

Master's thesis

NTNU  
Norwegian University of Science and Technology  
Faculty of Social and Educational Sciences  
Department of Sociology and Political Science

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## Women's Post-War Gains

A Quantitative Analysis

Master's thesis in Political Science  
Trondheim, May 2017

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## Abstract

The consequences of civil war are comprehensive. Civil war causes mass destruction and violence, and leads to the displacement of many thousands of people, but does it at the same time destroy patriarchal structures? Previous research on the link between civil war and changes in gender equality is divided. Some recent studies have found that the aftermath of war provides women with a window of opportunity, but many case studies report a backlash in women's freedom after war. Using global time-series data from 1960 to 2012, this study provides the first extensive analysis of the relationship between the end of an internal armed conflict and improvements in women's political empowerment. I employ gender-specific indicators from the Varieties of Democracy dataset to test various aspects of women's political empowerment. The regression analysis shows that the aftermath of internal armed conflict is associated with improved freedom of discussion and bettered access to justice for women. The effect is largely caused by conflict terminating in a negotiated settlement. It is also found that the number of female legislators increases in the aftermath of war, but only after high-intensity conflicts. The findings support the theory that gender equality can be achieved not only through incremental growth, but that women's movements can exploit political transitions and political vacuums to gain political power and improve their position in society. The results suggest that policy makers should be aware of the post-war opportunities for increased gender equality.



## Samandrag

Konsekvensane av borgarkrig er omfattande. Krig ber med seg øydeleggingar og vald, og gjer at tusenvis vert tvungne på flukt, men kan krig på same tid bryte ned patriarkalske samfunnsstrukturar? Tidlegare forskning på samanhengen mellom borgarkrig og endringar i likestilling mellom kjønna er delt. Nokre nylege artiklar finn at ettertida av krig opnar eit vindauge av moglegheiter for kvinner, medan mange kvalitative studiar rapporterer om at kvinner opplever at deira fridom vert forverra i etterkant av krig. Ved hjelp av globale tidsseriedata frå 1960 til 2012 er dette den første omfattande studien som testar forholdet mellom slutten på væpna intern konflikt og betring i kvinners politiske stilling. Regresjonsanalysen syner at diskusjonsfridomen til kvinner og deira tilgang til rettssystemet vert betra i etterkant av borgarkrig. Denne effekten skuldast i stor grad dei konfliktane som vart avslutta ved ein fredsavtale. Eit anna funn er at talet på kvinnelege parlamentarikarar aukar etter intern konflikt, men berre etter konfliktar av høg intensitet. Funna støttar teori om at likestilling mellom kjønna ikkje berre kan nåast ved hjelp av ei gradvis utvikling, men at kvinnerørsla kan utnytte politiske overgangar og vakuum for å tileigne seg politisk makt. Resultata syner at politikarar og andre som er involvert i politisk utvikling må ha medvit om dei moglegheitene som finst i etterkant av krig for å betre kvinners stilling.



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## Abbreviations

CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CSO	Civil Society Organization
DDR	Disarmament, Demobilization and Reintegration
DHS	Demographic and Health Surveys
FE	Fixed Effects
GDP	Gross Domestic Product
IPU	Inter-Parliamentary Union
NGO	Non-Governmental Organization
OLS	Ordinary Least Squares
PCSE	Panel-Corrected Standard Errors
PR	Proportional Representation
PRIO	Peace Research Institute Oslo
TRC	Truth and Reconciliation Commission
TSCS	Time-Series Cross-Section
UCDP	Uppsala Conflict Data Program
UN	United Nations
UNSCR	United Nations Security Council Resolution
V-Dem	Varieties of Democracy
VIF	Variance Inflation Factor
WVS	World Value Survey



# 1. Introduction

*Women's rights are human rights. But in these troubled times, as our world becomes more unpredictable and chaotic, the rights of women and girls are being reduced, restricted and reversed. Empowering women and girls is the only way to protect their rights and make sure they can realize their full potential (Ki-moon, 2017).*

As evidenced by the speech of the United Nation's (UN) Secretary-General Ban Ki Moon on International Women's Day 2017, cited above, women in the world today still suffer from a persistent gender gap in political decision-making, education, and working life (UN Women, 2016; World Economic Forum, 2016). However, some progress is observed. Gender parity is nearly achieved in primary education (United Nations, 2015) and women's average share of parliamentary membership nearly doubled between 1995 and 2015 (Inter-Parliamentary Union, 2015). Africa and the Americas are the regions that have experienced the most dramatic increase the last 20 years, and Rwanda was the first country ever to elect more women than men to its lower house of parliament, where women gained 56 percent of the seats in 2008 (Inter-Parliamentary Union, 2015). Inter-Parliamentary Union (IPU) argues that

*some of the most impressive changes have occurred in countries where existing political arrangements have been challenged, creating moments of instability, a willingness to experiment, and crucial windows of opportunity to move women's representation onto the political agenda. This has occurred, for example, in many post-conflict countries (2015, p. 11).*

Many of the countries that experience growth of women in decision-making fora are countries that have experienced turbulent periods of armed conflict and unrest. In the highest leadership position, conflict-ridden countries like Liberia, Ireland and Mozambique have elected a female head of state. Does this imply that internal armed conflict explains progress for women? More specifically, the question that this study seeks to answer is: Is the political empowerment of women improved in the aftermath of civil conflict?

The idea that women can gain something from war may seem counter-intuitive. During war, infrastructure, health facilities, schools, and homes are destroyed. The amount of violence and attacks on civilians during war is pervasive (Kumar, 2001) and hundreds of thousands are forced to flee, splitting up families and communities. Civil war leads to 'development in reverse' (Collier et al., 2003). The burden of war on women is especially heavy, as violence is often strategically targeted on women, who suffer from physical damage and psycho-social traumas after rape, sexual violence and abduction (Pankhurst, 2003). Moreover, previous

research shows that more women than men die in the aftermath of conflict (Ormhaug, Meier, & Hernes, 2009), that women's life expectancy is reduced more than men's (Ghobarah, Huth, & Russett, 2003; Plümper & Neumayer, 2006), and that maternal mortality rates are elevated in the aftermath of conflict (Urdal & Che, 2013)

Nevertheless, it is precisely these destructive effects of war that can facilitate opportunities for change, "because the very fabric of social life is torn by violence against civilians and massive displacement" (Kumar, 2001, p. 7). The reconstruction of a community that has been so profoundly damaged is not only about rebuilding roads, houses and schools; the society may also need to question the normative and social foundations upon which it is built, in addition to building new institutions (Tripp, 2015). In this sense, war opens a 'window of opportunity', where women have a chance to influence the future development of the society.

To test if women's political empowerment is improved in the aftermath of civil conflict, I analyze time-series cross-section (TSCS) data from 1960 to 2012. The relationship between the end of internal armed conflict and women's outcomes is examined using several indicators that capture women's political empowerment: legislative representation, female head of state, freedom of discussion and access to justice. The regression analysis shows that all the dependent variables except female head of state improve in the first three years after a civil war ending, most prominently after conflicts of high intensity. The result is robust to country-fixed effects and alternative measures of the 'window of opportunity'. Exploring sub-groups in the data, I find that the effect is largely driven by those conflicts that terminated in a negotiated settlement.

This is the first study that tests post-war gains for women extensively with quantitative research techniques. The study contributes to filling a gap in the scholarship on peace and conflict studies, where gendered aspects of civil conflict have often been neglected (Ellerby, 2015). Moreover, the need for including women's perspective in post-conflict development is an explicit objective of the UN. The UN Security Council Resolution (UNSCR) 1325 stresses "the importance of their [women's] equal participation and full involvement in all efforts for the maintenance and promotion of peace and security, and the need to increase their role in decision-making with regard to conflict prevention and resolution"<sup>1</sup>. Further, scholars have found gender equality to correspond with a wide range of positive outcomes<sup>2</sup>. For example, it

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<sup>1</sup> Available from

<https://documents-dds-ny.un.org/doc/UNDOC/GEN/N00/720/18/PDF/N0072018.pdf?OpenElement>

<sup>2</sup> See Reiter (2015) for an overview.

has been found that peace agreements are more sustainable when women are included in negotiations (Gizelis, 2009), and that gender-equal societies have lower risk of civil war outbreak (Bjarnegård & Melander, 2015; Caprioli, 2005; Melander, 2005). In addition, empowering has women is not only of instrumental value, but also of intrinsic value.

The results confirm that working for increased gender equality in the post-war period can be fruitful: Where previous case studies have reported of both backlash as well as gains for women, this study finds that the general trend is that gender equity, measured as political empowerment, is improved in the first years following the end of war. The findings suggest that where social and institutional structures are already in flux, a change for women may be obtainable. Policy makers should be aware of the opportunity structures that a war ending implies, and work to ensure that the short-term gains are safeguarded.

The study is structured as follows. In Chapter 2, the theoretical framework is sketched up. The research strategy is presented in the methodology section, Chapter 3. The results are displayed in Chapter 4, along with a discussion of the findings. A short conclusion follows in Chapter 5.



## 2. Theory

In this section, the barriers to women's empowerment will be explained, before turning to theories on social change. Social change for women can be achieved in many ways, but the focus is here on how war or conflict, conceptualized as a rupture or crisis, can lead to transformations. The more specific arguments for why war may improve the empowerment of women will then be explored<sup>3</sup>, along with previous empirical work<sup>4</sup>. First, some definitions need to be clarified.

In accordance with the Uppsala Conflict Data Program (UCDP), I define an armed conflict as a contested incompatibility that concerns a government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths<sup>5</sup>. Methodologically, war and conflict are two separate concepts<sup>6</sup>, but in the theory section, war, conflict and armed conflict will be used interchangeably, unless other is specified. Furthermore, I focus on internal conflicts, also called civil or intrastate conflict, which is defined as a conflict between a government and a non-governmental party<sup>7</sup>.

The study focuses on women's political empowerment. Unfortunately, there is no consensus on what complex notions as empowerment and gender equality contain (see Arat, 2015). In this study, I build on the understanding of Sundström et al. (2017), who define women's political empowerment as "a process of increasing capacity for women, leading to greater choice, agency, and participation in societal decision-making" (p. 322). Women's political empowerment is thus a three-dimensional notion, including choice, agency, and participation. Choice is meant as aspects like women's freedom of movement and access to justice, seeing as these are prerequisites for making decisions. Agency refers to the possibility of airing policy preferences, make demands and join organizations. Participation is about the presence of women in the formal political arena, such as the legislature<sup>8</sup>. Although other definitions could

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<sup>3</sup> I do not want to downplay the exploitation and hardships that girls and women go through by focusing on improvements. Yet, as will be shown in the theory section, the possible gains have not been sufficiently examined, and more knowledge is needed about the gendered aspects of war.

<sup>4</sup> The main theoretical arguments rest on an assumption that women in societies ridden by civil war were not empowered prior to the war. This may in some incidents be false, yet it is beyond doubt that women have played a marginalized role both at society level and in politics in much of the world.

<sup>5</sup> For more details on the concepts of the definition, see <http://www.pcr.uu.se/research/ucdp/definitions/>

<sup>6</sup> The UCDP/PRIO Dataset, which will be used in the analysis, distinguishes between conflict and war, based on the number of battle-related deaths. More about this is found in section 3.3.1.

<sup>7</sup> In the category internal conflict, internationalized internal conflicts are included. These are conflicts where one of the parties get support from another state.

<sup>8</sup> As such, agency and choice capture absolute measures, where the empowerment of women is not compared to men's situation. The participation dimension is about relative gains, since women's legislative representation is best understood as the ratio to men.

have been employed, the definition is covering essential aspects of political power<sup>9</sup>. Moreover, in this study, I focus on *improvement* in women's empowerment<sup>10</sup>, and will use the notions empowerment, political empowerment, and gender equality interchangeably from here.

## 2.1 Barriers to women's political empowerment

Traditionally, men have occupied leadership positions in politics, industry, and commerce, helped by a "status quo bias" that prevents women from being appointed or elected. This bias is often referred to as the glass ceiling. The literature on gender equality lists several barriers to women's advancement in politics:

*narrow gender roles, restrictive religious doctrines, unequal laws and education, discriminatory socioeconomic conditions, male-biased party leaders or other political elites, women-unfriendly election systems. These factors are typically interrelated and mutually reinforcing (Rule, 1994, p. 15).*

Such barriers can be summarized in what Connell (2009) calls a "gender order" of a society. The barriers to women's advancement are commonly divided into three groups: institutional barriers, socioeconomic barriers, and cultural barriers (Inglehart & Norris, 2003; Matland, 1998; Reynolds, 1999)

Institutional barriers to women's advancement typically involve laws and policies that discriminate women, or male-biased electoral systems. Although nearly all countries of the world have now signed the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), adopted by the UN in 1979, women still meet discriminative legislation. Laws prohibiting women the right to engage in politics, the right to own land, or the right to work continue to hinder women in many parts of the world. Some countries have only recently granted women the right to suffrage and the right to run for office, and Brunei has still not granted women the vote (Inter-Parliamentary Union, 2015).

Socioeconomic barriers can simply put be summarized as poverty. The main point is that when women lack access to resources, their empowerment is not likely to improve. As Inglehart and Norris (2003) explain, it was a common belief in the 1960s and 1970s that economic growth would automatically lead to human development, also for women. The idea is that economic growth leads to better education, job opportunities, and wages. However, the limitation of

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<sup>9</sup> For example, access to economic resources is not included here. However, an advantage with the definition is that it covers both descriptive participation, as well as normative intolerance towards women gaining political power.

<sup>10</sup> By improvement, it is meant relative changes, meaning that countries will not be compared based on their level of gender equality seen from a set of universal criteria. This approach is in line with Waylen (2007).

growth alone has later been acknowledged (Kabeer & Natali, 2013). There are several examples of rich states not respecting women's rights and potential, such as the oil-rich Gulf states.

By cultural barriers, it is meant the norms, beliefs and values of a society related to gender and women. The term gender can be defined as “the socially constructed roles and learned behavior of women and men associated with the biological characteristics of females and males” (Inglehart & Norris, 2003, p. 8). In short, a woman's scope of action can be severely limited by the community's perception of what it means to be “a good woman”. In many cultures, being a good woman means caring for the family and raising children, while men are supposed to be the leader of the family and provide an income. Although women have rights *de jure*, the cultural barriers may hinder women from *de facto* enjoying these rights.

The list of barriers is not exhaustive, but it illustrates the various forms that discrimination can take. Also of importance is that the barriers are not mutually exclusive. Rather, there is a complex interaction between gender-restrictive norms, non-inclusive institutions and the socioeconomic position of women (Connell, 2009). The next question is, how can women break down these barriers? How is social and political development achieved? The following section presents theory on social change, and shows how war can be a catalysator for abrupt change. As will be shown, war can break down the cultural barriers, leading women to get increased access to decision-making. In some instances, the aftermath of conflict can also lead to more gender-inclusive political institutions.

## 2.2 Social change for women: how is it achieved?

Put simply, two main theories stand out in explaining how change is achieved. On the one hand, there is the theory that social change is an incremental process (Blumberg 1984). From this perspective, it is argued that the advancement of women in leadership positions is dependent on a gradual development where women increase their human capital (Blumberg, 1984). This can be achieved through increased education and participation in the labor market, which leads to growth in both the demand for and supply of women. Economic growth, specialization and technological development are typical factors that facilitate the modernization process. This view is closely connected with the socio-economic barriers mentioned above, as it emphasizes the importance of a gradual increase in women's human capital.

On the other hand, it is argued that social change often takes place in the context of some dramatic event or crisis. Political development is not necessarily a gradual process responding to socioeconomic change, rather, “the political arena may to some degree follow its own pattern

and pace of change, that at times takes a highly discontinuous form” (Collier & Collier, 1991, p. 11). Empirically, both theories can help explain increased gender equality<sup>11</sup>. In terms of women’s legislative representation, examples exist of both incremental and dramatic increases: In Sweden, the growth in female legislators has been incremental, while in Rwanda, the growth has been abrupt (Wängnerud, 2009). This supports the idea that gender equality can be achieved suddenly, although not in all cases<sup>12</sup>.

### 2.2.1 Critical junctures and opportunity windows

Collier & Collier (1991), studying the labor movement and regime change in Latin America, explain change through the notion *critical juncture*, a concept taken from the work of Rokkan & Lipset (1967). A critical juncture is a crisis or cleavage that creates opportunities for political entrepreneurs to change the political system. The theory draws focus towards major watersheds and transitions in political life where the political pathway take a new direction and represent a break with the past. The outcome and the legacy of the critical juncture will influence future development until a new event triggers a change. If war is a critical juncture, it represents an opportunity for the women’s movement to step forward.

The idea of critical junctures is related to the notion of *policy windows*, developed by Kingdon (1995). The context of his analysis is the political system in the US, where he tries to explain why and when some policy reforms are adopted. He asserts that a policy window is an opening where actors can push forward for a wanted development. The opening of a policy window can be caused by different events, and crisis is one of them. The successful utilization of a policy window depends on the political entrepreneurs and their ability to mobilize before the window closes (Kingdon, 1995).

Critical junctures and opportunity windows are connected to the more general theory of *path dependency*. Path dependency is the idea that once a direction is taken, it will continue to influence future development and produce distinct political legacies (Pierson, 2000). However, it is generally believed that a break with the path is not caused by some predictable event, rather, “[s]pecific patterns of timing and sequence matter (...), political development is often punctuated by critical moments or junctures that shape the basic contours of social life” (Pierson, 2000, p. 251). Path dependency helps explain why gender inequality is so persistent

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<sup>11</sup> Note that while Blumberg’s (1984) theory is gender-specific, the other theory explains social and institutional change more generally. So far, no gender-specific theory on abrupt change is developed.

<sup>12</sup> This paper will not deal with which theory best explains gender outcomes. Rather, the theory is used to construct an argument that war creates opportunities for women. Since the question of this paper is conflict and gender outcomes, the theoretical propositions of abrupt change will be the main focus.

in some societies, but it also supports the idea that an exogeneous shock, such as war, is needed for making a country cut off from the path and take a new direction<sup>13</sup>.

Recapitulated, the outlined theory posits that crisis can lead to change. As explained by Tripp (2015, p. 35), “major historical events can trigger a series of consequences that transform structures and practices. These dislocations can disturb a social structure in such a way that it cannot be restructured, thus allowing for new understandings of what is imaginable and desirable”. Building on this assumption, war can be analyzed as a crisis that potentially leads to change in social structures and women’s position. However, why would one expect war to change the society to the better for women? In the next section, I show why war comes with opportunities to enhance female empowerment. I start broadly, by explaining the more general assumption that crises are beneficial for women’s advancement in politics, before moving on to the studies treating the explicit link between war and development for women.

### 2.3 Crisis as a catalysator: A question of legitimacy

Previous research from various disciplines shows that crises may help women break the “glass ceiling” and step into leadership positions. Psychological research has found that gender stereotypes are important predictors of people’s endorsement of a female leader. For instance, some have found that people perceive men as better fit for leadership in general, while women appear as better suited to lead in times of crisis (Bruckmüller & Branscombe, 2010). If a crisis leads to discontent or distrust towards the elites in power, women stand out as eligible and desirable candidates because they represent alternatives to the establishment. One example is the election of Michelle Bachelet as president of Chile in 2006. Tobar (2008) argues that Bachelet represented a break with the past and an alternative to the elite. A series of corruption scandals involving members of the government led to a growing anti-establishment climate, and her quality of being a women helped her win the presidency (Tobar, 2008). Another example is provided by Tripp (2001): In analyzing women’s civil society organizations (CSO) in African countries, she argues that women enjoy high legitimacy among the population because they have been denied political power, and hence, have been forced to build their movement by confronting the political elites. Thus, crisis and fatigue with political elites may contribute to the forthcoming of women.

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<sup>13</sup> This is not a complete account of the theoretical tenets of path dependency, and there is also disagreement between scholars on the content of the concept (Pierson, 2000). However, the basic idea of path dependency is helpful for understanding gender outcomes.

The argument that crisis leads to higher demand and accept for women is applicable to the context of civil strife. Men are normally the main participants in armed conflicts, being both agitators and combatants. The overall impression of war and gender is that “war is a man’s world where women are helpless, passive and powerless” (Skjelsbæk, 1997, p. 41). Indeed, previous research has found that both men and women apprehend women as more peaceful than men (Rudman, Goodwin, & Dovidio, 2004). Tripp (2015) studies women and power in post-conflict environments in Africa and argues that “[women] were perceived, rightly or wrongly, as outsiders to politics and therefore untainted by corruption, patronage, and the factors that may have led to conflict” (p. 19). This provided women with greater legitimacy in the aftermath (ibid.). Adams (2008) argues that because women were perceived as less responsible for the conflict, the opinion was more favorable toward electing a female president, something that helps explain the election of Ellen Sirleaf Johnson as president of Liberia in 2005. Paradoxically, the same attitudes and perceptions that create barriers on women’s advancement can in some instances be helpful. In Bosnia, women were seen as “mothers reproducing the nation”, and women’s non-governmental organizations (NGO) used these stereotypes when representing themselves to donors and local communities in the aftermath of the Bosnian war (Helms, 2003).

Jalalzai (2008, 2013) investigates in which context it is more likely for a woman to become a president or prime minister. One finding is that women have higher chances of obtaining such positions in politically unstable contexts and in countries lacking political institutionalization. Jalalzai (2013, p. 94) argues that women “successfully exploit familial ties, political vacuums, or activist background [and] benefit from gender stereotypes of women as healers, reformers, or dependents often during critical political trajectories”. The claim is backed up by qualitative evidence from looking at the cases, where Bangladesh, the Philippines, and Lithuania are some examples where women entered during political transitions. This suggests that the aftermath of conflict, where institutions may be shattered and destabilized, is a context favorable to seeing women in political positions.

The proposition that women are peaceful has been tested empirically<sup>14</sup>, but the reality is arguably more nuanced. It is useful to have in mind that women are far from a homogeneous group, and they should not be reduced to being merely victims. Indeed, history has many

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<sup>14</sup> A recent study attempts to find out if such a proposition is rooted in reality. Rosenfield (2017) shows that women in legislatures are more likely to prioritize public welfare goods over military spending, compared with male legislators. Another study has found that higher shares of women in government reduces corruption (Dollar, Fisman, & Gatti, 2001).

examples of women acting as belligerents and combatants<sup>15</sup>. Nonetheless, the *perceived* gender differences are something that can be taken advantage of by women who aim at achieving political power. The main point is that in a context where women were marginalized prior to a crisis, or the public opinion is hostile toward the (male) elites, women have greater legitimacy. Hence, in the aftermath of armed conflict, the environment may be especially favorable toward the election of a woman, since women are perceived as peaceful, non-elitist and not responsible for the conflict.

#### 2.4 Bending gender roles during war

A much-used argument for why war transforms gender roles is that women take on new roles during war (Wood, 2008). While the men are absent, women have to take responsibility for the economy, the household and the jobs (Ní Aoláin, Haynes, & Cahn, 2011). As explained by an interviewee in Liberia, “[t]he war brought a lot of evils, and a lot of good things. It brought out our leadership abilities in women” (Fuest, 2008, p. 202). In Sudan and Uganda, women took on political roles both at community and national levels, Angolan women became involved in trade, and Somalian women entered previously unacceptable areas of economic activity (El-Bushra & Sahl, 2005). In some conflicts, women fight alongside men in the army (Thomas & Wood, 2017). During the war in El Salvador in 1980 through 1992, women made up 40 percent of the guerrilla unit leaders (Skjelsbæk, 1997). In Nicaragua, women constituted up to 30 percent of the combatants (Luciak, 2008). Although this may have the effect that the perceived peacefulness of women is dampened, women’s participation in war may be a first step towards the recognition that women can perform equal tasks as men<sup>16</sup>.

Traditionally, women are seen as belonging to the private realm, while men have public positions. During war, many women enter the public realm through organizing peace movements (Kaufman & Williams, 2010). One example is “Women in Black”, a protest group that was formed in 1988 to oppose the Israeli occupation of the West Bank and Gaza. Another example is women’s groups in Liberia, Mali, and Sierra Leone, who walked into remote areas to persuade the militia to lay down their arms in an effort to disarm child soldiers (Tripp, 2015).

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<sup>15</sup> Some examples where women have served as warriors alongside with men are the Tamils in Sri Lanka (Cockburn, 2001) and the Algerian liberation war (Tripp 2015). We must remember, therefore, that “[w]omen may be equally war-prone as men, and, most likely, men may be equally peace-loving as women” (Skjelsbæk, 1997, p. 54).

<sup>16</sup> Independence wars are outside the scope of this study, but the need to include women has been prominent in such wars, as being numerous and including women was a precondition for victory (Urdang, 1978). In the Algerian war of independence, “[w]omen were ... freed, indeed thrust, in the service of the struggle against the French, into abandoning their traditional role” (Ahmed, 1982, p. 164).

Public activism by women was observed also during the ‘Arab spring’ (Merrill, 2017). The participation in public movements makes the civil society see that women can be public actors, and it also leads to women’s increased self-awareness. As Kaufman & Williams (2010, p. 70) explain, “political action brought about by conflict can transform women so that even those who did not previously see themselves as political and/or feminist ... discover how rewarding and important their contributions can be”.

In sum, the participation of women in new domains during war may change society’s perception of women, as people see that gender roles are not fixed. It also changes women’s perceptions of themselves, leading to higher self-esteem. This may lead to improvements in the political empowerment of women in the aftermath of conflict.

## 2.5 War termination and the aftermath

So far, it has been argued that war opens a window of opportunity for women. War bolsters women’s legitimacy, something that increases their chances of stepping forward and gaining political power. Also, war leads to changes in gender roles, not only for a few women, but possibly for everyone who is affected. Consequently, the cultural barriers are weakened by conflict. The next question is, under what circumstances are women most likely to profit from the changes in gender roles and their legitimacy gains? It is in the aftermath of the war that the foundations of the new society are constructed; this is where the window of opportunity needs to be exploited before it closes<sup>17</sup>. If women are to sustain their forthcoming and reap the benefits of gaining legitimacy, new skills and responsibilities, a lot depends on the context of the war termination. As will be discussed in the next section, a conflict terminating in a negotiated settlement is more likely to offer opportunities for women than other war endings. Other aspects, such as the characteristics of the women’s movement and the aid of international organizations, are also explanations for women’s successful exploitation of the opportunity window.

### 2.5.1 Peace agreement

A conflict that ends in a peace agreement is more open for women’s demands than other conflict terminations, because it implies a rebuilding of the society’s institutions and possibly also norms and values. “The holding of peace talks, constitutional reform processes, and truth and reconciliation tribunals are all postconflict institutional *opportunity structures* through which

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<sup>17</sup> This is not to say that the war ending is the one and only moment where an effort need to be made in order to make gains, rather, as scholars have pointed out, women’s organizations, and those who support them, need to work for post-conflict inclusion also during wartime (Meintjes, Turshen, & Pillay, 2001).

women are able to assert their demands” (Tripp, 2015, p. 19, author's emphasis). When such structures are absent, it is harder for women to articulate their agendas. Traditionally, women have in most cases not been given a seat at the negotiation table, or been explicitly mentioned in the peace agreement documents (Byrne & McCulloch, 2012; Ellerby, 2015; Skjelsbæk, 2016), but after year 2000, there is an increasing number of peace agreements that include reference to women. After 2000, 27 per cent of the peace agreements contained reference to women, as opposed to only 11 per cent before 2000 (Bell & O'Rourke, 2010), although a slight decrease in the ratio is observed after 2010 (Ellerby, 2015). In addition, the peace agreement process may provide women with opportunities outside the formal negotiations. Women tend to participate more in informal processes, such as peace marches, reconciliation ceremonies, regional consultations, lobbying, and media campaigns (Bouta, Frerks, & Bannon, 2005).

In the wake of a conflict terminating in a peace agreement, Truth and reconciliation commissions (TRC) are often established. These are set up to deal with the past, hold former regimes accountable for human rights violations, and play a role in building a democratic future (Ní Aoláin, Haynes, & Cahn, 2011). In recent conflicts, gender sensitive approaches have been employed in TRCs, including in Peru in 2002, in Sierra Leone in 2000, and in East Timor in 2002 (Secco, 2008). In these countries, attention was directed towards women's perspectives on the conflict and the violence they had experienced, most prominently sexual violence. In East Timor, focus was also expanded to reproductive rights and health, in addition to socio-economic and education rights (ibid.). Also after peace agreement, Disarmament, Demobilization and Reintegration (DDR) programs may be helpful in reintegrating prior female combatants, and they may also be useful in recognizing the various roles that women play during the conflict (Ní Aoláin, Haynes, & Cahn, 2011).

Moreover, “[p]ost-conflict constitutional and transitional negotiations present an important entry point for the introduction of electoral gender quotas” (Lukatela, 2012). Several post-conflict countries have adopted gender quotas, such as Rwanda, South Sudan, Burundi, and East Timor. On average, these countries have over 30 per cent women represented in parliament<sup>18</sup>. Although the effectiveness of gender quotas is contested<sup>19</sup>, a threshold of 30 percent is often denoted as the critical mass if women are to have an impact (Wängnerud, 2009).

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<sup>18</sup> The National Assembly of South Sudan has a gender quota of 25 percent, Rwanda's constitution sets a gender quota of 30 percent in decision-making organs, the National Assembly of Burundi has 30 percent of the seats reserved for women, and East Timor has a 30 percent candidate quotas (information available at <http://www.quotaproject.org/>).

<sup>19</sup> For a discussion, see Waylen (2007, p. 11) and Dahlerup (2009).

Anderson & Swiss (2014) investigate the relation between peace agreement and adoption of gender quotas. Through analyzing a sample of 115 developing countries between 1990 and 2006, they find that countries where a peace accord is present, electoral quotas for women are adopted more rapidly than in those countries without a peace accord. Also, some post conflict countries have adopted an electoral system that is favorable to women's inclusion. For instance, Burundi and South Africa have adopted a Proportional Representation (PR) system, which is the electoral system that has a consistently positive effect on levels of female legislators (Hughes & Tripp, 2015).

### 2.5.2 Other favorable conditions

Another key circumstance that favors women's advancement is support from international frameworks, NGOs and partners (Tripp, 2015). Such organizations may provide legal instruments to enforce women's rights to justice, participation and social security. Support and pressure from international organizations is more likely to appear in the event that a conflict terminated in a peace agreement, but these networks' impact may extend beyond this. In Uganda and Rwanda, support from both the UN and the African Union was important in achieving gender-inclusive post-war institutions, and using these forums was an explicit strategy by the women leading the peace movements in these countries (Arostegui, 2013). However, while Uganda had a peace agreement process, the Rwandan conflict was settled by a military victory. As such, women may take advantage of such frameworks in any conflict setting, although the circumstances are more favorable in a peace process environment.

The framework provided by the UN is especially relevant after The Beijing Platform for Action from 1995, which explicitly stated that women should be included in conflict resolution. States should "[t]ake action to promote equal participation of women and equal opportunities for women to participate in all forums and peace activities at all levels, particularly at the decision-making level"<sup>20</sup>. This resulted in the UN Security Council adopting Resolution 1325 in 2000. "With the adoption of this resolution, a formal barrier was broken in terms of acknowledging a link between the promotion of women's rights and international peace and security" (Tryggestad, 2009, p. 541). When women's groups refer to norms and rules that have already been established in international fora, it is easier to get approval (Anderson, 2016). In general, NGOs provide education and vocational training specifically to girls, and donor agencies often make funding conditional on the objective of increasing gender equality (Smet, 2009).

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<sup>20</sup> Document available from <http://www.un.org/womenwatch/daw/beijing/platform/armed.htm>

One crucial factor that has been identified for the successful exploitation of the opportunity window is the women's movement itself (Tripp, 2016; Viterna & Fallon, 2008). Women's CSOs are important if gender issues are to be articulated during a political transition (Waylen, 2007). When activists build a coherent organization, and mobilize women across different social groups and ethnic cleavages, their chances of influencing the postwar agreements are higher (Anderson, 2016). In this regard, it is argued that the length of conflict influences the women's movements' ability to unite (ibid.). The longer the conflict, the more probable it is that women can form independent, coherent and efficient organizations. In addition, the longer the conflict, the more discontent among the population, which makes it more likely that women's organizations will be able to mobilize and gain support<sup>21</sup>.

Most of the studies treated here use qualitative research methods, but recently, some quantitative research has examined the link between war endings and gains for women. Evidence from the quantitative research suggests that the intensity level of the war is important for predicting gender outcomes in the aftermath of conflict. Hughes (2009) demonstrates that the experience with civil war can explain some of the variance in the share of female parliamentary representation in low-income countries. However, she finds that low-intensity conflicts, i.e. conflicts that did not reach the threshold of 1000 battle deaths in a year, do not have an impact.

In a more recent article, Hughes and Tripp (2015) analyze the change in women's political representation in sub-Saharan Africa in the period 1985 to 2010. The authors compare the growth in parliamentary representation for women in post-conflict countries and not post-conflict countries and find that the conflict-countries had a more prominent increase in female representation compared to the countries without conflict. They conclude that

*the end of armed conflict generated a boost in African women's legislative presence [...] Across the continent, civil-war endings enable faster and more sweeping changes in women's legislative representation, setting these countries on a fundamentally different trajectory of reform (Hughes & Tripp, 2015, p. 1515).*

In accordance with Hughes (2009), they find no positive effect of minor conflict. This suggests that minor conflicts are not of sufficient magnitude to cause changes in women's political

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<sup>21</sup> Much of the literature here, such as Anderson (2016), applies to the ability of women to influence peace negotiations, but I argue that they also apply to other conflict terminations. The aftermath itself represents an opportunity where it is possible for women to influence the political leadership, although the circumstances may be less favorable.

representation, i.e. they do not produce a critical juncture. Nonetheless, they assert that their findings support the idea that gender equality can be achieved rapidly:

*Unlike classic theories of gender stratification that theorize political change as a slow trickle up through other institutions such as education, here we find evidence of rapid political change fueled by widespread social disruption (Hughes & Tripp, 2015, p. 1531).*

Fallon, Swiss and Viterna (2012) support the findings of Hughes (2009) and Hughes and Tripp (2015): They find that prior to the Beijing Conference in 1995, where women's rights were put on the UN agenda, women's representation levels increased most rapidly in countries transitioning to democracy from civil strife. These studies have all focused on parliamentary representation, as this is a variable that is easy to measure compared to other aspects related to women's position<sup>22</sup>. Legislative representation is only one aspect of female empowerment, but the findings still provide evidence of women's post-conflict opportunities.

To sum up the main propositions of the outlined theory, there is substantive evidence that war increases women's legitimacy and changes gender roles. The aftermath of war may itself provide women with opportunities, especially if a conflict terminates in a peace process. The more active and engaged women have been during war, both in taking on new roles and in organizing public campaigns, the higher the chance that women successfully utilize the opportunity window.

Moreover, the barriers to women's advancement are often divided in three: institutional, cultural, and socioeconomic barriers. Based on the theory outlined here, the potential gains are mostly related to gains in political representation and gains related to changes in perceptions of gender and women's roles, i.e. the cultural barriers. As such, we can anticipate an improvement in the female empowerment of women in the aftermath of civil conflict. In the beginning of the theory chapter, women's political empowerment was defined as choice, agency and participation. We can expect participation to increase because of women's social movements, legitimacy gains and support from NGOs. The choice dimension may improve if cultural barriers are weakened and the society increasingly supports women's empowerment. With

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<sup>22</sup> Although not much quantitative research exists on the link between gains for women and civil war, some scholars have investigated the relation between civil war and democratization. One finding is that democracy increases in the wake of a civil war if it ended in a negotiated settlement (Gurses & Mason, 2008; Nilsson, 2012). However, they do not look at gender-sensitive indicators, which means that it is not evident that women will experience the eventual increased level of democracy the same way as men.

women joining social movements and taking over men's responsibilities, it is likely that the agency dimension improves.

However, there are alternative narratives in the literature on women and war. Instead of providing women with opportunities, it is argued that women experience a backlash in the newfound freedoms in the aftermath of war. Next, I present the main objections to the arguments introduced above. Simply put, critics argue that 1) war does not provide opportunities for women, and/or 2), if gains are made, they are later backdated.

## 2.6 Alternative explanations

Rather than experiencing progress and development, some argue that societies that are torn apart by war turn to traditional values and religious doctrines (Jordan & Denov, 2007; Kumar, 2001). There are many examples of women participating in war and taking on new roles, but then experiencing a backlash of the newfound freedoms in the aftermath of the war<sup>23</sup>. What many scholars point out is that changes at the macro level have not been accompanied by changes in informal structures. Meintjes (2001) and Iyob (1997) both find this propensity through studying the case of Eritrea. First of all, Eritrean women did gain some institutional power after the war through the adoption of gender quotas (Meintjes, 2001). However, the adoption of quotas was not followed by a change in norms (Iyob, 1997). The same conclusion is drawn by Smet (2009), who studies the post-war society in Sierra Leone, where she argues that changes for women were only superficial with patriarchal norms and culture remaining unchanged. One explanation for the turn to traditional values can be explained by men seeking to reassert their authority once freed from the preoccupation with war (Kumar, 2001; Manchanda, 2001).

Another reason why women may not gain anything, is the extremely violent conditions that women live under during war (Rehn & Sirleaf, 2002). Importantly, violence and suffering is not over when the war formally comes to an end (Ní Aoláin, Haynes, & Cahn, 2011), and domestic violence often increases in the aftermath of war (El-Bushra & Sahl, 2005). Women endure physical insecurity, psychosocial trauma (post-traumatic stress disorder PTSD), sexual abuse, exploitation, and domestic violence (Kumar, 2001). The pervasive violence may prevent

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<sup>23</sup> Although interstate wars are outside the scope of this study, an interesting parallel is found in the wake of World War II, where Lenz (2016, p. 106) argues that “[i]n almost all Western countries, even in the last part of the war, and in the immediate post-war period, women were relegated to the traditional roles of housewife and mother”.

women from joining social movements and fighting for their rights (Kandiyoti, 2007). Without political entrepreneurs, it is difficult to utilize the policy window before it closes.

Some point out that women's participation in war in many instances is not so equal after all. Women participate, but they often do other tasks than participating in combat, such as preparing food, washing clothes, or performing secretarial tasks (Bop, 2001; Skjelsbæk, 1997). If women are not given the same responsibility as men, and are left with playing a secondary role, the presumed changes in gender roles during war may not be of sufficient magnitude to implicate a change in gender relations in the aftermath of the war. Also, those women who do participate in war on the same level as men, may experience a serious backlash upon returning because of social stigma. Often, female combatants are rejected by their societies and hindered from returning back to their families (Pankhurst, 2003).

UN's gender policies and UNSCR 1325 is also subject of critique. "UNSCR 1325 has only been very sparsely and inconsistently implemented due to lack of political pressure and resource scarcity" (Olsson & Gizelis, 2015, p. 12). The framework is criticized for failing to adapt to different contexts and engaging with grassroots organizations (Funmi & Eka, 2010). According to Ní Aoláin, Haynes & Cahn (2011, p. 233), "internationals involved in post-conflict reconstruction regularly import institutions and policies – adding a dash of gender-oriented policy to satisfy mainstreaming requirements. In such importation, consultation is absent". Critics also address the insufficiency of focusing on electoral reform, arguing that parliamentary quotas are insufficient if not followed by social and economic conditions that are necessary for political equality (Caprioli, 2004). Another counter-argument against the helpfulness of the international framework, is the involvement of the West in armed conflicts abroad. This may lead to a rejection of 'Western' values, including gender equality. One example is Afghanistan, where US' war against Taliban was justified partly on behalf of liberating Afghani women, something that may have worsened the prospects for women's emancipation: "The invocation of women's rights for political expediency in the context of the 'war on terror' has tended to breed skepticism, if not outright resistance" (Kandiyoti, 2007).

When it comes to TRC processes in the aftermath of war, critics point out their shortcomings in aiding women. The 'trials' are often informal processes at the community level, something that may prevent women from seeking justice (Ní Aoláin, Haynes, & Cahn, 2011). Often, focus is on sexual violence which may underscore the victimization of women and reproduce gender stereotypes and neglect stories of women's agency (Secco, 2008). Along the same lines, DDR

programs are criticized for failing to adapt to women's needs (Basini, 2015; Ní Aoláin, Haynes, & Cahn, 2011).

In sum, there may be reasons not to expect an improvement in the political empowerment of women in the wake of an internal armed conflict.

## 2.7 Summary and hypotheses

The theory chapter shows that the literature on war and gains for women is divided. On the one hand, there is substantive evidence that war can lead to improvements in female empowerment. On the other hand, many studies show that women's social standing is not improved, or that women experience backlash in the newfound freedoms in the aftermath of war. However, an important reason why previous studies report so different findings, is that authors look at different outcome variables and time frames, and that they evaluate cases differently. Gender equality and women's empowerment are complex notions and there may be different criteria underlying what one author terms a beneficial outcome. Some authors that come to negative conclusions employ universal criteria rather than relative. Much of the literature seems to agree that improvements *may* take place, although there is disagreement on whether these improvements are sufficient or of permanence<sup>24</sup>.

Since this study looks at relative improvements in women's empowerment, not absolute criteria, the positive findings suggest that we should expect to find a positive relationship between the end of armed conflict and changes in female empowerment, at least in the short term. In addition, all the quantitative analyses report a positive relationship between the aftermath of civil war and increased representation of women. Tripp (2015) claims that "although backlash may have described some outcomes, the dominant trend has been an increase in women's rights at the formal level in most postconflict countries" (Tripp, 2015, p. 10). Since I employ a quantitative research design, it is likely that I find some of the same results. Also of importance is that the negative consequences of war arguably produce the mechanisms that favor change for women. As such, the negative empirical findings do not necessarily weaken the argument that civil war leads to change. If anything, the literature review demonstrates the need for more research, and the utility of testing the question at hand using longitudinal data.

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<sup>24</sup> Uganda serves as an example on ambivalent findings. Arostegui (2013) calls Uganda "a role model for the region on inclusion and women's rights", where women successfully mobilized and gained quotas assigning them seats in the decision-making fora. The optimistic picture stands in contrast to studies of El-Bushra and Sahl (2005), Tripp (2000), and Goetz (2003). They argue that in the no-party system of Uganda, the rules, structures, and practices continue to promote existing political and social interests, making it difficult for women to realize their interests. Consequently, what for some are "success stories", are for others a story of backlash.

Based on the theory that war leads to changes in gender roles and increased legitimacy for women, I hypothesize that

*H1: In the aftermath of civil conflict, women's political empowerment is improved.*

Other studies have pointed out favorable conditions for women's gains. One finding is that low-intensity conflicts do not produce the same changes as war does. This is in accordance with the main theoretical proposition, namely that war constitutes a crisis, which is a catalysator for change. The third hypothesis is therefore

*H2: The positive effect is stronger after high-intensity conflicts.*

Another important circumstance that favors the forthcoming of women is the conflict termination. Previous research indicates that conflicts terminating in a peace agreement offer women several entry points to influence the post-war agreements. The fourth, and final hypothesis is that

*H3: The positive effect is stronger after conflicts terminating in peace agreement.*

### 3. Methodology

#### 3.1 Empirical strategy

To test the hypotheses outlined, I employ a quantitative research design. As was shown in the theory section, female empowerment is a multifaceted notion, understood as choice, agency and participation. I therefore set out to test the relationship between civil conflict and outcomes for women using four variables that capture these aspects.

Participation is measured by female representation in the legislature and women's access to the highest leadership position, state leader. These variables reflect women's access to political power resources, but they can also indirectly represent the normative view on women and their suitability for assuming political positions. However, the two variables do not directly say anything about the average woman's level of empowerment. To analyze if women in general see improvements in empowerment, freedom of discussion and access to justice for women are used. Access to justice is critical for the choice dimension of women's political empowerment, since an inclusive judicial system secures that women's formal rights are enacted. If women do not have access to the judicial system, it is harder for women to enter politics. Freedom of discussion is crucial; if women are unable to publicly air their policy preferences, they cannot participate in political decision-making or engage in CSOs. Both variables measure the general female population's rights. In total, the four variables are assumed to capture the political empowerment of women.

I estimate two statistical models to test each of the relationships. First, a regular Ordinary Least Squares (OLS) model with panel-corrected standard errors (PCSE) is estimated. The PCSE model accounts for problems related to heteroskedastic residuals and autocorrelation (Beck, 2001; Beck & Katz, 1995)<sup>25</sup>. In the case of executive leadership, a logit model with robust standard errors is used. Second, I estimate fixed effects (FE) models. The advantage of fixed effects is that the relationship is estimated using only the within country variance, as opposed to OLS regression, where it is more difficult to assess if the estimated effect is caused by characteristics within countries or between countries<sup>26</sup>. All estimates are analyzed in Stata 14.0.

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<sup>25</sup> Regular OLS reports underestimated standard errors and inflated t-scores, because the TSCS data are nested and autocorrelated. The PSCE model relaxes the assumption that residuals are homoscedastic and independent and assumes that residuals are by default heteroscedastic and contemporaneously correlated.

<sup>26</sup> The method removes between-countries differences, estimating only the within-country effects of conflict. Fixed effects account for unobserved variables that do not vary over time within a country, hence, reducing omitted-variable bias (Baltagi, 2008; Mehmetoglu & Jakobsen, 2016).

The models are set up to analyze change, not levels, in the dependent variable. The FE models do this by default by removing between-country differences. In the OLS models, I model change in the dependent variable, defined as  $y_t - y_{t-1}$ . The OLS model's estimates will not be identical to the FE model's estimates, since the OLS model will be based more on the variance between countries than the FE model. However, since both models are set up to analyze change in the dependent variable, they should yield somewhat comparable results, allowing us to assess if the reported results are consistent.

The choice of modeling change rather than levels is driven largely by theoretical reasons. For instance, I expect conflict countries to increase their proportion of women in parliaments in the postwar period, but I do not expect a country that comes out from war to have higher levels of women in the legislature than peaceful and wealthy countries. Modeling changes rather than levels also has advantages related to statistical problems. The continuous dependent variables appear to be non-stationary, as they are trending upwards in most countries from 1960 to today. By measuring change instead of levels, the problem with such trends is reduced.

Below, the variables are described more in detail, before the results of the models are reported in the next chapter.

## 3.2 Dependent variables

### 3.2.1 Women in parliament

Parliamentary representation is measured as the total percentage of women in the legislature. The variable is taken from the Varieties of Democracy (V-Dem) dataset (Coppedge et al., 2016a). They define the lower chamber as follows: "The lower chamber in a bicameral legislature, sometimes also called the "second chamber," is typically the more numerous chamber and also more directly representative of the general population" (Coppedge et al., 2016a, p. 415). There are some gaps in the data, and I replace missing values with 0<sup>27</sup>.

The parliamentary representation of women is on average 9 percent in the sample, but the standard error is larger, suggesting there is high variation and considerable gaps between countries. Notably, the maximum value is above 50 percent, while some countries still do not

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<sup>27</sup> It is not clear from the V-Dem codebook if missing means true missing, if females in parliament were 0 percent in a given year, or if there was no parliament in session that year. It would be misleading to replace true missing or no parliament in session with 0, but the risk that these years will be included is low, since these countries will be excluded from the analysis due to other variables in the model that reports true missing when there is no parliament in session. Through investigating the data, it seems plausible that many of the missing numbers can be replaced by 0. I ran the analysis with the original variable, and it did not alter the findings.

have a single woman represented in the legislature. As of 2010, Saudi-Arabia, Bahrain, Qatar, United Arab Emirates, Oman, and Brunei had no women represented. As is evident from Figure 1, the global average has been steadily increasing since the beginning of the 1960s until today.

One inherent problem in using legislative participation is that the variable may possibly reflect the advancement of the female *elite*, rather than the participation of the average woman (Arat, 2015). In addition, the variable does not distinguish between descriptive versus substantive representation, i.e. we do not know if representation is merely symbolic, or if women have real influence (Waylen, 2007). An advantage is that instead of measuring women's *right* to run for office, the legislative representation suggests if women *in reality* get elected. The variable can also reflect more than merely representation. As argued by Caprioli (2004, p. 420), "politicians tend to be highly educated professionals, thus education becomes central to political access/power. When structural hierarchies prevent women from obtaining an education and participating in the public sphere, few women become politicians". In addition, it can possibly reflect a normative change: "it is more likely that a woman may become the highest leader of the state, or a parliamentarian, when the norms of equality between women and men are more widespread" (Melander, 2005, p. 699). In total, this shows that parliamentary representation is an important indicator to include in an analysis of female empowerment.

### 3.2.2 Female president or prime minister

Numbers on female presidents and prime ministers were provided by Jalalzai (2017)<sup>28</sup>. I have numbers updated to 2015 and use these to code a dichotomous variable that registers if a woman was either president or prime minister in a certain year. I include every year that a woman had this position, regardless of whether she in that year only sat for a few months. I exclude interim periods, as well as hereditary, monarchic positions.

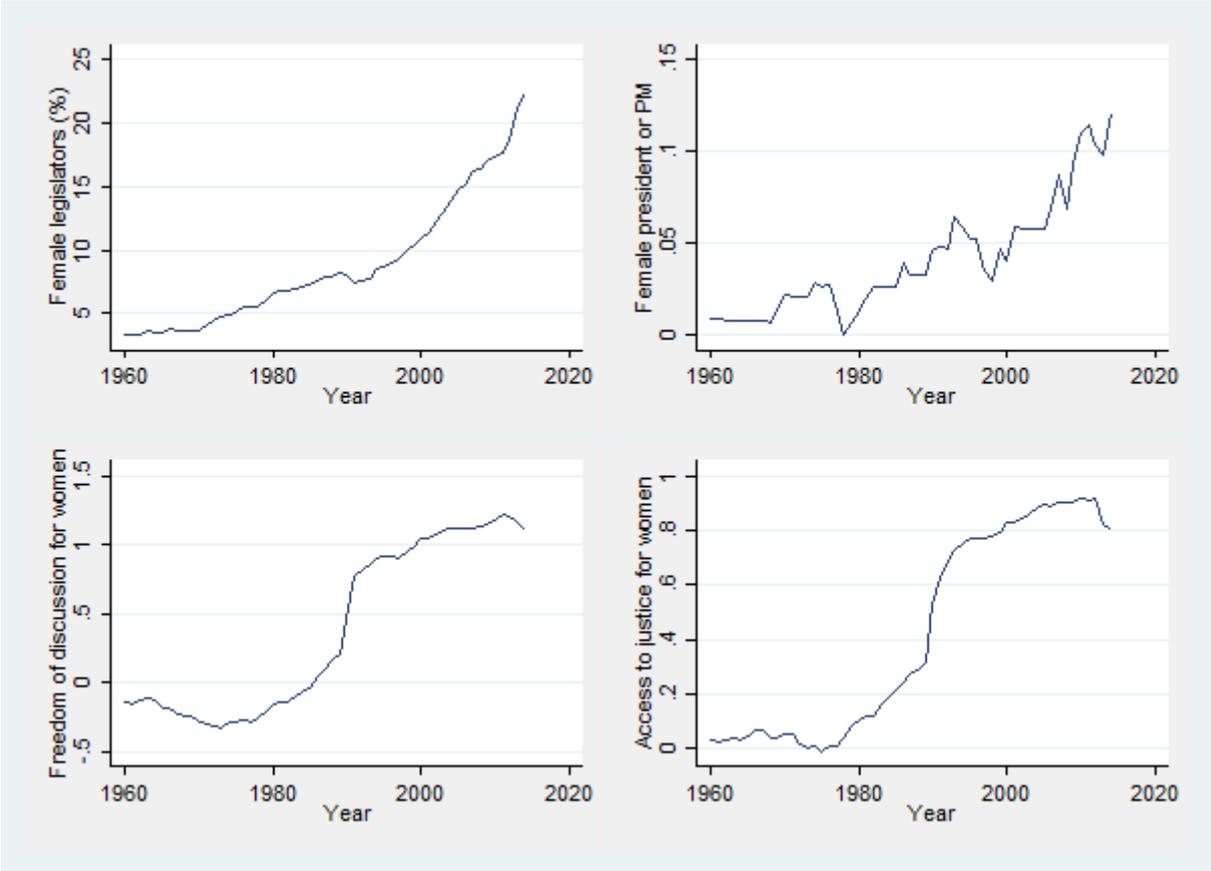
Of the total of 8452 observations, there was a female state leader in only 4 percent of the observations. The number of observations has been increasing since the beginning of the time period, as evidenced in Figure 1. As of 2010, the number of countries that had ever had a female president or prime minister was 45.

There are some problems related to validity on this variable. Sometimes, the head of state is only a ceremonial role with largely restricted power. Also, we do not know if the leaders were appointed or elected, nor by whom they were appointed or elected. However, this is not a study

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<sup>28</sup> The information was provided through personal correspondence.

**Figure 1:** The development of the global average value of the dependent variables



that sets out to explain when and why women come into powerful (or not so powerful) leadership positions. This has been done by for instance Jalalzai (2008). This study aims at finding out if conflict is associated with improved female empowerment, and the variable executive leader functions as a proxy for this. Having women in symbolic positions can mirror an increasing accept of women in leadership positions, even in cases where the leader has relatively little power.

**3.2.3 Freedom of discussion for women**

The variable that measures women’s freedom of discussion is collected from the V-Dem dataset (Coppedge et al., 2016a). It has been coded based on the qualitative assessment of country experts. Country experts typically are academics or professionals working in government, media, or public affairs, and they are residents and/or nationals in the country of which they have documented knowledge (ibid.). The variable is based on the question: “Are women able to openly discuss political issues in private homes and in public spaces?”. By freedom of discussion, it is meant

*the extent to which women are able to engage in private discussions, particularly on political issues, in private homes and public spaces (restaurants, public transportation, sports events, work etc.) without fear of harassment by other members of the polity or the public authorities (Coppedge et al., 2016a, p. 218).*

If women's ability to freely discuss is restricted, their chances of influencing politics, make demands or form organizations, are poor. The country experts were instructed to evaluate the question based both on restrictions by the government, as well as cultural restrictions or customary laws. Hence, the variable measures both formal barriers as well as informal ones. Furthermore, country experts were not meant to evaluate the relative freedom of women compared to men, so it may well be that both women and men enjoy equally high or low freedom of discussion.

Women's freedom of discussion is rated on a scale from 0, not respected, to 4, fully respected. The variable I use is a standardized interval scale<sup>29</sup>, similar to a normal "Z" score. Discussion of freedom variable has a mean of 0.44, a maximum value of 3.87 and the minimum value is -3.55. As shown in Figure 1, the global average value has been increasing over the time period, but most prominently after 1985.

V-Dem uses country experts to code qualitative variables that have until recently been difficult to quantify and compare over time across countries. The dataset is a much-anticipated contribution to statistics. However, worries about reliability and validity are justified. The V-Dem project has taken several measures to make sure that the data enjoy high reliability, such as providing models of uncertainty, and the recruitment of country experts follow a wide number of precautions (see Coppedge et al., 2016b for more details).

#### **3.2.4 Access to justice for women**

Access to justice is taken from the V-Dem dataset and is calculated based on the qualitative assessment of country experts. The variable is based on the following question: "Do women enjoy equal, secure, and effective access to justice?". By access to justice, it is meant

*the extent to which women can bring cases before the courts without risk to their personal safety, trials are fair, and women have effective ability to seek redress if public authorities violate their rights, including the rights to counsel, defense, and appeal. (Coppedge et al., 2016a, p. 225)*

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<sup>29</sup> The ratings are aggregated by a measurement model that take into account disagreement and measurement error, before producing a probability distribution over country-year scores on a standardized interval scale (see Coppedge et al., 2016b).

Again, country experts were not meant to evaluate the relative freedom of women compared to men, so it may well be that neither men, nor women, enjoy access to justice. Country experts were to rate access to justice on a scale from 0 to 4, and the variable is reported as a standardized interval scale, the same way as freedom of discussion described above. The mean value is 0.41, maximum value is 3.60 and minimum value is -3.83. The global mean value has been increasing from 1960 to today, as displayed in Figure 1.

### 3.3 Independent variables

#### 3.3.1 The aftermath of internal armed conflict

It is not conflict itself, but rather its aftermath, that theoretically can have a positive impact on women's political empowerment. A focal question is, what is the time frame of the opportunity window supposedly caused by war? Since this study aims to test the effect of a dramatic upheaval, i.e. war, we must expect change to follow in the immediate aftermath. If there is a direct causal link between war and development for women, the consequences should be observed within the first few years after the end of a conflict. It is not a matter of course when the window opens and when it closes, but in the research design, I define the post-phase as the first three years after a conflict terminated. I do not assume that this is the *exact* window, with the effect only being observable in the first three years, or that the effect is zero in year four. However, there is a trade-off in defining the time frame too narrowly or too broadly. By extending the window, we might have trouble with establishing a relationship, since the effect is assumed to be strongest in the immediate aftermath. On the other hand, if reduced to for instance two years, it could be that the effect would not be captured. The decision of defining the window as three years is therefore a compromise between these two concerns.

To test the impact of civil conflict on women's position, I use data from UCDP<sup>30</sup>. This is the most comprehensive and widely used data source on global armed conflicts. The data have been backdated and adapted in collaboration with Peace Research Institute Oslo (PRIO) and are referred to as the UCDP/PRIO Armed Conflict data (Gleditsch et al., 2002; Harbom & Wallensteen, 2009). I analyze only internal conflicts, thus excluding extra systemic and interstate conflicts<sup>31</sup>.

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<sup>30</sup> I use the UCDP/PRIO Armed Conflict Dataset version 4-2016, available at <http://www.pcr.uu.se/research/ucdp/datasets/>

<sup>31</sup> I also exclude the US from the analysis. In the data, US are registered as an internal armed conflict in the years 2001 to 2015 because of Al-Qaida attacks on Pentagon in 2001.

UCDP distinguishes between minor and major armed conflict. They define a minor conflict as a conflict that has between 25 and 999 battle-related deaths in a given year. Major armed conflict, war, produces at least 1000 battle-related deaths in a year. I hypothesized that the effect of war is stronger than the effect of minor conflict. In the regression models, I therefore distinguish between the aftermath of war and the aftermath of conflict in general<sup>32</sup>. It was also hypothesized that conflicts that terminate in a peace agreement produce better outcomes for women than conflicts terminating other ways. I therefore include an outcome variable, collected from UCDP's dataset on conflict termination (Kreutz, 2010), and code a variable that registers if a conflict terminated in a negotiated settlement.

To test the effect of conflict, regardless of the intensity level, I code a variable called "conflict aftermath" that is given the value 1 in the first three years after conflict termination. The variable that only measures the aftermath of high-intensity conflicts, is defined as a period of three years after a conflict period with high intensity ended, called "war aftermath". I count war cumulatively, meaning that the preceding conflict period must have had at least one year where the intensity level of war was reached. I make a dummy for termination by peace agreement and I code a three-year variable covering the aftermath of a peace agreement. Correspondingly, I include a three-year variable to control for the aftermath of all other outcomes.

Furthermore, I use a non-restrictive definition and define a post-conflict phase as the first year of peace, regardless of whether there is a conflict registered in the following year. In many studies, peace is counted after a minimum of two no-conflict years (Buhaug, 2006; de Soysa & Fjelde, 2010; Gleditsch & Ruggeri, 2010; Østby, 2008). The reason why I count the first year of peace as an aftermath phase, is that a major conflict can be followed by a few years of some tensions, leading them to qualify for the threshold of 25 battle-related deaths within a year. As such, it is possible that the mechanisms of war and the subsequent changes for women may manifest themselves also in a post-conflict setting that is characterized by some new years of conflict.

During years of ongoing conflict, the variables takes the value 0. As such, some post-conflict periods last only 1 year, while others last up to 3 years. All other countries also have the value 0. The distribution of the post-conflict observations is displayed in Appendix 7.2. In the sample, there are 402 country-years of conflict aftermath, while there are 137 country-years of war

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<sup>32</sup> Some countries have more than one conflict on their territory in one calendar year, but I collapse the data using the maximum value (war) so that countries have only one observation per year.

aftermath. The post-peace agreement variable has 81 observations, as displayed in Appendix 7.3. The coding of the different post-conflict phases is illustrated with a hypothetical example in Table 1.

### 3.3.2 Control variables

I include control variables to minimize the risk of spurious results. There is a wide range of indicators that influence gender equality, but not all variables that have an impact are included. First, stable characteristics, such as the dominant religion of a country, can explain levels of gender equality. As such, it can influence the baseline probability of change (or absence of change), but religion comes short of explaining the moment that change occurs, i.e. the *time-specific* change. Hence, because I analyze change in the dependent variable, not the level, I do not include stable characteristics as region or religion, but rather, I include the variables that theoretically are most important in explaining change in the outcome variables. In addition, stable characteristics will be accounted for by the country-fixed effects. I have also avoided including all possible variables that influence the outcome variables. In statistical models, omitted-variable-bias is avoided by adding numerous control variables, but this does not necessarily lead to the best fitted model (Ray, 2003).

Previous research has demonstrated that women have a higher chance of being elected where proportional representation is in place, while it is more difficult in systems based on the “first past the post” rule (Paxton, Hughes, & Painter, 2010; Wängnerud, 2009). In a PR system, the candidates are elected based on the total percent of votes received by their party. I therefore

**Table 1** The coding of the post-conflict phases for a country “Utopia”

Year	Conflict <sup>a</sup>	Peace agr <sup>b</sup>	Other term <sup>c</sup>	Conflict aftermath	War aftermath	Peace agr. aftermath	Other term. aftermath
1970	0	0	0	0	0	0	0
1971	1	0	0	0	0	0	0
1972	2	0	0	0	0	0	0
1973	1	0	1	0	0	0	0
1974	0	0	0	1	1	0	1
1975	1	0	0	0	0	0	0
1976	1	1	0	0	0	0	0
1978	0	0	0	1	0	1	0
1979	0	0	0	1	0	1	0
1980	0	0	0	1	0	1	0

a 0=no conflict, 1=low intensity, 2=high intensity

b Conflict terminated by peace agreement=1

c Conflict terminated, but not by peace agreement=1

include a variable that measures the lower chamber electoral system, taken from the V-dem dataset (Coppedge et al., 2016a). I recode the variable into a dummy, where 1 means PR system, all else 0. I replace gaps in the V-dem data with numbers from the World Bank's Database of Political Institutions 1975-2012 where this is possible (Beck et al., 2001).

Previous research on the political representation of women has also shown that communist countries follow different trajectories in female representation than other countries (Paxton, Hughes, & Green, 2006; Wängnerud, 2009). Marxist-Leninist ideology of social equality may facilitate the acquisition of political rights for women, because of an ideal of having both genders represented in politics (Paxton, Hughes, & Green, 2006). I therefore include Marxist-Leninist ideology as a variable, taken from the Women in Parliament data 1945-2003 (Paxton, Green, & Hughes, 2008). These were updated with numbers from the CIA World Factbook<sup>33</sup>. I code a dummy variable that gets the value 1 every year that a country had communist ideology, otherwise 0. As of today, only five countries remain communist: China, North Korea, Laos, Vietnam, and Cuba.

Although economic growth alone cannot explain changes in gender relations, it is linked to increased gender equality through increased education, job opportunities and welfare (Dollar, 2005; Kabeer & Natali, 2013). Therefore, wealthy countries are expected to be more gender equal than poor countries, and wealthy countries also have less conflict (Gartzke, 2007). To control for income level, I use data from Gleditsch (2002), updated to 2011 in the 6.0 version. I use the variable that measures real Gross domestic product (GDP) per capita in 2005 prices. Since the distribution is skewed, the variable has been log transformed. The reason why I include income level, rather than economic growth, is that growth may itself be a result of the post-war period<sup>34</sup>.

The theory section showed that one explanatory factor for women's advancement is women's human and financial capital, gained through education and work experience. I therefore control for the education level of girls in a country. I use a variable that measures mean years of schooling for women aged 20 to 24, expressed in years. The variable is taken from Wittgenstein

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<sup>33</sup> <https://www.cia.gov/library/publications/the-world-factbook/fields/2128.html#kn> Accordingly, there are no changes in coding since 2003, as the five countries still to remain communist are China, North Korea, Lao, Vietnam, and Cuba.

<sup>34</sup> It could be argued that growth, rather than income level, explains changes in gender relations. However, growth can be a consequence of the postwar period. Gates et al. (2012) find that post-conflict countries exhibit faster economic growth than normal to regain the average income level. As an intervening variable, it should be excluded (Ray, 2003).

Centre Data Explorer<sup>35</sup>. Numbers are reported at five-year intervals and I interpolate the values in between. The time series available begins in 1970, so I extrapolate between 1960 and 1970, as well as between 2011 and 2012. There are also some countries missing. Instead of excluding them from the analysis, I replace them with values from comparable countries. I follow the coding of Hegre et al. (2016) in replacing country values<sup>36</sup>.

Countries are influenced by their surroundings, such as their neighboring states. Therefore, I estimate the neighborhood's mean value on the dependent variable in each of the models. I define neighborhood as direct contiguity, i.e. bordering countries. If a country is surrounded by states that have elevated levels of gender equity, it is more probable that this country also has gender equity (Jacob, Scherpereel, & Adams, 2014). Thus, the variable captures much of the regional differences as well. The inclusion of contiguity variables is theoretically important, but in addition, it has statistical advantages. In TSCS data, there can be cross-sectional dependence, which can lead to spatially correlated residuals. The inclusion of contiguity variables account for this problem. I tested simple bivariate correlations between the original variables and the neighborhood variables, which confirmed a prominent level of cross-sectional dependence.

I include a control for ongoing conflict, as conditions for women are likely to deter during conflict. I also control for time, to reduce problems with autocorrelation and trending dependent variables. Time is defined as year minus 1959. To ensure that the causal direction between the outcome variable and the independent variables is specified correctly, Marxism, education, income level, electoral system, and contiguity, have been lagged with one year.

Another thing to note is that some of the control variables may not be of equal importance in explaining all the dependent variables. Electoral system is arguably most important in explaining variations in women's legislative representation. However, using commensurate models is an advantage when we are to assess the effect of the main independent variable, post-conflict. I therefore keep everything constant when changing the outcome variable and comparing the different operationalizations of the main post-conflict phase.

Descriptive statistics for all the indicators are displayed in Table 2.

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<sup>35</sup> Available at <http://www.oeaw.ac.at/fileadmin/subsites/Institute/VID/dataexplorer/index.html>

<sup>36</sup> Hegre et al. (2016) investigate Barro Lee and UNESCO education data, and find comparable matches which I copy. One exception is Israel, which is not missing in their data. Using UNESCO data, I find numbers on mean education for girls age 20 to 24 from 2009-2014. At the risk of aggregating erroneous numbers, I use the US value in 1970 as a substitute for Israel 1970, as these two countries have approximately the same value in 2010. I then interpolate the values in between. The resulting growth curve is similar to the one of the US.

**Table 2** Summary statistics

Variable name	Mean	Std. dev.	Min	Max	N
Female legislators (%)	9.677	9.842	0	56.3	8255
Female legislators (%), change	0.361	2.611	-30.8	29.8	8070
Freedom of dicussion	0.444	1.651	-3.548	3.868	7736
Freedom of dicussion, change	0.0285	0.301	-2.474	4.245	7569
Access to justice	0.407	1.495	-3.835	3.550	7736
Access to justice, change	0.019	0.224	-3.847	3.087	7569
Female president or PM	0.0395	0.195	0	1	8452
Conflict aftermath	0.0705	0.256	0	1	8452
War aftermath	0.0240	0.153	0	1	8452
Peace agr. Aftermath	0.0142	0.118	0	1	8452
Other term. Aftermath	0.056	0.230	0	1	8452
Ongoing conflict	0.181	0.385	0	1	8452
PR system	0.396	0.489	0	1	7345
Marxism	0.064	0.245	0	1	8452
GDP per capita (log)	8.238	1.194	4.889	11.083	7930
Education level	6.695	4.143	0	15.58	8058
Time	30.838	14.272	2	53	8452
Neighbor's average value of Y: legislators	10.441	8.051	0	44.5	7141
Neighbor's average value of Y: discussion	0.353	1.369	-3.142	3.550	7141
Neighbor's average value of Y: justice	0.345	1.233	-3.835	3.590	7141
Neighbor's average value of Y: president/PM	0.117	0.322	0	1	7190

### 3.4 Methodological concerns

Influential outliers may drive the results. As shown in Appendix 7.2, the distribution of post-conflict periods between countries is not equal; the most influential countries have 13 observations between 1960 to 2012. The concern is that the observations from these countries account for the effect. To test if these observations are influential, I removed them from the sample and ran the regression to see if it changed the coefficients. Removing the countries with the most observations did not change the results.

Another concern is multicollinearity. When adding country fixed effects, collinearity is increased because there will be correlation between the fixed effects and the variables in the model that are slowly changing (Baltagi, 2008). However, the country fixed effects greatly reduce omitted-variable bias, so the increased risk of multicollinearity is an acceptable trade-

off. Estimating the variance inflation factor (VIF) in Stata revealed that multicollinearity between the independent variables is not a problem in the model without fixed effects.

It could be questioned if measuring the aftermath of war as a dichotomous effect is the best way of capturing the effect. It is not necessarily correct that the effect is the same in all three years after conflict, and that the effect is zero in year four and onwards. To investigate the robustness of the results, I tested a continuous, non-linear effect, which will be dealt with in Section 4.4.1.

The selection of control variables could also be problematized. More specifically, it could be questioned if the models suffer from omitted-variable-bias because of the exclusion of regime type. For robustness, I ran the models with democracy included in the models, which will be treated in Section 4.4.2.

## 4. Results and discussion

In this chapter, I start by presenting the main findings of the statistical analysis. The impact of the control variables will only shortly be explained. Thereafter, the robustness of the findings is assessed, before turning to the discussion. In the discussion, I show how the findings relate to previous research, what the possible causal mechanisms are, and directions for future research. I also discuss in brief some concerns about the validity of the dependent variables.

### 4.1 Main findings

In Table 3, the effect of armed conflict on the number of female legislators is displayed. The aftermath of civil conflict, civil war and peace agreement has a positive impact on the number of female legislators, but the effect is statistically significant only after civil war, and partly after peace agreement. The aftermath of all other conflict terminations has a mixed and insignificant effect. Hence, there seems to be a positive relationship between having had a high-intensity conflict and experiencing increases in the number of female legislators after the war ends.

Table 4 shows that freedom of discussion for women increases after armed conflict. Both the aftermath of conflict, war, and peace agreement, is associated with increased freedom of discussion for women, and the relation is statistically significant. The aftermath of conflicts that terminated other ways is positive but not significant. Table 4 thus shows that there is a consistently positive relationship between having experienced civil conflict and seeing improvements in freedom of discussion for women, but the results are caused by conflicts that terminated in a negotiated settlement.

The relationship between the aftermath of conflict and access to justice for women is displayed in Table 5. The aftermath of both high- and low-intensity conflicts, as well as the aftermath of peace agreement, is associated with an improvement in access to justice, and the connection is statistically significant. There is a positive but not significant effect of conflicts terminating other ways. Hence, the aftermath of conflict is associated with improved access to justice for women, but again, the effect is caused by those conflicts ending in a peace agreement.

As shown in Table 6, there is no consistent relation between the aftermath of civil conflict and the likelihood that a country has a female president or prime minister. Most of the coefficients are positive, but none of the post-conflict variables reaches statistical significance. The results indicate that there is no specific relationship between having a woman leading the country, and

having recently experienced armed conflict, but the results may also be explained by the variable having very few observations.

**Table 3** Armed conflict and change in female legislators (%), 1960-2012

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	FE	OLS	FE	OLS	FE
Conflict aftermath	0.210 (0.143)	0.039 (0.147)				
War aftermath			0.839*** (0.259)	0.705*** (0.234)		
Peace agr. aftermath					0.557* (0.297)	0.331 (0.304)
Other term. aftermath					0.125 (0.154)	-0.034 (0.161)
Ongoing conflict	-0.145 (0.112)	-0.455*** (0.129)	-0.158 (0.110)	-0.416*** (0.124)	-0.144 (0.112)	-0.455*** (0.129)
PR system	0.275*** (0.077)	0.052 (0.155)	0.268*** (0.077)	0.047 (0.155)	0.272*** (0.077)	0.053 (0.155)
Marxism	0.034 (0.228)	0.318 (0.242)	0.030 (0.227)	0.313 (0.241)	0.036 (0.227)	0.326 (0.242)
GDP per capita (log)	-0.076* (0.044)	-0.019 (0.104)	-0.066 (0.045)	0.010 (0.104)	-0.071 (0.044)	-0.008 (0.105)
Education level	0.024 (0.017)	-0.012 (0.046)	0.022 (0.017)	-0.012 (0.046)	0.023 (0.017)	-0.013 (0.046)
Time	0.014*** (0.004)	0.028*** (0.007)	0.014*** (0.004)	0.027*** (0.007)	0.014*** (0.004)	0.028*** (0.007)
Neighbor's average value of Y	0.035*** (0.007)	0.062*** (0.009)	0.035*** (0.007)	0.062*** (0.009)	0.035*** (0.007)	0.062*** (0.009)
Level of Y <sub>t-1</sub>	-0.048*** (0.010)	0.894*** (0.007)	-0.048*** (0.010)	0.894*** (0.007)	-0.048*** (0.010)	0.894*** (0.007)
Constant	0.381 (0.322)	0.135 (0.825)	0.311 (0.327)	-0.107 (0.825)	0.354 (0.324)	0.058 (0.828)
Observations	5,704	5,704	5,704	5,704	5,704	5,704
R-squared	0.024	0.876	0.026	0.876	0.025	0.876
Number of countries	140	140	140	140	140	140

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 4** Armed conflict and change in freedom of discussion for women, 1960-2012

	(7)	(8)	(9)	(10)	(11)	(12)
	OLS	FE	OLS	FE	OLS	FE
Conflict aftermath	0.042** (0.017)	0.048*** (0.017)				
War aftermath			0.062** (0.025)	0.074*** (0.027)		
Peace agr. aftermath					0.182*** (0.034)	0.192*** (0.035)
Other term. aftermath					0.008 (0.019)	0.012 (0.019)
Ongoing conflict	-0.029** (0.013)	-0.030** (0.015)	-0.033*** (0.012)	-0.037*** (0.014)	-0.028** (0.013)	-0.030** (0.015)
PR system	0.019** (0.009)	0.024 (0.018)	0.018* (0.009)	0.023 (0.018)	0.018* (0.009)	0.025 (0.018)
Marxism	0.006 (0.025)	0.006 (0.028)	0.005 (0.025)	0.005 (0.028)	0.006 (0.025)	0.008 (0.028)
GDP per capita (log)	0.004 (0.007)	0.003 (0.012)	0.004 (0.007)	0.004 (0.012)	0.006 (0.007)	0.009 (0.012)
Education level	0.005*** (0.002)	0.006 (0.005)	0.005** (0.002)	0.006 (0.005)	0.005** (0.002)	0.006 (0.005)
Time	0.001* (0.001)	0.002*** (0.001)	0.001** (0.001)	0.003*** (0.001)	0.001* (0.001)	0.002*** (0.001)
Neighbor's average value of Y	0.008* (0.004)	0.020*** (0.007)	0.007* (0.004)	0.020*** (0.007)	0.008* (0.004)	0.021*** (0.007)
Level of Y <sub>t-1</sub>	-0.035*** (0.007)	0.922*** (0.005)	-0.035*** (0.007)	0.922*** (0.005)	-0.035*** (0.007)	0.921*** (0.005)
Constant	-0.064 (0.060)	-0.092 (0.097)	-0.063 (0.060)	-0.093 (0.098)	-0.077 (0.059)	-0.132 (0.098)
Observations	5,532	5,532	5,532	5,532	5,532	5,532
R-squared	0.022	0.914	0.022	0.914	0.026	0.915
Number of countries	133	133	133	133	133	133

Standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

**Table 5** Armed conflict and change in access to justice for women, 1960-2012

	(13)	(14)	(15)	(16)	(17)	(18)
	OLS	FE	OLS	FE	OLS	FE
Conflict aftermath	0.025*	0.025*				
	(0.013)	(0.013)				
War aftermath			0.064***	0.070***		
			(0.019)	(0.020)		
Peace agr. aftermath					0.091***	0.090***
					(0.022)	(0.026)
Other term. aftermath					0.009	0.008
					(0.015)	(0.014)
Ongoing conflict	-0.020**	-0.033***	-0.023**	-0.034***	-0.020**	-0.033***
	(0.009)	(0.011)	(0.009)	(0.011)	(0.009)	(0.011)
PR system	0.010	0.028**	0.009	0.028**	0.009	0.029**
	(0.007)	(0.014)	(0.007)	(0.014)	(0.007)	(0.014)
Marxism	0.020	0.011	0.019	0.011	0.020	0.012
	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)
GDP per capita (log)	0.003	0.005	0.004	0.007	0.004	0.008
	(0.005)	(0.009)	(0.005)	(0.009)	(0.005)	(0.009)
Education level	0.003**	-0.002	0.003**	-0.002	0.003**	-0.002
	(0.001)	(0.004)	(0.001)	(0.004)	(0.001)	(0.004)
Time	0.000	0.002***	0.000	0.002***	0.000	0.002***
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)
Neighbor's average value of Y	0.008**	0.033***	0.008**	0.034***	0.008**	0.034***
	(0.003)	(0.009)	(0.003)	(0.009)	(0.003)	(0.009)
Level of Y <sub>t-1</sub>	-0.023***	0.909***	-0.023***	0.909***	-0.023***	0.909***
	(0.005)	(0.006)	(0.005)	(0.006)	(0.005)	(0.006)
Constant	-0.029	-0.054	-0.034	-0.068	-0.036	-0.072
	(0.038)	(0.073)	(0.038)	(0.073)	(0.038)	(0.073)
Observations	5,532	5,532	5,532	5,532	5,532	5,532
R-squared	0.016	0.901	0.017	0.901	0.017	0.901
Number of countries	133	133	133	133	133	133

Standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

**Table 6** Armed conflict and likelihood of female president or PM, 1960-2012

	(19)	(20)	(21)	(22)	(23)	(24)
	Logit	FE	Logit	FE	Logit	FE
Conflict aftermath	0.352 (0.492)	0.001 (0.007)				
War aftermath			-0.092 (0.757)	0.001 (0.011)		
Peace agr. aftermath					0.312 (1.011)	0.001 (0.014)
Other term. aftermath					0.359 (0.552)	0.001 (0.007)
Ongoing conflict	0.386 (0.273)	-0.001 (0.006)	0.331 (0.274)	-0.001 (0.006)	0.386 (0.273)	-0.001 (0.006)
PR system	0.249 (0.249)	-0.013* (0.007)	0.244 (0.253)	-0.013* (0.007)	0.249 (0.250)	-0.013* (0.007)
Marxism	-0.608 (0.744)	0.010 (0.011)	-0.579 (0.725)	0.010 (0.011)	-0.610 (0.745)	0.010 (0.011)
GDP per capita (log)	0.040 (0.175)	0.010** (0.005)	0.032 (0.174)	0.010** (0.005)	0.039 (0.174)	0.010** (0.005)
Education level	0.028 (0.055)	-0.006*** (0.002)	0.024 (0.056)	-0.006*** (0.002)	0.028 (0.055)	-0.006*** (0.002)
Time	0.029*** (0.010)	0.001*** (0.000)	0.029*** (0.010)	0.001*** (0.000)	0.029*** (0.010)	0.001*** (0.000)
Neighbor's average value of Y	0.118 (0.367)	-0.007 (0.006)	0.124 (0.366)	-0.007 (0.006)	0.117 (0.366)	-0.007 (0.006)
Level of Y <sub>t-1</sub>	5.989*** (0.239)	0.750*** (0.009)	5.996*** (0.239)	0.750*** (0.009)	5.988*** (0.240)	0.750*** (0.009)
Constant	-6.407*** (1.272)	-0.066* (0.038)	-6.265*** (1.257)	-0.066* (0.038)	-6.404*** (1.268)	-0.066* (0.038)
Observations	5,734	5,734	5,734	5,734	5,734	5,734
R-squared		0.548		0.548		0.548
Number of countries		140		140		140

Robust standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

#### 4.2 The effect of the control variables

Ongoing conflict has a consistently negative impact on the number of women in parliament, access to justice and freedom of discussion. The association is mostly statistically significant. Civil conflict has a mixed impact on the likelihood that a country has a female president or prime minister, and the relation is not statistically significant.

Having a PR system has a consistently positive effect on the number of female legislators, freedom of discussion and access to justice. The association is partly statistically significant. The relationship between having a PR system and seeing a female president or prime minister is more ambiguous; the coefficients are positive in the OLS models, negative in the FE models, and only some coefficients are significant at the 10 percent level.

Marxism has a consistently positive effect on freedom of discussion, access to justice, and number of women in parliament, but the effect is not statistically significant. The effect of Marxism is mixed in the model with female state leader as the outcome variable, and the effect is not significant.

Income level seems to positively affect access to justice and freedom of discussion for women, but the relationship is not statistically significant. The impact on the number of female legislators is more ambiguous; the effect is mostly negative and not significant. High income level corresponds with increased likelihood that a country has a female president or prime minister. The finding is significant at the 5 percent level in the FE models.

The impact of education on female legislators is mixed and not significant. Increased education level for women increases freedom of discussion, but the relationship is significant only in the OLS models. The effect on access to justice is ambiguous: a positive and significant relationship is found in the OLS models, while the FE models report a negative and insignificant relation. Education has a mixed effect on the likelihood that a country has a female president or prime minister.

The contiguity variable shows that the neighboring countries' value on the dependent variable influences the dependent variables in a given country. When freedom of discussion, access to justice, and number of female legislators increases in a neighboring country, the dependent variable also increases. The finding is statistically significant. Having a neighbor with a female president or prime minister does not influence the likelihood that the same will happen in a given country. Here, the contiguity variable gives mixed results and none of them are significant.

The variable capturing time has a consistently positive effect on all the dependent variables. This confirms that they all are trending upwards. The relationship is statistically significant in most of the models.

The lagged value of the level of the dependent variable has a statistically significant impact on the dependent variables. However, the direction of the relation is mixed. In the OLS models, the lagged value has a negative impact on freedom of discussion, access to justice, and number of female legislators, but in the FE models, the effect is positive. This is a puzzling finding. One possible explanation is that when we compare all countries, those who have low levels of gender equality at the starting point, have higher chances of seeing an increase. However, when only the within-effect is considered, it seems like those countries that have reached a certain level are more likely to further improve, perhaps reflecting an exponential effect. In the models for female state leader, the effect of the lagged value of the dependent variable is consistently positive and significant.

#### 4.3 The substantive effect of the independent variables

Based on the results in Tables 3 to 6, a preliminary finding is that there is a positive relationship between most of the dependent variables and the aftermath of conflict. However, how to evaluate the results depends on the substantive effect and the explanatory power of the aftermath of conflict.

One way of assessing the substantive effect is looking at the size of the coefficients. In Model 3, Table 3, we see that the increase in female legislators after war is 0.839, i.e. the increase constitutes less than one percentage point. The relative impact depends on the initial level of female legislators. Moreover, since the dependent variable measures change, not level, this is a considerable increase, seeing as a country does not change much from one year to the next. If we look at Model 11 in Table 4, we see that the aftermath of negotiated settlement gives an increase in freedom of discussion of 0.182. Similarly, Model 17 in Table 5 shows that the aftermath of negotiated settlement gives an increase in access to justice of 0.091. Since freedom of discussion and access to justice is measured on identical interval scales, it is apparent that the improvement in access to justice is of less magnitude than the improvement in freedom of discussion. However, the scale is not as intuitive as the number of female legislators, so the substantive effect is not that easy to detect from only looking at the size of the coefficients.

Post-estimation predictions help us assess the effects<sup>37</sup>. Using Stata to predict the average growth, I find that the average growth in female legislators in the post-war countries is 1.16, compared to a growth rate of 0.34 for all other countries, i.e. the effect in the post-conflict

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<sup>37</sup> The command “margins” was used post-regression to find the predictions. This allows to test specific values of some covariates and averaging or otherwise integrating over the remaining covariates.

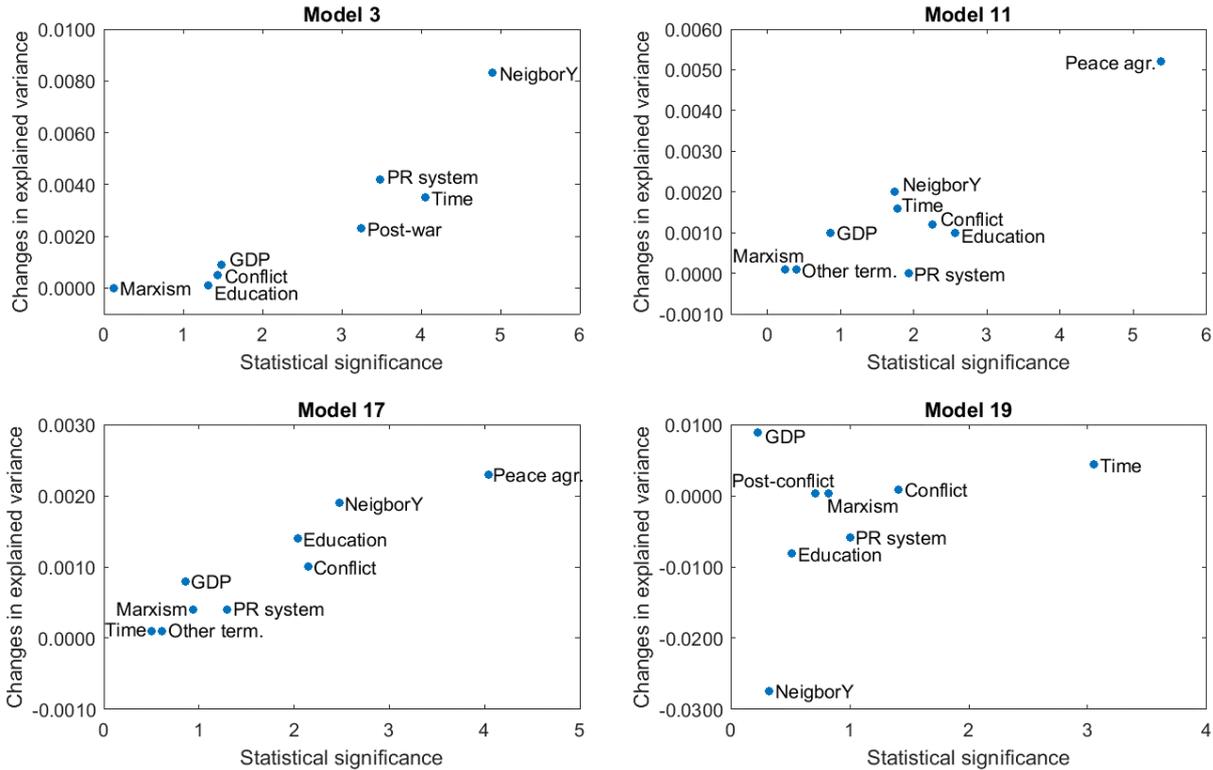
environment is three times larger compared with a non-post-conflict environment. Although the heterogeneous category “all other countries” also include conflict countries, there is a substantive difference between this group of countries and the post-war countries. Post-estimation predictions show that the average growth in freedom of discussion for post-peace agreement countries is 0.207, compared to 0.026 for all other countries. In access to justice, the growth rate in the aftermath of peace agreement is 0.108, compared to 0.017 for all other countries. As such, the post-estimation prediction reveals that the growth rate in the dependent variables is many times higher in post-peace agreement countries compared to other countries.

It can be argued that the post-conflict increase reflects a simple catch up effect when the conflict ends. When investigating Model 3, 11, and 17, we see clearly that the increase represents more than just a return to the pre-war level: The coefficients for the aftermath of war (Model 3) and peace agreement (Model 11 and 17) are considerably larger than the coefficient of ongoing conflict.

Another way of evaluating the substantive effect of the post-conflict variables is to compare the explanatory power of the post-conflict variables with the control variables. I estimate the contribution to the explained variance of each of the independent variables by deleting one independent variable from the model at a time and compare the changes in  $R^2$ . I test Models 3, 11, 17, and 19. The explanatory power of these models is generally low, meaning that the effect of excluding one and one variable is not large. Yet, it is still possible to compare the *relative* differences in explanatory power between the variables.

The results are displayed in Figure 2. The x-axis represents the variable’s statistical significance measured in terms of the absolute value of its z-score, and the y-axis shows the contribution of the variable to the explained variance, compared to the full model. The lagged value of the dependent variable is not included in the graph. We see that in Model 3, the most important variables are the mean value of Y in the neighboring countries, PR system and time. The aftermath of war contributes only marginally to the explanatory power of the model.  $R^2$  falls from 0.026 to 0.024 when it is excluded, but it does better than GDP per capita, ongoing conflict, education level and Marxism. In Model 11, the aftermath of peace agreement is by far the most important variable, both in terms of statistical significance and explanatory power. When it is excluded,  $R^2$  falls from 0.026 to 0.021. The aftermath of peace agreement is also the most important variable in Model 17, although the point for post-peace agreement is closer to the other independent variables. Without this indicator,  $R^2$  goes from 0.017 to 0.015. It is clear from the graph of Model 19 that GDP per capita and time are the only variables that contribute

**Figure 2** Comparison of explanatory power and statistical significance



to the model’s explanatory power, and only time is statistically significant. PR system, education, and neighbor’s value seems to negatively contribute to the model’s pseudo-R<sup>2</sup>. It also confirms the result displayed in Table 6, that the aftermath of conflict does not influence the likelihood of having a female state leader.

In sum, Figure 2 shows that the aftermath of peace agreement is a relatively important explanatory variable for growth in freedom of discussion and access to justice for women. It does better than often-used explanations of gender equality, such as education and income level. However, the graphs for Model 11 and 17 also indicate that the models may suffer from a lack of other relevant explanatory variables, something that can explain why peace agreement has such a high relative impact. The aftermath of war is not a very strong explanation for growth in female legislators, but it is more important than income and education level. Figure 2 also indicates that the model with female executive leader as dependent variable is a poorly specified model. However, the difficulty of finding significant relationships may be explained by the small number of observations with value 1 on this indicator.

In total, the preliminary results indicate that Hypothesis 1 is partly confirmed; women's political empowerment is increased in the aftermath of civil conflict. However, we have little reason to expect women to get the highest leadership position in the wake of a conflict. Hypothesis 2 is also partly confirmed, since the positive effect indeed is stronger after high-intensity conflicts, but the effect is explained more by the termination than the intensity level. Only those conflicts terminating in negotiated settlement have a positive impact on the dependent variables in Tables 3 and 4. As such, Hypothesis 3, that the positive effect is stronger after peace agreement, is confirmed.

#### 4.4 Robustness

So far, the findings presented have been largely in line with previous research. The results suggest that the three hypotheses are at least partially confirmed. However, before we can conclude, auxiliary analysis is needed to test the robustness of the reported findings. First, I estimate a set of models where the main independent variables are measured as decay functions. Second, I test what happens with the main models when democracy is included as a control variable.

##### 4.4.1 Decay versions of the post-conflict variables

In Tables 3 to 6, the post-conflict variables measure the post-conflict phase as a dichotomous effect. The operationalization implies that the effect of conflict is the same in all three years after conflict, and that the effect is zero in year four and onwards. However, one could imagine that the effect of conflict is strongest in the first year following conflict, before it is gradually reduced. To test a continuous and non-linear effect of conflict, I estimate a decay function, defined as

$$x = 2^{-\frac{t}{\alpha}}$$

Here,  $t$  is time in years since the last year of conflict and  $\alpha$  is the designated half-life, and is determined by when the effect is expected to be reduced to half. All countries have the value 0 until they get their first post-conflict phase. I set the half-life parameter to 2 years, which implies that the decay variable has the value 1 in year  $t$ , the first year after conflict, 0.5 in year  $t+2$ , and 0.25 in year  $t+4$ , and so on. It is close to zero when the war ending occurred a long time ago.

The relationship between the decay versions of the aftermath and the dependent variables is displayed in Appendix 7.4. By and large, the decay variables yield equivalent results as the findings reported in Tables 3-6. They confirm that the positive effect is due to conflicts

terminating in peace agreement, and that other conflict terminations do not have a significant effect. When the aftermath is measured as a decay function rather than a three-year interval, the size of the coefficients increases. This suggests that the effect is strongest in the first year following the end of the war. The model can still not establish a relationship between having a female state leader and having had civil war.

Comparing Model 13 in Table 5 with Model A13 in Appendix 7.4 through a chi-squared test, reveals that the model where the post-conflict period is measured as a decay function has a slightly better fit, as the chi square increases from 53.44 to 54.16.

#### 4.4.2 Inclusion of democracy as explanatory variable

I chose not to include democracy as a control variable. There were mainly two reasons for this. First, democracy is possibly an intervening variable. An intervening variable influences both the outcome variable and the main independent variable, but the intervening variable is empirically a consequence, rather than a reason to the main independent variable (Ray, 2003). In this case, it is likely that democratic development is in part a consequence of the end of the war. Second, a pitfall in statistical models is to include control variables that are conceptually similar to the outcome variable. By including democracy in the regression, one risks including the same concept on both sides of the equation. However, I ran additional models where democracy was included as a control variable<sup>38</sup>. The results are displayed in Appendix 7.5.

When democracy is controlled for in the models, the effect of the aftermath of conflict is largely the same: Even when democracy is included, there is a positive and statistically significant increase in access to justice, freedom of discussion, and female legislators, and the effect is still caused by conflicts ending in a negotiated settlement. The size of the coefficients is not reduced by the presence of democracy, which suggests that the post-conflict period has a separate effect on gender equality. None of the aftermath variables are significant in the models with female state leader as dependent variable.

Democracy itself has a negative, not significant effect on female legislators, something that will be further discussed later. The effect on freedom of discussion is positive and statistically significant. Increased democracy corresponds with a partly significant increase in access to justice. Democracy increases the chances that a country has a female president or prime minister, and the relationship is statistically significant.

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<sup>38</sup> I use the Electoral Democracy index from V-Dem, where 0 means no democracy and 1 means full democracy. See Coppedge et al. (2016a) for V-Dem's definition of democracy.

## 4.5 Summary

In total, there is a consistent and positive relationship between the end of armed conflict and the political empowerment of women. Access to justice, freedom of discussion and number of female legislators increase in the first three years after conflict. The effect is larger after high-intensity conflicts than after minor conflicts, but the biggest effect is found after conflicts terminating in peace agreement. At large, conflicts terminating in negotiated settlement account for most of the positive result, since the aftermath of conflicts terminating other ways does not have a significant impact on any of the indicators. The substantive effect of the aftermath of negotiated settlement and civil war is relatively high, compared to the control variables. In the models with female executive leader, none of the post-conflict variables reaches statistical significance. The results are robust to alternative model specifications and alternative measurements of the post-conflict period.

## 4.6 Discussion

### 4.6.1 The impact of peace agreement

The most important finding for policy relevance is the finding that conflicts terminating in peace agreement produce better outcomes for women than conflicts terminating in other ways. The positive effect we find in the wake of a peace agreement is very consistent, and robust to alternative model specifications. This clearly supports the claim that there is potential for improving female empowerment in the wake of conflict. The positive findings also support the theoretical argument that change for women does not always follow an incremental process, but shows that women can sometimes achieve their goals rapidly. The findings fit well into the theoretical propositions of Kingdon (1995), who analyze change through the concept of windows of opportunity.

That a peace agreement is associated with a window of opportunity for women is not that surprising, as much of the literature on gender and conflict focuses on the possibilities inherent in a peace negotiation process. As expressed by Kaufman & Williams (2010, p. 95), “one of the components of conflict resolution or peace negotiations must be an outline of the reconstruction of society in a way that furthers the goals of peace, such as making sure that there is equality or at least equal opportunity for all, a guarantee of basic human rights, and full and open access to the political system”. Thus, a peace process implies that the community agrees on how the society is to be built up again, both regarding political institutions, as well

as values and norms. The basic idea is that a negotiated settlement opens entry points for women, and this is confirmed by the analysis at hand.

The finding that the aftermath of conflicts terminating in peace agreement have a positive effect on the empowerment of women may seem like an obvious discovery. Yet, although several factors related to peace agreement suggest that a peace process may be favorable to women's empowerment, the reality is that women are formally included only in a marginal number of cases. As pointed out by several authors, women have in most cases neither been given a seat at the negotiation table, nor have they been explicitly mentioned in the peace agreement documents (Bell & O'Rourke, 2010; Byrne & McCulloch, 2012; Ellerby, 2015; Skjelsbæk, 2016). "[A]dding a gender perspective and/or bringing women into the peace room is rarely high on the agenda for the mediators" (Skjelsbæk, 2016). Still, after year 2000, there is an increase in the number of peace agreements that include reference to women (Bell & O'Rourke, 2010). The positive effect found in this study may either reflect this trend, or, more likely, it implies that women have possibilities to influence the agreements from outside the formal fora. Women can apply pressure on the main actors, especially if backed up by international organizations or donors. In this sense, the findings are good news for women operating in a context where they are excluded from the formal political decision-making organs, since they indicate that the fight for gender rights can be fruitful also in a seemingly unfavorable setting.

Empirically, some cases fit well into the suggested framework of a peace agreement being a facilitator for women's advancement. One example is Burundi, where conflict and rupture led women to organize political peace movements (Anderson & Swiss, 2014). Women pushed for a seat at the negotiation table, but were denied. With the assistance of UNIFEM, however, the official parties to the peace talks agreed to convene an all-women's peace conference. A key claim from the women's meeting was a 30 percent gender quota, something that was not accepted by the leadership. Nonetheless, a quota of 30 percent was implemented during the 2010 election, leading to over 30 percent women in the lower house (*ibid.*). Here, several factors were present: a united women's movement, a peace agreement process, and an international framework. Formally, women were excluded, yet gains were made.

However, other cases do not fit that well into the finding that peace agreement matters. Rwanda, with its over 50 percent proportion of women in the parliament, is the idealized image of a post-conflict country that has seen a rapid expansion in women's rights. Importantly, the Rwandan civil war was not settled by peace agreement, but by military victory. This suggests that empirically, there is more variation in the cases than what the regression models can reveal. A

problem with the category that measures other conflict terminations, is that it is very heterogeneous. It includes several categories for termination: ceasefire agreement, victory for government, victory for rebel, low activity, or actor ceases to exist (Kreutz, 2010). As such, a subtler analysis could investigate if there are different outcomes depending on the other categories of termination.

#### 4.6.2 Peace agreement matters for female legislators, but only among wars?

The finding that only high-intensity conflicts have a significant impact on the number of female legislators is not very surprising, seeing as this was found by similar research conducted by Hughes (2009) and Hughes & Tripp (2015). None of these studies found an effect of minor conflict. This can be explained by the main theoretical propositions, that crisis leads to change. A minor conflict, reaching a total of 25 battle-related deaths in a calendar year, may not be a catalysator for change. Civil wars of high brutality, i.e. conflicts where there are at least 1000 battle-related deaths within a year, are more likely to create a crisis. Anderson (2016) argues that the length of conflict is important for the women's movement to gain momentum. The same could be said about the intensity level; if women are to experience increased legitimacy, the war must be of such magnitude that it affects a substantive part of the population. If only a limited part of the country experiences conflict, we cannot expect to see a general change in the public opinion in that country.

When it comes to the impact of peace agreement on the number of female legislators, the effect is less consistent than the effect on freedom of discussion and access to justice. This may be explained by the fact that some of the peace agreements appear after minor conflict, while some appear after major conflict. In the sample, termination by peace agreement happened 22 times after a cumulative war, and it is registered 18 times after low-intensity conflicts. This may be the reason why conflicts terminating by peace agreements fail to achieve significance in the FE model. Thus, to have an effect on the inclusion of women in the legislature, the findings suggest that peace agreement has most impact among high intensity-conflicts.

#### 4.6.3 Do the results reflect a normative change toward women or a general process of democratization?

A fundamental question is if the observed improvement reflects a general democratization process, rather than a gender-specific change. Previous research has investigated the link between civil war and democratization (Gurses & Mason, 2008; Nilsson, 2012). Looking at changes in polity scores before and after war, Gurses (2008) finds increased levels of

democracy after civil war, but only after conflicts terminating in peace agreement. In this sense, it can be argued that women's improvement is a result of a general democratization process, fueled by a conflict terminating in a peace agreement. However, the explanation is not that straightforward, as previous research has pointed out the gender-insensitivity of democracy indicators that are employed in positivist research (Caprioli, 2004). According to an examination by Paxton, Hughes & Painter (2010), no cross-national quantitative study has ever shown a positive effect of democratic institutions on women's political representation. As such, one can hardly argue that the finding that democratization increases in the aftermath of a negotiated settlement implies increased democratic freedoms for women.

In addition, the effect of the post-conflict variables is not absorbed by the inclusion of democracy in the regression models. This indicates that the effect of war on gender equality is not contingent on the development of democratic institutions. If the increase in freedom of discussion and access to justice is not caused by the development of democratic institutions, what can explain the positive change? One possible explanation is that norms or culture changes in the wake of a civil conflict. The theory section showed that gender roles are altered during times of war, because in the absence of men, women must take responsibility for the economy (Ní Aoláin, Haynes, & Cahn, 2011) and take over men's jobs (El-Bushra & Sahl, 2005). In addition, women are participating in war, also as combatants (Luciak, 2008). Many women enter the public realm through organizing peace movements (Kaufman & Williams, 2010), and the participation in public movements shows the civil society that women can be public actors. The increased participation of women in new roles and in the public realm may lead to women's participation in politics being more appreciated and accepted.

The idea that the improvement is caused by normative changes, is supported by the finding that freedom of discussion increases more prominently than access to justice. The variable that measures access to justice is coded more based on institutional practice than cultural norms, while freedom of discussion measures barriers to women's right to discuss open and freely, based as much on cultural restrictions as political hinders (Coppedge et al., 2016a). The more substantive increase in freedom of discussion thus points to a normative change, as this type of change can manifest itself more rapidly than institutional changes.

Although women's improvement may not be caused by the development of democratic institutions, it may well be that an effect of the increased empowerment of women is more democracy. As such, it is possible that men's democratic freedoms increase parallel with women's improvement. A recent article finds that over the period 1900–2012, there are few

cases of successful democratic transition without women's civil liberties first reaching a certain threshold (Wang et al., 2017). As such, an increase in female empowerment may reflect a more substantial democratization process. In this sense, the findings from this study may speak to a more general development of democratization. It would be interesting to investigate if also men's empowerment increase in the aftermath of conflict in future research.

#### 4.6.4 Causal mechanisms

What can causally explain the findings? Judging from existing theory, one of the main reasons for improvements in gender relations is the women's movement. A main finding of previous work is that the women's movement is crucial if women are to gain anything in the wake of war (Anderson, 2016; Tripp, 2015; Tripp, 2016; Waylen, 2007). Anderson (2016) points out that the successful influence of women in peace processes depend on the women's movement ability for uniting women across ethnic cleavages and mobilize a wide specter of the population. Tripp (2015) argues that there are three main causal mechanisms that explain gender outcomes in post conflict settings: gender disruptions, as caused by the war; a women's movement; spread of international norms, resulting in interventions by the UN and foreign donors. Unfortunately, including the influence of women's peace movements in the regression model is not possible due to lack of appropriate data.

Recently, scholars have given attention to the pacifying effect of women. A seemingly robust finding is that a high level of gender equality is associated with lower risk of civil war outbreak (Caprioli, 2005; Melander, 2005; Wig & Dahlum, 2017). If increased gender equality leads to more peaceful societies, one question is if gender equity increased during war, which again led to the termination of the war. In this case, we have a problem of potential reversed causality. However, it does not seem likely that the observed increase takes place before the war ends, seeing as the regression models show clearly that all the dependent variables decrease while a conflict is ongoing. Although war leads to changes in gender roles, and women organize themselves during war, the benefits of this development is most likely observed in the aftermath of the conflict.

Although some causal mechanisms have been sketched up, we cannot know for certain that the results are not due to some sort of selection effect. The risk is that some quality with either the country or the conflict at hand influences both the probability that a conflict ends in a negotiated settlement, and the probability that women's political empowerment increases in the aftermath. For future research, it would be interesting to further investigate the causal mechanisms and try

to isolate the underlying variable that causes the effect. This is a task that requires not only the use of advanced statistical methods, but also further theoretical reasoning and empirical investigation.

#### 4.6.5 How do the findings relate to the contradictory literature?

The findings do not necessarily contradict those authors who report of negative consequences for women in the aftermath of war, but they show that women can gain something in contexts that at first eyesight seem to be unfavorable to their advancement. Previous research demonstrates that war leads to elevated maternal mortality rates in the conflict aftermath (Urdal & Che, 2013), that more women than men die in the aftermath of conflict (Ormhaug, Meier, & Hernes, 2009), and that women's life expectancy in the aftermath is reduced more than men's (Ghobarah, Huth, & Russett, 2003; Plümper & Neumayer, 2006). Interestingly, the results in this study indicate that although the physical living conditions deteriorate, women's political and societal position may improve.

Unfortunately, this study can say little about the development in the years after the three-year period. As explained in the theory chapter, a central claim from the more "pessimistic" strand of the literature is that where gains have been made, they have later been backdated, leading women to experience a backlash in newfound freedoms (El-Bushra & Sahl, 2005; Ní Aoláin, Haynes, & Cahn, 2011; Pankhurst, 2008). As such, an appropriate question is if the observed effect on the empowerment of women is caused by 'window dressing'. It could be that in the aftermath of war, the political regime met some of women's demands for inclusion, but that the gains were with-drawn after a certain period. This question requires further scrutiny, and it would be interesting to test if the gains are upheld in a long-term perspective.

#### 4.6.6 Is the political empowerment of women captured?

In the literature on gender and politics, as well as in the development of gender policies, there is no consensual definition of gender equality (Arat, 2015). Some would object that the reality for women is much more nuanced than what a generalized regression model can show. The value of the findings depends largely on the study's validity.

First, the study can be criticized for not employing a sufficiently covering definition of empowerment. Clearly, there are several aspects that are important for women's empowerment, such as access to economic resources. However, since this study looks at only a part of empowerment, namely political empowerment, I argue that the definition, as provided by Sundström et al (2017), is satisfying many of the components of what it means to be able to

influence politics. Of course, there is an interplay between increased economic empowerment and access to politics for women, but within the scope of this study, I have focused on the political dimension, measured as participation in decision-making fora and the ability to voice opinions and have access to legal recourse.

Second, in the case that the definition is sufficiently covering political empowerment, it can still be argued that the variables employed are not capturing the tenets of the definition. In short, the two variables measuring the participatory aspect of political empowerment can be criticized for measuring mere representation, instead of the possibility to *influence* politics. A problem is that after war, interim governments are set up, meaning that the women who are present in legislative fora in the aftermath of conflict are not necessarily elected. An important theoretical argument is that war increases women's legitimacy, but an increase in non-elected women in the parliament is hardly supporting this theoretical claim. Further, the indicator does not distinguish between women elected through quotas or women elected on the same level as men. There is an ongoing debate around the shortcomings of quotas (Dahlerup, 2009; Waylen, 2007). The variable that measures if women have access to the highest political leadership position also has its shortcomings. Previous research shows that women who step into such power positions often have an elitist background and ties to powerful families (Jalalzai, 2004, 2013). If a woman obtains power through kinship, it does not necessarily reflect a change in the norms and perceptions of women, nor does it imply that women in general would benefit from having a female state leader.

However, any quantitative study needs to adapt to the data availability, so also this study. The variables serve as proxies for the participation dimension of political empowerment. Moreover, the inclusion of the two other indicators, freedom of discussion and access to justice, help modify the overall picture, since these variables concern women in general. Political empowerment is about women's capacity to influence, and a prerequisite for women's capacity to influence, whether at local, regional or national level, is their ability to discuss openly and freely. Freedom of discussion for women is coded based on both restrictions by the government, as well as cultural restrictions or customary laws. It therefore reflects the normative dimension of gender equality as well. In total, the four variables capture several dimensions of women's political empowerment. That three of four variables increase in the aftermath of civil conflict clearly shows progress for women's ability to participate in politics.

#### 4.6.7 Future research

For future research, it would be interesting to employ different indicators for female empowerment, such as women's socio-economic status. Indicators such as participation in the labor force and in higher education, capture women's socioeconomic position and apply to the female population, not only the privileged. Theoretically, it does not seem plausible that women's education level or wages would increase in the immediate aftermath of war. After a war, the economy is often shattered, schools are out of function, and infrastructure is broken. Hence, although women gain responsibilities and become head of households, it is unlikely that women's material resources and access to education will improve because of war. However, if the theoretical proposition is true - that war leads to changes in gender roles and make women more visible citizens that participate in the public realm - then a positive effect of this might be increased focus on the education of girls in the coming years, eventually resulting in an increase in the long-term perspective. This would be interesting to test in future research.

What could prove fruitful, is analyzing household data. Many authors have found that women take responsibility over household during times of war, but is their authority pushed back upon the return of the men? Such data could be taken from for example Demographic and Health Surveys (DHS). Auxiliary analyses could also be done using data from Afrobarometer or World Value Survey (WVS). Although I argue that freedom of discussion indirectly captures norms, seeing as it reflects barriers on women from society, WVS offers more concrete questions concerning gender roles and perceptions of women's role. Another fruitful path for future research is to look at disaggregated data. The main theoretical proposition is that war is an exogenous shock, creating changes in both norms and institutions. However, many conflicts are limited to a small geographical area. It would be interesting to test if changes in gender roles and perceptions toward women changed more prominently in those regions where the war takes place.

One could also use different measures of the opportunity window. It is not a given when the window opens and when it closes. In this study, I defined the opportunity window as the three first years after a conflict ends. This was a choice informed by not only theory, but also my own judgement, since few comparable studies exist. Other operationalizations would be easy to implement. Another methodological choice that could be altered is how to define peace. I defined peace as the first year after a conflict terminates, while what is more common to do in quantitative conflict research, is to define it as at least two years of no-conflict. This was done because it was thought that the mechanisms of war and the subsequent changes for women may

manifest themselves also in a context where a conflict was restarted, or exchanged by a new one. In the case of a new conflict, however, the objection that gains are only observed on a short-term basis may be especially relevant. For future research, it would be interesting separate short-term peace periods from lasting peace periods, and look at how that changes the results.

In a study of change, we do not deal with the level of representation, so we cannot say if post-conflict countries in general have high levels of gender equality. Although looking at levels is beyond the scope of this study, it would be interesting to further analyze in future research, to see if the levels of representation in post-conflict countries reach the 30 percent threshold. This could be included in a study that looks at how gender equality develops in the long term in post-conflict countries.

Another aspect that could be tested, is if other types of conflict terminations matter for women's outcomes. One expectation is that military victory does not produce better outcomes for women. Gurses (2008, p. 318) argues that “[w]ars that end in a decisive military victory by the rebels or the government produce uneven power balances between the contending groups. The result is more likely to be a more exclusionary polity marked by authoritarian features”. Also, one could imagine different outcomes from a military victory, depending on who's the winner: the rebels or the government. If rebels win, and the result is an overthrow of the existing regime, major changes will most likely take place, but perhaps not in the direction of more democracy. In addition, one could test if the stated incompatibility at hand influences the result. In the armed conflict dataset, conflicts are either about statehood or territory. One could argue that the statehood conflicts will produce more institutional changes than territory conflicts.

## 5. Conclusion

The aim of this study was to find out if the political empowerment of women is improved in the aftermath of civil conflict. The notion women's political empowerment was understood as women's representation, voice, and agency, and four variables were employed to test the relationship between the aftermath of conflict and progress for women: the number of female legislators, the quality of having a female president or prime minister, freedom of discussion for women and access to justice for women. The regression analysis revealed that, over the period 1960 to 2012, a short-term improvement is found in women's freedom of discussion and access to justice, as well as the number of female legislators. The effect is robust to alternative model specifications and country-fixed effects. No effect was found on the propensity of having a female state leader. The positive effect was stronger after conflicts of high intensity, and the positive effect is largely caused by those conflicts that terminated in a negotiated settlement.

The reason why these effects are found, is most likely the opportunity structure that is inherent in a peace agreement process. War is a catalysator for change, but the termination of the war is important for the outcomes. Although it is intuitive that a conflict terminating in a negotiated settlement provides women with relatively better opportunities than a conflict where no peace process can unfold, the inclusion of women in peace negotiations is still an uncommon feature in most cases. That the findings of this study so consistently show a positive outcome for women after a negotiated settlement, suggests that the opportunity structures inherit in a peace agreement extends beyond the formal structures. The women's movement may successfully influence the development of the post-conflict agreements from outside the formal fora.

Since women's movements seem to be a crucial factor if women should get increased political power in the aftermath of conflict, the international community and donors should increasingly focus on strengthening women's civil society organizations. This could be done by increased funding and by offering education and learning facilities. Training and learning facilities are important, because women often have less education than men (Pankhurst, 2003). Thus, they do not have the means to participate effectively in peace processes, which often include discussion about technical issues. In addition, women's organizations suffer from "chronic under-funding" (ibid.). Supporting local women's organizations also contribute to securing that the fight for gender equality is a bottom-up process, where local entrepreneurs with specific knowledge are in front of the development.

The findings of this study are relevant, because politicians, international organizations, NGOs, and activists all agree that the empowerment of women is crucial for a range of development issues. Also, “[d]iscussions about gender and peace processes are generally missing from mainstream conflict literature” (Ellerby, 2015, p. 186). War does not have the same effect on women and men, and analyses disaggregated by gender are important if we are to gain knowledge about how war affect women. Also, much of the scholarship on women and war centers around the negative effects of war, and the majority of the literature is based on qualitative research methods. A handful of quantitative papers investigate the link between conflict end and parliamentary representation, but no one has tested the question as extensively as this study. The findings should therefore interest those who work with post-conflict reconstruction and women’s empowerment, as they indicate that political gains can be made in a context that at first eyesight looks unfavorable to the advancement of women.

Certainly, the sufferings that women go through during war should not be under-stated. Many scholars report of a backlash against women in the aftermath of war, because war-torn societies turn to religious doctrines and patriarchal values. In this study, the long-term effects of conflict on women are not evaluated; what we find is simply that there is an improvement in the immediate aftermath of war. As such, there is a danger in celebrating the positive findings as a definite liberation of women, and that post-conflict countries achieve gender equality in a flash. However, we should at the same time not understate the positive findings, as they evidence a step in the right direction in post-conflict countries. Importantly, the findings call for attention to the possibilities that lie in the post-war period. If the general trend is that women see improvement in the aftermath, the focal question is how this development is most effectively sustained.

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## 7. Appendix

### 7.1 List of countries

Afghanistan	Congo,	Honduras	Mexico	Spain
Albania	Democratic	Hungary	Moldova	Sudan
Algeria	Republic of	India	Mongolia	Swaziland
Angola	(Zaire)	Indonesia	Morocco	Sweden
Argentina	Costa Rica	Iran (Persia)	Mozambique	Switzerland
Armenia	Cote D'Ivoire	Iraq	Myanmar	Syria
Austria	Croatia	Ireland	(Burma)	Tajikistan
Azerbaijan	Cyprus	Israel	Namibia	Tanzania/Tang
Bahrain*	Czech	Italy/Sardinia	Nepal	anyika
Bangladesh	Republic	Jordan	Netherlands	Thailand
Belarus	Denmark	Kazakhstan	Nicaragua	Togo
(Byelorussia)	Djibouti	Kenya	Niger	Tunisia
Belgium	Dominican	Korea, People's	Nigeria	Turkey
Belize*	Republic	Republic of	Norway	(Ottoman
Benin	Ecuador	Korea,	Oman*	Empire)
Bhutan	El Salvador	Republic of	Pakistan	Turkmenistan
Bosnia-	Equatorial	Kuwait*	Panama	Uganda
Herzegovina	Guinea*	Kyrgyz	Papua New	Ukraine
Botswana	Estonia	Republic	Guinea	United States
Brazil	Ethiopia	Laos	Paraguay	of America
Bulgaria	Finland	Latvia	Peru	Uruguay
Burundi	France	Lebanon	Poland	Uzbekistan
Cambodia	Gabon	Lesotho	Portugal	Venezuela
(Kampuchea)	Gambia	Liberia	Rumania	Vietnam,
Cameroon	Georgia	Libya	Russia (Soviet	Democratic
Canada	German	Lithuania	Union)	Republic of
Central African	Federal	Luxembourg*	Rwanda	Yemen)
Republic	Republic	Macedonia	Senegal	Yugoslavia
Chad	Ghana	(Former	Sierra Leone	Zambia
Chile	Greece	Yugoslav	Singapore*	Zimbabwe
Colombia	Guatemala	Republic of)	Slovakia	(Rhodesia)
Congo	Guinea	Malawi	Slovenia	
	Guinea-Bissau	Malaysia	Somalia	
	Guyana	Mali	South Africa	
	Haiti	Mauritania		

*\*Not in model 7-18*

## 7.2 List of countries with post-conflict observations

<b>Post-conflict countries</b>	<b>Freq.</b>	<b>Post-war countries</b>	<b>Freq.</b>
Angola	7	Angola	3
Argentina	6	Azerbaijan	3
Azerbaijan	9	Bosnia-Herzegovina	2
Bangladesh	6	Burundi	3
Bosnia-Herzegovina	2	Cambodia (Kampuchea)	5
Burundi	8	Cameroon	3
Cambodia (Kampuchea)	5	Chad	9
Cameroon	6	Congo	3
Central African Republic	5	Congo, Democratic Republic of (Zaire)	6
Chad	10	El Salvador	3
Chile	3	Ethiopia	3
Congo	8	France	3
Congo, Democratic Republic of (Zaire)	13	Georgia	3
Cote D'Ivoire	4	Indonesia	3
Croatia	4	Iran (Persia)	3
Djibouti	6	Iraq	3
Dominican Republic	3	Laos	4
Egypt	3	Lebanon	6
El Salvador	6	Liberia	3
Ethiopia	3	Libya	1
France	3	Morocco	3
Gabon	3	Mozambique	1
Gambia	3	Nepal	3
Georgia	9	Nicaragua	6
Ghana	7	Nigeria	3
Guatemala	4	Pakistan	5
Guinea	3	Peru	3
Guinea-Bissau	3	Russia (Soviet Union)	2
Haiti	7	Rwanda	6
India	3	Sierra Leone	3
Indonesia	8	Somalia	3
Iran (Persia)	12	South Africa	3
Iraq	3	Sudan	3
Kenya	3	Syria	3
Laos	7	Tajikistan	3
Lebanon	8	Uganda	4
Lesotho	3	Yemen (Arab Republic of Yemen)	3
Liberia	9	Yugoslavia	6
Libya	1	Zimbabwe (Rhodesia)	2
Macedonia (Former Yugoslav Republic of)	3		

Malaysia	9	Total	137
Mali	8		
Mauritania	1		
Mexico	4		
Moldova	1		
Morocco	6		
Mozambique	1		
Nepal	3		
Nicaragua	5		
Niger	8		
Nigeria	7		
Pakistan	12		
Panama	3		
Papua New Guinea	4		
Paraguay	3		
Peru	8		
Rumania	3		
Russia (Soviet Union)	3		
Rwanda	4		
Senegal	9		
Sierra Leone	3		
Somalia	7		
South Africa	3		
Spain	8		
Sudan	6		
Syria	6		
Tajikistan	5		
Thailand	3		
Togo	3		
Tunisia	3		
Uganda	6		
Uruguay	3		
Uzbekistan	6		
Venezuela	8		
Yemen (Arab Republic of Yemen)	3		
Yugoslavia	6		
Zimbabwe (Rhodesia)	2		
Total	402		



Moldova	1
Morocco	6
Nicaragua	5
Niger	6
Nigeria	7
Pakistan	12
Panama	3
Papua New Guinea	3
Paraguay	3
Peru	8
Rumania	3
Russia (Soviet Union)	3
Rwanda	4
Senegal	6
Somalia	7
Spain	8
Sudan	3
Syria	6
Tajikistan	5
Thailand	3
Togo	3
Tunisia	3
Uganda	6
Uruguay	3
Uzbekistan	6
Venezuela	8
Yemen (Arab Republic of Yemen)	3
Yugoslavia	3
Total	321

## 7.4 Robustness: Regression models with decay function

**Table 7** Armed conflict and change in female legislators (%), 1960-2012

	(A1)	(A2)	(A3)	(A4)	(A5)	(A6)
	OLS	FE	OLS	FE	OLS	FE
Conflict decay	0.275 (0.172)	0.057 (0.181)				
War decay			1.174*** (0.316)	1.040*** (0.297)		
Peace agr. decay					0.560* (0.321)	0.351 (0.354)
Other term. decay					0.164 (0.181)	-0.067 (0.195)
Ongoing conflict	-0.159 (0.110)	-0.457*** (0.126)	-0.163 (0.109)	-0.400*** (0.125)	-0.161 (0.110)	-0.463*** (0.126)
PR system	0.276*** (0.077)	0.052 (0.155)	0.268*** (0.077)	0.048 (0.154)	0.274*** (0.078)	0.053 (0.155)
Marxism	0.035 (0.228)	0.318 (0.242)	0.028 (0.227)	0.316 (0.241)	0.038 (0.227)	0.335 (0.242)
GDP per capita (log)	-0.074* (0.044)	-0.017 (0.104)	-0.060 (0.045)	0.026 (0.105)	-0.070 (0.044)	-0.006 (0.105)
Education level	0.024 (0.017)	-0.012 (0.046)	0.023 (0.017)	-0.011 (0.046)	0.024 (0.017)	-0.013 (0.046)
Time	0.014*** (0.004)	0.028*** (0.007)	0.014*** (0.004)	0.027*** (0.007)	0.014*** (0.004)	0.028*** (0.007)
Neighbor's average value of Y	0.035*** (0.007)	0.062*** (0.009)	0.035*** (0.007)	0.062*** (0.009)	0.035*** (0.007)	0.062*** (0.009)
Level of Y <sub>t-1</sub>	-0.048*** (0.010)	0.894*** (0.007)	-0.048*** (0.010)	0.894*** (0.007)	-0.048*** (0.010)	0.894*** (0.007)
Constant	0.363 (0.321)	0.123 (0.828)	0.256 (0.328)	-0.242 (0.828)	0.340 (0.324)	0.042 (0.834)
Observations	5,704	5,704	5,704	5,704	5,704	5,704
R-squared	0.024	0.876	0.027	0.877	0.025	0.876
Number of countries	140	140	140	140	140	140

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 8** Armed conflict and change in freedom of discussion for women, 1960-2012

	(A7)	(A8)	(A9)	(A10)	(A11)	(A12)
	OLS	FE	OLS	FE	OLS	FE
Conflict decay	0.054*** (0.020)	0.071*** (0.021)				
War decay			0.107*** (0.031)	0.147*** (0.034)		
Peace agr. decay					0.240*** (0.037)	0.284*** (0.041)
Other term. decay					0.004 (0.022)	0.010 (0.022)
Ongoing conflict	-0.032** (0.012)	-0.033** (0.015)	-0.033*** (0.012)	-0.033** (0.014)	-0.032*** (0.012)	-0.034** (0.014)
PR system	0.019** (0.009)	0.024 (0.018)	0.018* (0.009)	0.023 (0.018)	0.018** (0.009)	0.027 (0.018)
Marxism	0.007 (0.025)	0.005 (0.028)	0.005 (0.025)	0.006 (0.028)	0.005 (0.025)	0.011 (0.028)
GDP per capita (log)	0.004 (0.007)	0.005 (0.012)	0.005 (0.007)	0.007 (0.012)	0.008 (0.007)	0.015 (0.012)
Education level	0.005*** (0.002)	0.006 (0.005)	0.005** (0.002)	0.006 (0.005)	0.005*** (0.002)	0.006 (0.005)
Time	0.001* (0.001)	0.002*** (0.001)	0.001* (0.001)	0.002*** (0.001)	0.001 (0.001)	0.002*** (0.001)
Neighbor's average value of Y	0.008* (0.004)	0.021*** (0.007)	0.007* (0.004)	0.020*** (0.007)	0.008* (0.004)	0.022*** (0.007)
Level of Y <sub>t-1</sub>	-0.035*** (0.007)	0.921*** (0.005)	-0.035*** (0.007)	0.922*** (0.005)	-0.037*** (0.007)	0.919*** (0.005)
Constant	-0.067 (0.060)	-0.110 (0.098)	-0.070 (0.060)	-0.124 (0.098)	-0.090 (0.059)	-0.183* (0.098)
Observations	5,532	5,532	5,532	5,532	5,532	5,532
R-squared	0.023	0.914	0.023	0.915	0.028	0.915
Number of countries	133	133	133	133	133	133

Standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

**Table 9** Armed conflict and change in access to justice for women, 1960-2012

	(A13)	(A14)	(A15)	(A16)	(A17)	(A18)
	FE	OLS	FE	OLS	FE	OLS
Conflict decay	0.043*** (0.015)	0.051*** (0.015)				
War decay			0.106*** (0.024)	0.133*** (0.025)		
Peace agr. decay					0.121*** (0.024)	0.139*** (0.030)
Other term. decay					0.017 (0.016)	0.020 (0.017)
Ongoing conflict	-0.021** (0.009)	-0.032*** (0.011)	-0.023** (0.009)	-0.031*** (0.011)	-0.022** (0.009)	-0.033*** (0.011)
PR system	0.010 (0.007)	0.029** (0.014)	0.009 (0.007)	0.028** (0.014)	0.009 (0.007)	0.030** (0.014)
Marxism	0.021 (0.021)	0.012 (0.021)	0.019 (0.021)	0.011 (0.021)	0.020 (0.021)	0.014 (0.021)
GDP per capita (log)	0.003 (0.005)	0.007 (0.009)	0.004 (0.005)	0.010 (0.009)	0.005 (0.005)	0.011 (0.009)
Education level	0.003** (0.001)	-0.002 (0.004)	0.003** (0.001)	-0.002 (0.004)	0.003** (0.001)	-0.002 (0.004)
Time	0.000 (0.000)	0.002*** (0.001)	0.000 (0.000)	0.002*** (0.001)	0.000 (0.000)	0.002*** (0.001)
Neighbor's average value of Y	0.008** (0.003)	0.034*** (0.009)	0.008** (0.003)	0.034*** (0.009)	0.008** (0.003)	0.035*** (0.009)
Level of Y <sub>t-1</sub>	-0.023*** (0.005)	0.909*** (0.006)	-0.023*** (0.005)	0.908*** (0.006)	-0.024*** (0.005)	0.908*** (0.006)
Constant	-0.034 (0.038)	-0.072 (0.073)	-0.041 (0.039)	-0.095 (0.073)	-0.043 (0.038)	-0.101 (0.073)
Observations	5,532	5,532	5,532	5,532	5,532	5,532
R-squared	0.017	0.901	0.019	0.901	0.018	0.901
Number of countries	133	133	133	133	133	133

Standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

**Table 10** Armed conflict and likelihood of female president or PM, 1960-2012

	(A19)	(A20)	(A21)	(A22)	(A23)	(A24)
	Logit	FE	Logit	FE	Logit	FE
Conflict decay	0.091 (0.602)	-0.003 (0.008)				
War decay			-0.402 (0.893)	-0.002 (0.014)		
Peace agr. decay					0.452 (0.943)	-0.003 (0.016)
Other term. decay					0.147 (0.660)	-0.003 (0.009)
Ongoing conflict	0.341 (0.273)	-0.002 (0.006)	0.325 (0.275)	-0.001 (0.006)	0.344 (0.274)	-0.002 (0.006)
PR system	0.244 (0.250)	-0.013* (0.007)	0.251 (0.253)	-0.013* (0.007)	0.243 (0.251)	-0.013* (0.007)
Marxism	-0.596 (0.725)	0.010 (0.011)	-0.537 (0.709)	0.010 (0.011)	-0.592 (0.730)	0.010 (0.011)
GDP per capita (log)	0.036 (0.175)	0.010** (0.005)	0.023 (0.176)	0.010** (0.005)	0.044 (0.174)	0.010** (0.005)
Education level	0.025 (0.056)	-0.006*** (0.002)	0.024 (0.056)	-0.006*** (0.002)	0.026 (0.055)	-0.006*** (0.002)
Time	0.029*** (0.010)	0.001*** (0.000)	0.029*** (0.010)	0.001*** (0.000)	0.029*** (0.010)	0.001*** (0.000)
Neighbor's average value of Y	0.120 (0.365)	-0.007 (0.006)	0.128 (0.365)	-0.007 (0.006)	0.121 (0.364)	-0.007 (0.006)
Level of Y <sub>t-1</sub>	5.991*** (0.240)	0.750*** (0.009)	6.001*** (0.240)	0.750*** (0.009)	5.994*** (0.241)	0.750*** (0.009)
Constant	-6.318*** (1.274)	-0.064* (0.038)	-6.194*** (1.267)	-0.065* (0.038)	-6.390*** (1.268)	-0.064* (0.038)
Observations	5,734	5,734	5,734	5,734	5,734	5,734
R-squared		0.548		0.548		0.548
Number of countries		140		140		140

Robust standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

## 7.5 Robustness: Regression models with democracy

**Table 11** Armed conflict and change in female legislators (%), 1960-2012

	(B1)	(B2)	(B3)	(B4)	(B5)	(B6)
	OLS	FE	OLS	FE	OLS	FE
Conflict aftermath	0.178 (0.144)	0.041 (0.149)				
War aftermath			0.841*** (0.264)	0.714*** (0.238)		
Peace agr. aftermath					0.540* (0.297)	0.335 (0.306)
Other term. aftermath					0.088 (0.155)	-0.033 (0.163)
Democracy	-0.065 (0.179)	-0.428 (0.287)	-0.034 (0.181)	-0.409 (0.287)	-0.069 (0.179)	-0.428 (0.287)
Ongoing conflict	-0.182 (0.112)	-0.461*** (0.130)	-0.191* (0.110)	-0.421*** (0.125)	-0.181 (0.112)	-0.461*** (0.130)
PR system	0.286*** (0.078)	0.128 (0.161)	0.277*** (0.078)	0.124 (0.161)	0.283*** (0.078)	0.129 (0.161)
Marxism	0.073 (0.231)	0.233 (0.253)	0.077 (0.229)	0.233 (0.253)	0.075 (0.230)	0.241 (0.253)
GDP per capita (log)	-0.013 (0.050)	0.017 (0.108)	-0.005 (0.051)	0.048 (0.108)	-0.008 (0.051)	0.027 (0.108)
Education level	0.016 (0.018)	-0.006 (0.047)	0.014 (0.018)	-0.007 (0.047)	0.015 (0.018)	-0.007 (0.047)
Time	0.018*** (0.004)	0.030*** (0.007)	0.018*** (0.004)	0.029*** (0.007)	0.018*** (0.004)	0.029*** (0.007)
Neighbor's average value of Y	0.036*** (0.008)	0.065*** (0.009)	0.036*** (0.008)	0.065*** (0.009)	0.036*** (0.008)	0.064*** (0.009)
Level of Y <sub>t-1</sub>	-0.054*** (0.011)	0.892*** (0.007)	-0.054*** (0.011)	0.892*** (0.007)	-0.054*** (0.011)	0.892*** (0.007)
Constant	-0.086 (0.357)	-0.044 (0.849)	-0.156 (0.363)	-0.310 (0.849)	-0.118 (0.360)	-0.124 (0.852)
Observations	5,528	5,528	5,528	5,528	5,528	5,528
R-squared	0.027	0.875	0.029	0.875	0.028	0.875
Number of countries	133	133	133	133	133	133

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 12** Armed conflict and change in freedom of discussion for women, 1960-2012

	(B7)	(B8)	(B9)	(B10)	(B11)	(B12)
	OLS	FE	OLS	FE	OLS	FE
Conflict aftermath	0.043** (0.017)	0.049*** (0.017)				
War aftermath			0.067*** (0.026)	0.082*** (0.027)		
Peace agr. aftermath					0.182*** (0.034)	0.194*** (0.035)
Other term. aftermath					0.008 (0.019)	0.013 (0.019)
Democracy	0.076** (0.037)	0.120** (0.052)	0.080** (0.037)	0.128** (0.052)	0.077** (0.037)	0.127** (0.052)
Ongoing conflict	-0.031** (0.013)	-0.032** (0.015)	-0.036*** (0.012)	-0.039*** (0.014)	-0.031** (0.013)	-0.032** (0.015)
PR system	0.014 (0.009)	0.023 (0.019)	0.013 (0.009)	0.022 (0.019)	0.013 (0.009)	0.024 (0.018)
Marxism	0.006 (0.025)	0.011 (0.028)	0.004 (0.025)	0.011 (0.028)	0.006 (0.025)	0.013 (0.028)
GDP per capita (log)	0.002 (0.007)	0.002 (0.012)	0.002 (0.007)	0.003 (0.012)	0.004 (0.007)	0.008 (0.012)
Education level	0.005** (0.002)	0.005 (0.005)	0.005** (0.002)	0.004 (0.005)	0.005** (0.002)	0.005 (0.005)
Time	0.001* (0.001)	0.002*** (0.001)	0.001** (0.001)	0.003*** (0.001)	0.001* (0.001)	0.002*** (0.001)
Neighbor's average value of Y	0.006 (0.004)	0.018** (0.007)	0.006 (0.004)	0.017** (0.007)	0.006 (0.004)	0.018** (0.007)
Level of Y <sub>t-1</sub>	-0.044*** (0.009)	0.908*** (0.008)	-0.045*** (0.009)	0.907*** (0.008)	-0.045*** (0.009)	0.906*** (0.008)
Constant	-0.071 (0.061)	-0.126 (0.098)	-0.072 (0.061)	-0.131 (0.099)	-0.085 (0.060)	-0.168* (0.099)
Observations	5,527	5,527	5,527	5,527	5,527	5,527
R-squared	0.023	0.914	0.023	0.914	0.027	0.915
Number of countries	133	133	133	133	133	133

Standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

**Table 13** Armed conflict and change in access to justice for women, 1960-2012

	(B13)	(B14)	(B15)	(B16)	(B17)	(B18)
	FE	OLS	FE	OLS	FE	OLS
Conflict aftermath	0.026** (0.013)	0.023* (0.013)				
War aftermath			0.067*** (0.020)	0.077*** (0.020)		
Peace agr. aftermath					0.091*** (0.022)	0.091*** (0.026)
Other term. aftermath					0.009 (0.015)	0.006 (0.014)
Democracy	0.009 (0.020)	0.133*** (0.034)	0.014 (0.021)	0.140*** (0.034)	0.009 (0.020)	0.135*** (0.034)
Ongoing conflict	-0.020** (0.009)	-0.035*** (0.011)	-0.023** (0.009)	-0.036*** (0.011)	-0.020** (0.009)	-0.035*** (0.011)
PR system	0.009 (0.007)	0.025* (0.014)	0.008 (0.007)	0.025* (0.014)	0.008 (0.007)	0.026* (0.014)
Marxism	0.021 (0.021)	0.017 (0.021)	0.020 (0.021)	0.017 (0.021)	0.021 (0.021)	0.018 (0.021)
GDP per capita (log)	0.003 (0.005)	0.006 (0.009)	0.003 (0.005)	0.008 (0.009)	0.004 (0.005)	0.008 (0.009)
Education level	0.003** (0.001)	-0.004 (0.004)	0.003* (0.001)	-0.004 (0.004)	0.003* (0.001)	-0.004 (0.004)
Time	0.000 (0.000)	0.002*** (0.001)	0.000 (0.000)	0.002*** (0.001)	0.000 (0.000)	0.002*** (0.001)
Neighbor's average value of Y	0.008** (0.003)	0.027*** (0.009)	0.008** (0.003)	0.027*** (0.009)	0.008** (0.003)	0.027*** (0.009)
Level of Y <sub>t-1</sub>	-0.024*** (0.005)	0.891*** (0.008)	-0.024*** (0.005)	0.889*** (0.008)	-0.024*** (0.005)	0.890*** (0.008)
Constant	-0.030 (0.038)	-0.094 (0.073)	-0.035 (0.038)	-0.114 (0.073)	-0.036 (0.038)	-0.113 (0.073)
Observations	5,527	5,527	5,527	5,527	5,527	5,527
R-squared	0.016	0.901	0.017	0.901	0.017	0.901
Number of countries	133	133	133	133	133	133

Standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

**Table 14** Armed conflict and likelihood of female president or PM, 1960-2012

	(B19)	(B20)	(B21)	(B22)	(B23)	(B24)
	Logit	FE	Logit	FE	Logit	FE
Conflict aftermath	0.323 (0.568)	0.001 (0.007)				
War aftermath			0.079 (0.885)	0.001 (0.011)		
Peace agr. aftermath					0.372 (1.019)	0.001 (0.014)
Other term. aftermath					0.313 (0.649)	0.001 (0.008)
Democracy	3.216*** (0.697)	0.027** (0.013)	3.227*** (0.699)	0.027** (0.013)	3.216*** (0.698)	0.027** (0.013)
Ongoing conflict	0.546* (0.311)	-0.001 (0.006)	0.501 (0.311)	-0.001 (0.006)	0.546* (0.311)	-0.001 (0.006)
PR system	-0.018 (0.269)	-0.013* (0.007)	-0.029 (0.270)	-0.013* (0.007)	-0.018 (0.270)	-0.013* (0.007)
Marxism	0.127 (0.899)	0.017 (0.011)	0.132 (0.884)	0.017 (0.011)	0.128 (0.899)	0.017 (0.011)
GDP per capita (log)	-0.181 (0.197)	0.010** (0.005)	-0.181 (0.196)	0.010** (0.005)	-0.180 (0.196)	0.010** (0.005)
Education level	-0.007 (0.061)	-0.006*** (0.002)	-0.012 (0.062)	-0.006*** (0.002)	-0.007 (0.061)	-0.006*** (0.002)
Time	0.024** (0.010)	0.001*** (0.000)	0.024** (0.010)	0.001*** (0.000)	0.024** (0.010)	0.001*** (0.000)
Neighbor's average value of Y	0.030 (0.337)	-0.007 (0.006)	0.032 (0.338)	-0.007 (0.006)	0.031 (0.336)	-0.007 (0.006)
Level of Y <sub>t-1</sub>	5.672*** (0.244)	0.747*** (0.010)	5.678*** (0.244)	0.747*** (0.010)	5.674*** (0.246)	0.747*** (0.010)
Constant	-5.758*** (1.358)	-0.072* (0.039)	-5.686*** (1.346)	-0.071* (0.039)	-5.761*** (1.352)	-0.072* (0.040)
Observations	5,558	5,558	5,558	5,558	5,558	5,558
R-squared		0.546		0.546		0.546
Number of countries		133		133		133

Robust standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1