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Not Tokens Anymore: Expanding Equality and Integration of Women in Presidential Cabinets in the U.S. and Latin America

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Abstract:
This paper brings together analysis from several chapters in our book project about representation of women in presidential cabinets. We utilize four different benchmarks to evaluate whether genuine integration of women is occurring in presidential cabinets, comparing male and female ministers on: the types of posts they receive, legislative activity, modes of exit, and how long ministers remain in their post. Our data set is comprised of 447 ministers (all men and women of full cabinet rank) in recent cabinets in Argentina, Chile, Colombia, Costa Rica and the U.S. We find evidence that there is still a glass ceiling for women particularly regarding the Finance/Treasury post, but overall most of the evidence indicates that women are being integrated into the cabinet and that there appears to be equal treatment and that women and men are equally effective in performing their jobs at the highest level of the executive branch.

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In this paper we evaluate whether there are significant differences between men and women in presidential cabinets in terms of the kinds of posts they receive or their effectiveness once they are in the cabinet. We use several different benchmarks to assess if there appears to be genuine integration of women as ministers now that women have moved beyond token status in presidential cabinet. These benchmarks are: the types of posts women are appointed to, the legislative activity of female and male ministers, modes of exit, and how long men and women last in their post. To preview our findings, while there is still some evidence of glass ceilings for women, particularly in the Finance/Treasury portfolio, overall our analysis indicates that women are integrated into the cabinet.

Most existing studies of women in cabinets focus on the number of women appointed. That is an important topic for research, particularly given the guiding role the executive branch plays in shaping public policy and the historic exclusion, and ongoing lack of parity of women in cabinets, and because only recently has it become expected that a cabinet should contain at least one woman (Baldez 2002: 181; Htun and Jones 2001). Yet the number of women in the cabinet has been increasing, as has the diversity of portfolios held by women (Escobar-Lemmon and Taylor-Robinson 2009). Expanding numerical representation of women prompts questions about the diversity of experience and perspectives that women may be bringing to the cabinet; and about what women ministers are able to accomplish. Do the women look different than the men, or are their backgrounds the same? Are women treated the same as men in the cabinet, or are they present, but yet systematically treated differently from male ministers?

Borrelli (2002, 2010), studying the cabinets of U.S. presidents, has written about gender "desegregation" as women have come to be appointed to more than one or two token posts.[1] In recent administrations she observes evidence of "gender integration" with women receiving posts for which they have connections to department clients and their own base of political power making them less dependent on the president. Another way to study gender integration (or lack of integration) is to compare the track records of women and men once they are in the cabinet. The latter is the strategy we adopt in this paper. By so doing we can begin to explore if there is equality of men and women within the cabinet even while women still lack parity in numbers. We can explore if sex differences have diminished (or at least are not grossly evident from many of the observable measures we can obtain) as women ministers have the same credentials s men (i.e., conform to the masculine norm). At a practical level, this approach enables us to assess whether women who reach the highest levels of government get to stay in post long enough to do the job, play the same role in making policy as their male colleagues, and are as crisis-ridden as male ministers. The purpose of this paper is to pull together several observable implications of gender integration in cabinets, and to assess whether the outcomes we observe indicate sex differences, or the track records of the women match up to those of the men.

Data and analysis

As explained above, our goal is to evaluate whether there are significant sex differences in the treatment or effectiveness of cabinet ministers. We test for these differences with four distinct benchmarks – measures of different observable outcomes within cabinets. For each benchmark we evaluate whether there are significant sex differences, first using a simple

[1] Gender desegregation is when "women enter a formerly all-male cabinet, but then are marginalized within it" (Borrelli 2010: 735)

difference of means test, and then whether these differences persist once we control for a common set of background characteristics.

For our study we examine all cabinet ministers in 5 presidential democracies: Argentina, Chile, Colombia, Costa Rica and the United States. The dataset for this paper is comprised of all ministers holding posts of full cabinet rank, initial and replacement, for the most recent two to four presidential administrations. Due to the near impossibility of obtaining in-depth biographical data about cabinet ministers who served further back in time, particularly since we need coverage of *all* ministers, our study is limited to the most recent presidents:

- Argentina: De la Rúa (1999-2001), Duhalde (2002-3), Kirchner (2003-7), Fernández (2007-11) – 96 ministers (19 women, 20%)[2]
- Chile: Lagos (2000-6), Bachelet (2006-10) – 94 ministers (33 women, 35%)
- Colombia: Pastrana (1998-2002), Uribe (2002-6), Uribe (2006-10) – 83 ministers (20 women, 24%)
- Costa Rica: Rodríguez (1998-2002), Pacheco (2002-6), Arias (2006-10) – 97 ministers (24 women, 25%)
- United States: Clinton (1993-7), Clinton (1997-2001), Bush (2001-5), Bush (2005-9) – 77 ministers (14 women, 18% women)[3]

The explanatory variable data for this study come from biographical information about each minister. We obtained this information primarily from searches on the World Wide Web.[4] Thus, our study reflects an evaluation of the publically known credentials of ministers. To the

[2] We include the first administration of President Cristina Fernández in most, but not all of the analyses. Her secretaries are excluded from the legislative activity analysis because at the time we stopped collecting bills data the administration was on-going which meant that there was still a good chance that bills previously initiated could become law and ministers still had time to initiate bills creating a systematic bias against her ministers on these dimensions and rendering the comparison unfair. We are able to include her ministers in the duration analysis, however, because we simply treat them as censored observations.

[3] We do not include the US in the legislative activity analysis because unlike the four Latin American countries, U.S. cabinet secretaries cannot directly sponsor or initiate legislation.

[4] Most of the data come from ministry webpages that often include an official biography of the minister, newspaper coverage of president's initial cabinet appointments and of cabinet shuffles that typically includes commentary on the backgrounds and credentials of the ministers, webpages from organizations, businesses, and universities where former ministers are currently employed that often include resumes or biographical descriptions of their members/employees, and candidate webpages when former ministers later ran for office. Some ministers received awards from international organizations and award press releases include biographical information. We also consulted *The International Who's Who* 1991-2006; *Who's Who in Latin America* 1993 and 1997; *Who's Who in the World* 2002. Where we were not able to obtain enough information about a minister's background to know, for example, where they went to school, they are coded as missing on that variable only.

extent that a minister possesses a characteristic and we do not code him or her as possessing it either the connection was tenuous enough or not highly visible enough that if presidents were using this appointment to signal it was not particularly effective in this regard.

After building biographical sketches about each minister, we coded ministers on an array of variables. For example, we coded each minister's interest group connections and whether the minister was known to be affiliated with a political party and if yes had held an official party post or had helped to run a campaign. Each author coded every minister on every variable. We then met to discuss coding disagreements, adding additional coding rules to clarify how we handled special or borderline cases. All the characteristics in this analysis are coded as binary variables, meaning a minister was either judged to have this trait or not. A description of the threshold or characteristics necessary for a minister to qualify as having a characteristic is reported in Appendix A. Additionally, we include a series of country fixed-effects to account for any unobserved variation at the country level.

Benchmark #1: Types of posts

Social control theory expects that dominant players in politics will resist allowing new types of people into the political elite, but once the cost of continuing to exclude a group becomes too high some group representatives will be allowed in, but only ones who differ minimally from the dominant group (Carroll 1984; Coser 1964; Duke 1976; Lukes 1974; Zimmer 1988). Literature from sociology about occupational dynamics as women move into the workforce shows that jobs often lose prestige as women become more common members of a profession (e.g., Kenney 1996; Yoder 1991). Past research has found that when women began to be appointed to the cabinet they were appointed to low prestige posts in a policy area that fit

societal expectations about the home and family-oriented domain of women (see Borrelli 2002, 2010; Davis 1997; Escobar-Lemmon and Taylor-Robinson 2005, 2009a; Krook and O'Brien 2011). If we find in our cases that, despite increasing numbers of women, women are still overwhelmingly appointed to stereotypically feminine policy domain posts, this is not a sign of integration. If women are (relatively) equally represented in all types of posts then on this benchmark we would conclude that there is integration.

We use two distinct measures of post type to evaluate if there are systematic differences in the kinds of posts to which men and women are appointed: 1) Economic, Social Welfare, or Central based on the policy responsibilities of the portfolio and 2) High-Visibility based on public attention to and preoccupation with that policy area. Economic, Social Welfare, or Central categories of portfolios draw on Keman (1991). This grouping should allow us to aggregate (at a higher level) ministries with similar policy responsibilities.[5] Economic ministries manage the national economy or regulate or oversee sectors of the economy: Agriculture, Commerce & Industry, Energy, Mining, & Environment, Finance/Treasury, Planning, and Public Works & Transportation. Social Welfare ministries oversee a country's social welfare programs: Education, Health, Housing & Urban Development, Labor & Social Security, Culture, and Women's Affairs. Central ministries are responsible for managing a country's national and international affairs: Defense, Foreign Affairs, Justice & Public Security, Presidency &

[5] Before assigning portfolios into these 3 categories we grouped together like posts across time and across countries regardless of possible differences in the name of the ministry. In some cases this is simple as a ministry has a discrete policy domain and every country has a very similar ministry (e.g., foreign relations, education). For other policy areas we were able to determine that the policy domain of portfolios was relatively similar across countries despite differences in names, by studying the mission statements, dependent agencies, and organizational structures of current cabinet ministries (e.g., health, justice/security, transportation & public works). For some portfolios we formed groups based on what appears to be the predominant mission of the ministry, even though some components of the ministry's policy purview do not completely overlap across time or across countries. This exercise produced 16 portfolio categories. We then consulted with country experts regarding the placement of ministries into each of these categories. Note that not all 16 categories are present in each country and in a few instances a country had more than one ministry fall into a category (e.g. in the United States both the Departments of Justice and Homeland Security fall into the Justice & Security category).

Communications. We summarize the distribution of male and female ministers to these types of posts in Figure 1.

< Figure 1 about here >

In testing whether there are significant differences in the proportion of men and women appointed to head portfolios in each of the three categories we find strong evidence for sex differences. For Economics portfolios we observe 41.5% male ministers, but only 29.1% female ministers; a difference which is statistically significant (p=.0197). Women are also less commonly appointed to Central Ministries: 20.9% women, 34.1% of men (p=.0091). Not surprisingly this means women are over-represented in Social Welfare ministries with 50% of them holding these posts compared to 24.3% of men (p=.0001). These findings are consistent with what might be expected by someone who viewed these spheres as being differentiated by gender with Economic and Central posts falling into stereotypically masculine policy domains and Social Welfare posts being in a more stereotypically feminine policy domain. However, we cannot observe if women are as likely as men to obtain the post they desire. Women are statistically over-represented in Social Welfare posts, but if occupation can be used as a proxy for interest in a topic (and not just as a measure of expertise) then 61% of women (and 64% of men) are likely to have posts they desired or were pleased to accept, rather than being forced to take an ill-fitting opportunity to move into politics at the highest level of the executive branch.

We also verified whether sex differences persisted once we accounted for other background characteristics (work experience, political experience and connections, interest group links). The dependent variable is which kind of post the minister receives (Economic, Social Welfare or Central) so we use a multinomial logit model. The results of this estimation, reported in Table 1, reinforce what we find in the bivariate analysis. There are significant

differences between men and women in the probability that they are appointed to Social Welfare versus Central posts and Social Welfare versus Economic posts, but not between Economic and Central posts. For women, the odds of being appointed to a Social Welfare rather than Central Post increase by a factor of 3 (p=.001) and for Social Welfare rather than Economic they increase by a factor of 2.4 (p=.004).

< Table 1 about here >

There may be some concern about the appropriateness of including Finance/Treasury in the Economics category because while it obviously deals with economic issues like the other ministries included therein, it may also be different as it is subjected to higher levels of scrutiny and we know Finance Ministers are often the ones taken to task when a country's economy falters. In this regard some might argue that Finance/Treasury has more in common with nationally-oriented posts included in the Central category. Those who study cabinets in the United States might also argue that this is where Finance/Treasury belongs as it is clearly an "inner cabinet" post like State, Defense, and the Attorney General (Cohen 1988; Fenno 1959; Martin 1989). If Finance is added to the Central Post category we still observe significant differences in the percentage of men (45.1%) and women (23.6%) who are appointed to these kinds of posts (p=.0001). However, when Finance is removed from the Economics category we no longer see differences in the proportion of men (30.6%) and women (26.4%) appointed to economic posts (p=.4029). To the extent that women seem shut-out of posts in the economic policy domain, this appears to be a result of their virtual absence in what is arguably the highest-visibility post in that category: Finance/Treasury.

Another way to consider differences in kinds of post is based on whether a post is high-visibility or high-scrutiny at the time a minister is appointed. Posts that are high-visibility are

those which deal with policy areas or topics which receive significant coverage in the media or are of heightened concern to citizens which could mean that ministers in those portfolios might be subjected to extra media attention. Thus, we want to see if women and men are equally likely to receive high visibility posts. This novel way of categorizing cabinet posts allows us to observe whether presidents are willing to appoint women to posts that are likely to be in the public eye as the media, and in some cases the congress, ask pointed questions about how pressing problems are being handled. If sex is not a significant predictor of the likelihood of receiving a high visibility post, this is evidence of integration of women. However, literature about voter expectations about the aptitude of candidates – that women are more compassionate, while male politicians have more voter support in times of war or other crisis – leads us to anticipate that women will be under-represented in high visibility posts since ministers in these portfolios often have to confront protests and are grilled by the press and opposition parties.

To determine which cabinet posts are "high visibility" we make use of public opinion surveys that ask, "In your opinion, what is the most important problem facing the country?" A post is determined to be high-visibility if in the last survey *before* the minister was appointed one of the top five responses[6] mentioned a topic which falls into the policy purview of that ministry.[7] The major advantage of this measure over a static determination of which ministries are high-prestige is that it allows for variance across time within a country, as well as variance across

[6] In some years we have more than five problems because of ties – particularly in fifth place.

[7] For almost all important problems mentioned by survey respondents there was clear overlap with a specific ministry (or two ministries). However, a few of the topics listed as most important problems were general or vague or appeared to relate to the entire government, rather than to a specific ministry, such as the response of "political problems/political situation" (in the top 5 once in Colombia) or "dissatisfaction with government/congress/politicians/corruption/abuse of power" and "ethics/moral/religion/family decline, dishonesty, lack of integrity" (in the top 5 problem list several times in the US). The only other matching difficulty we encountered concerned "corruption" when it was on the top 5 problem list in Colombia because investigating corruption was not explicitly part of the policy purview of any ministry, while in our other countries a particular ministry had investigation of corruption as part of its mission (e.g., Justice & Security in Argentina).

countries.[8] It is noteworthy that some, but definitely not all, the "high visibility" posts are the posts commonly viewed as "high prestige." For example, education is frequently flagged by survey respondents as an important problem, making the Education Ministry "high visibility", but the Foreign Affairs Ministry rarely must handle a "most important problem" as determined by citizens. It is also worth noting that some ministries become "high visibility" because of transient events such as the transportation crisis that occurred in Santiago, Chile when the Transantiago Project was implemented which catapulted transportation problems to a "high visibility" issue in Chile in 2007. By contrast, economic problems associated with the Finance Ministry are recurring on the "most important problem" list in many countries and not surprisingly, political violence or violence/armed conflict is always mentioned as a most important problem in Colombia. While this measure does not distinguish between these two kinds of visibility (short-term or enduring), by using the preceding survey we do distinguish posts that are not high visibility and those which later become high visibility due to unexpected events from those that a president knows when appointing ministers will receive higher attention.

Again a simple difference of means test reveals significant (p=.0587) differences with 33.2% of men but only 23.6% of women being appointed to a high visibility post. This provides suggestive evidence that presidents may not want to put women into posts which might receive higher scrutiny. We noted, however, that one of the ministries which was most consistently in the "high visibility" category was Finance/Treasury as concerns about some (and often time multiple) aspects of a country's economy were almost always mentioned in surveys. Because we know that only three of the 40 ministers appointed in the Finance/Treasury category are female,

[8] To ensure that surveys were of comparable quality in terms of survey techniques across countries, we use the surveys conducted annually by Latinobarometer (LB), and annually or biannually by LAPOP for our Latin American cases. For the U.S. we utilize Gallup polls selecting polls conducted at approximately the same time as the LB and LAPOP surveys. We thus have one or two surveys per year from which we drew data about most important problems.

as a robustness check upon the data we re-evaluated whether women were still less likely to receive high visibility posts if ministers of Finance were not included in the analysis. When we delete Finance there is no longer a statistically significant difference (p=.4656) with 26% of men compared to 22.4% of women being appointed to high visibility posts. Thus, to the extent that one concludes women are kept out of these kinds of posts, this conclusion appears to be driven by their almost total absence in Finance/Treasury.

To verify whether these results hold once we control for the other background characteristics we tested whether a minister's sex affected the probability they received a high visibility post controlling for the same background factors as before (results are reported in the last column in Table 1). Once we control for a minister's background and connections it is not clear that women are systematically disadvantaged in terms of their appointment to high visibility posts as the coefficient for sex is significant at .089 although the effect is in the hypothesized direction with being a woman decreasing the odds by a factor of 18% that a minister is appointed to a high visibility post. As in the test of proportions however, when we exclude Finance/Treasury posts, sex is robustly insignificant (p=.481).

Benchmark #2: Legislative activity

As the heads of executive branch departments, ministers are peak public managers. Decisions they make about how to implement executive orders, enforce (or not) existing regulations, spend and allocate their department's budget, all have a profound effect upon policymaking in that area. In our four Latin American democracies ministers can shape policy directly by initiating legislation. Legislative effectiveness of cabinet ministers matters because, as Aleman and Navia (2009: 401) explain, "the effectiveness of governments [stems] principally

from the approval of executive-initiated bills" (even though the legislature may modify the executive's bills). Thus, we turn to an examination of whether there are significant differences between men and women with regard to their legislative activity. The under lying process here is if the cabinet discusses bills or has any sort of internal approval process, and executive-legislative relations and its impact on success of executive bills and whether there are sex differences in success. We cannot obtain systematic data about what goes on within cabinet meetings or between presidents and individual ministers, or even if some ministers are regularly invited to attend and take part and others are virtually closed out of decision-making. But we can observe the legislative records of ministers: how many bills they propose, how many laws each minister authored, and their success in converting bills into laws (batting average). If women have a batting average that is the same as the men then this indicates equal effectiveness.

To construct the dependent variable for this analysis we collected data on all bills[9] initiated by members of the executive branch for the period corresponding to that for which we have data on cabinet ministers. We recorded the names of all ministers who sponsored the bill as well as whether the bill became law or not. We give each minister who signed the bill "full credit" regardless of whether they authored the bill alone.[10] A bill is deemed to have become a law if it has passed the legislature and been signed by the president regardless of how long it

[9] In all four countries we include treaties submitted for ratification because failing to do so would introduce systematic bias for Ministers of Foreign Affairs. Despite concern that the legislature rubber stamps treaties (Cardenas et al. 2006) our data suggest that is not the case thus they do not artificially inflate minister batting averages. Because the legislature must approve the executive borrowing money in Costa Rica we include the bills authorizing this debt. Similarly in Argentina we also include bills that would appoint someone to a post or promote military officers. We do not include the Fernández administration in the bills analysis because we stopped collecting data more than a year before the end of her term, so we do not know the total number of bills her ministers initiated. We thank Monica Pachón and the staff of the Congreso Visible project in Colombia for providing us with access to data. We also thank Ernesto Calvo for sharing his dataset on bill initiation in Argentina with us, and Ludovico Feoli and Leslie Schwindt-Bayer for sharing their datasets on bill initiation by presidents in Costa Rica.

[10] This decision is not artificially inflating a minister's bill count as co-sponsorship is relatively rare and most bills have only one or two sponsors suggesting ministers are only signing bills germane to the policy purview of their post. Ninety-eight percent of bills in Costa Rica have one or two sponsors, 95% in Colombia, and 92% in Argentina. Having one or two sponsors is least common in Chile but still covers the vast majority of bills (76%).

took to complete this process. We also count a bill as becoming law even if the court struck down the law as unconstitutional after it was signed by the president because it did clear the legislative process.

Figure 2 summarizes the number of bills and laws initiated by men and women and compares their batting averages. There are significant differences between the average of 6.48 bills introduced by female ministers and 19.46 bills by male ministers (p=.0124). There are also significant sex differences in law authorship: average of 8.83 laws by men and 3.65 laws by women (p=.0378). However, while the quantity of bills and laws women ministers produce is less, there is not a significant sex difference in batting average (p=.5099) with women passing on average 52% of their legislation compared with 49% for men.[11] The difference in the mean number of bills initiated by women and men prompted us to delve deeper into the data. In particular we wanted to explore whether women hold portfolios that typically propose little legislation and thus post, more than sex, may explain the difference. Appendix B presents bill initiation data broken down by portfolio/country/sex, and from this we observe similar incidences of men and women in the same post initiating at least half a standard deviation of bills above and below the mean for that portfolio in that country (and also that bill initiation varies across countries within the same portfolio). Therefore, it does not appear that women are less active legislators when compared to men in the same post.

< Figure 2 about here >

In order to model the number of bills and laws ministers introduce we use a negative binomial regression because our data are count data. To model the percentage of bills that

[11] If we exclude treaties from the analysis the results are identical in terms of significance. The number of bills authored drops to 12.8 for men and 4.5 for women (p=.0377), the number of laws drops to 5.1 for men and 2.2 for women (p=.0698), and there is still no difference (p=.5495) in the batting averages of 50.7% for women and 40.8% for men.

become law we use ordinary least squares. The results are reported in Table 2.[12] Even after we control for background characteristics and connections, we still find that there are significant differences between men and women in the number of bills and laws initiated. For example, being a woman decreases the expected rate at which they will introduce legislation by a factor of .4540 and decreases the expected rate at which they will introduce laws by a factor of .4050. Also consistent with the difference of means test, we find that there are not significant differences (p=0.447) between men and women in terms of the percentage of their bills which become law.[13] When we add fixed effects for category of ministry (economic, social welfare, central) or a control for high visibility posts, being a woman still decreases the expected rate at which a minister will introduce bills and author laws. Overall, our evidence suggests that while female ministers are less active legislators than their male colleagues, they are not less effective legislators.

< Table 2 about here >

Benchmark #3: Mode of exit

Another way of evaluating if women are becoming integrated in these presidential cabinets is to look at whether there are differences between men and women in how they exit the cabinet and the amount of time they serve in a post. Are male ministers able to hold on to their posts until the end of the term or to retire as their preference, while women are more likely to be forced out? Such a finding would indicate a lack of integration despite increasing numbers of women holding more diverse posts. The liberal feminist account of equality would say that men

[12] Because these models only use data from the four Latin American cases we drop the Argentina variable from the model making it the referent category.
[13] If we add a control variable for the number of bills a minister initiated we still do not find a statistically significant difference in the batting averages of male and female ministers (p=.523).

and women are interchangable – there is no difference between men and women. So we would expect women and men to have the same types of experiences when it comes to how they exit the cabinet. But a different perspective on gender sees gender differences; that women are often thought to be collaborative and to prefer to avoid conflict (see Carey et al. 1998; Jeydel and Taylor 2003; Kathlene 1994; Simon Rosenthal 2000). If that is true about women in the cabinet, they might be more likely to retire early, while men would be more likely to fight losing battles and exit in disgrace. The underlying process here is how are exit decisions made and what are the pressures to exit (be made to exit, since cabinet ministers are rarely outright fired), or the incentives to switch posts or to retire? Part of the decision is made by the minister based on what other good options they have, and part of the decision is made by the president and his/her advisors after evaluating the costs and benefits of keeping a particular person in a post or in the cabinet versus urging or forcing them out. Serving as a minister is often viewed as the peak of ambition for many politicians, yet as Berlinski et al. (2007: 245) write, "we know little about what determines which ministers are successful." In order to see whether there are significant differences in how ministers exit their post we compare different modes of exit. We turn to the related question of how long they remain in post before exiting (each of the different ways) in the final section.

In order to determine if there were differences in the way ministers left office we collected data on the date they took office and the date they left office. Most of our data that allowed us to determine why a minister left office draws on newspaper stories from that country around the time they left office describing the political situation and usually announcing the replacement of one minister with another. Using this information, we coded ministers as leaving office for one of four reasons. First, we have ministers who remain in office until the end of the

president's term. These "survivors" include ministers who leave either at the same time a president leaves office, who leave at the end of the first term for presidents elected to two consecutive terms, or who are reappointed to the same post by the next president. These ministers do not truly exit, and might have continued in office indefinitely if the situation had allowed, consequently, we treat these observations as censored in the hazard models. A second category is "switchers" – people who leave the post they held, but not the cabinet. A minister can become a switcher by moving from one cabinet post to another during a single presidential administration, moving from one cabinet post to another when a new administration starts, or by moving from a cabinet post to another high-level appointed post (e.g. ambassador).[14] Third, we have ministers who leave the cabinet under adverse conditions – meet a "bad end". This includes ministers who are fired or dismissed by the president, those who resign in the face of problems or protests or surrounded by scandal, as well as those who leave because of policy failure as well as policy or personal conflict with the president. Fourth, are ministers who "retire" apparently as their choice. This category includes ministers who leave to seek elected office themselves or help someone else win an election, those who explicitly say they are returning to the private sector (or their family), as well as those who lost their post in a general cabinet shuffle but who were not described in the press as having been the cause of the cabinet

[14] Some ministers in our dataset leave the cabinet for ambassador posts, such as, Carolina Barco in Colombia who became her country's Ambassador to the United States, which is a very important position because of U.S. aid to Colombia. In other cases it might be argued that the minister was given an ambassadorship as a consolation prize, such as Secretary Margaret Heckler in the United States, who is not part of our dataset, but was Secretary of Health and Human Services during the Reagan administration and became Ambassador to Ireland. We thank MaryAnne Borrelli for pointing out this distinction, and we note that none of the US cabinet secretaries in our dataset were moved to ambassador posts immediately after their cabinet post, though several served as ambassadors prior to their appointment to the cabinet.

shuffle.[15] We treat as censored the seven ministers who died in office or became ill enough to need to retire as well as those about whom we could find no information on why they left.[16]

We begin by comparing survivors to all early exit types (bad end, retire, and switch) and find that men and women are equally likely (p=.6924) to be survivors with 51.1% of men and 53.4% of women making it to the end of the term. When we compare each of the types of exit against all others we do not find significant differences in the percentages of men and women who meet a bad end (17.3 versus 11.6, p=.1780), retire (17.9 versus 24.2, p=.1597), or switch posts (13.3 versus 9.7, p=.3331). If we compare the different "early exits" (bad end, switch, retire) with each other and restrict the dataset so that survivors are excluded, there are still no significant differences between the percentage of men and women meeting a bad end (35.3 versus 25, p=.1863) or switching posts (27.3 versus 20.8, p=.3726), but a significantly greater percentage of women than men retire (52.1 versus 33.7, p=.0586). On the whole, though our bivariate testing suggests that roughly similar percentages of men and women exit the cabinet each way, as summarized graphically in Figure 3.

< Figure 3 about here >

In order to test whether there are still no significant differences in the way men and women exit the cabinet after controlling for background characteristics and connections we estimate a multinomial logit model. This is the appropriate estimation technique because our

[15] Our decision to include ministers who lose their post in a cabinet reshuffle in the voluntary departure category may surprise some. We have done this to err on the side of caution. Where a minister was the cause of the reshuffle (e.g. their policy failure caused the need for a broader cabinet reshuffle) we coded them as meeting a "bad end". However, in many other cases the press coverage of the reshuffle indicated the president needed to appear to be taking a new direction or doing something and that a change was necessary. In these instances, it is not clear that it was a particular failing on the part of the minister that caused him or her to be replaced. To preserve the "bad end" category as truly those who caused problems, we include the cabinet reshuffles without a clear problem attributable to the minister in the "retire" category.

[16] Four Colombians (one of whom was kidnapped by the FARC, another killed in a plane crash) and three from the United States (one of whom died on a trade mission). We include those who resigned due to severe health problems here, rather than in voluntary retirement, because we expect they would not have left post if they did not have serious health problems (e.g. end-stage pancreatic cancer).

dependent variable is four unordered categorical outcomes (Survive, Switch, Retire, Bad End) all of which are mutually exclusive. The results of this model are reported in Table 3. Remaining in post until the end of the president's term (Survive) is the comparison category. Based on the model estimated in Table 3, there is only one case in which we find there are significant differences in how male and female ministers exit the cabinet. For women the odds of retiring rather than switching increase by a factor of 1.67 (p=.049). There is also limited evidence that women may just be less likely to switch in general as fewer of them do and the odds they remain until the end of the term in their post rather than switching to a different post are 1.61 higher (p=.074). Overall multivariate analysis suggests that sex does not have a clear and significant impact upon ministers' mode of exit.

< Table 3 about here >

Benchmark #4: Time in post

A general assumption in the parliamentary literature is that ministers want to remain in their post because it is the culmination of most political careers unless the minister can move up to a more prestigious post. But in presidential systems, where many cabinet ministers come from outside the legislature and even from outside of politics, they may want to leave early because they may have "better" options elsewhere. As our fourth observable outcome for assessing if women are being integrated into presidential cabinets we examine whether women systematically have a shorter stay in the cabinet than men or if women remain in their jobs as long as men. More cynically, the question can be phrased as, are women cycled out after the first few photos show a diverse cabinet? If women stay in post for the same length of time as the men then this indicates equal effectiveness and would be evidence of integration. The

underlying process here is similar to mode of exit: partly the minister's own decision based on what other options might be better, and partly based on the political calculus of the president about how best to, for example, maintain a coalition or work with the legislature or key interest groups in society; though another component to the outcome with regard to time in post is when a minister got the post, and thus how much of the term had already elapsed.[17] We draw on our data about the number of days a minister serves (computed based on the entry and exit dates) as well as the data discussed above regarding mode of exit.

A difference of means test shows that there are not differences in the average number of days men (764.5) and women (824.5) served (p=.2685). Another way of examining whether there are differences between men and women in the dataset is to compare the Kaplan-Meier survivor curves for men and women. These are plotted in Figure 4 along with 95% confidence intervals. Not surprisingly the probability of continuing to remain in office decays over time for both men and women. There is significant overlap between these two ranges showing that at least from this point of view there are not significant sex differences in terms of the average time they spend in post.

< Figure 4 about here >

Of course this simple analysis does not take into account other factors that might influence the probability a minister continues to survive in office. We use a competing risks framework in order to estimate the effect that sex has upon a minister's survival in office while also taking into account background characteristics and connections. A competing risks model allows us to model the risk (or the hazard) of exiting early while simultaneously acknowledging

[17] Literature about cabinet minister duration in post has focused primarily on ministers in parliamentary systems. That literature acknowledges that length of stay is not only a function of the minister's competence, but also of the cost to the prime minister of replacing a particular minister, which is influenced by factors such as whether the cabinet is a coalition (see Indridason and Kam 2005; Huber and Martinez-Gallardo 2008; Dewan and Myatt 2010).

that there are multiple possible exits. Thus, for instance it allows us to model the risk of retiring early as opposed to surviving to the end of the president's term while acknowledging that instead of just retiring early a minister could meet a bad end or switch posts. Because there are essentially three possible early exits (retire, bad end, switch) we estimate the competing risk model three times using a different mode of exit each time and setting the other two as competing with it. Thus, the three models reported in Table 4 were estimated independently.

< Table 4 about here >

Even when taking into account the different modes of exit and modeling the effect of other background variables, we still do not find sex has a significant effect upon the time a minister serves. The probability for both men and women of exiting increases over time (but this is consistent with the fact that everyone exits at the end of the president's term) and thus women are not at higher risk of serving shorter terms than are men. It would be fascinating to see inside the decision calculations of whether to keep a minister in post, move the minister, or urge her or him to leave. All we can observe is actual time spent in post, and the finding on this outcome indicates that women are as effective as the men at doing the job expected of them, or at making it appear costly to the president to remove/replace them.

Conclusion

This paper has drawn together the analysis presented in a more detailed manner in the chapters that will comprise part II of our book project about women in presidential cabinets. Part I of the book focuses on the background and qualifications of cabinet ministers to assess whether the women who are now making up a growing percentage of cabinet members are likely to bring different experiences to the cabinet then the men. From our examination of education and work

experience, political backgrounds and connections, and interest group links we found that, in the aggregate the women being appointed to presidential cabinets, at least in these 5 countries, are very similar to the men. However, when we split the cabinet into Economics, Social Welfare and Central posts there are notable differences between the men and women who hold the Economics posts, and because of some of those differences the women often lack background traits and connections that may be important qualifications to be effective in their jobs. For example, women who hold Economics posts are significantly less likely than men to have connections to client groups of their ministry or to come from business careers. However, for the Social Welfare posts we do not observe striking differences in the percentage of men and women that have specific background traits and connections, and in the Central posts there are some differences but they would not be expected to limit the effectiveness or credibility of the ministers who lack a trait (e.g., both men and women who hold these posts are politicos, though they often differ in the nature of their political experience).

Part II of the book examines different types of observable outcomes of treatment and effectiveness once women are in government. Are there sex differences? Do they persist after we control for aspects of minister background, political experience and group connections? Is there evidence of genuine gender integration in cabinets now that presidential cabinets no longer have just a single "token" woman and women are holding more diverse types of posts?

This paper draws these analyses together so that we can assess based on four different benchmarks whether women are experiencing gender integration once they are in the cabinet or if there is evidence that cabinets are gendered institutions. "The term 'gendered institutions' means that gender is present in the processes, practices, images and ideologies, and distribution of power in the various sectors of social life" (Acker 1992: 567). The evidence presented here is

mixed, but overall gives several indications that women are just as effective as male ministers, and also that they are just as scandal-prone. Part I of the book showed that on most aspects of their background, experience and connections the women in these cabinets have the same credentials as their male colleagues; i.e. that women are conforming to the masculine norm. Part II indicates that sex differences inside the cabinet diminish because of these credentials.

Our first benchmark is the type of posts women receive in the cabinet. While the number of women in the cabinet has increased, women are still over-represented in Social Welfare portfolios that comport with traditional gender norms about the domain of women, while women are significantly under-represented in Economics and Central portfolios. So sex still seems to matter for the post a person receives. Yet the under-representation of women in Economics posts (sex differences) disappears if the high prestige Finance/Treasury portfolio is moved to the Central category (where the other high prestige posts are found, though their policy domain is not related to regulating or running the economy). We also divided cabinet posts into those that are "high visibility" vs. other posts based on public opinion data about the most important problem facing the country, thereby obtaining a measure of post importance that varies across time and also across countries. We find sex differences in appointment to high visibility posts – that women are significantly less likely than men to be appointed to a high visibility post. But if we remove the Finance/Treasury post from the analysis (because we know that very few women have held that post and Finance/Treasury is frequently high visibility), the evidence of a sex barrier disappears. In addition, even when Finance/Treasury is included in the high visibility category, once we control for minister background traits and connections, sex becomes only weakly significant. In sum, women are more common in Social Welfare posts and there is some evidence that women are less likely than men to be appointed to posts that can be expected to

receive a great deal of media scrutiny and to be sources of intense political debate, which could indicate a sex or a gender difference. Yet the evidence of sex discrimination in the types of posts women receive is not as stark as would have been expected if women were only considered competent to hold stereotypically gender "appropriate" posts in a feminine policy domain or where they would not have to manage conflict and political challenges. Thus, gender bias in appointments (if we could observe the decision calculus of why person X or Y is appointed to a specific post) appears to be diminishing, which is a positive sign for gender integration.

Our second benchmark concerns the legislative work of ministers, though this analysis could not include the US cabinet because in the United States only members of Congress can initiate legislation. For our 4 Latin American cases we find that women initiate significantly fewer bills than their male colleagues, and they also initiate fewer laws: sex differences in legislative behavior. This appears to be strong evidence that there is not a level playing field for women in the cabinet. However, we are hesitant to draw such a strong conclusion because it appears to be related to the portfolios they receive, since examination of portfolios by country shows the legislative activity of women to be similar to the men who hold the same post. Also, we observe that women are just as successful as their male colleagues at getting the bills they do initiate passed into law. In sum, women ministers in these countries are less active legislators then the men, but they are just as effective at legislating as their male colleagues.

Our third benchmark is how ministers exit their post; whether they survive in post until the end of the term, switch post, retire (leave their post) voluntarily, or "meet a bad end." Cabinet ministers rarely are fired, but it is not uncommon for ministers to resign under intense political pressure or scandal, which is a crude indicator that the minister was not successful, at least in comparison to the president keeping a person in post or retaining the services of an

appointee, but in a new post. We find no evidence of sex differences in how ministers exit their post. Women are no more or less likely than their male colleagues to meet a bad end. In addition, there are no significant sex differences in the chances of any mode of exit (though a significantly greater percentage of women than men retire if we compare the different "early exits" with each other and restrict the dataset so that survivors are excluded, and multi-variate analysis indicates that women are more likely to retire than switch posts). Women in these cabinets are no less crisis prone then their male colleagues, and their chances of survival and exit in various ways are the same as for the men. This indicates equal capability in the job and equal treatment, so it is a positive sign for gender integration.

The final benchmark for assessing if cabinets are gendered institutions is the amount of time ministers stay in their post. Again we find no evidence of sex differences, which we view as strong evidence of equal treatment of women once they get into the cabinet. Presidents now know that their initial cabinet will be scrutinized for whether women are included, but citizens and the media may pay little attention to the cabinet's overall composition after the initial appointments are done. Consequently, we wondered cynically whether women were appointed to the initial cabinet for the photo op, and then quickly removed when the going gets tough. There is no evidence that this occurs, whether we compare all men to all women, or when we control for background traits and also for the mode of exit. Whether they survive, switch, retire voluntarily or meet a bad end, there is no sex difference in how long ministers stay in their post, which is another positive sign for gender integration.

Overall our analysis indicates that women are being increasingly "integrated" into the cabinet (Borrelli 2010). But, beyond their sex, female ministers do not bring different backgrounds, experiences and group links into the cabinet (part I of the book), which may mean

that increased numbers of women in the cabinet will not change who or what types of issues are represented through the executive branch (see Escobar-Lemmon et al. 2012). There is still strong evidence of a glass ceiling for women in the Finance/Treasury post, and women are still most frequently found in Social Welfare posts, but representation of women in non-traditional cabinet posts is growing. Once women are in the cabinet they are as successful as their male colleagues at getting their legislation passed into law (though they initiate fewer bills), how long they last in their post, and they exit their posts in the same ways as the men. This is broad and diverse evidence of integration of women in the cabinet. Possibly this integration has occurred precisely because the women have the same types of credentials as the men, so they are perceived (based on the rules of the political game that were established by a male-dominated system of politics [Duerst-Lahti and Kelly 1995]) as well qualified for their posts. They also have backgrounds that make them similarly qualified as their male colleagues to navigate the often turbulent waters of executive branch politics.

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Table 1: Type of Post a Minister Receives

	"Type of Post" multinomial logit		"High Visibility Post" logistic regression
	Social Welfare	**Central**	
Woman	0.877**	-0.237	-0.465
	[0.307]	[0.358]	[0.273]
Post-related experience	-0.374	-0.375	0.0865
	[0.331]	[0.328]	[0.266]
Insider	-0.3	0.743*	0.418
	[0.323]	[0.345]	[0.273]
Connected to President	-0.482	0.338	0.0566
	[0.317]	[0.303]	[0.243]
Officeholder	0.782*	0.364	-0.128
	[0.353]	[0.387]	[0.299]
Links to Ministry Clients	0.268	-0.776*	0.406
	[0.322]	[0.341]	[0.266]
Links to Business	-0.982**	-0.092	-0.185
	[0.367]	[0.368]	[0.296]
Organizational Partisan	0.471	0.566	-0.101
	[0.320]	[0.307]	[0.248]
Government Sector Career	-0.186	0.903*	-0.047
	[0.328]	[0.358]	[0.279]
Business Sector Career	-1.788***	-0.776	0.129
	[0.412]	[0.420]	[0.322]
Legal Career	-1.005*	1.111*	0.134
	[0.488]	[0.450]	[0.360]
Revolving Door Career	-0.481	0.676	0.59
	[0.425]	[0.406]	[0.321]
Chile	-0.836	0.64	-0.262
	[0.442]	[0.475]	[0.380]
Colombia	-0.278	0.632	0.144
	[0.464]	[0.502]	[0.382]
Argentina	-0.186	1.512**	0.351
	[0.463]	[0.484]	[0.364]
CostaRica	0.39	0.341	0.0406
	[0.423]	[0.474]	[0.350]
Constant	0.393	-1.852**	-1.158*
	[0.525]	[0.603]	[0.452]
Number of Observations	427		427
LR chi-square (Prob)	190.98 (0.0001)		19.00 (0.2688)
Pseudo R-square	0.2044		0.0358

Standard errors in brackets, comparison category is Economics portfolios

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

Table 2: Legislative Activity

	Bills	Laws	Batting Average
Woman	-0.790***	-0.904***	-3.401
	[0.181]	[0.206]	[4.470]
Post-related experience	0.0392	-0.285	-6.631
	[0.174]	[0.195]	[4.464]
Insider	0.598**	0.672**	-0.687
	[0.198]	[0.223]	[4.798]
Connected to President	0.343*	0.419*	0.679
	[0.166]	[0.187]	[4.257]
Officeholder	-0.501*	-0.732**	-5.239
	[0.206]	[0.232]	[4.882]
Links to Ministry Clients	0.380*	0.560**	1.191
	[0.177]	[0.196]	[4.682]
Links to Business	0.0633	-0.0195	0.695
	[0.222]	[0.253]	[5.248]
Organizational Partisan	0.259	0.209	-2.632
	[0.173]	[0.193]	[4.314]
Government Sector Career	0.019	0.060	0.605
	[0.197]	[0.231]	[4.911]
Business Sector Career	0.129	0.299	6.562
	[0.254]	[0.289]	[5.981]
Legal Career	0.448	0.543	6.563
	[0.276]	[0.314]	[6.748]
Revolving Door Career	0.995***	1.118***	3.299
	[0.231]	[0.261]	[5.619]
Chile	-0.798***	0.0884	42.85***
	[0.212]	[0.239]	[5.370]
Colombia	-1.873***	-1.415***	24.18***
	[0.228]	[0.267]	[5.753]
Costa Rica	-2.109***	-1.623***	15.28*
	[0.247]	[0.290]	[6.095]
Constant	3.377***	2.332***	33.19***
	[0.273]	[0.306]	[6.689]
lnalpha	0.418***	0.618***	
	[0.0822]	[0.0917]	
Number of Observations	323	323	275
	160.51	127.55	
LR chi-square (Prob)	(0.0001)	(0.0001)	
Pseudo R-square	0.0662	0.066	

Standard errors in brackets * p<0.05, ** p<0.01, *** p<0.001

Table 3: Mode of Exit

	Switch Post	Bad End	Retire
Woman	-0.771	-0.308	0.211
	[0.432]	[0.391]	[0.352]
Post-related experience	-0.174	0.175	0.0024
	[0.407]	[0.382]	[0.361]
Insider	-0.849	0.115	0.374
	[0.449]	[0.411]	[0.397]
Connected to President	0.512	-0.0385	0.376
	[0.383]	[0.361]	[0.339]
Officeholder	-0.414	-0.404	-0.112
	[0.466]	[0.424]	[0.416]
Links to Ministry Clients	-1.359**	-0.893*	-0.392
	[0.479]	[0.403]	[0.370]
Links to Business	0.29	0.926*	0.455
	[0.472]	[0.397]	[0.417]
Organizational Partisan	0.507	0.275	0.789*
	[0.393]	[0.363]	[0.340]
Government Sector Career	-0.329	-0.508	-0.185
	[0.481]	[0.406]	[0.409]
Business Sector Career	0.025	-0.056	0.001
	[0.532]	[0.445]	[0.454]
Legal Career	-32.83	0.369	0.109
	[5499897.6]	[0.491]	[0.464]
Revolving Door Career	-0.12	0.436	-0.97
	[0.544]	[0.423]	[0.537]
Chile	1.894*	0.956	0.077
	[0.819]	[0.629]	[0.501]
Colombia	1.715*	1.620**	0.642
	[0.847]	[0.607]	[0.518]
Argentina	2.037*	1.955**	-0.236
	[0.847]	[0.629]	[0.608]
Costa Rica	1.534	1.378*	0.64
	[0.849]	[0.569]	[0.468]
Constant	-1.709	-2.120**	-1.831**
	[0.897]	[0.708]	[0.633]
Number of observations	387		
LR chi-square (Prob)	97.48 (0.0001)		
Pseudo R-square	0.1061		

Surviving to the end of the term is the comparison category
* p<0.05, ** p<0.01, *** p<0.001

Table 4: Predicting Time in Post

	Retire as Exit	Bad End as Exit	Switch as Exit
Woman	0.361	-0.229	-0.415
	[0.259]	[0.326]	[0.355]
Post-related experience	0.171	0.256	-0.239
	[0.261]	[0.311]	[0.309]
Insider	0.195	0.151	-0.563
	[0.286]	[0.322]	[0.355]
Connected to President	-0.097	-0.00966	0.0864
	[0.289]	[0.320]	[0.317]
Officeholder	0.285	-0.0439	-0.222
	[0.332]	[0.352]	[0.353]
Links to Ministry Clients	0.0516	-0.566	-0.788*
	[0.271]	[0.311]	[0.369]
Links to Business	-0.0376	0.737	0.0651
	[0.307]	[0.398]	[0.393]
Organizational Partisan	0.399	-0.226	0.258
	[0.283]	[0.323]	[0.307]
Government Sector Career	-0.078	-0.331	0.060
	[0.336]	[0.315]	[0.466]
Business Sector Career	0.0682	-0.166	0.0431
	[0.375]	[0.398]	[0.455]
Legal Career	0.0907	0.451	-14.64***
	[0.401]	[0.374]	[0.338]
Revolving Door Career	-0.512	0.331	-0.118
	[0.415]	[0.332]	[0.517]
Chile	0.733	0.85	1.615*
	[0.410]	[0.551]	[0.719]
Colombia	0.589	1.349*	1.429
	[0.449]	[0.526]	[0.747]
Argentina	0.00413	2.214***	1.937**
	[0.529]	[0.513]	[0.730]
CostaRica	0.399	1.106*	1.255
	[0.430]	[0.499]	[0.750]
Number of Observations	409	409	409
	16.58	31.65	3113.21
Wald chi-square (prob)	(.4134)	(.0111)	(0.0001)

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

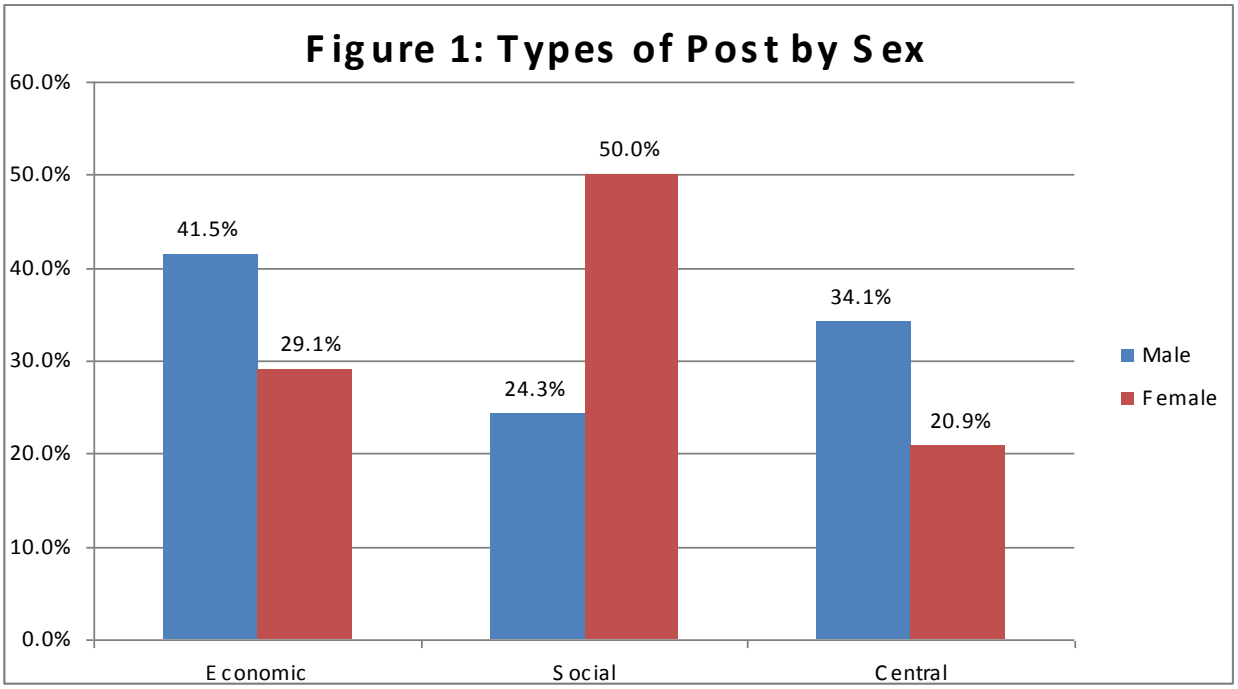
Figure 1: Types of Post by Sex
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
41.5%
29.1%
24.3%
50.0%
34.1%
20.9%
Economic
Social
Central
Male
Female

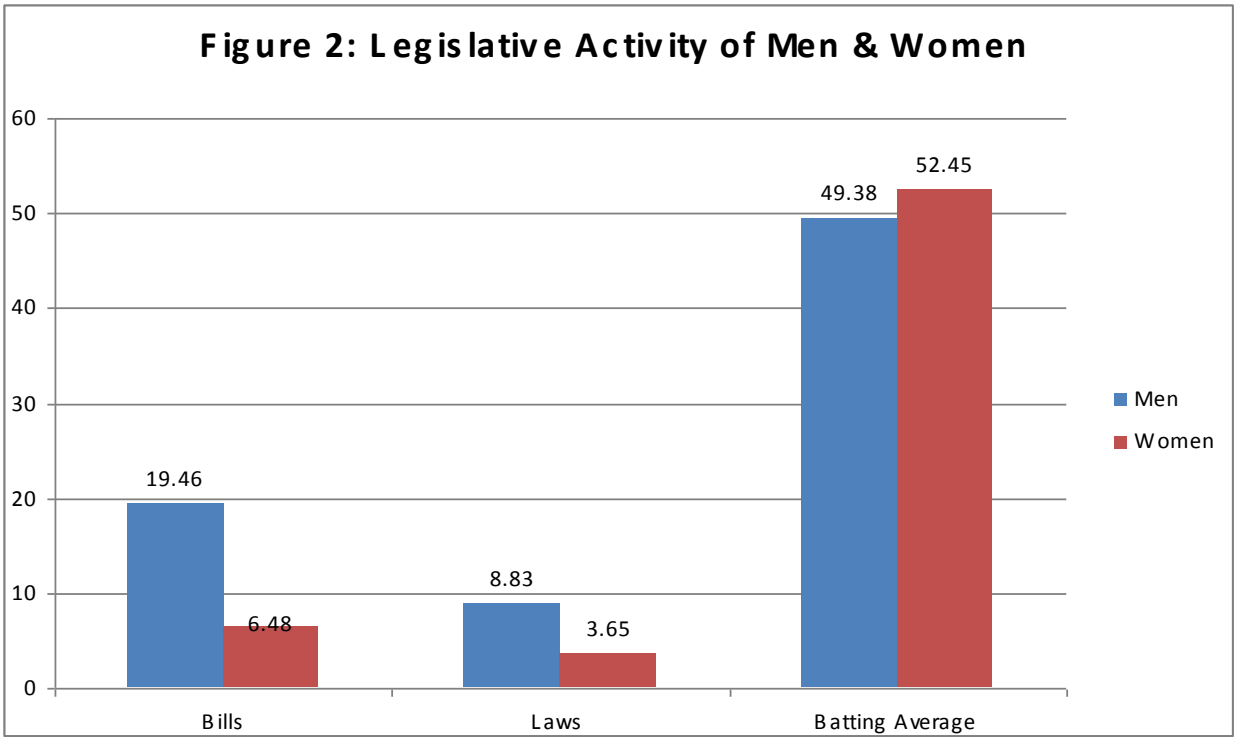
Figure 2: Legislative Activity of Men & Women
60
50
40
30
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10
0
19.46
6.48
8.83
3.65
49.38
52.45
Bills
Laws
Batting Average
Men
Women

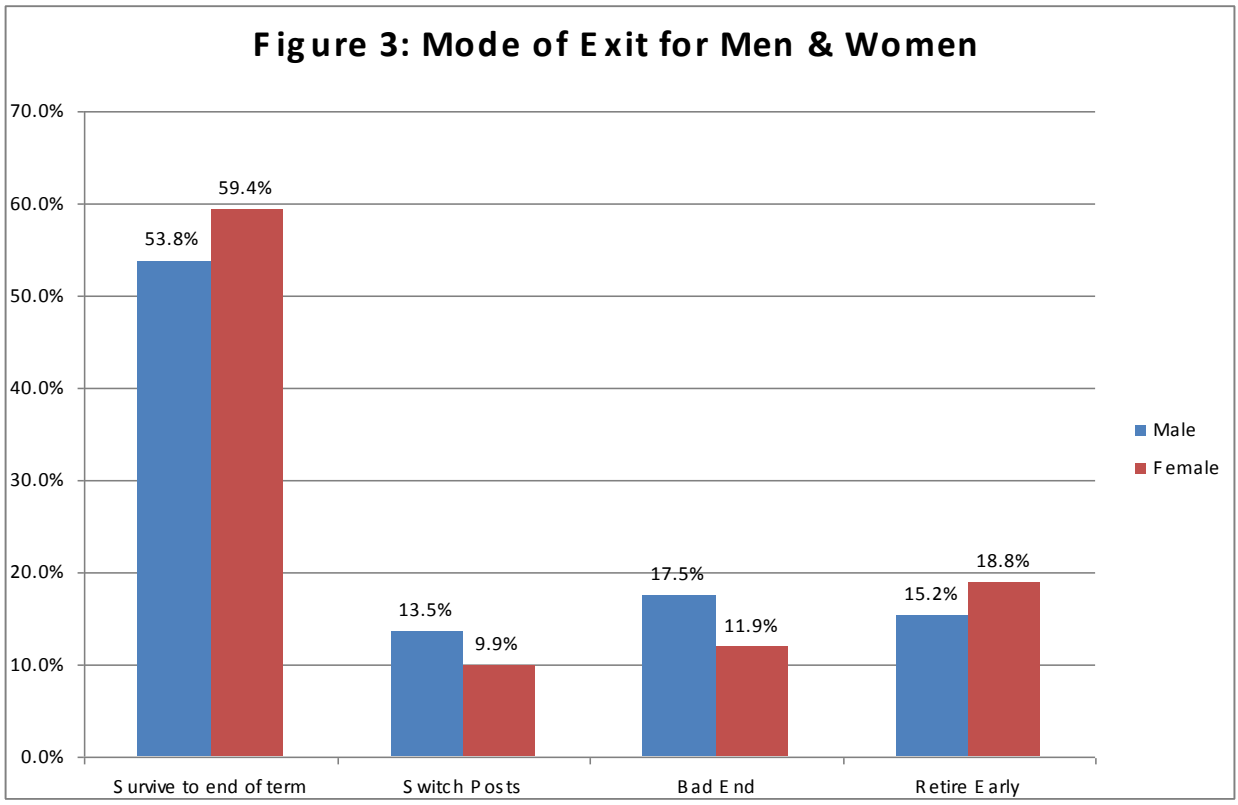
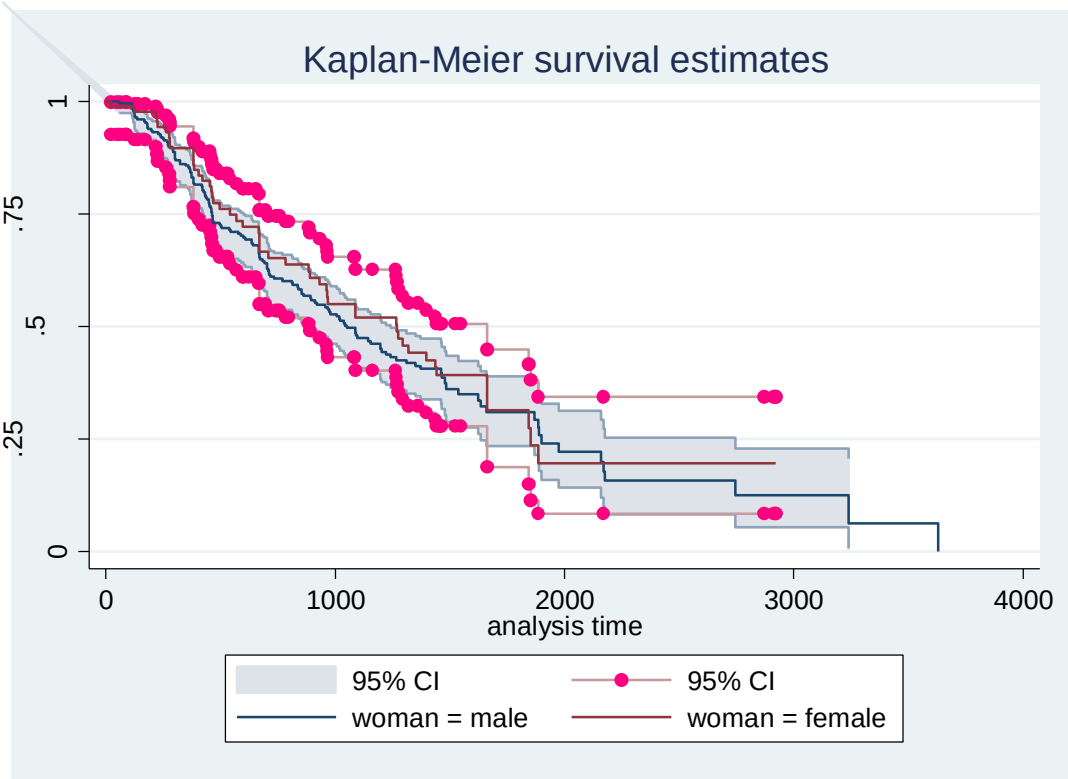


Figure 3: Mode of Exit for Men & Women
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
53.8%
59.4%
13.5%
9.9%
17.5%
11.9%
15.2%
18.8%
Survive to end of term
Switch Posts
Bad End
Retire Early
Male
Female

Figure 4: Kaplan Meier Survival Estimates for Men and Women



Appendix A: Variable Descriptions

Woman	Coded 1 for women, 0 for men.
Post-related experience	Coded 1 if the minister is judged to have substantial experience. "A little" experience or school related experience 20 years ago does not count as substantial.
Insider	A measure of high level political experience, encompassing a prior post as vice-minister or minister, and ministers who built a career in national government (either in elected posts such as the congress or senior appointed positions). "Outsiders" may have worked for the government for years, but not in a high-level post or not in the capital, or they entered the cabinet from the private sector. This concept is a slightly modified version of that used by Borrelli (2002) in her study of U.S. cabinets. 179 of the 235 "insiders" are prior ministers.
Connected to President	Coded 1 if the minister was identified as a long-time friend or confident of the president or had a long-time involvement in their political exploits. People could also be coded as 1 (connected) if they served as campaign advisors to the president or there was some other association (such as working together) that did not quite rise to the level of friendship. A final way to be connected to a president was through family ties (e.g. relative or in-law of the president).
Office-holder	Coded 1 if the minister ran for or held elected office. Also coded 1 if the minister held high appointed office (e.g. prior minister, ambassador).
Links to Ministry Clients	Coded 1 if the minister is known to be associated with any group whose interest/purpose overlaps the policy purview of their ministry. The association can be formal (e.g., member of the National Chamber of Agricultural Producers, labor union leader, affiliation with an environmental organization or women's group). Their work may have brought them into regular and close contact with international aid organizations, lending agencies, or with business by serving on the boards of various companies. Ministers can have professional associations relevant to their ministry (e.g., the American Medical Association). If the press touted a new minister as "well known with the business community" or "applauded by environmentalists" we coded them as having that group/sectoral association.
Links to Business	Coded 1 if the minister is known to have links (as described above) with businesses or the business community.
Organizational Partisan	Coded 1 if the minister held a post in their party (national, local, party office in congress), managed a campaign, or was a presidential campaign advisor. This concept comes from Cohen's (1988) typology of party activity in the U.S.
Government Sector Career	Coded 1 for a career in government. A minister can have a government career by holding a series of elected posts, appointed posts or being employed within government. This category encompasses careers "in government" built at either the national or state/local level or which span the two.
Business Sector Career	Coded 1 if the minister's primary career was in the business sector including banking, industry.
Legal Career	Coded 1 if the minister's primary career was in law.
Revolving Door Career	Primary career can be defined as being a revolving door where they have consistently gone back and forth between government and the private sector.

Note: Ministers were permitted to have two primary careers and thus these categories are not mutually exclusive. Not all ministers do though so we excluded "other private sector" careers which include careers in education, consulting, medicine, unions, and other miscellaneous private careers.

Appendix B: Average bill initiation by ministry, country, sex

			Women			Men		
				1/2 sd or more			1/2 sd or more	
	mean # bills	SD	N	above mean	below mean	N	above mean	below mean
Agriculture								
Chile	16.7	2.9	1	0	1	2	1	1
Colombia	4.5	3.3	0			6	2	2
Costa Rica	3	2.5	0			7	2	2
Commerce & Industry								
Argentina	4	4.8	1	0	0	3	1	1
Colombia	5.3	4.3	0			5	1	2
Costa Rica	2.3	3.8	1	0	1	15	4	5
Culture								
Chile	3.5	4.9	1	1	0	1	0	1
Colombia	2.9	3.8	5	2	1	2	0	2
Costa Rica	3.3	1.7	2	0	1	2	1	0
Defense								
Argentina	26.4	22.6	2	1	0	5	1	1
Chile	10.7	7.1	2	0	0	4	1	1
Colombia	6.8	5.3	1	1		7	1	2
Education								
Argentina	5.6	7.7	1	0	0	7	1	3
Chile	12.2	8.9	4	0	1	2	1	1
Colombia	2.8	1.8	2	2	0	3	0	2
Costa Rica	1.1	2	2	0	2	7	1	3
Environment, Mining & Energy								
Chile	4	4.2	5	1	1	7	2	4
Colombia	3.7	3.5	3	1	1	8	3	3
Costa Rica	4	1.4	1	1	0	3	0	2
Finance								
Argentina	49	75.3	1	0	0	10	2	3
Chile	86.6	112.1	1	0	1	6	2	3
Colombia	24.7	15.3	0			6	2	2
Costa Rica	11.1	9	1	0	1	7	2	3
Foreign Affairs								
Argentina	107.6	83.2	0			6	3	2
Chile	76	53.5	1	1	0	3	0	1
Colombia	11.4	13	2	0	2	3	2	1
Costa Rica	69.3	12.9	0			3	1	1
Health								
Argentina	5	6.7	9	2	2	4	1	3
Chile	7.6	5.5	2	1	1	3	0	1
Colombia	7.3	8.8	1	0	1	5	2	1
Costa Rica	6	2	2	1	1	1	0	0

			Women			Men		
				1/2 sd or more			1/2 sd or more	
	mean # bills	SD	N	above mean	below mean	N	above mean	below mean
Housing & Urban Development								
Argentina	9.5	4.9	0			2	1	1
Chile	8.8	6.1	2	1	0	2	1	1
Costa Rica	1	0.8	2	1	1	5	1	1
Justice & Public Security								
Argentina	45.5	40.3	1	0	1	16	4	6
Chile	40.1	17.9	0			9	3	3
Colombia	13.9	12.2	0			9	2	3
Costa Rica	9.3	8.5	5	3	2	6	0	3
Labor & Social Security								
Argentina	19	24.4	2	0	0	5	1	1
Chile	21.8	20.7	2	0	1	3	2	1
Colombia	2	2	1	1	0	4	1	2
Costa Rica	7	5.7	0			6	2	3
Planning								
Chile	4.5	3.1	5	2	1	6	0	1
Presidency & Communication								
Argentina	91	165.2	0			15	3	8
Chile	8.4	10	3	0	2	11	3	1
Costa Rica	11.3	12	2	0	2	4	2	1
Public Works and Transportation & Housing								
Argentina	47.5	62.9	0			2	1	1
Chile	12	9.5	0			7	2	3
Colombia	3.9	3.9	5	0	3	4	2	2
Costa Rica	1.4	1.4	1	0	0	7	1	3
Women's Affairs								
Chile	2.8	3.1	4	2	1	0		
Costa Rica	0.4	0.9	5	1	0	0		