightly different variables. Cabinets vary cross-nationally and temporally in terms of the number of "high," "medium," and "low" prestige ministries and the number of "feminine," "masculine," and "neutral" ministries. I totaled the ministry prestige and ministry gender scores and averaged them for each cabinet to create the variables *cabinet prestige score* and *cabinet gender score*. Higher prestige scores mean that the cabinets contain a greater proportion of more prestigious cabinet positions. Higher gender scores means the cabinets are more "masculine" in nature. These variables are potential confounders because *presidentas* may happen to govern cabinets with lower cabinet prestige or gender scores.

A third relevant characteristic of cabinets is their size. Cabinets range from 11 to 38 ministers, and they tend to expand over time. Given that presidents often face pressure to incorporate women, male presidents with small cabinets will be forced to include at least one *ministra* (Escobar-Lemmon and Taylor-Robinson 2005). Male presidents with larger cabinets enjoy more latitude in selecting more men. Male presidents nominated approximately 87 percent of the sample's ministers, and I therefore expect the probability of observing a female minister to decline as the cabinet size increases.

A final potential confounder of the relationship between *presidentas* and *ministras* is ideology. In Latin America, ideology is generally conceived of as a left-right continuum according to policy stances on the degree of state intervention in the economy (Kitschelt 2010). *Presidentas* may appoint more women not because of their common gender but because of their common political beliefs. Three *presidentas* were classified as "left" (Bachelet, Fernández and Rousseff) while one was classified as "far right" (Moscoso) and another as "center" (Chinchilla). By this measure, the *presidentas* tend to lean to the left, and some scholarship suggests that left-leaning presidents are more likely to appoint women (Levitsky and Roberts 2011). However, regional public opinion polls show that female citizens in Latin America

self-identify as more conservative, and thus conservative presidents could strive to please women by naming more *ministras* (LAPOP 2004-2012). Since the relationship between ideology and female appointments may be non-linear, I include dummies rather than a single ordinal variable. Table 1 lists each president's ideology, which is coded according to Murillo, Oliveros and Vaishnav's (2010) five-point scale. "Far left" corresponds to -10, "left" to -5, "center" to 0, "right" to 5 and "far right" to 10.

Finally, time may confound the relationship between *presidentas* and *ministras*. *Presidentas* tend to appear in the sample at later time periods. The probability of observing *ministras* increases over time as well, so I also control for the year the minister was appointed.

RESULTS AND DISCUSSION

Table 3 displays the results for the logistic regressions with random intercepts for presidents. The full model includes the entire sample of 1,890 ministers and all control variables. This model tests the general prediction that *presidentas* tend to appoint more female ministers than male presidents.

$H_{presidenta}$: The probability of appointing a female minister increases when the president is female.

<Insert Table 3>

The *presidenta* coefficient for the full model is positive and significant, and this result supports the general prediction that *presidentas* enhance women's presence in executive cabinets. However, the coefficient barely reaches the threshold for significance (p=0.099). The finding therefore begs the question of the conditions under which *presidentas* make a difference in terms of improving women's representation in cabinets. This question is addressed by the other models, which are examined later.

As expected for the full model, both supply variables – percent female in the lower house and percent female in the predecessor's cabinet – are positive and significant. This is consistent with my general argument that underscores the relevance of supply factors. The inaugural dummy is also positive and significant, and this suggests that presidents tend to name more women to their cabinets at the beginning of their terms – when the public is most likely to notice. Ministry prestige and ministry gender coefficients are negative and significant. The higher the ministry's prestige and the more "masculine" it

is, the lower the probability of observing a female minister. The magnitude of the logit coefficient for ministry gender is over twice as large as the ministry prestige coefficient. This suggests that ministry gender seems to be the more important ministry characteristic variable in predicting the presence of a *ministra*.

The cabinet size coefficient is negative and significant, a result which accords with the expectation that the larger the size the more (mostly male) presidents are free to appoint male ministers. The year appointed variable is not significant; thus time does not influence the probability of appointing a *ministra* above and beyond the other variables, many of which are correlated with time.

The final variables to analyze in the full model are the presidential ideology dummies with the baseline category designated as "center." The far left dummy is positive and significant, and this is consistent with the intuition that far left presidents are more likely to appoint women. Perhaps more surprising is the observation that the left dummy is not significant, but the right dummy is positive and significant. The finding that far left and right presidents tend to name more women may surprise some scholars of Latin American politics. Conservative parties are often believed to promote fewer women-friendly policies than left-leaning parties. However, it could also be that conservative presidents attempt to appeal more to women because Latin American women generally self-identify as more conservative than men (Latin American Public Opinion Project 2004-12).[vi]

Importantly, these results suggest that the impact of *presidentas* is most accurately conceived as one of *acceleration* towards greater female representation in cabinets rather than initiation of such a trend. Male presidents in Latin America slowly have been nominating more women over the past three decades (Escobar-Lemmon and Taylor Robinson 2009). The correlation between year appointed and minister gender for male presidents in this 15-year dataset is low but positive (p= 0.09). Demand from domestic and international audiences for more female leadership along with a growing pool of female candidates may spur male presidents to name more women (Towns 2012). When the full model is run on just male presidents, the coefficient for the inaugural dummy appears positive and significant. Consistent with the

demand explanation, the results showed that presidents are more likely to name women to inaugural cabinets – when the public is most likely to notice and care – rather than their end-of-term cabinets.

In light of the positive result for a *presidenta* impact, we can now ask: under what conditions are *presidentas* most likely to make a difference? The second logistic model includes only the observations of ministers appointed to inaugural cabinets and a third features only the ministers that appear in the end-of-term cabinets. These models test the hypotheses derived from the theory of the supply of female ministerial candidates. Because the pool of female ministerial candidates is largest at the beginning of the executives' term, *presidentas* are most effective in "making a difference" in women's representation in cabinets right after they are elected. Because the supply diminishes as presidents replace ministers over the course of their administration, *presidentas* are less likely to make a difference when they are about to hand power off to their successor.

$H_{inaugural}$: The presence of a *presidenta* increases the probability of appointing a female minister when the minister is appointed to an inaugural cabinet.

$H_{endofterm}$: The presence of a *presidenta* does not increase the probability of appointing a female minister when the minister appears in an end-of-term cabinet.

The *presidenta* coefficient for the inaugural model is positive and highly significant, but not significant in the end-of-term model. These results are consistent with both hypotheses. The rest of the results for the inaugural model are similar to those in the full model. Both supply variables are positive and significant. The ministry prestige and gender variables are also negative and significant. The cabinet size variable is not significant, but close (p=0.12). The year variable is not significant. In terms of presidential ideology, the results are very similar to the full model as well. Only the far left and right dummies are positive and significant. The remaining results for the end-of-term model are similar those in the inaugural model with a few exceptions: the percent female in the lower house is not significant; the year appointed variable is positive and significant; and the right dummy is not significant.

A fourth model features only ministers appointed to stereotypically feminine ministries (359 observations), and a fifth model includes ministers named to stereotypically masculine and neutral

ministries (1,528 observations). These models test the hypothesis from the supply theory that the presence of a *presidenta* augments the probability of observing a *ministra* for "feminine" ministries, but not "masculine" and "neutral" ministries. Because the pool of female ministerial candidates is larger for ministries associated with stereotypically feminine characteristics – such as education and health, *presidentas* should make a difference when appointing ministers to these kinds of ministries. *Presidenta* selection decisions are indistinguishable from male presidents' decisions when we only examine non-feminine ministries – such as agriculture and finance.

$H_{feminine}$: The probability of appointing a female minister to a "feminine" ministry increases when the president is female.

$H_{masculineneutral}$: The presence of a *presidenta* exerts no impact on the probability of appointing a female minister to a "masculine" or "neutral" ministry.

Results are consistent with the above hypotheses: the *presidenta* coefficient is positive and significant for the feminine model, but not for the masculine/neutral model. For the feminine model, the supply variables of percent female in the lower house and the percent female in the predecessor's cabinet are not significant. Ministry prestige and cabinet size are significant and negative. Three presidential ideology variables are positive and significant – far left, left and right. This suggests that presidents with these ideologies are effective in naming more women to their cabinets than presidents with very conservative ideologies.

For the masculine/neutral model, the percent female in the predecessor's cabinet is significant and positive, but the percent female in the lower house is not. Interestingly, the inaugural dummy is significant in the masculine/neutral model, but it is not significant in the feminine model. This suggests that presidents name women to masculine/neutral ministries at the beginning of their terms when the public is most likely to notice. As in the other models, ministry prestige is negative and significant in the masculine/neutral model. The only other significant variable is the far left dummy.

Table 4 presents the results for the second set of models. These models employ Poisson regression to answer the question: Do *presidentas* name more women than male presidents? This question

is probably the more relevant test of my theory because only one male president in the sample named no women to his cabinet. The first Poisson model includes all the cabinets (102 observations) while the second and third models include the inaugural and end-of-term cabinets (55 and 47 observations), respectively. These models cannot test whether the *presidenta* impact also depends on the ministry's gender because the data is cabinet-level rather than minister-level.

<Insert Table 4>

The *presidenta* coefficient is positive and significant in the full Poisson model, and this is consistent with the prediction that *presidentas* name more women to their cabinets, ceteris paribus. In terms of supply, the percent female in the lower house is positive and significant, but the percent female in the predecessor's cabinet is not significant (p=0.15). In terms of the cabinet characteristics, the inaugural dummy is positive and significant and the cabinet gender score is negative and significant. This provides evidence that presidents tend to name more women to their inaugural cabinets and that the more "masculine" the cabinet, the lower the number of appointed women. Cabinet size is not significant, but year coefficient is and the sign is in the expected direction. This supports the intuition that the later the cabinet, the more women will be appointed. In terms of presidential ideology, only the far left dummy is positive and significant. The right dummy is close to reaching significance (p=0.13).

The results for the inaugural and end-of-term cabinets reveal evidence consistent with the notion that *presidentas* are more likely to make a difference when the female ministerial pool is deepest. The *presidenta* coefficient is positive and significant for the inaugural cabinets, but it is not significant for the end-of-term cabinets. For the inaugural model, both supply variables are positive and significant, and no other variables are significant. For the end-of-term model, only the cabinet gender score, year appointed and far left variables are significant, and all of these coefficient signs are in the expected directions.

In sum, these statistical results are consistent with my theoretical argument that *presidentas* "make a difference" when the pool of female candidates is deepest – namely at the beginning of their terms and for ministries with "feminine" portfolios. *Presidentas* augment the probability of appointing a female minister when the sample includes only inaugural observations and when the sample includes only

"feminine" ministry observations. *Presidentas* do not augment the probability of observing a female minister when we examine end-of-term and masculine/neutral ministries. The second set of models featured a different version of the dependent variable. Instead of a minister-level, binary dependent variable, these Poisson models featured a cabinet-level, count variable. These results showed that *presidentas* named more women to their inaugural cabinets, but *presidenta's* end-of-term cabinets do not feature more women than male presidents' end-of-term cabinets.

An examination of the gender composition of *presidentas*' inaugural and end-of-term cabinets also corroborates the paper's main argument. Table 5 lists the *presidentas* and the number of *ministras* in their inaugural and end-of-term cabinets. Moscoso began her term with three *ministras* and ended her term with two; Chinchilla named nine women to her inaugural cabinet, but by the end of her term she only had four; Rousseff – who is up for re-election in October 2014 – began her term with seven *ministras* and as of September 2014 she only has five. Bachelet began and ended her term with nine *ministras*, but she added ministries, so the percent female in her cabinet favored men by the end of her first administration. Cristina Fernández is the only *presidenta* who did not experience a drop in the proportion of women in her cabinet. Despite the fact that she – like virtually all executives – has reshuffled her cabinet, she named three *ministras* to her inaugural cabinet and continues to have three today.[vii]

<Insert Table 5>

An examination of the random effects in the full logit model will reveal the amount of variance that is explained exclusively by presidents' idiosyncrasies. After controlling for the variables in the models, the results show that individual presidencies only account for one percent of the remaining variance. The relative impact of presidents' idiosyncrasies therefore appears tiny compared to the supply and demand variables included in the full model. Nevertheless, it is worth examining some of the effects of specific *presidentas* on the probability of appointing a woman.

The last column of Table 5 lists the random effects for each *presidenta*. Bachelet, who was the first Latin American president to assemble a gender-parity cabinet in 2006 – is the *presidenta* who exerts

the largest positive impact on the probability of observing a *ministra*. The Bachelet effect is 0.13, again controlling for all other factors, including presidents' gender. Moscoso and Rousseff exert a small negative effect (-0.02 and -0.05, respectively) while Chinchilla exerts a small, positive effect (0.03). Argentina's Cristina Fernández is the *presidenta* with the largest negative effect (-0.07). Being named by Fernández lowers the probability of being a female minister by about 7 percent. It is important to emphasize that these president random effects are small and the majority of the variance for these *presidentas* is adequately explained by the model variables – including, of course, presidents' gender.

CONCLUSIONS

In light of the fact that the study includes just eleven cabinets headed by women, how generalizable are these findings through time and throughout the world?[viii] Will female heads-of-state in the future continue to accelerate improvements in women's numerical representation in cabinets? There are theoretical reasons to expect future *presidentas* to advance women's representation more than what this first generation of *presidentas* have already done. Provided that the supply of female ministerial candidates continues to expand, we may find that future *presidentas* will assimilate less to the male-established status quo than this first generation of *presidentas*, who may be more constrained by the realities of a finite and shallow supply of female ministerial candidates. This study's findings therefore will likely generalize to future time periods.

Nevertheless, the findings may not generalize as well to political systems where the executive is more constitutionally constrained in appointing ministers. For example, in some parliamentary systems, prime ministers must choose their cabinets from a more restricted pool of members of Parliament. Female prime ministers may be more restricted in their ability to name women, and thus less able to advance women's representation in cabinets. However the fundamental argument that female leaders with appointment prerogatives are informally constrained by the realities of the supply of female candidates would still hold. In countries where the supply is larger, female leaders will have a greater opportunity to advance women's numerical representation in the executive branch.

This is the first study of women in cabinets to consider the relevance of executives' gender. Extant literature has assumed that the appointers' gender does not matter, but I proposed several theoretical reasons to expect *presidentas* to prefer selecting more women. The first was that female ministers are more likely to share the same policy concerns than male ministers. For presidents who need ministers to draft, promote and execute legislation, like-mindedness is an important quality. A second reason was that *presidentas* may bring different kinds of political networks to the presidency – *presidentas'* networks may feature more women than male presidents' networks. A third explanation was that *presidentas* interpret their own mandates as popular calls for a greater female presence in government. Therefore, a fruitful avenue for future research would attempt to test which of these explanations – preferences, networks or strategies – drive the results or whether all of these factors are at work. A study of the causal mechanisms linking *presidentas* to increased female presence in executive cabinets would likely involve in-depth case studies, archival work and fieldwork rather than the cross-national, statistical approach employed in this study.

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Figure 1: Percent *Ministras* Appointed and *Diputadas* Elected 1999-2014

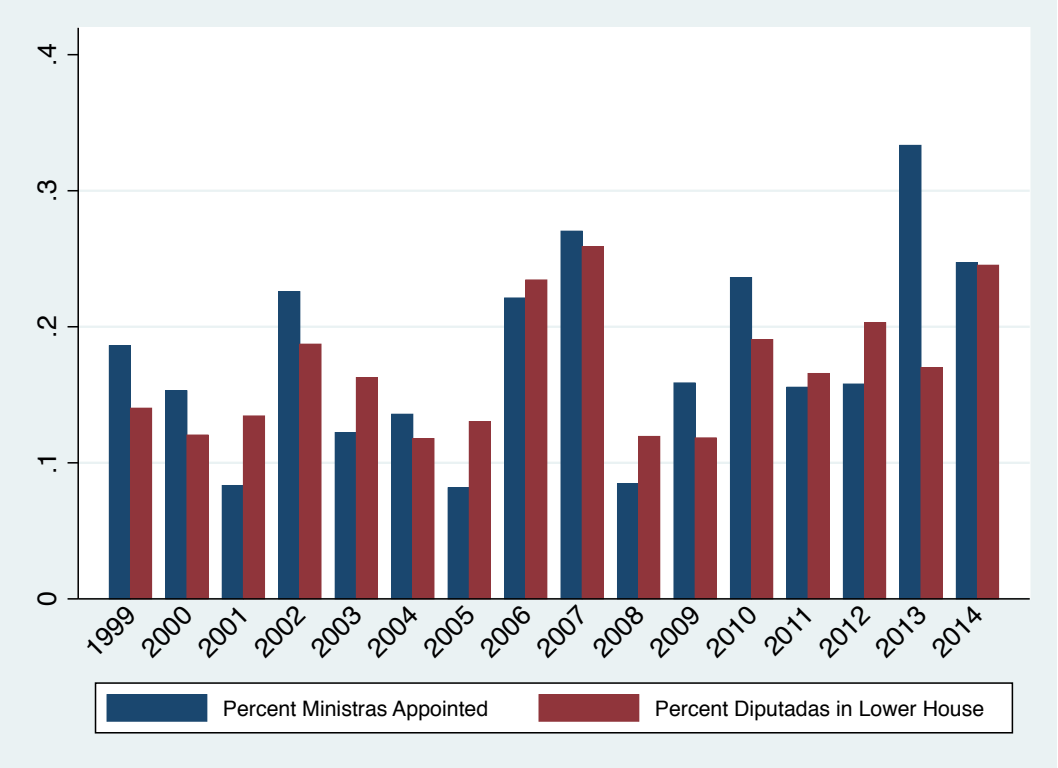

Figure 2: President Random Effects

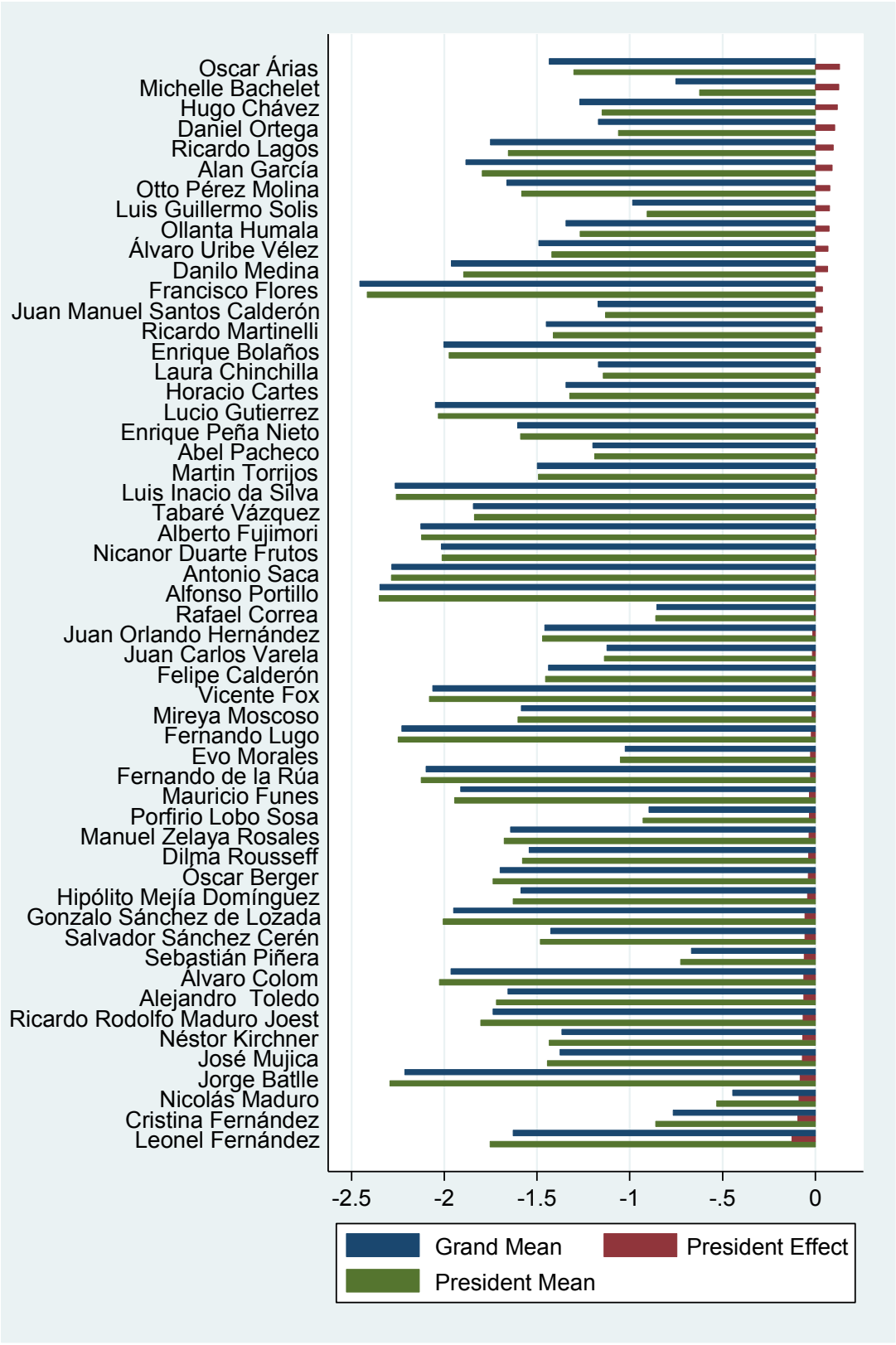

Table 1: Elected Latin American Presidents 1999-2014

Country	President[2]	Inauguration	Ideology
Mexico	Vicente Fox	2000	Far right
Mexico	Felipe Calderón	2006	Right
Mexico	Enrique Peña Nieto	2012	Center
Guatemala	Alfonso Portillo	2000	Far right
Guatemala	Óscar Berger	2004	Right
Guatemala	Álvaro Colom	2008	Left
Guatemala	Otto Pérez Molina	2012	Right
El Salvador	Francisco Flores	1999	Far right
El Salvador	Antonio Saca	2004	Far right
El Salvador	Mauricio Funes	2009	Left
El Salvador	Salvador Sánchez Cerén	2014	Left
Honduras	Ricardo Maduro	2002	Right
Honduras	Manuel Zelaya Rosales	2006	Left
Honduras	Porfirio Lobo Sosa	2010	Right
Honduras	Juan Orlando Hernández	2014	Far right
Nicaragua	Enrique Bolaños	2002	Far right
Nicaragua	Daniel Ortega	2007, 2012	Left
Costa Rica	Abel Pacheco	2002	Right
Costa Rica	Oscar Árias	2006	Center
Costa Rica	Laura Chinchilla	2010	Center
Costa Rica	Luis Guillermo Solis	2014	Right
Panama	Mireya Moscoso	1999	Far right
Panama	Martin Torrijos	2004	Left
Panama	Ricardo Martinelli	2009	Right
Panama	Juan Carlos Varela	2014	Far right
Colombia	Álvaro Uribe	2002, 2006	Right
Colombia	Juan Manuel Santos	2010, 2014	Right
Ecuador	Lucio Gutierrez	2003	Left
Ecuador	Rafael Correa	2007, 2009, 2013	Far left
Bolivia	Gonzalo Sánchez de Lozada	2002	Right
Bolivia	Evo Morales	2006, 2010	Far left

[2] Included are just two presidential terms of Venezuela's Hugo Chavez: 2001 and 2007. Chavez died in office in 2013, shortly after he was re-elected to a fourth term.

Country	President	Inauguration	Ideology
Peru	Alberto Fujimori[3]	2000	Far right
Peru	Alejandro Toledo	2001	Right
Peru	Alan García	2006	Left
Peru	Ollanta Humala	2011	Left
Paraguay	Nicanor Duarte Frutos	2003	Right
Paraguay	Fernando Lugo	2008	Left
Paraguay	Horacio Cartes	2013	Right
Chile	Ricardo Lagos	2000	Left
Chile	Michelle Bachelet	2006, 2014	Left
Chile	Sebastián Piñera	2010	Right
Chile	Michelle Bachelet	2014	Left
Uruguay	Jorge Batlle	2000	Center
Uruguay	Tabaré Vázquez	2005	Left
Uruguay	José Mujica	2010	Left
Brazil	Luiz Inácio da Silva	2003, 2007	Left
Brazil	Dilma Rousseff	2011	Left
Venezuela	Hugo Chávez	2001, 2007	Far left
Venezuela	Nicolás Maduro	2013	Far left
Argentina	Fernando de la Rúa	1999	Center
Argentina	Néstor Kirchner	2003	Left
Argentina	Cristina Fernández	2007, 2011	Left
Dom. Rep.	Hipólito Mejía	2000	Left
Dom. Rep.	Leonel Fernández	2004	Center
Dom. Rep.	Danilo Medina	2012	Center

[3] Fujimori fled to Japan four months after his second re-election. Only his 2000 inaugural cabinet is included in the analysis.

Table 2: Ministerial Portfolios by Prestige and Gender

High	Medium	Low
Chief of Staff, Defense, Economy, Finance, Foreign Affairs, Government, Interior, Prime Minister, Presidency, Vice-President	Agriculture, Attorney General, Cities/Local Government, Comptroller General, Communications, Corruption, Education, Energy, Health, Heritage, Housing, Industry, Justice, Labor, Mining, Penitentiary, Planning, Public Works, Social Services, Transportation	Culture, Environment, Human Rights, Indigenous Affairs, Nutrition, Sports, Technology, Tourism, Without Portfolio, Youth, Women's Affairs

Masculine	Neutral/Ambiguous	Feminine
Agriculture, Communications, Defense, Economy, Finance, Foreign Affairs**,** Government/Interior, Industry, Labor, Mining, Prime Minister, Public Works, Security, Technology, Transportation, Vice-President	Attorney General, Chief of Staff, Cities/Local Governments, Comptroller General, Energy, Environment, Housing, Justice, Penitentiary, Planning, Presidency, Sports, Tourism, Without Portfolio	Culture, Corruption, Education, Health, Heritage, Human Rights, Indigenous Affairs, Nutrition, Social Services, Youth, Women's Affairs

Source: Escobar-Lemmon and Taylor-Robinson 2005; Krook and O'Brien 2012

Table 3: Logit Results with Random Intercepts for President

	Full Model	Inaugural	End-of-Term	Feminine	Masculine/Neutral
Presidenta	0.41*	0.72***	-0.04	0.89**	0.20
	0.25	0.26	0.36	0.44	0.29
% Fem. in Lower House	1.38*	2.48***	-0.11	1.82	1.37
	0.78	0.98	1.04	1.42	0.88
% Fem. Predecessor	1.87**	2.01**	2.72**	1.25	2.01**
	0.83	0.96	1.24	1.48	0.92
Inaugural	0.32**	--	--	0.16	0.39**
	0.15	--	--	0.27	0.18
Ministry Prestige	-0.31***	-0.33**	-0.30*	-1.20***	-0.38***
	0.11	0.15	0.17	0.27	0.11
Ministry Gender	-0.82***	-0.72***	-0.93***	--	--
	0.09	0.12	0.13	--	--
Cabinet Size	-0.03*	-0.03	-0.03	-0.04*	-0.03
	0.02	0.02	0.02	0.03	0.02
Year Appointed	0.03	-0.001	0.09***	0.03	0.03
	0.02	0.02	0.03	0.03	0.02
Far Left	1.00***	0.90**	1.16**	1.13**	0.94***
	0.31	0.35	0.45	0.57	0.33
Left	0.30	0.24	0.36	0.77*	0.07
	0.24	0.27	0.34	0.43	0.27
Right	0.46*	0.55*	0.23	0.78*	0.28
	0.25	0.28	0.36	0.45	0.28
Far Right	-0.04	0.01	-0.06	0.52	-0.34
	0.31	0.34	0.52	0.54	0.36
N	1,890	1,010	880	359	1,528
Random Intercept by President	0.25	0.000	0.000	0.35	0.22
	0.10	0.30	0.27	0.25	0.16

$^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$

Table 4: Poisson Results

	Full Model	Inaugural	End-of-Term
Presidenta	0.25*	0.49**	0.10
	0.18	0.23	0.32
% Female in Legislature	0.97*	1.61**	0.08
	0.57	0.81	0.87
% Fem. Predecessor	0.86	1.56*	1.17
	0.59	0.83	1.04
Inaugural	0.31**	--	--
	0.12	--	--
Cab. Prestige Score	-0.74	-0.73	-1.26
	0.67	0.98	1.05
Cab. Gender Score	-2.09***	0.31	-3.09***
	0.74	1.19	1.04
Cabinet Size	0.001	0.03	-0.02
	0.02	0.02	0.03
Year Appointed	0.03**	-0.001	0.07**
	0.01	0.02	0.03
Far Left	0.58***	0.39	0.73*
	0.22	0.31	0.39
Left	0.12	0.03	0.11
	0.18	0.24	0.29
Right	0.28	0.23	0.12
	0.19	0.25	0.31
Far Right	0.01	-0.15	-0.06
	0.25	0.32	0.46
N	102	55	47

$^{*}p < 0.10, ^{**}p < 0.05, ^{***}p < 0.01$

Table 5: ***Presidentas and Ministras***

Presidenta	Inaugural (%)	End-of-Term (%)	Random Effect
Mireya Moscoso	3 (18.75)	2 (12.50)	-0.02
Michelle Bachelet	9 (50.00)	9 (40.91)	0.13
Cristina Fernández	3 (23.08)	3 (23.08)	-0.07
Laura Chinchilla	9 (40.91)	4(16.00)	0.03
Dilma Rousseff	7 (20.59)	5 (13.16)	-0.05

Appendix

Table 1: Descriptive Statistics of Variables

	Mean	S.D.	Min.	Max.	N
Presidenta	0.13	0.34	0	1	1,890
% Female in Legislature	0.19	0.10	0.07	0.42	1,890
% Female in Predecessor's Cabinet	0.13	0.10	0	0.41	1,890
Inaugural	0.53	0.50	0	1	1,890
Ministry Prestige	2.18	0.67	1	3	1,890
Ministry Gender	0.31	0.77	-1	1	1,890
Cabinet Size	19.80	5.82	11	38	1,890
Year Appointed	2008.28	4.72	1999	2014	1,890
Far Left	0.09	0.28	0	1	1,890
Left	0.36	0.37	0	1	1,890
Center	0.15	0.35	0	1	1,890
Right	0.26	0.27	0	1	1,890
Far Right	0.13	0.35	0	1	1,890
Cabinet Prestige Score	0.33	0.10	0.11	0.58	102
Cabinet Gender Score	2.22	0.15	1.76	2.5	102

[i] Since 2000, Colombia has a 30 percent gender quota law for ministries, and the press has accused Colombia presidents of not respecting this law.

[ii] Some constitutions, such as that in Chile, allow Congress the faculty to impeach a minister. However, ministerial impeachment is extremely rare.

[iii] Álvaro Uribe, Juan Manuel Santos, Rafael Correa, Evo Morales, Michelle Bachelet, Luiz Inácio da Silva, Hugo Chávez and Cristina Fernández

[iv] Some presidents are still in power, and thus I include the current configurations for presidents who will hand power over to a successor within a year. After serving from 2006-10, Bachelet is the only president in the sample

who was re-elected at a later date. I thus include Bachelet's 2013 inaugural cabinet, but not her current cabinet configuration. All results are robust to excluding Bachelet's second inaugural cabinet.

[v] Random effects here are more useful than fixed effects because they allow for greater efficiency. An alternative estimation technique is clustering the standard errors by president. Results are robust to this estimation technique as well, but the advantage of random effects over clustered standard errors is the ability to extract more information from the data. Random effects in these models estimate the decision-making variance, which is unexplained by the control variables and thus specific to presidents. These estimates, in other words, generate baseline propensities of nominating *ministras* for each president. Figure 2 in the appendix lists the random effect of each president.

[vi] The supply of female politicians for conservative parties may also be greater, but unfortunately there is no cross-national data to test this empirically.

[vii] Fernandez's term will last through 2015.

[viii] It is important to note that the impact of *presidentas* is still positive, but not significant when the Chile is removed from the analysis. Conversely, the impact is larger and more significant when Argentina is excluded.