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“Defending the Realm: The Appointment of Female  
Defense Ministers Worldwide”

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## Defending the Realm: The Appointment of Female Defense Ministers Worldwide

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### Abstract

Though the defense ministry has been a bastion of male power, a growing number of states have appointed women to this portfolio. What explains men's dominance in these positions? Which factors predict women's ascension to this post? With comprehensive cross-national data on women's ministerial appointments in the post-Cold War era, we develop and test three sets of hypotheses concerning women's access to the defense ministry. We show that women remain excluded when the portfolio's remit reinforces traditional beliefs about the masculinity of the position, particularly in military dictatorships and states engaged in international conflict. By contrast, female defense ministers emerge when expectations about women's role in politics have changed—i.e. in states with female chief executives and parliamentarians. Women are also first appointed to the post when its meaning diverges from traditional conceptions of the portfolio, particularly in countries concerned with peacekeeping and in former military states with left governments.

**Keywords:** executive politics; female cabinet ministers; cabinet portfolio allocation; defense portfolios; quantitative, cross-national research

In 2014, an informal encounter between four defense ministers made global headlines. This meeting garnered attention not because of the content of the discussion, but due to the composition of the group: each of the four countries represented—Germany, the Netherlands, Norway, and Sweden—had selected a woman to head their defense portfolio. The widespread interest in these female ministers reflects the degree to which women’s nomination to these positions upends traditional gendered expectations about women’s role in politics. The remit of the defense minister arguably makes this the most “masculine” position within the executive branch and, as the news coverage suggested, women’s presence in this post continues to be viewed as exceptional.

Though female politicians have historically been denied access to the defense portfolio, these patterns of exclusion have begun to change. By 2012, women had been appointed to the ministry of defense in 40 countries. Despite both the rapid increase in women’s access to power and the growing interest in women’s appointment to high-prestige and masculine cabinet positions (Bauer and Tremblay 2011; Bego 2014; Escobar-Lemmon and Taylor-Robinson 2005; Jacob, Scherpereel, and Adams 2014; Reynolds 1999), existing work has been largely silent on female defense ministers. No study to date has established the conditions that perpetuate women’s exclusion from the defense portfolio, nor the factors that facilitate women’s initial inclusion in the post. This is a surprising oversight, given that these portfolios have long been viewed as one of the last bastions of male political dominance.

To address this gap in the literature, we provide the first study of female defense ministers. After highlighting the importance of women’s nomination to this position, we explore appointment patterns in all 166 states with ministries of defense between 1992 and 2012. The diversity among the countries including (and excluding) women from power demands a new theory of women’s access to the post. In response, we posit three related sets of hypotheses concerning female defense ministers. Focusing on women’s exclusion from office, we first argue that women are likely to remain absent

from the defense portfolio when its remit reinforces established beliefs about the masculinity and prominence of the position. To explain women's inclusion in the post, our second and third sets of hypotheses argue that the initial appointment of a female defense minister can be explained by changing perceptions of both women's role in politics and also of the ministry itself. In particular, we posit that male dominance erodes when politics becomes more feminized and when the meaning and significance of the position diverges from our traditional conceptions of the portfolio.

Together, our hypotheses suggest that men will maintain their grip on power when beliefs about this cabinet position reflect the male-dominated status quo. Women will gain access to the ministry of defense when the expectations surrounding these portfolios have fundamentally changed. Using our original and comprehensive dataset of women's initial appointments to the defense ministry, we test these claims with a logistic discrete-time duration model that predicts women's initial nomination to these posts across 166 states. As theorized, we find that women are less likely to be appointed to the ministry of defense in countries that are actively engaged in armed conflict or governed by a military dictator. By contrast, women are more likely to come to power when there are more women in politics—that is, in states with large numbers of female parliamentarians and female chief executives—and in states where the post takes on new meanings—particularly in countries concerned with peacekeeping and in former military states governed by left-leaning parties.

Our findings present a nuanced portrait of the role gender plays in politicians' appointment to traditionally masculine portfolios. On the one hand, the nomination of female defense ministers is associated with the growth of women's presence in politics more broadly, and therefore appears to reflect and reinforce the transformation of conventional gender roles. On the other hand, women are more likely to be selected for these positions when their meaning has fundamentally changed.

Thus, even when women appear to be taking on more high-powered positions, as is often the case in politics, they remain relegated to less masculine posts.

## **THE IMPORTANCE OF WOMEN'S ACCESS TO DEFENSE MINISTRIES**

Traditionally, the executive was the most masculine branch of government, with men occupying the vast majority of positions as national leaders and cabinet ministers (Davis 1997; Duerst-Lahti 1997; Jalalzai 2013). Though there is a growing belief that cabinets should more closely resemble the populations they represent (Borrelli 2002; Martin 1988), tremendous differences remain in women's access to ministerial portfolios both across countries and within states over time. While some governments are comprised of parity cabinets with equal numbers of women and men, in others women continue to be excluded or hold only a small number of ministries.

As scholars increasingly recognize the power and policy-making authority held by the executive branch, a growing body of research seeks to explain the variation in women's access to ministerial posts (Bauer and Tremblay 2011; Claveria 2014; Krook and O'Brien 2012; Siaroff 2000). This work is often concerned not only with women's presence in cabinets, but also with the kinds of portfolios women hold (Bego 2014; Escobar-Lemmon and Taylor-Robinson 2005, 2009; Reynolds 1999). Different ministries vary with respect to their influence within the cabinet, the amount of media attention they garner, and the degree to which they provide a pathway to higher office (Krook and O'Brien 2012). Beyond their status and cachet, cabinet assignments also take on different gendered meanings. Some portfolios address policy areas that have historically been linked to the home front and/or to women as a group—such as those addressing youth and education—while others cover issues traditionally associated with the public sphere and/or with men as a group, including infrastructure, economics, and defense (Escobar-Lemmon and Taylor-Robinson 2009).

Historically, women have been assigned both to low- or medium-prestige ministries (Bego 2014; Davis 1997; Escobar Lemmon and Taylor-Robinson 2005; Jacob, Scherpereel, and Adams

2014), as well as to portfolios in feminine issue domains (Borrelli 2002; Escobar Lemmon and Taylor-Robinson 2009; Moon and Fountain 1997). While this gender-based division of labor does not necessarily suggest that women’s portfolio assignments are inferior (Trimble and Tremblay 2011),<sup>1</sup> it is especially important to examine the cases where women ascend to the “high-prestige” and “masculine” posts from which they have long been excluded. Women’s appointment to prominent portfolios gives them access to the “inner cabinet” (Davis 1997; Escobar-Lemmon and Taylor-Robinson 2005). Likewise, the nomination of women to traditionally masculine ministries helps to erode traditional expectations about men’s and women’s gender roles (Krook and O’Brien 2012).

Of all of the traditionally male-dominated positions, women’s appointment to the ministry of defense demands particular attention. Because the defense minister is central to the operations and regulation of the armed forces, the remit of this portfolio arguably addresses one of the most stereotypically masculine issue areas (Jalalzai 2011, 432). Indeed, the defense ministry is almost always included in measures of high-prestige and masculine posts (Escobar-Lemmon and Taylor-Robinson 2005, 2009; Krook and O’Brien 2012; Reynolds 1999). Among the portfolios in these categories, moreover, the defense ministry has been especially difficult for women to access. Women have made much greater inroads in interior/home affairs and foreign affairs posts, while defense (along with finance) remains a last bastion of male control (Escobar-Lemmon and Taylor-Robinson 2009; O’Brien et al. 2015).

More than almost any other portfolio assignment, women’s appointment to the ministry of

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<sup>1</sup> To the contrary, Trimble and Tremblay (2011) note that the portfolios traditionally assigned to female ministers often have large budgets and deal with policy areas that have a “profound impact on women’s citizenship status” (36).

defense represents a highly visible break from traditional gendered patterns of governance. There is evidence to suggest, moreover, that men and women may prioritize different policies in the post (Bashevkin Forthcoming; Koch and Fulton 2011). Thus, it is clear that the selection of female defense ministers has important symbolic and policy consequences. Yet, to date we know very little about where these women have been appointed, let alone when and why they are able to access this post. Indeed, predicting women's nomination to high-prestige or masculine portfolios has challenged scholars, as many of the conditions that are correlated with women's presence in cabinets do not account for their appointment to this subset of ministries (Escobar-Lemmon and Taylor-Robinson 2005; Jacob, Scherpereel, and Adams 2014; Studlar and Moncrief 1999). We begin to address this gap in the literature in the following section, where we examine global patterns in the appointment of female defense ministers.

## **WOMEN DEFENSE MINISTERS ACROSS THE GLOBE**

In recent years a diverse but growing number of states have appointed women to the ministry of defense. Using information gathered from the Database of Political Institutions (DPI), the Central Intelligence Agency's (CIA) directory of Chiefs of State and Cabinet Members of Foreign Governments, and the Worldwide Guide to Women in Leadership,<sup>2</sup> we examine women's

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<sup>2</sup> Countries are identified as having defense portfolios based on the Database of Political Institutions (DPI) and the Central Intelligence Agency's (CIA) online directory, Chiefs of State and Cabinet Members of Foreign Governments. DPI identifies countries in which there are no armed forces or in which there is no cabinet minister responsible for the defense portfolio (Beck et al. 2001). The CIA online directories provide a list of all cabinet ministers for every state. We used this information to determine the presence of a defense minister in states not included in DPI. Women's ministerial appointments were identified using the Worldwide Guide to Women in Leadership.

nomination to the defense portfolio across the 166 countries that include this post in their governments. Figure 1 illustrates women's access to defense ministries. In total 52 women have been appointed to this cabinet position in 40 different countries across the globe from 1992 to 2012. In the vast majority of cases, only one woman has served in this capacity, though ten states appointed multiple women to the ministry of defense over this period. Bangladesh, Chile, the Czech Republic, Ecuador, Latvia, the Philippines, South Africa, Sri Lanka, and Sweden have each nominated two female defense ministers. In Norway four women have served in this post.

INSERT FIGURE 1 HERE

In the post-Cold War era, women have been appointed to the defense portfolio in every region of the world except for the Middle East. Figure 2 shows the distribution of initial appointments by region and decade. In the 1990s female defense ministers served in five countries: two in Asia, two in Europe and one in the Americas respectively. The first women to serve in this position during this period were Defense Ministers Kim Campbell of Canada (1993), Chandrika Bandaranaike Kumaratunga of Sri Lanka (1994-2001), and Anneli Kariina Taina of Finland (1995-1999).

INSERT FIGURE 2 HERE

In the following decade, women's initial appointments to the defense ministry increased almost four fold, with twenty-eight countries nominating women to this portfolio across four regions. During this period, most appointments were made in Europe and the Americas, where nine additional countries in each region selected women for this post. African states followed closely behind, with seven countries promoting women to the defense portfolio for the first time. Additionally, female defense ministers were selected in three Asian countries.

Between 2010 and 2012 seven more countries first appointed a woman to the ministry of defense. Four of these appointments came in Europe, two in the Americas, and one in Africa.



Overall, during the post-Cold War period, Europe stands out as having the greatest number of countries nominating at least one female defense minister—15 in total. The Americas follow closely behind, with female appointees in 12 different states. Notably, more than half of the countries in the Southern Cone have seen a female defense minister. Finally, there have now been female appointees in eight African and five Asian states.

## **EXPLAINING WOMEN’S EXCLUSION FROM THE DEFENSE MINISTRY**

Across the 166 countries with defense portfolios, there have been dramatic increases in women’s appointments to this ministry in the post-Cold War era. Countries as varied as Ecuador, Japan, the Netherlands, and Bangladesh have each nominated a woman to this position. Nonetheless, the vast majority of countries—over 75 percent—have not selected a woman for the defense portfolio. What explains women’s continued exclusion from this ministry?

Male dominance can be explained in part by conventional expectations about the masculinity and power of the defense ministry. The minister of defense is the head of military operations and is primarily responsible for overseeing national defense policy. Traditionally this portfolio is thus seen as one of the most masculine and prominent government posts (Escobar-Lemmon and Taylor-Robinson 2005, 2009; Krook and O’Brien 2012; Reynolds 1999). While the responsibilities and perceptions of the ministry of defense have changed in some states since the end of the Cold War (Gyarmati and Winkler 2002; Kathman 2011), in others its duties and status remain largely unaltered. Our first set of hypotheses posit that the appointment of the first female defense minister remains unlikely in those countries where the position continues to be one of the most important and highly-masculinized cabinet appointments. This is especially the case in countries that are actively engaged in international armed conflict and in states governed by military dictatorships.

Military conflict and gender are inextricably linked (Goldstein 2001). Indeed, many of the characteristics associated with modern masculinity—including “physical strength, adventurousness,

emotional neutrality, certainty, control, assertiveness, self-reliance, individuality, competitiveness, instrumental skills, public knowledge, [and] discipline” (Kenway and Fitzclarence 1997, 12)—are also associated with military prowess. Military conflict may increase the salience of these characteristics to the public and elected officials. Military involvement in international conflict therefore perpetuates the traditional view of the defense ministry as particularly masculine.

The masculine features associated with the ministry of defense also run counter to widespread perceptions of women in politics. Men and women are generally seen as bringing different policy strengths and leadership characteristics to the political arena. While women are typically perceived as being particularly competent in soft policy areas such as healthcare, welfare, and other social policies, they are viewed as less capable than their male counterparts at handling the military, national defense, and foreign policy (Alexander and Andersen 1993; Fox and Oxley 2003; Sanbonmatsu 2003). Women are additionally stereotyped as being compassionate and compromising leaders; men by contrast are seen as more assertive, aggressive, forceful, and capable of handling crises (Burrell 1994; Huddy and Terkildsen 1993; Rosenwasser and Dean 1989).

These perceived policy expertise and gender stereotypes hold more weight when military disputes dominate the political agenda (Lawless 2004). During times of military crises individuals look for “strong” leaders with masculine characteristics (Holman et al. 2011). For this reason, women are generally less preferred to male leaders when there is a known threat to national security (Falk and Kenski 2007; Holman et al. 2011; Lawless 2004). By this same logic, we anticipate that in the context of an international military dispute, women will be viewed as less appealing—and perhaps less qualified—for the defense portfolio. Instead, leaders may be more likely to pursue the appointment of a strong, aggressive, and masculine leader with known military expertise. As such, we hypothesize:

*Hypothesis 1: States involved in international military conflict are less likely to first appoint a female defense minister.*

Extending this logic, a similar argument applies to military dictatorships. These regimes emerge from coups against nondemocratic or democratic governments. After seizing power, the military often establishes a junta as a means of either formally governing the country or informally exercising control over the government's activities (Brooker 2014, 122). The junta, or political council, is typically comprised of members from the inner circle, heads of the armed services, and potential rivals from within the armed forces (Cheibub, Gandhi, and Vreeland 2010). Military and civilian dictatorships thus remain distinct. While civilian dictators are at the "mercy of the armed forces," military dictatorships use the "organizational apparatus of the armed forces to consolidate their rule" (Cheibub, Gandhi, and Vreeland 2010, 85-86).

Given the ties between the military and the government, the ministry of defense is an especially significant post within military dictatorships. This position is likely to be held by a high-ranking official with close ties to the military. Coupled with the feminine stereotypes that govern perceptions about women's leadership traits and policy expertise, it is unsurprising that Brooker (2014) makes frequent references to "military *men* in government" when describing these regimes. This leads to our second hypothesis:

*Hypothesis 2: Military dictatorships are less likely to first appoint a female defense minister.*

## **PREDICTING WOMEN'S INITIAL INCLUSION IN THE DEFENSE MINISTRY**

Though women largely remain excluded from the defense portfolio, a growing number of governments have appointed female defense ministers. What explains women's initial inclusion in this conventionally masculine post? We posit that women are likely to be selected as defense ministers when the meaning of this portfolio diverges from traditional conceptions of the post. In the following subsections, we identify two mechanisms by which this occurs. First, we discuss the changing perception of women's role in politics, such that women are viewed as plausible candidates

for this post. Second, we explain how the changing priorities and remit of the defense minister result in the portfolio itself being perceived as less masculine than in previous eras.

### **Changing Perceptions of Women’s Role in Politics**

Women’s inclusion in the defense portfolio appears to both reflect, and also result from, a new understanding of women’s role in the public sphere. Indeed, politicians and activists alike link the appointment of female defense ministers to broader trends in women’s access to political power. Dutch defense minister Jeanine Hennis-Plasschaert, for example, pointed to her position within the cabinet as a sign of the “erosion of the old boys club” in European politics.<sup>3</sup> Observers likewise link the selection of female defense ministers in Latin America to a shift away from a culture of “machismo” in politics.<sup>4</sup> That is, women are likely to be appointed as defense ministers when politics is no longer viewed as an exclusively, or even primarily, male domain.

These claims suggest that the nomination of female defense ministers is linked to a more widespread “feminization” of politics. Indeed, women’s appointment to cabinets in general—and conventionally masculine or high-prestige posts in particular—is often correlated with women’s access to political office more broadly (Escobar-Lemmon and Taylor-Robinson 2005; Krook and O’Brien 2012; Studlar and Moncrief 1997, 1999). There is an especially robust relationship between the proportion of seats held by women in legislative assemblies and women’s inclusion in the executive branch (Whitford, Wilkins, and Ball 2007).

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<sup>3</sup> “Female Defence Ministers Pledge to Break Europe’s Old Boys’ Network.” *The Guardian* available at: <http://gu.com/p/3mcp3/stw>.

<sup>4</sup> “Move Over Machismo: Latin America Sets A Global Example For Women In Power.” *Fox News Latino* available at: <http://fxn.ws/1jMco32>

Building on studies of legislative recruitment (Norris and Lovenduski 1995; Randall 1982), women's presence in parliament likely alters both the supply of, and demand for, female defense ministers. To begin with, bolstering the number of female legislators increases the supply of women eligible to serve in the post. Prior experience in elected office is the principal qualification for cabinet appointments in parliamentary systems (Blondel 1987). Oftentimes ministers in these systems are drawn directly from parliament. In these cases, the composition of the legislatures acts as a "supply force for the presence of women in ministerial lines" (Whitford, Wilkins, and Ball 2007, 563). Even in presidential systems, where ministers do not have to come from the national assembly, existing work suggest that the presence of female legislators increases the supply of women for (high-prestige) cabinet posts (Escobar-Lemmon and Taylor-Robinson 2005).

Above and beyond an increased supply of prospective female cabinet ministers, an increase in the number of female parliamentarians feminizes politics by fundamentally reshaping the demand for women in masculine cabinet posts. Davis (1997) links women's heightened descriptive representation in legislatures to an "irreversible process of change" that reshapes institutional culture with respect to ministerial appointments. An increase in the presence of women in legislatures, she posits, results in a willingness on behalf of female parliamentarians to "mobilize the resources of the organization or institution to improve the situation for themselves" (64). This increased demand for female ministers at the elite level is paralleled at the societal level. Women's presence in parliaments not only suggests that voters are more open to women in positions of political power, but also directly enhances citizens' beliefs about women's ability to govern (Alexander 2012). Together, these supply and demand effects lead to our third hypothesis:

*Hypothesis 3: Countries with greater numbers of female parliamentarians are more likely to first appoint a female defense minister.*

In addition to the role played by women in legislatures, the presence of a female head of government also likely affects the selection of female defense ministers. With a female president or

prime minister in power, the demand-side effects are particularly clear. The head of government often controls—or at least exercises significant influence over—ministerial appointments. Existing research suggests that female heads of government promote women to their cabinets at higher rates than their male counterparts (Davis 1997; Jacob, Scherpereel, and Adams 2014; Reyes-Housholder 2013), and thus may be more likely to first select a woman to head the defense portfolio. Female presidents or prime ministers may likewise affect societal acceptance of female defense ministers. Exposure to a female leader can improve citizens’ beliefs about women’s capacity to hold historically male-dominated posts (Beaman et al. 2009). Indeed, the very presence of a female head of government indicates that women have cracked the highest glass ceiling within the country and suggests that voters and politicians alike are amenable to women taking on more masculine ministerial positions.

Just as female heads of government may bolster the demand for female nominees to traditionally male-oriented cabinet appointments, they can also affect the supply of prospective female defense ministers. In some countries prime ministers or presidents hold multiple portfolios. This is especially the case in South and South-East Asian countries such as Bangladesh, India, Pakistan, the Philippines, and Sri Lanka, as well as some Caribbean states (including Dominica and Jamaica). Self-appointments thus represent an important mechanism by which female heads of government can shatter the glass ceiling of the defense ministry. Together, these supply- and demand-side effects suggests our fourth hypothesis:

*Hypothesis 4: Female chief executives are more likely to first appoint a female defense minister.*

### **Changing Perceptions of the Ministry of Defense**

Women’s access to the defense ministry may not only be shaped by beliefs about female politicians, but also by perceptions of the position itself. A large body of literature suggests that women are more likely to be appointed to less masculine and less prestigious posts (Escobar-

Lemmon and Taylor-Robinson 2005; Krook and O'Brien 2012; Reynolds 1999). Though this work necessarily assigns a single coding to each portfolio—such that defense ministries are always considered “high-prestige” and “masculine”—in practice the expectations and importance placed on different portfolios varies over time and space (Bauer and Tremblay 2011). Among cabinet posts, this variation in meaning is especially high for ministries of defense, particularly in the post-Cold War era. Our third set of hypotheses suggests that women gain office when the remit of the portfolio has shifted, thereby changing the traditionally masculine perceptions of defense ministries.

Different systems of government have fundamentally different expectations for their ministries of defense. While military dictators are least apt to place women in this portfolio, the appointment of a female defense minister may be especially likely in former military dictatorships led by left governments. With the end of military rule, new leaders are immediately tasked with consolidating civilian rule, strengthening state capacity, and addressing a number of other competing interests (Carothers 2002). Thus, many former military dictatorships are left grappling with the legacies of military rulers years after regime transition (Roniger and Sznajder 1999). For governments seeking to further disassociate themselves from former military abuses of power, the appointment of a female defense minister can signal change and renewal (Murray 2010) and offer a visible break from the past (Wiliarty 2008).

Left governments in former military states have particularly strong incentives to nominate women to the defense portfolio. In contrast to right-wing parties—which sometimes bear connections to former military regimes—left parties are more apt to seek to distinguish their own military agenda from their state's history of military dominance and human rights abuses. Parties of the left also tend to favor less military spending and more peaceful approaches to international relations (Palmer, London, and Regan 2004; Koch, 2009) and are perceived as more pacifistic (Koch and Cranmer 2007; Palmer, London, and Regan 2004). While right parties often exhibit strong

preferences for more military spending and an expanded international presence (Klingemann, Hofferbert, and Budge 1994; Whitten and Williams 2011), lefts parties are likely to prioritize human rights and women's issues (Viola and Mainwaring 1984). Together, this suggests our fifth hypothesis:

*Hypothesis 5: Left-wing governments in former military states are more likely to first appoint a female defense minister.*

The values and expectations assigned to the defense portfolio likely affect the selection of female defense ministers in both military dictatorships and in governments seeking to distance themselves from these legacies. At the same time, former military states are not the only countries in which the meanings assigned to this cabinet position have shifted over time. With the end of the Cold War in 1991, governments began to reconsider the priorities and purposes of their defense ministries. "Shrinking budgets and indefinable threats," combined with the view that militaries could be essential for peace enforcement, provoked widespread reevaluations of military goals in a number of states (Gyarmati and Winkler 2002, 5). In many cases this led to military downsizing, the elimination of conscription, and a shift in focus from an exclusive emphasis on homeland defense to a broader interest in international security and the promulgation of peace (Kathman 2011).

The end of the Cold War was also accompanied by major increases in peacekeeping efforts, with militaries from across the globe committing personnel to United Nations' missions seeking to create stability in tumultuous regions. As Fortna explains (2004, 269): "Since the end of the Cold War the international community and the UN have moved beyond 'traditional peacekeeping' between states and have become much more involved in civil conflicts, monitoring and often managing or administering various aspects of the transition to peace within states." While the traditional focus on national defense represents a stereotypically masculine remit, the shift in focus towards international security and peace building signifies a more gender neutral or even feminine approach to military duties. Indeed, women are often stereotyped as being "less aggressive, adventurous, competitive, and violent" than men (Fukuyama 1998). Instead the conventional



wisdom about women in leadership suggests that “women work for peace, and men wage war—cooperative women, conflictual men” (Caprioli and Boyer 2001, 503). As such, we anticipate that states are more likely to appoint a female defense minister when military efforts are dedicated—at least in part—to promoting peace and security. Specifically, our sixth hypothesis posits:

*Hypothesis 6: Countries engaged in peacekeeping missions are more likely to first appoint a female defense minister.*

## **ANALYZING THE APPOINTMENT OF FEMALE DEFENSE MINISTERS**

Using our new dataset of female defense ministers presented in Figure 1, we examine the determinants of women’s exclusion from—and inclusion in—this portfolio across 166 countries in the post-Cold War era. In particular, as our outcome variable we consider the *time until the selection of the first female defense minister* in each of these states. We focus on the initial promotion of a woman to this post because this represents the most important and visible departure from the male-dominated status quo. This nomination is likewise distinct from the appointments of subsequent female defense ministers. Existing work indicates that women are more likely to be selected for high-prestige posts after the glass ceiling has been shattered (Krook and Jalalzai 2010). Indeed, the decision to choose women for this portfolio in the future may be colored by the successes or failures of the first female defense minister. This suggests that the mechanisms driving women’s initial selection and subsequent nomination differ. Given the significance of this appointment, and consistent with O’Brien (Forthcoming), we thus focus on the first female defense minister.

We begin our analysis in 1991. We chose this start date to reflect the fundamental shift in the function of the defense ministry that occurred in many countries following the end of the Cold War.<sup>5</sup> This was a period of major political transformation, which altered the values, priorities, and

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<sup>5</sup> We use multiple lagged independent variables, each of which are measured in the post-Cold War period starting in 1991. The measure of the dependent variable thus begins in 1992.

purposes of the armed forces in many states. This era witnessed the decline of military dictatorships, for example, and growth in civilian-led regimes (Brooker 2014; Geddes, Wright, and Frantz 2014). Countries likewise began diversifying their defense portfolios. Many states now place greater emphasis on building peace, as opposed to primarily preparing for the threat of war. The vast majority of peacekeeping operations, for instance, have occurred in the post-Cold War period (Kathman 2011).

Trends in women's access to power further reinforce the argument that the defense ministry experienced a fundamental transformation in the years after 1991. Consistent with our hypotheses, women were virtually absent from these posts prior to the end of the Cold War. Other than Finland's Elisabeth Rehn, who was nominated to the portfolio in 1990, all female defense ministers in this era were self-appointed, as each held the chief executive post (i.e. president or prime minister). Extending our results backwards in time would thus provide few additional examples of female appointees.

### **Measuring Predictors of Women's Continued Exclusion**

Our first set of hypotheses posits that the defense ministry remains male dominated when the portfolio reinforces traditional perceptions about the masculinity and significance of the post. To begin with, we argued that women are excluded from this position in states that are involved in international armed conflict—i.e. conflict that occurs between two or more states (H1). We test this hypothesis with a covariate capturing whether a country was involved in a *deadly interstate dispute* in the preceding year. Specifically, we use the variable “Fatalities” from the MIDB4.01 dataset to create a binary measure that takes a value of 1 for states involved in any dispute that led to battle deaths in

the previous year and 0 otherwise (Ghosn et al. 2003; Palmer et al. 2015).<sup>6</sup> Of the military disputes that resulted in the use of force, only a fraction witnessed fatalities. As shown in Table 1, in our data there are 325 instances of countries' involvement in interstate disputes that end in at least one battle death. Lending initial support to our hypothesis, in none of these cases was a female defense minister first selected in the subsequent year.<sup>7</sup>

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<sup>6</sup>The casualty threshold for classifying wars is subject to debate. The COW project requires a minimum of 1,000 battle-deaths (Singer and Small 1972; Small and Singer 1982), while the UCDP/PRIO Armed Conflict Dataset (Gleditsch et al. 2002) uses a significantly lower threshold (25 battle-deaths). Our theory does not require interstate disputes to escalate to the level of war in order to perpetuate the exclusion of women from the defense ministry. To the contrary, even low levels of fatalities are likely sufficient to reinforce the perceptions of the defense portfolio as a high-profile and masculinized post. Indeed, no government has ever first appointed a female defense minister in the year following an interstate conflict with at least one fatality. Clearly, this relationship holds even when setting higher casualty thresholds. We thus opt for an inclusive measure: an interstate conflict that results in at least one death.

<sup>7</sup>We also examined a measure that includes both international and civil conflict. Here, we use the UCDP/PRIO Armed Conflict Dataset (Gleditsch et al. 2002) to identify civil or internal conflicts and combine these cases with our indicator of fatalities resulting from interstate conflict. Our results indicate there is no significant relationship between the appointment of female defense ministers and this alternative measure. In fact, civil conflicts occurred in four countries in the year immediately preceding the appointment of a female defense minister (Colombia, Bangladesh, Sri Lanka, and the Philippines). Three of these four nominations, however, were self-appointments. When we exclude self-appointments from our analysis we find a negative and significant relationship between deadly

INSERT TABLE 1 HERE

In addition to participation in interstate disputes, we contend that military dictatorships are more likely than civilian-led governments to remain male dominated (H2). We identify military dictatorships using information from Cheibub, Gandhi, and Vreeland (2010). They distinguish between monarchs, military dictators, and civilian dictators based on the characteristics of the elite who keep the ruler in power. In particular, they note that “military rulers confine key potential rivals from the armed forces within juntas” (84). We use this data to create a binary measure capturing whether the state is a *current military dictatorship* for each year between 1992 and 2012. Table 1 shows that of the 3,065 total country-years in the dataset, 447 are military dictatorships. Across the 166 states in the dataset, 40 were classified as such at some point during the period of study. Again, lending initial support to our theory, only one military dictatorship ever appointed a female defense minister in this era.

### **Measuring Predictors of Women’s Initial Inclusion: Women’s Role in Politics**

With respect to the initial inclusion of women in the defense ministry, we expect that their first appointment is more likely when the old-boys networks that historically dominated politics have broken down and women have gained access to positions of power more broadly. The second set of hypotheses concern this feminization of politics and focus on women’s access to both legislative (H3) and executive (H4) posts. To capture women’s presence in the legislature, we use data on women’s numeric representation from the Paxton, Green, and Hughes (1991-1998) and IPU (1997-2011) to determine the *percentage of parliamentary seats held by women* in each country in the previous year. The average proportion of female legislators in countries nominating a female defense minister

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conflicts (both civil and international combined) and the appointment of a female defense minister.

These results are reported in the appendix.

is 18.42%, as opposed to 12.12% otherwise. To test the hypothesis that female executives are more likely to appoint a female defense minister, we use information from Jalalzai (2013) to construct an indicator variable that captures *female state leaders*. Table 1 shows that women served in this position in 102 of the country-years in our dataset (for 31 states in total). Of the female defense ministers included in the data, six were selected by women and 34 were male appointees.

### **Measuring Predictors of Women’s Initial Inclusion: Perceptions of the Ministry of Defense**

The third set of hypotheses posits that states that have experienced a major shift in the role of the military—for example, those that have transitioned from a military-led government to a left-wing civilian-headed regime—are more likely to appoint female defense ministers (H5). To test this claim, we used data from Cheibub, Gandhi, and Vreeland (2010) to create a variable identifying states that were previously led by a military dictator but have transitioned to civilian rule (i.e. former military dictatorships). To further account for left-wing governments, we relied on the Database of Political Institutions. Here, governments are coded as left-wing if they are controlled by communist, socialist, social democratic or other leftist parties (Beck et al. 2001). To test H5, we include an *interaction effect between former military dictatorships and governments led by left-wing parties*. As shown in Table 1, our dataset includes 276 country-years fitting this description. Of our 40 first female defense ministers, seven were appointed in these regimes.

Our final hypothesis argues that the appointment of female defense ministers is more likely in states where the meaning of the position has significantly changed. Specifically we argue that countries that have diversified their defense portfolios to include peacekeeping efforts are more likely to first appoint women to these posts (H6). To account for this diversification we include an indicator variable that distinguishes states that *commit at least one peacekeeping troop* in the previous year from those that do not. This measure, which is taken from Kathman (2011), is based on data gathered by the UN Department of Peacekeeping Operations. In total, 1,656 country-years in our

analysis (or 54% of the observations) were involved in peacekeeping assignments. Of the instances in which a female defense minister is first appointed, 32 come from states that were involved in these missions in the year preceding the appointment.

In addition to our main predictors, we also control for three other factors that may otherwise bias our results. Over time leaders become more likely to appoint a female defense minister. Our model therefore includes *mean-centered linear and mean-centered quadratic measures of time*. These time controls constitute the baseline effects of the duration model.<sup>8</sup> Finally, because advanced industrialized democracies have been shown to have different attitudes towards both women's representation and defense, we also control for *membership in the Organization for Economic Co-operation and Development (OECD)*.

### **Modeling Strategy**

Our outcome variable—the time between the end of the Cold War and the appointment of the first female defense minister—is the survival or duration time. As the exact date of women's nomination to the post is unknown in most cases, this duration time is discretized into years. The time to first female defense minister is thus modeled using a logistic discrete-time duration model. As shown in Table 1, one of our covariates—deadly interstate disputes—perfectly predicts women's continued exclusion from the defense ministry. That is, a country involved in a deadly international conflict has never appointed a woman to the defense portfolio. When a covariate perfectly predicts the response—that is, when we encounter complete separation—its parameter estimate diverges to

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<sup>8</sup> Our duration model was estimated using several different formulations of the baseline hazard. The results of penalized likelihood ratio tests and simple backward elimination procedures both suggest that including both the linear and quadratic terms for time provides the best fit without sacrificing the parsimony of the model.

infinity. To address this complete separation, we use a bias reduction method originally proposed by Firth (1993). Firth's penalized likelihood approach always yields finite estimates of parameters under complete separation, and simulation results indicate that even under extreme conditions these estimates have relatively little bias (Heinze and Schemper 2002).

## **RESULTS**

In the following subsections we discuss the findings from the discrete time duration analysis estimated using Firth's penalized likelihood approach. Interpreting the results from the model is straightforward. The exponentiated coefficient estimates (listed in the last column of Table 2) represent the effect of a one unit increase in the covariate on the relative odds of first appointing a female defense minister in year  $t_i$  given "survival" as a male-dominated post up to the end of the previous year. A value above 1 indicates a greater likelihood of first appointing a female defense minister as the value of the covariate increases. Values below 1 mean that female defense ministers are less likely to be selected—i.e. they indicate decreases in the odds of observing the event. An estimate that is significant and far from 1 thus suggests that a one-unit increase in the explanatory variable has a large effect on the country's survival probability. As Table 2 shows, the findings from the duration analysis offer strong support for our hypotheses.

### **Traditional Perceptions of the Defense Ministry and Women's Exclusion from Power**

We argue that traditional beliefs about masculinity and power facilitate women's continued exclusion from the ministry of defense. Our first hypothesis focuses on the state's involvement in international military conflict. To capture the conflicts that are most likely to shape government behavior on this front, we focus on the country's involvement in interstate hostilities with at least one battle death. As posited in H1, when the military is involved in these weighty disputes, the defense portfolio is significantly more likely to remain male dominated. As compared to cabinets in countries that are not involved in deadly inter-state conflicts, the relative odds of female

appointment for these states is just 0.13 (a seven-fold decrease). In fact, and as noted above, across the entire time period under study there are no cases in which a country that experienced a battle death appointed its first female defense minister in the subsequent year. This result also holds, moreover, when estimating an alternative model that includes a measure of both inter and intrastate conflicts and excludes female self-appointments to the post (see appendix for details).

INSERT TABLE 2 HERE

Lending support to H2, the ministry of defense is also significantly more likely to remain male-led in military dictatorships. As compared to other regimes, the relative odds of female appointment in these countries is just 0.25 (a four-fold decrease). Figure 3 further plots the survival probabilities for these regimes over time. Like other states, the probability that the defense portfolio in military dictatorships survives as a male-dominated post is near one during the first year of the study (1992). Unlike other regime-types, however, the survival probability for these states remains high over the course of time (never falling below 0.90).

Delving deeper into the data demonstrates that women have been conspicuously absent from the ministry of defense under military dictators. Only one woman has ever held this post in these regimes, and she served only in an interim capacity. In 2010 Lesego Motsumi was appointed as Acting Defense Minister of Botswana. As she already held the portfolio for presidential affairs and public administration—and was presumably part of the inner circle given her long history of executive appointments—she was selected to stand in as the Acting Minister of Defense and the Acting Minister of Justice when these positions were vacated for a short period.<sup>9</sup> Other than Motsumi, women's access to the defense portfolio remains restricted under military dictatorships.

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<sup>9</sup> It is further worth noting that prior to 2008 Botswana was classified as a civilian, not a military, dictatorship (Cheibub, Gandhi, and Vreeland 2010). It is also one of the few states classified as a



## Changing Perceptions of Women's Role in Politics and Women's Inclusion in Power

Women are clearly less likely to first be appointed to the ministry of defense in countries where the post reinforces traditional masculine perceptions of the portfolio. Instead, the initial selection of a female defense minister is most likely when beliefs about women's role in politics have shifted and when the meanings and expectations placed on the ministry itself have fundamentally changed. With respect to the feminization of politics, the covariates capturing women's presence in elected office affect women's initial nomination to this post. Consistent with H3, a 10% gain in women's seat share in parliament increases the relative odds of appointment by a factor of 1.49, conditioned on survival up until that point. This represents a one-and-a-half-fold increase. Not surprisingly, a number of female defense ministers have been appointed in countries where women's numeric representation far exceeds the global average. Notably, Argentina, Denmark, Finland, the Netherlands, Norway, Spain, and Sweden have each selected female defense ministers. In the year preceding appointment, each of these countries ranked among the top ten states in the world in terms of the percentage of women in parliament.

Offering support for H4, the presence of a female executive has an even greater effect on the initial selection of female defense ministers. The hazard ratio for female executives as compared to male executives is 4.04, an over four-fold increase. This effect is driven almost entirely by self-appointments. In seven different countries women presided over the defense portfolio while also

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military dictatorship that has traditionally enjoyed a comparatively high Polity IV score. In the appendix, we include an alternative model specification that excludes Botswana from our analysis. With this model, we find that the coefficient estimate for military dictatorships becomes much larger, and the standard errors for this predictor are much smaller. The direction and significance of all other covariates remain largely unchanged.

holding the chief executive post. As president of the Philippines, for example, Gloria Macapagal-Arroyo was in charge of the defense portfolio during 2002 and again in 2006. Similarly, during her Premiership Iveta Radicova held the Slovakian defense portfolio from 2011 to 2012. As shown in the appendix, when excluding these self-appointments the covariate capturing female chief executives loses its significance (though the direction and significance of all other predictors remain largely unchanged).

### **Changing Perceptions of the Ministry of Defense and Women's Inclusion in Power**

Beyond the influence of female legislators and chief executives, the covariates capturing the changing perceptions of the ministry of defense are also significant. First, women's limited access to the defense ministry under military rule stands in sharp contrast to women's appointments in former military dictatorships. As shown in Table 2, the prospect of appointing the first female defense minister increases dramatically in these regimes. This relationship, however, is conditioned on government ideology. Consistent with H5, left-wing governments in former military states are significantly more likely than non-left former military dictatorships to first allocate this portfolio to a female politician.

Figure 3 clearly illustrates these findings. Initially, all regimes are likely to remain male-dominated, and for many states these survival probabilities remain high over time. Even in former military dictatorships, after 10 years of non-left party governments the probability of the state surviving without a female defense minister remains at 0.92. At year 15 it is still 0.84 and by year 20 the survival probability falls only to 0.79. In contrast, over time left-leaning governments in former military dictatorships are much more likely to first appoint a woman to this portfolio than any other type of regime. Their probability of surviving without a female defense minister drops to 0.78 by year 10 and 0.61 by year 15 of left rule. While left governments in these states are unlikely to immediately choose a woman to fulfill this role—in part because of the need to balance competing

interests directly following the transition—the combination of national history and governing ideology can together create a space for the eventual appointment of women to these posts.

Since the end of the Cold War, women have broken the glass ceiling in seven former military dictatorships now led by left-wing executives. With the appointment of Michelle Bachelet in 2002, for example, President Richard Lagos became one of the first Latin American presidents to select a woman for this portfolio. This nomination was particularly symbolic, given the country's history. Chile's former military dictator Augusto Pinochet is often recognized as one of the most brutal rulers in Latin America's history. Bachelet's family, moreover, was victimized by the Pinochet dictatorship—with her father killed and her mother tortured under the military regime. The selection of Bachelet to this post demonstrates a clear break from Chile's legacy of military abuse of power. Similar trends in the appointment of female defense ministers are observed in several former military dictatorships across Latin American states. There is no difference, however, between left- and right-executives in other regimes.<sup>10</sup>

The relationship between peacekeeping forces and time to first female defense minister (H6) further bolsters this claim. As compared to countries that do not engage in peacekeeping missions, the relative odds of women's initial nomination increases to 2.34 for those that commit at least one troop. These states are more than twice as likely to select a woman to serve in the defense portfolio

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<sup>10</sup> Though initially surprising given the strong link between left ideology and women's presence in legislatures, this result is consistent with the mixed findings from the scholarship on women in executive posts. While Escobar-Lemmon and Taylor-Robinson (2005) find that Latin American presidents from left parties are more likely to appoint a woman to a high-prestige post, Bego (2014) finds no such effect in Central and Eastern Europe. Likewise, in a standard linear regression model, there is no link between party ideology and Krook and O'Brien's (2012) gender power score.

as those that do not participate in these missions. Notably, Bangladesh, Sweden, and Canada have each appointed female defense ministers. They also rank among the top five most frequent contributors to peacekeeping missions in the post-Cold War period.

Turning to the control variables, the covariate capturing advanced industrialized democracies is not significant. When controlling for other factors, the defense portfolios in these countries are as likely to remain male-dominated as those in other states. The linear coefficient for time, on the other hand, is positive, while the quadratic term is negative. Plotting the baseline odds suggests that countries were least likely to first appoint a female defense minister in the years immediately following the end of the Cold War. Through the mid-2000s, states became more likely to select women for this role over time. At this point, the baseline probability of women's appointment began to decline. Though the baseline odds of the initial selection of a female defense minister are still greater in 2012 than in 1992, they are lower than they were in 2005.

## **CONCLUSIONS**

Traditionally, the ministry of defense ranks among the most masculine and powerful executive posts. Despite the importance of the defense ministry, no study to date has asked when and where women gain access to these positions, nor has existing work considered what the growing number of female defense ministers might suggest about the portfolio itself. Our work closes this significant gap in the literatures on executive politics, the allocation of cabinet portfolios, and women's access to political power. We posit that women are likely to remain excluded from the ministry of defense when its remit underpins traditional beliefs about masculinity and power. Instead, we theorize that women are more likely to be appointed to this portfolio when beliefs about the "appropriateness" of female defense ministers have changed.

Using original data from all 166 countries with defense portfolios from 1992 through 2012, we find that the defense ministry is likely to remain male-dominated in countries where the military

is central to the state's governing capacity—and thus reinforces the perception that the portfolio is masculine and powerful. Specifically, rule by military dictatorship and state involvement in deadly armed conflict are both strong predictors of women's continued exclusion from office. By contrast, women are more likely to be appointed to the defense ministry when politics is feminized. That is, women's greater numeric representation in parliament and the presence of a female executive both increase the likelihood that women will first gain access to this cabinet assignment. Finally, the remit of the post itself affects women's ascension to power. Former military dictatorships led by left governments and countries engaged in peacekeeping missions are significantly more likely to select a female defense minister, suggesting that women's inclusion is more likely when the portfolio has become less masculine and conflict-centered.

Our results provide cause for optimism and pessimism alike. To begin with, the link between the appointment of female defense ministers and women's presence in politics more broadly suggests that women will continue to make inroads in traditionally high-prestige and masculine posts. Worldwide, women's presence in parliaments more than doubled over the period under study—from an average of 8% of legislative seats held by women in 1991 to 18% in 2011. If women's representation continues to grow at this pace, the feminization of politics will likely erode traditional patterns of male dominance in many arenas. In coming years we may observe even greater numbers of women in high-profile legislative and executive posts.

At the same time, though women's access to defense ministries has grown in recent years, this does not imply that all cabinet posts are now accessible to women. As we have made clear, the meaning and significance attached to the ministry of defense varies considerably across countries. Importantly, it is in the states where the portfolio has arguably become less masculine (and conflict-oriented) that women have made the greatest inroads. We must thus be cautious in placing too much emphasis on women's ascension to these posts, as women's increased access to the defense

ministry may not be paralleled in other high-profile portfolios. Positions including the finance portfolio, which has arguably become more important following the recent global economic crisis, may remain nearly exclusively controlled by men.

Extending this logic, our results underscore the need for additional research on other high-profile executive posts, including the ministries of foreign and interior affairs. Though a growing literature considers these portfolios together—combining them into a single category that captures either high-prestige or masculine ministries—our work highlights the importance of considering these vital cabinet appointments separately. While we expect that the feminization of politics will be an important predictor of women’s access to power across each of these posts, we also believe that the meanings attached to these individual portfolios likely differ significantly over place and time. As with the defense ministry, the perceptions and remit of the post will likely shape women’s access to power. In fact, this variation helps to explain the difficulty researchers have faced in predicting women’s ascension to masculine and high-prestige portfolios. Without accounting for the gendered expectations attached to each post, it is impossible to predict women’s inclusion in, and exclusion from, office.

As well as these clear implications for women’s representation in other high-profile cabinet portfolios, our research also raises important questions about the consequences of women’s presence in power. To date, the work examining the impact of female politicians on defense policy yields mixed results. On the one hand, as the proportion of seats held by women in the legislature increases, countries become “less likely to rely on military force to settle international disputes” (Caprioli 2000, 65). Likewise, the presence of female foreign policy leaders is in some cases associated with gender-focused aid and “pro-feminist [policy] rhetoric” (Bashevkin 2014). On the other hand, female chief executives and defense ministers increase defense spending and conflict behavior (Koch and Fulton 2011) and female foreign ministers decrease foreign aid spending (Lu

and Breuning 2014). This raises clear questions about the conditions under which female defense ministers promote hawkish or dovish policies, and how women's behavior in this post may be linked to the conditions that allowed for their initial appointment to the portfolio. Clearly, though this paper significantly extends our knowledge of women's access to traditionally masculine cabinet posts, the study of this topic is far from concluded.

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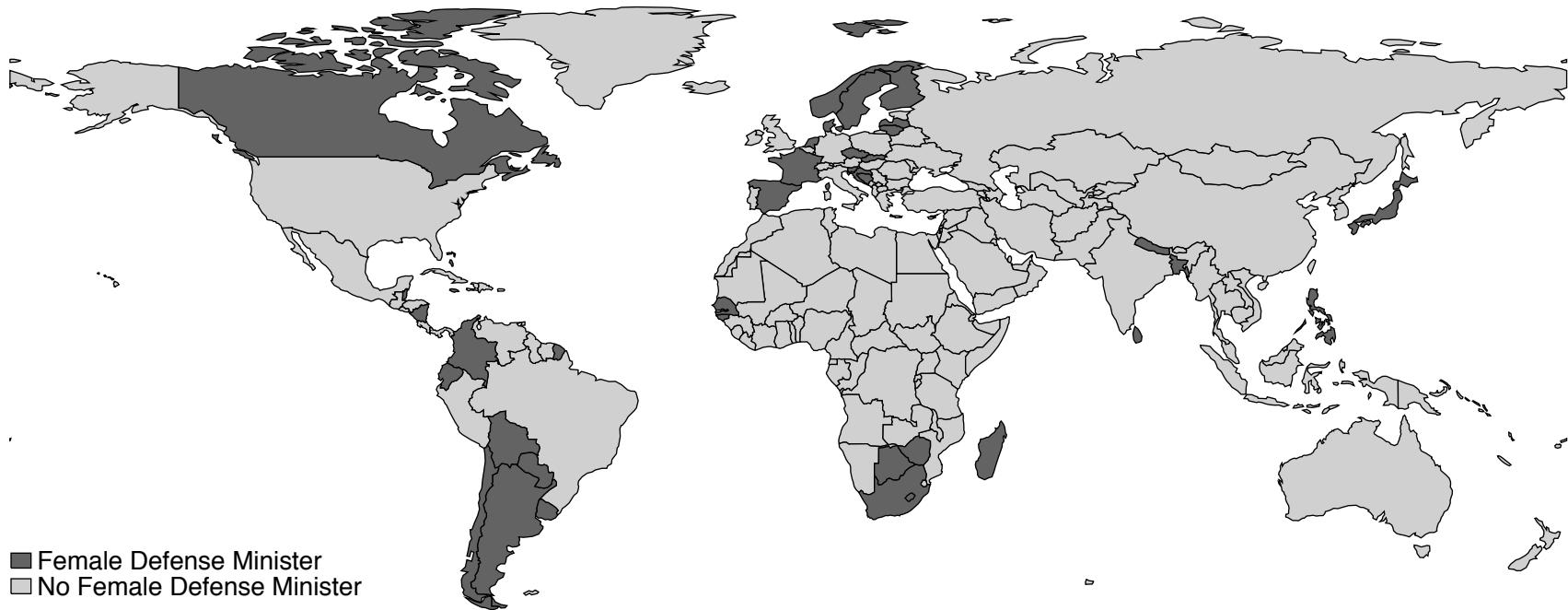
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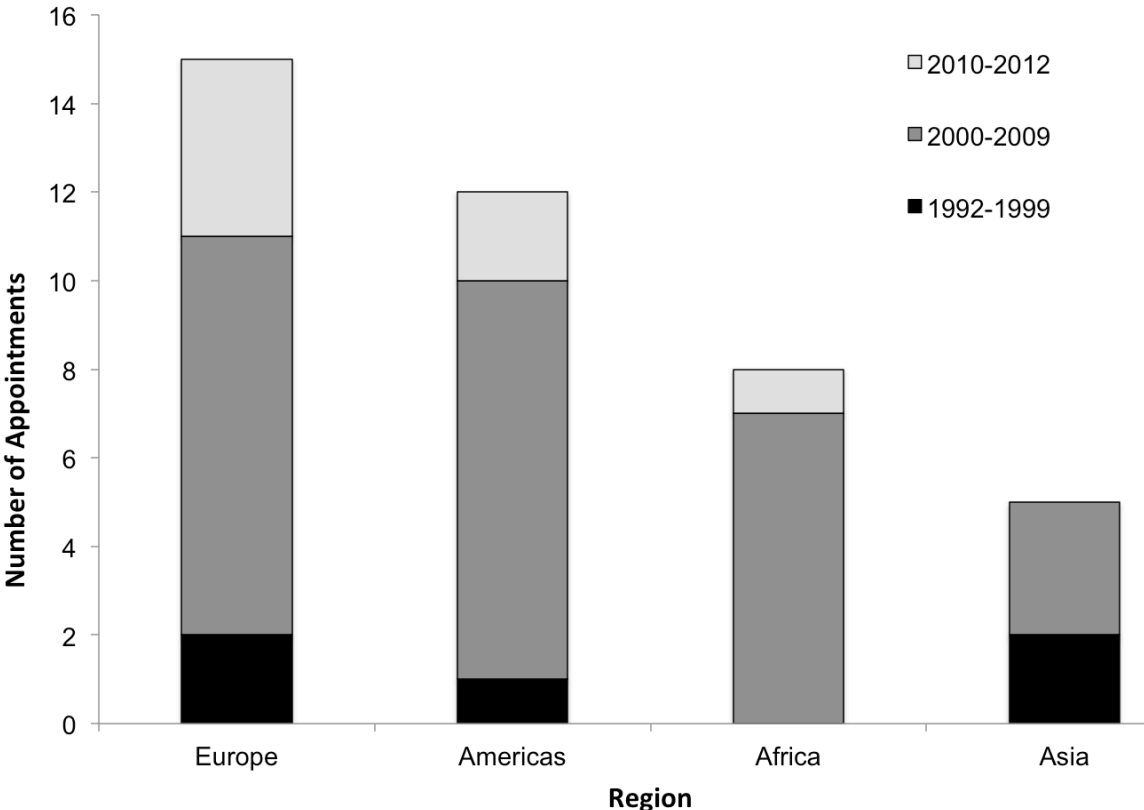
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Figure 1  
Female Defense Ministers Across the Globe 1992 to 2012



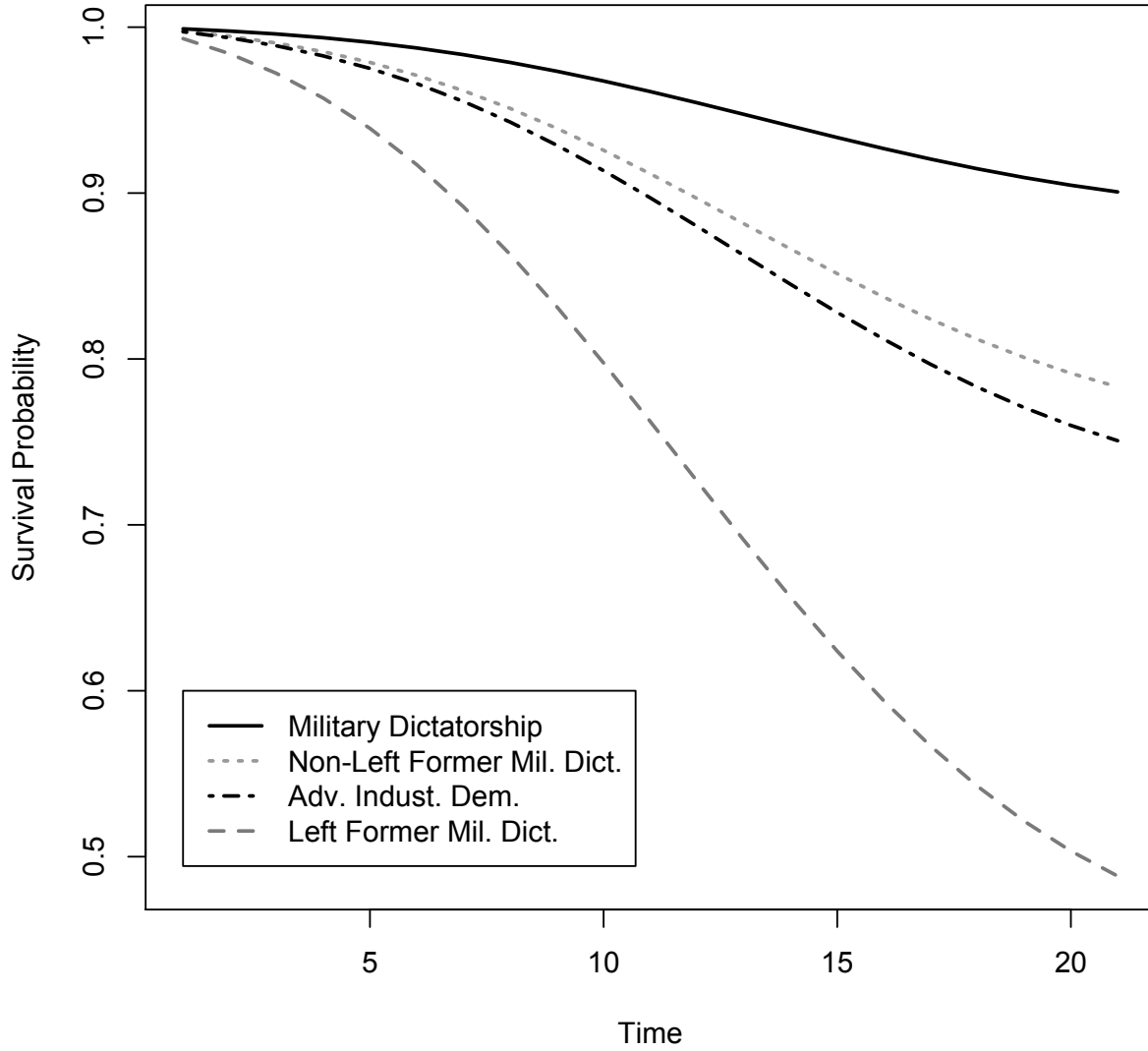
**Figure 2**  
**Count of Countries First Appointing a Female Defense Minister**  
**(Over Time and by Region)**



Note: Figure 2 plots initial appointments of female defense ministers in the post-Cold War era by region and over from 1992 to 2012.



**Figure 3**  
**Probability of Defense Ministry Remaining Male-Dominated Over Time**



Note: The survival probabilities were generated holding all other variables at their mean or modal values.

**Table 1**  
**Descriptive Statistics for Discrete Variables Used in Analysis**

<b>Variable</b>	<b>Value</b>	<b># Country- Years</b>	<b>% Country- Years</b>	<b># Female Defense Ministers</b>	<b>% Female Defense Ministers</b>
Deadly Interstate Disputes	1=Yes	325	10.6%	0	0%
	0=No	2740	89.4%	40	100%
Military Dictatorship	1=Yes	447	14.6%	1	2.5%
	0=No	2618	85.4%	39	97.5%
Female Executive	1=Yes	102	3.2%	6	15.0%
	0=No	2963	96.8%	34	85.0%
Left-Led Former Military Dictatorships	1=Yes	276	9%	7	17.5%
	0=No	2789	91%	33	82.5%
Peacekeeping	1=Yes	1656	54%	32	80.0%
	0=No	1409	46%	8	20.0%
<b>Observations in Analysis</b>		<b>3065</b>		<b>40</b>	

Notes: We list each of the discrete variables used in our analysis in the first column and the coding of the variable in the second column. The third and fourth columns show the number and percentage of observations in our data that take on a value of 1 and 0 for each variable. Columns five and six show the number and percentage of first female appointments to the defense ministry that take a value of 1 and 0 for each of the discrete variables in our analysis.

**Table 2**  
**Logistic Discrete-Time Duration Model (with Firth's Correction) of Women's Appointment as Defense Ministers**

	Estimate	Std. Error	p-value	$e^{\beta_p}$
Intercept	-4.82	0.44	0.00	0.01
Time	0.07	0.03	0.06	1.07
Time <sup>2</sup>	-0.01	0.01	0.06	0.99
Deadly Interstate Dispute	-2.01	1.35	0.04	0.13
Military Dictatorship	-1.40	0.81	0.05	0.25
% Fem. MP	0.04	0.02	0.05	1.04
Female Executive	1.40	0.46	0.01	4.04
Left Government	-0.09	0.40	0.82	0.91
Former Military Dictatorship	-0.55	0.48	0.25	0.58
Left-Led Former Military Dictatorship	1.18	0.68	0.09	3.26
Peacekeeping	0.85	0.39	0.03	2.34
OECD Membership	-0.38	0.41	0.36	0.68

Notes: The unit of analysis is the country. The outcome variable is the initial selection of a female defense minister. The time covariates capture the number of years since 1992 (or state founding date if later). Number of Observations=3,064 country-years.