

# Opening the Door: The Role of Conflict in Security Sector Gender Reform\*

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## Abstract

Security sector reform (SSR) plays a vital role in preventing conflict and promoting long-term peace. In the past thirty years, gendered security sector reforms, or those reforms that seek to increase women's representation within the security sector or make the security sector more responsive to gendered needs, have become increasingly popular. However, little is understood regarding the systematic patterns of adoption of these reforms. This paper examines the influence of conflict on the adoption of national gender balancing and gender mainstreaming policies in the security sector. Specifically, this study analyzes how the experience of intrastate conflict increases the domestic political will, need, and resources available for security sector gender reforms. Using a unique dataset on security sector gender reform between 1988 and 2016, this study strongly demonstrates that conflict and post-conflict states are significantly more likely to adopt gender balancing and gender mainstreaming reforms in the security sector compared to non-conflict states. As the first cross-national quantitative examination of the role of conflict in gender security policy adoption, this study advances our understanding of the dynamic processes that influence security sector reform.

**Key Words:** Security Sector Reform, Gender, Conflict, Post-Conflict

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# Introduction

In October 2000, the UN Security Council unanimously adopted Security Council Resolution 1325 (UNSCR 1325) on Women, Peace, and Security (WPS) to the applause of women's rights advocates, security experts, and Member State Representatives (Anderlini 2007). Many governments sought to comply with UNSCR 1325, which promoted women's right to participate in security and peace processes, by adopting gendered security sector reform, such as increasing the number of women in their security forces or establishing specialized gender offices or units within security institutions. However, a great degree of variation exists among states in the number and character of their security sector gender reforms. While the progress of individual states to reform gender relations in their security sector has been increasingly documented, little is understood about gendered security sector reform (SSR) cross-nationally.

This paper begins to fill this research gap by examining how conflict alters a state's political willingness and ability to adopt security sector gender reforms. While conflict is often harmful to women's rights and security (Reilly 2007), it can also challenge traditional gender roles, create new mobilization needs, delegitimize the security sector, highlight women's insecurity, and create access points for international actors to influence SSR, all of which favor gender reform. Therefore, conflict and post-conflict states may have greater political will and pressure for security sector gender reform, making them more likely to adopt these measures than non-conflict states.

Using a unique dataset on security sector gender reform in 150 countries, this paper demonstrates that conflict and post-conflict states are significantly more likely to adopt gender balancing and gender mainstreaming reforms in the security sector than non-conflict states. Further, it illustrates that the character of security sector gender reform differs in conflict and post-conflict states. Additionally, post-conflict states became more

likely to adopt these policies after the adoption of UNSCR 1325.<sup>1</sup> Finally, the results hold when natural disasters are used as a proxy for the theoretical mechanisms of conflict to address concerns of endogeneity. These findings demonstrate that the experience of conflict can present a unique opportunity for women to participate in security.

The paper begins with an introduction to security sector gender reform before proceeding to highlight how conflict increases the political will and need to adopt these reforms. Next, a research design is presented, followed by a discussion of the findings. Finally, the paper concludes with theoretical and policy implications.

## Gender Reform in the Security Sector

Although women have long participated in security, security sectors remain highly masculinized, both in the composition of security personnel and the values held by the institution (Sjoberg 2007). Security is often portrayed as a masculine duty - men are supposed to protect their families and communities, while women are portrayed as the benefactors of security based on gendered stereotypes that women are weak, innocent, or nonviolent (Sjoberg Forthcoming). In this study, security sector institutions consist of organizations that have the authority to use force to protect individuals and the state, such as the armed forces, police forces, federal agents, border and immigration agents, and intelligence services. The “security sector” refers to the state’s security apparatus, including the civil and military personnel that work in these institutions (Jacob 2009, Meharg 2010).

Highly masculinized security sectors have been increasingly criticized. Scholars connect militarized masculinity<sup>2</sup> with increased interstate and intrastate violence (Enloe 1989, 2000, Goldstein 2003, Higate and Henry 2004, 2009, Karim and Beardsley 2017, Sjoberg

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<sup>1</sup>In this study, the terms ‘policies’ and ‘reforms’ are used interchangeably since in general, gender mainstreaming policies are reform policies since they challenge or change the existing primarily male-dominated structure or norms of the security sector.

<sup>2</sup>Militarized masculinity refers to the belief that desired masculine traits are compatible with and gained through military service.

and Via 2010). In other words, masculinized and patriarchal security sectors may be more likely to engage in aggressive and violent behavior (Whitworth 2005). Further, masculinized security institutions may be more likely to commit human rights abuses, such as sexual violence (Cohen and Nordås 2014, Karim and Beardsley 2013, 2016, Nordås and Rustad 2013). Finally, feminist international relations and security scholars argue that women conceptualize security differently than men and have differing security needs (Tickner 1988, 1992, 2005). As a result, security sectors that are predominantly male may provide non-comprehensive security due a limited perspective of and experience with security. Therefore, masculine security sectors may provide inadequate protection for women, children, marginalized communities, and the civilian population in general.

After the establishment of several international commitments to women's right to participate in, be represented by, and be fully protected by the security sector with documents such as the Beijing Platform for Action (1995) and UNSCR 1325 (2000), governments worldwide have committed to reform their security sectors to integrate more women and women's perspectives into security. While there are many types of security sector gender reforms, this study categorizes them into two main types. Gender mainstreaming reforms in the security sector seek to promote gender equality by increasing women's representation, decision-making power, and influence. In other words, gender mainstreaming seeks to break down the masculinized values, hierarchies, and composition of security sectors to create a new institutional culture in which both male and female values, perspectives, bodies, and voices are valued equally.<sup>3</sup> Examples of gender mainstreaming efforts in SSR include the recruitment of women, the appointment of women into decision-making roles, the establishment of sexual harassment and gender equality policies, the creation of gender equality offices or units, the building of facilities and equipment for women, the establishment of special units to address gendered security issues,

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<sup>3</sup>Gender mainstreaming, according to the UN Economic and Social Council (ECOSOC), is "The process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels" (A/52/3/Rev.1 1997).

such as sexual and gender based violence (SGBV), the hosting of gender sensitization training, and the creation of a National Action Plan (NAP) for the implementation of UNSCR 1325.

One specific type of gender mainstreaming reform is gender balancing, which specifically seeks to increase women's physical representation within a security institution relative to men's representation. Gender balancing reforms are the most common type of gender reform undertaken by states and include actions such as recruitment drives that specifically target women, gender quotas that establish a minimum number or proportion of women that must be in the institution, the creation of gendered units or offices, such as SGBV units or all-female units, the removal of bans of women from certain positions, the promotion of women to high-ranking offices, and the creation of a NAP for 1325. As will be noticed, these reforms are also considered to be gender mainstreaming. Gender balancing is one component of gender mainstreaming, but is not sufficient to complete gender mainstreaming because women's presence alone within a security institution does not guarantee increased gender equality (Karim and Beardsley 2017).<sup>4</sup> Therefore, gender balancing must take place with other reforms to change the institutional culture in addition to the composition of security personnel.

Largely, calls for gender reform in the security sector rely on instrumental logic that gender reform improves the effectiveness of the security sector and promotes national security (Egnell 2014). These claims argue that gender mainstreaming brings a broader range of experiences, skills, and perspectives to the security sector, which improves its ability to provide security and respond to potential threats. For example, female officers can perform gender sensitive duties, such as female body searches, house searches, and working with female prisoners, suspects, or victims. Moreover, gender reforms may in-

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<sup>4</sup>In other words, a gender balancing reform is an example of gender mainstreaming, but not all gender mainstreaming reforms are specifically gender balancing as some gender mainstreaming reforms, such as the development of sexual harassment policies or the development of training sessions on sexual violence, seek to alter gendered relations within the institution, but do not directly attempt to increase women's representation.

crease the sector's legitimacy in the eyes of the public as women are perceived to be less corrupt, less threatening, and more empathetic than men (Baaz and Utas 2012, Dollar, Fisman and Gatti 2001, Hendricks 2012, Karim 2016, Karim and Beardsley 2013, Rabe-Hemp and Schuck 2007). Also, gendered SSR may improve responses to sexual violence through increased female representation, the creation of SGBV units, and the prioritization of domestic violence as a serious security concern (Anderlini 2007, Dharmapuri 2011). Finally, gender reform promotes women's right to participate in security and encourages women's empowerment (Olsson and Gizelis 2013, 2015).

Despite the increased interest in security sector gender reform, relatively little is understood about why states adopt security sector gender reforms. To the author's knowledge, there is no cross-national, systematic comparison of the adoption of gender reforms in the security sector and their effect on national security.<sup>5</sup> This paper seeks to address one of these gaps by examining the variation within the adoption of gender reform.

Since 2001, gender reform in security institutions has been declared as a main priority by several IGOs, such as the UN, NATO, the AU, the EU, and the OECD. However, a wide range of compliance with this emerging norm exists. For example, women's representation in police forces ranges from 1% to 54% and their participation in the military ranges from 0.5% to 26%.<sup>6</sup> Further, only 66 states have adopted NAPs for UNSCR 1325. Finally, only about one third of states have publicly recorded security sector gender recruitment targets or quotas to increase women's representation. Therefore, the question remains as to why do states adopt gender mainstreaming and gender balancing reforms in the security sector and why are some states more likely to adopt these reforms than others?

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<sup>5</sup>See Huber and Karim (n.d.) for a cross-national analysis of gender *balancing* policies in *post-conflict* states. However, this study focuses on the influence of peacekeeping missions on security sector gender balancing in post-conflict states and therefore, it cannot directly examine the influence of conflict on the adoption of the reforms since it does not consider non-conflict states. This study moves beyond that original examination by investigating the direct role of conflict in the process of gendered security sector reform, developing a theory which applies to both conflict-affected and non-conflict affected states, and incorporating a broader range of reforms.

<sup>6</sup>Data based on 2016 figures from the author's sample of 150 states

## Conflict: Opening Doors for SSR Gender Reform

While violent conflict often results in widespread economic, social, and political damage, it can also trigger societal and political transformation. Wars can create new states and societies, promote economic growth, secure political rights for a previously marginalized group, and prompt cultural change. While conflict can harm women's rights, it can also challenge women's roles to give them greater rights in the home, economics, politics, and society in general. Specifically, the experience of conflict can grant women greater access to participation in the security sector.<sup>7</sup>

The conflict and post-conflict environment shifts political will to favor gender mainstreaming in SSR by altering the needs and perspectives of the government, the security sector, and the population. Specifically, the experience of conflict may change the mobilization needs of the state, shift gender roles to grant women more access to public and security oriented duties, exacerbate women's physical insecurities, damage the reputation of security institutions, and finally, allow international actors greater access to and influence over policymaking. All of these factors increase the political will, need, pressure, and opportunity for security sector gender reform.

First, conflict leads to increased mobilization of the population into the security sector and its related institutions. The most prominent mobilization needs are calls for direct participation in the security sector. As mobilization demands begin to outstrip the availability of willing or able men, the government may feel pressured to turn to women to bolster security personnel (Goldstein 2003). For example, after the U.S. army became a volunteer force, the U.S. increasingly turned to female recruits during conflicts, such as the Gulf War (1991) or Iraq War (2003) (Aponte et al. 2011). Similarly, during the Korean War, the U.S. Defense Department established the Defense Advisory Committee

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<sup>7</sup>Please note that this paper does not necessarily argue that women's integration into the security sector contributes to women's rights. Many feminists argue that women's integration into security does little benefit to women since it only includes them into another patriarchal hierarchy (Anderlini 2007, Dharmapuri 2011, Sjoberg 2007).

of Women in the Services to target women for recruitment (Bellafaire 2006). Further, Thomas and Bond (2015) examine how competition for recruits between insurgent organizations and mobilization needs in Eritrea led to the recruitment of women, despite the some ideological reluctance.

In addition to mobilization directly into the military, there may also be mobilization needs for war-related activities, such as weapons-making and medical care. For example, during World War II, women were famously employed in various war-related industries to support the war effort as more men were pulled away from industries to fight directly in the conflict (Goldstein 2003). Therefore, as a conflict rages, especially long or intense conflicts, mobilization needs increase, heightening the probability that the security sector will turn to women to fill its ranks. This effect is likely to be particularly strong during active conflict, although it may also be present after conflict, especially if men who previously participated in the security sector either do not wish to continue after the conflict or may be barred from participating in it again.<sup>8</sup>

Second, the experience of conflict may also challenge traditional gender roles that bar or dissuade women from joining the security sector. Gender roles are most directly challenged by women's participating in the conflict as combatants. Women's direct participation in violent conflict shatters ideals of feminine innocence, weakness, and nonviolence and demonstrates women's agency in security roles (Karim and Beardsley 2016, Sjoberg 2007). Therefore, female combatants' experience may break down stereotypical gender norms that women are not suitable for the security sector.<sup>9</sup>

Further, short of direct participation in combat, women's experiences during and after conflict may also challenge traditional gender roles in less dramatic ways. For example,

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<sup>8</sup>For example, if a military is accused of committing atrocities during conflict, many SSR programs prevent military members from joining a newly constructed military.

<sup>9</sup>For example, Karim (2016) found that after the Liberian civil war, Liberians were more comfortable around and evaluated the competency of Liberian female police officers higher than foreign female peacekeepers potentially because they had directly witnessed Liberian women's strength and abilities as security agents during the conflict.



during conflict when able-bodied men may be off fighting, injured, or killed, women often have to fill traditionally male roles, such as laborers in economic activities, mediators of interpersonal conflicts, and community leaders (Carpenter 2005). For example, women in Northern Uganda increased their economic activity during war to fill the role of missing men (Ahikire, Madanda and Ampaire 2012). Similarly, in Sierra Leone, men encouraged women to take over their role as breadwinners, which led many women to enter an informal, shadow economy (Hoduck 2016). Further, women may continue their informal economic role in refugee camps (Hoduck 2016).

Additionally, women may fill the political positions of men who are either absent or ineligible or unwilling to enter political office. After conflicts, women may gain unprecedented political representation, such as women's unmatched representation in the legislature of Rwanda or the election of the first African female president, Ellen Johnson Sirleaf, in Liberia after their respective conflicts. Further, women may mobilize as part of a peace movement, such as the Woman's Peace Party in the USA during World War I, Mothers Against Silence in Israel during Israel's war with Lebanon, Women in Black in Israel, the women's peace movement in Liberia, and the Mothers of the Plaza de Mayo in Argentina. Many of these peace movements later evolved into or had implications for larger political movements. Women may be able to leverage their mobilization efforts and their status as the new "leaders" of their families and communities to gain political office. For example, Berry (2015) argues that the genocide and civil war in Rwanda created political mobilization opportunities for women that legitimized them as political actors and led to more women running for (and being elected to) political office. Further, women may gain legitimacy as political leaders from the fact that they may not have directly participated in fighting, do not support war (often playing to traditional stereotypes that women are less aggressive and hawkish than men), or were not "responsible" for the country's war originally (Thomas and Adams 2010). Therefore, during and after conflict, women may gain increased influence over their homes, their communities, and the entire country,

which challenges traditional gender roles that women belong in the private sphere and directly demonstrates their agency in these roles, increasing the probability that women will be deemed capable for security sector roles.

Third, although conflict may challenge gender roles to empower women in some aspects of life, it also creates an environment that is particularly insecure for women as they may be displaced from their homes, disconnected from their communities and families, and economically and physically vulnerable (Bennoune 2007). This insecurity is most predominantly expressed through increased threat of SGBV (Cohen and Nordås 2014, Karim 2017, Karim and Beardsley 2016, Manjoo and McRaith 2011, Nordås and Rustad 2013). The security sector may feel obligated to address women's unique insecurity by undertaking gender reforms. Further, women's heightened security needs may further act as a rallying point around which gender reform advocates organize to pressure for gendered SSR.

Fourth, during and after conflict, the population may distrust the security sector for its participation in the conflict, especially if it is accused of abusing civilians. The security sector may undertake gender reforms in the hope of leveraging gendered stereotypes that women are less corrupt, less violent, and less militant to decrease its perceived hypermasculinity and distance itself from previous behavior (Karim 2016).

Finally, during and after conflict, new actors may gain access to and influence over state policymaking. Conflict may weaken a state's internal policymaking abilities by damaging its infrastructure, limiting the state budget, and increasing political frustration and dysfunction. This may lead states to turn to and rely upon foreign donors to maintain or rebuild their government, economy, and infrastructure. Therefore, states, IGOs, and NGOs may intervene to end the conflict, prevent conflict resurgence, and assist in reconstruction, and thereby gain influence over the reforms adopted.

The increased presence of international actors may specifically promote gender reform in security due to the popularity of this rising international norm. Since UNSCR

1325, gender reform of security institutions has been declared a major priority of several intergovernmental organizations and states. These international actors may try to persuade (or coerce) the security sector to adopt gender reforms. For example, Huber and Karim (n.d.) and Bush (2011) find that the presence of a peacekeeping mission increases the likelihood that a post-conflict state will adopt a SSR gender balancing reform and a legislative gender quota, respectively.<sup>10</sup> This international influence likely increases as more resources are brought to the country, which can be used to implement state-desired SSR gender programs or pressure an unwilling government to adopt these programs.

While conflict may provide an opportunity for gender reform in security, it is not sufficient to ensure greater gender equality both within and outside of the security sector and in many ways, it is directly damaging to gender equality (Enloe 1989, 2000, Goldstein 2003, Hudson et al. 2013). The theory presented here does not necessarily contradict this perspective, but by considering the developments in the norm of gender reform in security in the past fifteen years, it further develops theories regarding conflict and gender. Specifically, while previously the WPS norm was underdeveloped, it is now an increasingly important norm. Therefore, this theory examines how conflict opens the door for the WPS norm to influence policy. Finally, another possible concern is that SSR gender mainstreaming does not actually promote gender equality in the security sector or in the society. While this is a valid concern and an important future research avenue, this study focuses primarily on the patterns of adoption of these reforms, and not their effect.

Therefore, due to increased political will and demand, conflict and post-conflict states should be more likely to adopt gender mainstreaming and gender balancing reforms than their non-conflict affected counterparts. “Conflict affected” in this study refers both active conflict and post-conflict states.

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<sup>10</sup> Huber and Karim (n.d.) examine the effect of UN peacekeeping missions on the adoption of SSR gender balancing reforms in *post-conflict* states. This study expands on that research by examining SSR gender balancing *and* mainstreaming in conflict *and* non-conflict states.

***Hypothesis 1:*** *Conflict affected states should be more likely to adopt security sector gender balancing reforms than non-conflict affected states.*

***Hypothesis 2:*** *Conflict affected states should be more likely to adopt security sector gender mainstreaming reforms than non-conflict affected states.*

However, while both active conflict and post-conflict states should be more likely to adopt gender mainstreaming and gender balancing reforms compared to non-conflict states, the expression of these reforms may differ. This is most strongly observed in the increased need for mobilization in conflict states. During conflict, the security sector expands rapidly, often outstripping the supply of available men, causing the government to turn to women. In contrast, after conflict, the government may decrease the size of the military and have already mobilized security personnel, decreasing the need to turn to women to fill these posts.<sup>11</sup> Therefore, while gender balancing should overall be more likely to occur in both conflict and post-conflict states, it should be especially likely to occur in active conflict states.<sup>12</sup>

***Hypothesis 3:*** *Active conflict states should be more likely to adopt security sector gender balancing reforms compared to post-conflict states.*

Similarly, although the need for SSR gender mainstreaming may be great in both conflict and post-conflict states, there may be more awareness of the need for it, political will, and resources available in post-conflict states. During conflict, the government may prioritize increasing the size and effectiveness of the security sector, rather than the gender equality of it. In fact, during conflict, security sectors often become highly masculinized, signifying that gender mainstreaming is not occurring. After conflict, states may be able to focus more on the equality of the security sector since militarization demands have decreased. Finally, after conflict, some of the mechanisms proposed above, especially the

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<sup>11</sup>This may only occur if the government is willing to retain the same troops it used during conflict.

<sup>12</sup>The patterns of gender balancing during conflict illustrate that the adoption of gender balancing reforms does not necessarily signify that the security sector is becoming more gender equitable. This study remains relatively agnostic about the implications of which causal pathway leads to policy adoption. In other words, it is possible that in conflict states, gender reforms in the security sector may be undertaken with little to no intention of undermining the current patriarchal culture (and in fact, may reinforce this culture) and instead are simply responses to mobilization needs.

prevalence of SGBV, the concern of the security sector’s decreased legitimacy, and the influence of international actors may increase greatly. In contrast, since security sectors often experience shrinking sizes and budgets after conflict, gender balancing needs may not be as great in the post-conflict environment as they are in the conflict environment. Therefore, security sector gender mainstreaming reforms should be especially likely to be adopted after conflict compared to both conflict and non-conflict states.

***Hypothesis 4:*** *Post-conflict states should be more likely to adopt security sector gender mainstreaming reforms compared to conflict states.*

Finally, while gender mainstreaming and gender balancing in SSR have been taking place for decades, the passing of UNSCR 1325 represented the first time that gender reform in SSR was declared to be an international and national obligation. As a result, gender mainstreaming and gender balancing in SSR in conflict and post-conflict countries should be especially likely after the passing of UNSCR 1325 in 2000.

***Hypothesis 5:*** *Active conflict states should be especially likely to adopt security sector gender balancing reforms after the adoption of UNSCR 1325.*

***Hypothesis 6:*** *Post-conflict states should be especially likely to adopt security sector gender mainstreaming reforms after the adoption of UNSCR 1325.*

## Research Design

To test these hypotheses, this analysis uses a unique cross-national dataset on security sector gender reform in a sample of 150 states between 1988 and 2016.<sup>13</sup> The state-year dataset contains 4,225 observations. Logistic regression models with state-clustered standard errors are used to account for autocorrelation across units.<sup>14</sup>

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<sup>13</sup>Countries included in the dataset were chosen randomly, which decreases concerns of selection bias. A list of the countries in the dataset can be found in the appendix.

<sup>14</sup>Alternative model specifications, including Generalized Estimating Equations and Negative Binomial Regressions can be found in the appendix.

## Dependent and Independent Variables

The main dependent variables are *SSR Gender Balance* and *SSR Gender Mainstream*. *SSR Gender Balance* is a dichotomous indicator of whether a gender balancing reform was adopted by the security sector in the state-year. Gender balancing reforms were defined as the adoption of a recruitment target or quota for female personnel, the hosting of a female-focused recruitment campaign, the creation of an office or unit with gendered implications, the removal of barriers to women's participation in certain security roles, the promotion of women to a high-ranking security position for the first time, the establishment of associations for female security personnel, and the creation of a National Action Plan (NAP) for UNSCR 1325.<sup>15</sup>

This indicator varies from year to year, recording a positive instance of gender balancing only if a gender balancing reform was adopted *in that year*. In other words, a state may adopt a gender balancing reform in one year, but not the next year. This distinguishes the adoption of these reforms from the simple existence of them. States may adopt a gender balancing reform that will be implemented for many years. However, the adoption of the gender balancing reform would only be recorded in the year it was adopted, rather than its tenure of existence.<sup>16</sup> The use of a dichotomous indicator allows for an examination of whether the experience of conflict has *any* effect on security sector gender reform, rather than the magnitude of the effect.<sup>17</sup> Gender balancing reforms were relatively rare in the sample, occurring in 15.1% of state-years, with 9 being the most reforms adopted by one country.

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<sup>15</sup>Reforms were largely recorded based on newspaper articles or country SSR gender mainstreaming guides or performance reviews, such as those country reports published by the UN or NGOs. This variable expands on the same variable in the Karim, Wagstaff and Huber (n.d.) dataset, extending it to non-conflict countries, standardizing the yearly range, and altering some coding rules.

<sup>16</sup>This coding not only allows for an examination specifically of adoption patterns, but also is more reliable since it is difficult to determine how long most gender policies are in place.

<sup>17</sup>However, an alternative measure of the dependent variable as a count of the number of reforms adopted is used with a negative binomial regression in the appendix to analyze the magnitude of the effect. Further, pending the collection of further data, future studies should examine the overall gender reformed status of the security sector.

The second dependent variable, *SSR Gender Mainstream* is also a dichotomous variable indicating that the state adopted a gender mainstreaming policy in the security sector in the year. A positive instance of gender mainstreaming was defined as any government led or approved reform or program to increase gender equality within the security sector, increase security forces' awareness of, sensitization to, and response to gendered issues, or create a welcoming environment for all genders in the security sector either as personnel or as recipients of security.<sup>18</sup> All reforms included within the *SSR Gender Balance* variable are also included within this variable, in addition to other reforms, such as gender sensitization trainings, SGBV training, sexual harassment policies or gender equality policies, the building of female facilities or equipment, and policies, procedures, or manuals for gendered crimes or violence, such as SGBV, human trafficking, and domestic violence. *SSR Gender Mainstream* also varies from state-year and is coded as 1 on the state-year in which a policy is first adopted. As to be expected, *SSR Gender Mainstream* is slightly more common than *SSR Gender Balance* with 19.6% of state-years across 141 states observing the adoption of a gender mainstreaming reform.<sup>19</sup> The most reforms adopted by one state is 13.<sup>20</sup>

Two main sets of independent variables to operationalize conflict are used in this analysis. The first is a dichotomous indicator of whether the state-year is “conflict affected.” *Conflict Affected* is coded as 1 if the state-year was either experiencing active civil conflict or had experienced active conflict within the last ten years.<sup>21</sup> Conflict is

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<sup>18</sup>This coding excludes programs supported entirely by NGOs without the government's direct support and collaboration. This was done to ensure that the variable only recorded programs that were directly supported by the government, rather than programs that are done independently from or without the active involvement of the government.

<sup>19</sup>It should be noted that instances of gender mainstreaming are likely to be underreported compared to gender balancing since they are often less controversial, notable, or understood. However, there does not appear to be any systematic differences across countries in the degree of underreporting.

<sup>20</sup>The correlation between *SSR Gender Balance* and *SSR Gender Mainstream* is 0.85. The high correlation is expected given that gender balancing reforms are part of gender mainstreaming reforms and because it is likely that states that adopt gender balancing reforms are also more likely to adopt gender mainstreaming reforms.

<sup>21</sup>Alternative codings of this variable conceptualize post-conflict as five years after the conflict ends or as a permanent state after conflict. These are used as robustness checks.

defined according to the UCDP/PRIO Dataset on intrastate conflict as 25 battle deaths in the state-year.<sup>22</sup> This analysis is limited to intrastate conflict since the mechanisms underlying the motivation for conflict affected states to adopt SSR gender reforms are likely to be the strongest in civil conflicts. Finally, it is important to note that conflict is not randomly assigned across states and certain states are more likely to experience conflict than others. To address this possible bias, several controls are added to the models to account for alternative mechanisms that may influence both whether conflict occurs and whether gendered SSR is adopted. Importantly, any induced bias is likely to decrease the reported relationship since patriarchal states and security sectors are more likely to experience conflict and are also more likely to resist the adoption of gender reforms (Caprioli 2000, 2003, 2005, Caprioli and Boyer 2001, Cole 2012, Goldstein 2003, Hudson and Den Boer 2002, Hudson et al. 2013, Melander 2005*a,b*). Finally, to address concerns of endogeneity, this variable is lagged by one year. About 39% of the state-years are conflict-affected.

The second set of independent variables, *Active Conflict* and *Post-Conflict*, are dummy variables indicating whether the state is experiencing an active conflict with more than 25 battle deaths or not and whether the state has experienced a conflict with more than 25 battle deaths within the last 10 years but is not currently experiencing conflict.<sup>23</sup> The coding of conflict and post-conflict is based on the UCDP/PRIO Dataset on intrastate conflict.<sup>24</sup> These variables are also lagged by one year. Around 19.2% of observations are active conflict state-years and 19.6% are post-conflict years.

For the interaction hypothesis between conflict and post-conflict states and the post-UNSCR 1325 period, *UNSCR 1325* is a dummy variable indicating whether the state-year

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<sup>22</sup>Alternative codings of this variable with a threshold of 1,000 battle deaths is found in the appendix.

<sup>23</sup>Alternative measures of post-conflict, namely post-conflict as ending five years after a conflict ends or as a permanent state, are included in the robustness checks.

<sup>24</sup>Although not included in the main models, controls for various characteristics of the conflict, including intensity, termination, and whether the conflict occurred in a previously post-conflict state, are included in the appendix.



is after the passing of UNSCR 1325 in 2000.<sup>25</sup> Slightly less than half of the observations, 49%, take place after 2000.

Finally, there may still be some concern of an endogenous relationship between security sector gender reform and the occurrence of conflict. In other words, while conflict may promote security gender reform, it is also possible that gender reform and the resulting more equitable and representative security force could affect the likelihood that conflict occurs in the first place. As explained previously, scholars have connected masculinized security sectors with increased aggression, violence, human rights abuses, and sexual violence, which may all lead to conflict. (Cohen and Nordås 2014, Enloe 1989, 2000, Goldstein 2003, Higate and Henry 2004, 2009, Karim and Beardsley 2013, 2016, 2017, Nordås and Rustad 2013, Sjoberg and Via 2010, Whitworth 2005).

While the lagged independent variables address this endogeneity to some extent, an additional proxy for the theoretical mechanisms that is more exogenous to the dependent variable is used – natural disasters. While natural disasters do not necessarily cause conflict, they are associated with decreased state capacity and create social and political upheaval (Berrebi and Ostwald 2011, 2016). Further, a natural disaster would prompt several of the theoretical mechanisms underlying the relationship between conflict and gendered security sector reform, including increased insecurity for women as women tend to be the worst affected by disasters,<sup>26</sup> altered gender roles as disaster may disrupt established daily life and women may have to take a more active role in re-establishing and rebuilding homes, businesses, and communities, increased international attention and pressure as countries, NGOs, and IGOs send aid, and increased mobilization into security institutions on a small scale if the military and police are deployed to assist after the

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<sup>25</sup>2000 is not included in the dummy variable because UNSCR 1325 was adopted in October, meaning that most states would not have had time to incorporate gender mainstreaming policies in their security sectors by the end of the year.

<sup>26</sup>The international community has increasingly recognized that natural disasters often have more harmful consequences for women than men. For more information, see the summary of the World Conference on Disaster Reduction in 2005 <http://www.unisdr.org/2005/wcdr/wcdr-index.htm>

disaster. However, natural disasters are unlikely to be highly correlated or endogenous to gendered security sector reform. Therefore, an additional set of models are run with a dichotomous indicator for whether a natural disaster has occurred within the state-year as the independent variable. Data on natural disasters comes from the Center for the Research on the Epidemiology of Disasters' (CRED 2010) Emergency Events Database (EM-DAT) as used by Berrebi and Ostwald (2016). The occurrence of a natural disaster is defined as any one or more of a geophysical, meteorological, hydrological, or climatological disaster in the state-year.

## Control Variables

A number of control variables are included. First, to account for a state's previous international and domestic commitment to women's rights in international law and to proxy for women's rights organizations (WROs) within the country, a control is included for the number of years since the state ratified the Convention for the Elimination of Discrimination Against Women (CEDAW) as recorded by the UN Treaty Collection Database.<sup>27</sup> CEDAW is the main international treaty on women's right to equal opportunities. Although CEDAW does not have an enforcement mechanism, which has led to relatively unequal compliance (Cole 2012), it signifies a state's willingness to identify women's rights as an international norm. Further, *CEDAW Years* also weakly proxies for the presence of WROs (Simmons 2009), which may lobby for SSR gender reform.<sup>28</sup>

Next, to account for gender equality within the state, which may indicate the need or pressure for SSR gender reform and has also been shown to affect whether conflict occurs (Caprioli 2000, 2003, 2005, Caprioli and Boyer 2001, Hudson and Den Boer 2002, Hudson

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<sup>27</sup>The number of years since CEDAW was ratified is used instead of a dichotomous indicator of whether CEDAW was ratified at all to gain greater information about the degree of commitment to and compliance with CEDAW by proxying for the degree of CEDAW's internalization within the state.

<sup>28</sup>Unfortunately, data limitations prevent the use of a more accurate measure of WROs, such as Murdie and Peksen (2015)'s measure of WRO presence within a state.

et al. 2013, Melander 2005*a,b*), *Fertility* is the one-year lagged measure of fertility rates during the country-year as recorded by the World Bank. Fertility rates are a common measure of women's rights because they indicate the strength of traditional stereotypes that women should act primarily as mothers and implies reproductive rights.<sup>29</sup> This variable reflects previous studies, which have used lagged measures of fertility rates to proxy for gender equality (Caprioli 2003, 2005, Caprioli and Boyer 2001)). The average fertility rate is 3.6.

*Democracy* is the one year lagged Polity II score from the Polity IV dataset (Marshall et al. 2015) indicating the state regime type in the state-year. *Democracy* ranges from -10 to 10, with 10 representing a strong democracy. The sample average is 2.2, indicating the average regime is in a transitional, weak democracy.<sup>30</sup> Democracies are likely more willing to adopt SSR gender reforms to conform with international norms and are also more likely to be gender equitable (Bjarnegård and Melander 2011).

Further, *Democratic Transition* is a dichotomous variable of state regime change to a democracy in the year. A sudden change in regime type may encourage gendered security sector reform since the new regime may establish new laws and security sectors. Since democracies may be especially prone to comply with international laws and norms, such as gender reform in security, a new democracy may be likely to undertake these reforms as a signal of its compliance with international norms.<sup>31</sup>

*GDPPC Growth* is a measure of the percentage growth from the previous year in the state's gross domestic product per capita. States experiencing an increase in wealth are more capable of adopting gender mainstreaming reforms due to increased budgetary

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<sup>29</sup>While fertility rates reflect one of many possible indicators of gender equality, it is the best measure for this analysis as other common indicators, such as labor force participation ratios and secondary school ratios may be endogenous to SSR gender mainstreaming since the security sector makes up the labor force and secondary school graduation is often a requirement to join the security sector. As a robustness check, we use several alternative measures for gender equality, including female-to-male secondary school ratios, female legislative representation, and labor force ratios.

<sup>30</sup>A state is a democracy when it has a Polity II score of 6 or higher (Marshall et al. 2015).

<sup>31</sup>*Democratic Transition* is coded as 1 if the Polity II score of a state increased from less than 6 to 6 or more from one year to the next.

resources. Further, states that are growing economically may also experience increased gender equality, since the two are correlated. *GDPPC Growth* is gathered from the World Bank and lagged by one year. The average *GDPPC Growth* is 2%.

Additionally, *Muslim Majority* is an indicator of whether more than 50% of the state’s population was Muslim, according to the World Religion’s Dataset.<sup>32</sup> Majority Muslims countries have been shown to be reluctant to adopt gender reform. For example, Cole (2012) shows that Muslim states are less likely to comply with CEDAW. Slightly less than one third of the sample represents a Muslim majority state.

Table 1: Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Max
Gender Balance	4,225	0.151	0.358	0	1
Gender Mainstream	4,224	0.196	0.397	0	1
Conflict Affected	4,227	0.388	0.487	0	1
Active Conflict	4,227	0.192	0.394	0	1
Post Conflict	4,227	0.196	0.397	0	1
Natural Disaster	3,281	0.540	0.498	0	1
CEDAW Years	4,198	13.689	9.832	0	37
Fertility	4,020	3.572	1.801	1.085	8.789
UNSCR 1325	4,227	0.561	0.496	0	1
Democracy	3,847	2.185	6.729	-10	10
Democratic Transition	3,831	0.014	0.117	0	1
GDPPC Growth	3,980	2.020	6.744	-64.996	140.501
Muslim Majority	4,227	0.283	0.451	0	1
Non-Gender SSR	2,473	0.414	0.493	0	1
Time Gender Balance	4,227	5.896	6.247	0	28
Time Gender Mainstream	4,224	5.202	5.943	0	28

To account for autocorrelation, *Time Gender Balance* and *Time Gender Mainstream* are count measures of the years since the previous gender balancing or mainstreaming reform was adopted, respectively. Gender mainstreaming and balancing reforms are likely to be highly interrelated across years. The cubic polynomial approach by Carter and Sig-

<sup>32</sup>The World Religion’s Dataset only includes data on the percentage of Muslims within a country in five year intervals. The coding recorded at each interval was continued for the next four years until the next interval. Since this is a dichotomous interval and the percent of the population which practices Islam is unlikely to change rapidly within a four year period, this coding is likely to be accurate.

norino (2010) captures the hazard rate, including those estimated by parametric duration models, of the state adoption of a new gender reform.<sup>33</sup>

Finally, to examine whether gendered security sector reforms are occurring independently from or in conjunction with general, non-gender SSR, *Non-Gender SSR* is a dummy variable indicating whether any large-scale non-gendered SSR has been adopted in the state-year. Non-gender security sector reform was defined as the establishment of a national or institutional plan for SSR, the creation or dissolution of a security institution or office, the institution of an oversight committee, or the creation of funding programs to improve the security sector. While conflict and post-conflict states may be more likely to adopt gendered SSR programs because the “door is opened” for gender reform, it is also possible that these states are simply more open to all types of SSR and that general SSR promotes the adoption of gendered policies. This control variable begins to examine whether gendered security reforms are adopted independently from general, non-gender SSR or if they are adopted in conjunction with it. Due to data limitations, this variable is only available for a random sample of 2,473 state-years in the dataset. Therefore, results will be shown for the logistic regression models with and without this variable.

## Results and Discussion

The results strongly demonstrate that intrastate conflict increases the probability that a state adopts security sector gender balancing and gender mainstreaming reforms. Table 2 shows the results of logistic regression models 1 through 4.<sup>34</sup>

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<sup>33</sup>Additional robustness checks includes the use of these variables as time variable dummies and the use of a generalized estimation equation (GEE) without time variables. The results remain consistent across these different specifications for autocorrelation across time.

<sup>34</sup>Models 1 and 2 examine whether conflict affected states are more likely to adopt gender balancing and gender mainstreaming reforms in the security sector. Model 3 tests whether conflict states are especially likely to adopt gender balancing reforms compared to post-conflict states. Finally, Model 4 tests whether post-conflict states are especially more likely to adopt gender mainstreaming policies. A table of the marginal effects can be found in the Appendix.

Table 2: Logistic Regression Results: Conflict and Gender Security Sector Reform

	<i>Dependent variable:</i>			
	Gender Balance (1)	Gender Mainstream (2)	Gender Balance (3)	Gender Mainstream (4)
Conflict Affected	0.32*** (0.12)	0.35*** (0.10)	0.46*** (0.15)	0.41*** (0.13)
Active Conflict			0.20 (0.15)	0.31** (0.12)
Post Conflict		0.01* (0.01)	0.01* (0.01)	0.01* (0.01)
CEDAW Years		-0.07*** (0.03)	-0.05 (0.03)	-0.07** (0.03)
Fertilitylag1		0.52*** (0.17)	0.53*** (0.16)	0.72*** (0.14)
UNSCR 1325		0.04*** (0.01)	0.04*** (0.01)	0.04*** (0.01)
Democracylag		0.003 (0.41)	-0.01 (0.41)	-0.02 (0.37)
Democratic Transition		-0.004 (0.01)	-0.003 (0.01)	-0.0002 (0.01)
GDPG Growthlag1		0.08 (0.16)	0.09 (0.16)	0.07 (0.15)
Muslim Majority		-0.19*** (0.06)	-0.19*** (0.06)	
Time Gender Balance		0.01* (0.01)	0.01* (0.01)	
Time Gender Balance <sup>2</sup>		-0.0002 (0.0002)	-0.0002 (0.0002)	
Time Gender Balance <sup>3</sup>				
Time Gender Mainstream		-0.24*** (0.05)		-0.24*** (0.05)
Time Gender Mainstream <sup>2</sup>		0.01** (0.01)		0.01** (0.01)
Time Gender Mainstream <sup>3</sup>		-0.0003 (0.0002)		-0.0003 (0.0002)
Constant	-1.91*** (0.25)	-1.61*** (0.20)	-1.93*** (0.24)	-1.62*** (0.20)
Observations	3,490	3,488	3,490	3,488
R <sup>2</sup>	0.09	0.15	0.09	0.15
χ <sup>2</sup>	175.50*** (df = 11)	344.04*** (df = 11)	178.53*** (df = 12)	344.58*** (df = 12)

*Note:* \*p<0.1; \*\*p<0.05; \*\*\*p<0.01  
State-clustered Standard Errors

Models 1 and 2 strongly support Hypotheses 1 and 2. *Conflict Affected* is positive and statistically significant at the 1% level, indicating active and post-conflict states are significantly more likely to adopt gender balancing or gender mainstreaming reforms. Substantively, a conflict-affected state is 8% more likely to adopt a gender balancing reform, increasing the probability of gender balancing policy adoption from 37% to 45%. Model 3 similarly supports Hypothesis 3. *Active conflict* states are statistically more likely to adopt gender balancing reforms than non-conflict states, increasing the likelihood of adoption from 39% to 50%, while post-conflict states do not have a statistically significant relationship with gender balancing reforms. Model 4 demonstrates that both conflict and post-conflict states are significantly more likely to adopt gender mainstreaming reforms than non-conflict states. However, in contrast to expectations, the size of this effect is larger in active conflict states than post-conflict states. While non-conflict states have about a 33% probability of gender mainstreaming reform, conflict and post-conflict states have a 43% and 40% likelihood (this is not a statistically significant difference between active conflict and post-conflict states).

Models 5 and 6 demonstrate interesting results. First, Model 5 examines whether SSR gender balancing and mainstreaming become more likely after the adoption of UNSCR 1325. Surprisingly neither conflict nor post-conflict states are more likely to adopt gender balancing reforms before or after UNSCR 1325 than non-conflict states. This may indicate that gender balancing reforms are driven primarily by need in conflict-affected states and therefore, are unaffected by the adoption of UNSCR 1325.

Interestingly, after the adoption of UNSCR 1325, non-conflict states do become statistically more likely to adopt gender balancing reforms, which may imply that UNSCR 1325 was successful in changing the behavior of non-conflict states. Model 6 demonstrates that while neither conflict nor post-conflict states were more likely to adopt gender mainstreaming reforms before the adoption of UNSCR 1325, post-conflict states are significantly more likely to adopt gender mainstreaming reforms after 2000. It appears

Table 3: Logistic Regression Results: Conflict and UNSCR 1325 Interaction Models

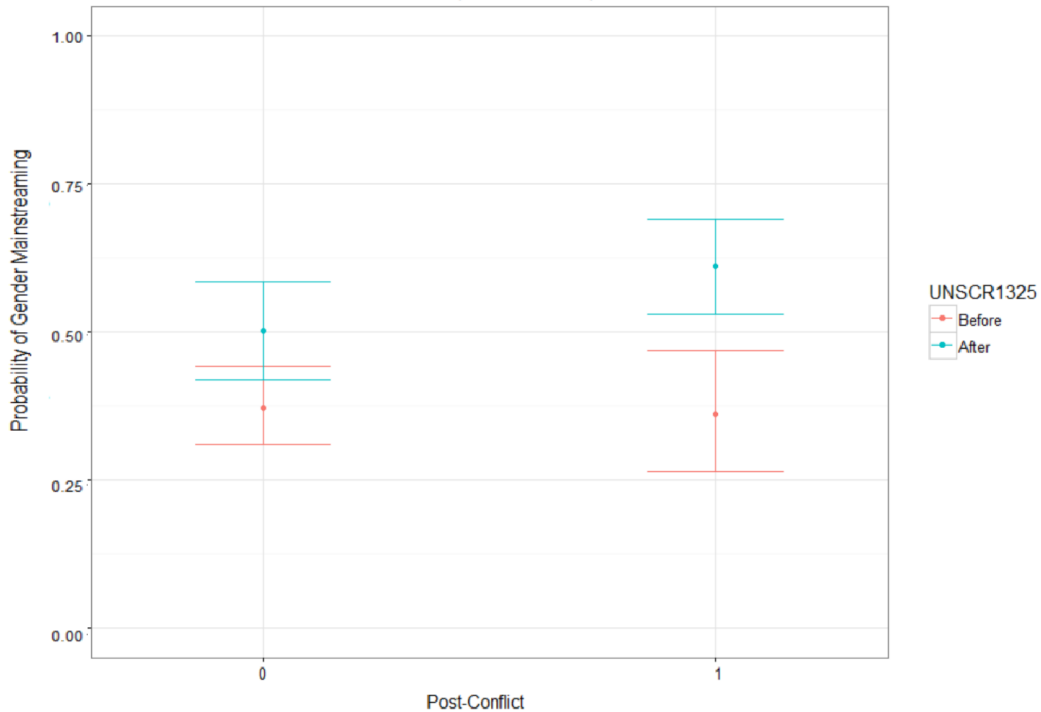
	<i>Dependent variable:</i>	
	Gender Balance (5)	Gender Mainstream (6)
Active Conflict	0.27 (0.26)	0.18 (0.24)
Post Conflict	-0.09 (0.24)	-0.04 (0.22)
UNSCR 1325	0.37** (0.19)	0.54*** (0.17)
CEDAW Years	0.01* (0.01)	0.01* (0.01)
Fertilitylag1	-0.05 (0.03)	-0.07*** (0.03)
Democracylag	0.04*** (0.01)	0.05*** (0.01)
Democratic Transition	-0.03 (0.41)	-0.04 (0.37)
GDPPC Growthlag1	-0.004 (0.01)	-0.001 (0.01)
Muslim Majority	0.08 (0.16)	0.06 (0.15)
Time Gender Balance	-0.18*** (0.06)	
Time Gender Balance <sup>2</sup>	0.01* (0.01)	
Time Gender Balance <sup>3</sup>	-0.0002 (0.0002)	
Time Gender Mainstream		-0.23*** (0.05)
Time Gender Mainstream <sup>2</sup>		0.01** (0.01)
Time Gender Mainstream <sup>3</sup>		-0.0003 (0.0002)
Active Conflict *UNSCR 1325	0.29 (0.31)	0.34 (0.28)
Post Conflict *UNSCR 1325	0.41 (0.26)	0.48** (0.24)
Constant	-1.83*** (0.25)	-1.49*** (0.21)
Observations	3,490	3,488
R <sup>2</sup>	0.09	0.15
$\chi^2$ (df = 14)	181.14***	348.82***

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01  
State-clustered Standard Errors



Figure 1: Predicted Probabilities Plot: Post-Conflict, UNSCR 1325, and SSR Gender Mainstreaming



that UNSCR 1325 may have had success in increasing the adoption of these policies in post-conflict states. As seen in Figure 1, before UNSCR 1325, post-conflict states and non-conflict states had a 37% probability of adopting gender mainstreaming reforms. After UNSCR 1325, post-conflict states have a 62% probability of adoption. Further, conflict states are not more likely to adopt either gender mainstreaming or gender balancing reforms after UNSCR 1325, indicating that conflict states may continue prioritize traditional security concerns.

Models 7 through 11 demonstrate that gender balancing and gender mainstreaming reforms appear to be adopted independently from non-gendered SSR. The results remain consistent with those in Table 2 with Conflict Affected, Active Conflict, and Post-Conflict increasing the probability of gender mainstreaming and gender balancing reforms.

Finally, Table 5 below replicates Models 5 through 8 (including the non-gendered SSR control variable) using the independent variable, *Natural Disasters*. While the occurrence

Table 4: Logistic Regression Results: Non-gender SSR Sub-Sample

	<i>Dependent variable:</i>			
	Gender Balance (7)	Gender Mainstream (8)	Gender Balance (9)	Gender Mainstream (10)
Conflict Affected	0.41*** (0.15)	0.53*** (0.14)		
Active Conflict			0.55*** (0.17)	0.58*** (0.16)
Post Conflict			0.31 (0.20)	0.50*** (0.17)
Non-Gender SSR	0.17 (0.13)	0.03 (0.12)	0.12 (0.14)	0.01 (0.13)
CEDAW Years	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Fertilitylag1	-0.02 (0.04)	-0.05 (0.03)	-0.02 (0.04)	-0.05 (0.03)
UNSCR 1325	0.62*** (0.22)	0.91*** (0.18)	0.63*** (0.21)	0.92*** (0.18)
Democracylag	0.05*** (0.02)	0.05*** (0.02)	0.05*** (0.02)	0.05*** (0.02)
Democratic Transition	0.10 (0.45)	0.18 (0.40)	0.08 (0.45)	0.17 (0.40)
GDPG Growthlag1	-0.001 (0.01)	0.0003 (0.01)	0.0001 (0.01)	0.001 (0.01)
Muslim Majority	0.05 (0.19)	-0.005 (0.17)	0.06 (0.19)	-0.002 (0.17)
Time Gender Balance	-0.18** (0.08)		-0.18** (0.08)	
Time Gender Balance <sup>2</sup>	0.01 (0.01)		0.01 (0.01)	
Time Gender Balance <sup>3</sup>	-0.0001 (0.0003)		-0.0001 (0.0003)	
Time Gender Mainstream		-0.21*** (0.08)		-0.21*** (0.08)
Time Gender Mainstream <sup>2</sup>		0.01 (0.01)		0.01 (0.01)
Time Gender Mainstream <sup>3</sup>		-0.0001 (0.0002)		-0.0001 (0.0002)
Constant	-2.24*** (0.40)	-2.01*** (0.37)	-2.26*** (0.39)	-2.01*** (0.37)
Observations	2,086	2,086	2,086	2,086
R <sup>2</sup>	0.11	0.17	0.12	0.17
χ <sup>2</sup>	139.47*** (df = 12)	230.57*** (df = 12)	141.41*** (df = 13)	230.82*** (df = 13)

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01  
State-clustered Standard Errors

of a natural disaster within a state-year is not a perfect proxy for the occurrence of conflict, it does affect several of the theoretical mechanisms outlined underlying the relationship between conflict and gendered security sector reform and is less endogenous to gendered security sector reform than conflict. Generally, the results align with those found above – the occurrence of a natural disaster within a state increases the likelihood that the state adopts a gender balancing or gender mainstreaming reform within the security sector. Models 11 and 12 replicate Models 7 and 8, showing a significant positive relationship with both gender balancing and gender mainstreaming. Models 13 and 14, however, show relatively differing results from Models 5 and 6. Unlike during and after conflict where gendered mainstreaming only gained significance in post-conflict societies after the adoption of UNSCR 1325, natural disasters have a significant relationship with security sector gender reform both before and after UNSCR 1325 (with the exception of gender balancing after UNSCR 1325). This may be because active and post-disaster societies are less likely to experience the militarization trends as conflict-affected states leading post-disaster states to favor gender reform more regardless of international pressure.

Overall, the results strongly support the theory that conflict (and natural disasters) disrupt traditional gender relations and increase the insecurity of women, international pressure, concerns of illegitimacy, and mobilization needs that increase the likelihood of the adoption of gendered SSR.

## **Robustness Checks**

The results generally remain robust to the operationalization of post-conflict as a permanent state and as lasting five years. However, when post-conflict is operationalized as 5 years, in Model 5 neither conflict nor post-conflict states have significant interactions with UNSCR 1325 and in Model 6, both have a significant interaction. Finally, when operationalized as a permanent state, active conflict states have a significant interaction

Table 5: Logistic Regression: Natural Disasters and Gendered Security Sector Reform

	<i>Dependent variable:</i>		
	Gender Balance (11)	Gender Mainstream (12)	Gender Mainstream (13)
Natural Disasters	0.40** (0.19)	0.36** (0.18)	0.51** (0.23)
CEDAW Years	0.02 (0.02)	0.01 (0.01)	0.02 (0.02)
Nongender SSR	0.24 (0.17)	0.18 (0.14)	0.24 (0.17)
Fertility	0.02 (0.04)	-0.03 (0.04)	0.02 (0.04)
UNSCR 1325	0.51** (0.25)	0.89*** (0.21)	0.69** (0.32)
Democracy	0.05*** (0.02)	0.05** (0.02)	0.05** (0.02)
Democratic Transition	0.28 (0.45)	0.28 (0.42)	0.29 (0.45)
GDPPC Growth	0.0002 (0.01)	0.001 (0.01)	-0.0002 (0.01)
Muslim Majority	-0.16 (0.22)	-0.18 (0.19)	-0.16 (0.22)
Time Gender Balance	-0.25** (0.11)		-0.25** (0.11)
Time Gender Balance <sup>2</sup>	0.02 (0.02)		0.02 (0.02)
Time Gender Balance <sup>3</sup>	-0.0004 (0.001)		-0.0004 (0.001)
Time Gender Mainstream		-0.20* (0.11)	-0.19* (0.11)
Time Gender Mainstream <sup>2</sup>		0.01 (0.02)	0.01 (0.02)
Time Gender Mainstream <sup>3</sup>		-0.0003 (0.001)	-0.0003 (0.001)
Natural Disaster*UNSCR 1325			-0.52* (0.32)
Constant	-2.40*** (0.42)	-2.01*** (0.39)	-2.23*** (0.41)
Observations	1,557	1,557	1,557
R <sup>2</sup>	0.13	0.16	0.16
χ <sup>2</sup>	110.65*** (df = 12)	148.72*** (df = 12)	110.99*** (df = 13)

Note:

\*p<0.1; \*\*p<0.05; \*\*\* p<0.01  
State Clustered Standard Errors

in both Models 5 and 6, whereas post-conflict states do not. Additionally, an alternative measure of gender mainstreaming which excludes reforms that primarily recruit more women produced consistent results except in Model 4 as Conflict loses its significance and Post-Conflict increases in magnitude, which supports Hypothesis 4.<sup>35</sup> Further the models are robust to GDP instead of GDPPC Growth, alternative measures for gender equality,<sup>36</sup> majority Catholic or Christian controls, communist controls, regional controls, an individual empowerment index (Cingranelli, Richards, and Clay 2014), and conflict controls, such as conflict intensity,<sup>37</sup> termination, and previous conflict history (Kreutz 2010). Additionally, the results remain robust without state clustered standard errors, the use of a Generalized Estimating Equation, and when a Negative Binomial Model is used to examine the number of reforms adopted.<sup>38</sup>

The results do appear sensitive to the operationalization of conflict. With a threshold of 1,000 battle deaths in intrastate conflicts (Sarkees and Wayman 2010), active conflict states lost significance in Models 3 and 4. However, when both interstate and intrastate conflicts with 1,000 battle deaths (Reiter, Stam and Horowitz Forthcoming) are included, the results are consistent, except active conflict states lose their significance in Model 4. These results underscore that even low intensity conflicts prompt gender reforms.

## Conclusion

This study is the first cross-national, quantitative analysis of gender balancing and gender mainstreaming policies in the security sector. In the past fifteen years, gender equality has been increasingly recognized as vital to international and national security. These

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<sup>35</sup>This meant that recruitment campaigns, female promotion, and recruitment gender quotas or targets were excluded

<sup>36</sup>Such as women's legislative representation, female-to-male secondary school and labor force ratios, and an index of women's rights from the CIRI human rights dataset

<sup>37</sup>Active conflict states lose significance.

<sup>38</sup>The GEE model was fit with an AR-1 correlation structure.

findings demonstrate that conflict-affected states are more likely to adopt gender reforms in SSR. These findings prompt several questions and require further analysis. One of the most pressing questions concerns the mechanisms behind the relationship between conflict and SSR gender reform. This paper proposes several possible pathways through which conflict may promote these reforms. The next step is to determine which causal pathways are present for gender balancing and gender mainstreaming reforms. Further, although gender reforms are examined here in aggregate, future studies should disaggregate the various types of these SSR gender reforms to examine *which* specific reforms conflict and non-conflict states adopt.

Moreover, the security sector is one of many public sectors into which a state may wish to incorporate gender reform. Future studies may wish to examine other venues in which gender reform takes place, such as the political and economic spheres, to see if the same relationship with conflict exists. Moreover, conflict is only one possible mechanism promoting security sector gender reforms. Future studies may want to examine other mechanisms, such as the role and influence of WROs, IGOs, alliances, regional dynamics, trade and foreign aid networks, and other state characteristics. Finally, future research agendas should move beyond asking why states adopt these policies to ask what happens after they do. Proponents of SSR gender reform argue for a plethora of positive effects from increasing gender equality to promoting peace. Future studies should examine whether gender reform has, as of yet, any tangible effects on the behavior and effectiveness of security sectors.

Finally, these findings hold important theoretical and policy implications. First, they demonstrate that conflict can sometimes act as a powerful agent of social change. Second, the results underscore that security gender reform may have great implications for the ways that security institutions interact with the population, the state, and the international community. If gendered SSR does help de-masculinize and de-militarize security sectors, then this evidence of change may indicate that states undergoing these

reforms may improve state responses to SGBV, promote improved relations with the general population, increase gender equality, and decrease state violence. Finally, the findings of this study are a powerful indication of the rise of a new international norm and possibly indicate some limited success of UNSCR 1325. While women's rights emerged as a global norm in the 1970s, this did not necessarily extend to the security sector from which women were still systematically excluded. This study highlights that states are actively attempting to incorporate more women into security and make the security sector more responsive to women's differing needs, wants, and challenges in security - an unprecedented development in global norms.

## References

- A/52/3/Rev.1. 1997. "Report of the Economic and Social Council for 1997."  
URL: <http://www.un.org/documents/ga/docs/52/plenary/a52-3.htm>
- Ahikire, Josephin, Aramanzan Madanda and Christine Ampaire. 2012. "Post-war economic opportunities in northern Uganda Implications for womens empowerment and political participation."
- Anderlini, Sanam. 2007. *Women Building Peace: What They Do, Why It Matters*. Lynne Rienne.
- Aponte, Maribel, Syreeta Cherry, George Fitzelle, Kelly Ann Holder, Baboyma Kaginiwa, Sidra Montgomery, Angus St. Hilaire and Eddie Thomas. 2011. "Americas Women Veterans: Military Service History and VA Benefit Utilization Statistics." *Department of Veterans Affairs* .
- Baaz, ME and M Utas. 2012. "Beyond 'Gender and Stir'." pp. 5–10.
- Bellafaire, Judith Lawrence. 2006. "Public Service Role Models: The First Wome of the Defense Advisory Committee on Women in the Services." *Armed Forces & Society* 32:424–436.
- Bennoune, Karima. 2007. "Do We Need New International Law to Protect Women in Armed Conflict." *Case Western Reserve Journal of International Law* 363:363–387.
- Berry, Marie E. 2015. "From Violence to Mobilization: Women, War, and Threat in Rwanda." *Mobilization: An International Quarterly* 20:135–156.
- Bjarnegård, Elin and Erik Melander. 2011. "Disentangling Gender, Peace and Democratization: The Negative Effects of Militarized Masculinity." *Journal of Gender Studies* 20(2):139–154.
- Bush, Sarah Sunn. 2011. "International Politics and the Spread of Quotas for Women in Legislatures." *International Organization* 65(1):103–137.
- Caprioli, Mary. 2000. "Gendered Conflict." *Journal of Peace Research* 37(1):51–68.
- Caprioli, Mary. 2003. "Gender Equality and State Aggression: The Impact of Domestic Gender Equality on State First Use of Force." *International Interactions* 29(3):195–214.
- Caprioli, Mary. 2005. "Primed for violence: The role of gender inequality in predicting internal conflict." *International Studies Quarterly* 49(2):161–178.
- Caprioli, Mary and Mark A Boyer. 2001. "Gender, Violence, and International Crisis." *Journal of Conflict Resolution* 45(4):503–518.
- Carpenter, Charli R. 2005. "Women, children and other vulnerable groups: gender, strategic frames and the protection of civilians as a transnational issue." *International Studies Quarterly* 49(2):295–334.



- Cohen, Dara Kay and Ragnhild Nordås. 2014. "Sexual Violence in Armed Conflict Introducing the SVAC Dataset, 1989–2009." *Journal of Peace Research* 51(3):418–428.
- Cole, Wade M. 2012. "Government Respect for Gendered Rights: The Effect of the Convention on the Elimination of Discrimination against Women on Womens Rights Outcomes, 19812004." *International Studies Quarterly* 57(2):233–249.
- Dharmapuri, Sahana. 2011. "Just Add Women and Stir?" *Parameters* pp. 56–66.
- Dollar, D, R Fisman and R Gatti. 2001. "Are Women Really the 'fairer' Sex? Corruption and Women in the Government." *Journal of Economic Behavior & Organization* 46:423–429.
- Egnell, R. 2014. *Gender Effectiveness, and Organizational Change. The Swedish Model*. Palgrave MacMillan.
- Enloe, Cynthia. 1989. *Bananas, Beaches and Bases*. Pandora Press London.
- Enloe, Cynthia. 2000. *Maneuvers: The international Politics of Militarizing Women's Lives*. University of California Press.
- Goldstein, Joshua S. 2003. *War and Gender*. Springer.
- Hendricks, Cheryl. 2012. "Research on Gender and SSR in Africa." pp. 11–17.
- Higate, Paul and Marsha Henry. 2004. "Engendering (In) security in Peace support Operations." *Security Dialogue* 35(4):481–498.
- Higate, Paul and Marsha Henry. 2009. *Insecure spaces: peacekeeping, power and performance in Haiti, Kosovo and Liberia*. Zed Books London.
- Hoduck, Ann. 2016. "Protecting Spaces for Womens Economic Participation in Fragile and Conflict-Affected States." *Georgetown Institute for Women, Peace and Security Occasional Paper Series* .
- Huber, Laura and Sabrina Karim. n.d. "The Internationalization of SSR Gender Balancing in Post-Conflict States." *Conflict Management and Peace Science* .
- Hudson, Valerie M and Andrea Den Boer. 2002. "A Surplus of Men, A Deficit of Peace: Security and Sex Ratios in Asia's Largest States." *International Security* 26(4):5–38.
- Hudson, Valerie M, Bonnie Ballif-Spanvill, Mary Caprioli and Chad F. Emmett. 2013. *Sex and World Peace*. Columbia University Press.
- Jacob, Margarete. 2009. Engendering Security Sector Reform: Sierra Leone and Liberia Compared. In *Engendering Security Sector Reform: A Workshop Report*. pp. 48–75.
- Karim, Sabrina. 2016. "Evaluating the Changing of the Guards: Survey Evidence from Liberia on Security Sector Female Ratio Balancing Reforms." *Working Paper, Emory University* .

- Karim, Sabrina. 2017. *Gender and Women in Military Affairs: A Comparative Study*. Washington, D.C.: Georgetown University Press chapter Women in UN Peacekeeping.
- Karim, Sabrina, Andrew Wagstaff and Laura Huber. n.d. "Internal Security Forces Dataset."
- Karim, Sabrina and Kyle Beardsley. 2013. "Female Peacekeepers and Gender Balancing: Token Gestures or Informed Policymaking?" *International Interactions* 39(4):461–488.
- Karim, Sabrina and Kyle Beardsley. 2016. "Explaining sexual exploitation and abuse in peacekeeping missions The role of female peacekeepers and gender equality in contributing countries." *Journal of Peace Research* 53(1):100–115.
- Karim, Sabrina and Kyle Beardsley. 2017. *Equal Opportunity Peacekeeping*. Oxford University Press.
- Manjoo, Rashida and Calleigh McRaith. 2011. "Gender-Based Violence and Justice in Conflict and Post-Conflict Areas." *Cornell International Law Journal* 44:11–31.
- Marshall, Gurr Monty G., Ted Robert and Ketih Jagers. 2015. "Polity IV Project Political Regime Characteristics and Transitions, 1800-2015 Dataset Users' Manual."
- Meharg, Sarah Jane. 2010. *Security Sector Reform: A Case Study Approach to Transition and Capacity Building*. Vol. 17 Strategic Studies Institute.
- Melander, Erik. 2005a. "Gender Equality and Intrastate Armed Conflict." *International Studies Quarterly* 49(4):695–714.
- Melander, Erik. 2005b. "Political Gender Equality and State Human Rights Abuse." *Journal of Peace Research* 42(2):149–166.
- Murdie, Amanda and Dursun Peksen. 2015. "Womens rights INGO shaming and the government respect for womens rights." *The Review of International Organizations* 10(1):1–22.
- Nordås, Ragnhild and Siri CA Rustad. 2013. "Sexual exploitation and abuse by peacekeepers: Understanding variation." *International Interactions* 39(4):511–534.
- Olsson, Louise and Theorora-Ismene Gizelis. 2013. "An Introduction to UNSCR 1325." *International Interactions* 39:425–434.
- Olsson, Louise and Theorora-Ismene Gizelis. 2015. *Gender, Peace and Security: Implementing UNSCR 1325*. Routledge.
- Rabe-Hemp, CE and AM Schuck. 2007. "Violence Against Police Officers Are Female Officers at Greater Risk?" *Police Quarterly* 10:411–428.
- Reilly, Niamh. 2007. "Seeking Gender Justice in Post-Conflict Transitions: Towards a Transformative Women's Human Rights Approach." *International Journal of Law in Context* 3.

- Sjoberg, Laura. 2007. "Agency, Militarized Femininity and Enemy Others." *International Feminist Journal of Politics* 9:82–101.
- Sjoberg, Laura. Forthcoming. "Jihadi Brides and Female Volunteers: Reading the Islamic States War to See Gender in Conflict Dynamics." *Conflict Management and Peace Science* .
- Sjoberg, Laura and Sandra Via. 2010. *Gender, War, and Militarism: Feminist Perspectives*. ABC-CLIO.
- Thomas, Gwynn and Melinda Adams. 2010. "Breaking the Final Glass Ceiling: The Influence of Gender in the Elections of Ellen Johnson – Sirleaf and Michelle Bachelet." *Journal of Women, Politics & Policy* 31:105–131.
- Thomas, Jakana L. and Kanisha D. Bond. 2015. "Women's Participation in Violent Political Organizations." *American Political Science Review* 109:488–506.
- Tickner, J. Ann. 1988. "Hans Morgenthau's Principles of Political Realism: A Feminist Reformulation." *Millennium - Journal of International Studies* 17:429–440.
- Tickner, J. Ann. 1992. *Gender in international relations: Feminist perspectives on achieving global security*. Columbia University Press.
- Tickner, J. Ann. 2005. "Gendering a Discipline: Some Feminist Methodological Contributions to International Relations." *Signs* 30:2173–2188.
- Whitworth, Sandra. 2005. *Critical Security Studies in World Politics*. Lynne Rienner Publishers.