Success Factors for Peace Treaties: A Review of Theory and Evidence

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December 19, 2018

Abstract

Wars impose tremendous costs on societies and the question of how to end them is of foremost importance. Several hundred books and scientific articles have been written on mediation and peace agreements. In this policy paper I shall provide a critical literature survey on the effects of peace agreements, with a special emphasis on mediation. One of the major conclusions of this review of existing work is that many findings in the literature need to be interpreted with much care, as they are merely correlations that could well be driven by selection bias or confounding factors, and that interpreting them as causal evidence would be dangerous. This survey does however not limit itself to discussing the potential fragility of various findings, but also highlights some results that are supported by a substantial body of suggestive evidence, focusing in particular on the sharing of political and military power, on security guarantees, on trust-building measures and on the role of economic opportunities.

Keywords: Conflict, civil war, mediation, peace agreement, negotiation, peace treaty, third party intervention.

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1. **Introduction: Overview and Motivation**

Wars are costly, both in terms of human fatalities, in terms of economic costs of destruction, as well as in terms of damage to the social structures of society. In terms of human lives lost, between 1945 and 1999 an estimated 3.3 million fatalities occurred in 25 interstate wars, and 16.2 million people got killed in 127 civil wars (Fearon and Laitin, 2003). This death toll is more than doubled when taking into account indirect effects of wars such as on the spread of diseases (Ghobarah et al., 2003). While these casualty counts refer to two-sided conflict, one has to add to these numbers the human lives lost in one-sided conflict, where armed troops turn their weapons against defenseless civilians. Since 1946 in some fifty episodes of mass killings between 12 and 25 million civilians have perished (Political Instability Task Force, 2010), with in many cases violence occurring along ethnic and religious lines.

While wars may be a lucrative business for some companies, overall fighting leads to large economic costs for the countries affected. According to estimates of Collier (2007), civil wars tend to reduce growth by on average 2.3 percent per year, with the average civil war that lasts about 7 years hence reducing GDP by about 15 percent. The same author estimates the cost of a typical civil war at around $64 billion, when taking into account the direct and indirect costs of a civil war, as well as spillovers to neighboring states.

Importantly, in addition to costs in terms of human lives and economic performance, wars also entail psychological damage and costs in terms of social and human capital. In particular, conflict hurts physical and mental health (see e.g. Barenbaum et al., 2004) and harms schooling attendance and long-run educational outcomes (see e.g. Shemyakina, 2011). Wars have also been found to drive down inter-ethnic trust (Rohner et al., 2013b), lead to more hawkish political attitudes (Grossman et al., 2015) and the increase crime propensity later in life after being exposed to conflict during childhood (Couttenier et al., 2018).

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2 One way of estimating how particular firms can benefit (or are expected to benefit) from conflict is to focus on abnormal stock market returns (see Guidolin and La Ferrara, 2007, 2010).

3 Cost estimates of particular wars include Abadie and Gardeazabal (2003) and Stiglitz and Bilmes (2008).

4 There are also papers finding that conflict stimulates local collective action (see e.g., the survey article of Bauer et al., 2016).
Last but not least, it is important to keep in mind that conflicts also have an impact on an international scale, with war having in particular been found to disrupt trade (see Glick and Taylor, 2010). Further, as shown by Murdoch and Sandler (2002), economic slowdown caused by conflict tends to spillover to neighboring countries, hence harming economic growth also outside the conflict country.

Overall the human, economic and social costs of conflict tend to heavily outweigh the private benefits to a subgroup of actors. Reducing the risks of new conflicts breaking out and shortening the duration of existing ones is thus a major priority for the international community.

Hence, the current paper aims to collect, structure and synthesize existing evidence and academic findings on the conditions for success of peace treaties, and the impact of various types of third party intervention, with special emphasis on mediation. We start in section 2 by laying out a conceptual, theoretical framework of drivers of conflict. Then we shall study in section 3 how success could be measured, before discussing in section 4 the main ingredients of successful peace agreements highlighted in the literature. Next, section 5 surveys the literature on the impact of third party interventions on peace, with a special focus on mediation. The remaining sections are devoted to providing syntheses, recommendations and conclusions. In particular, section 6 provides recommendations for future research, and in section 7 implications for practitioners are summarized. Finally, section 8 concludes.

2. Conceptual Framework: Conflict Theory

One dominant starting point for approaching conflict in political science is the so-called “war inefficiency puzzle”. As conflict is costly, preventing it would be win-win for all parties and hence the natural question arises of why costly conflict cannot be prevented through bargaining – while in contrast in many contexts and domains of life bargaining can be used to find compromises that can prevent costs. Take a simple example to illustrate this. Two armed factions have both winning chances of 50% and conflict destroys 20% of the contested “prize”, with the “prize” being for example the control of some territory (or, say, the rents of an oil well). In expectation, each party will obtain 40% of the value of the territory, and the remaining 20% is destroyed. Hence, by agreeing on a peaceful split, there is a so-called “peace dividend”, as the destruction
cost of conflict can be saved, and each of the conflict fractions should in principle be willing to accept any split offering more than expected 40% of the value obtained in expectation under conflict.

As explained in the classic contribution of Fearon (1995), one major reason for which in some situations such peaceful bargaining may fail is asymmetric information. This is the case when each group knows its military capacities but does not observe the strength of the adversary (and one can typically not easily “prove” its strength without revealing sensitive military information to the opponent). In this case it can occur that both over-estimate their winning chances and there exists no more a zone of peaceful splits acceptable for both parties. Assume for example that both enemy camps believe to have 75% chances of winning. In this case each one expects on average to win 60% of the territory in case of conflict (i.e. to win the non-destroyed 80% with a likelihood of three quarters), and will reject any peace agreement offering less than 60% of the “prize”. And if both factions hold such beliefs, conflict will not be prevented by bargaining.

As discussed below, one way that has been argued to potentially reduce asymmetric information is mediation, as in all forms of mediation the mediator typically creates a flow of information, allowing to increase the set of acceptable bargains. This result has been found in formal theory (see Hörner et al., 2015, and Mitusch and Strausz, 2015). In particular, applying mechanism design tools, these authors have shown that mediation can relax enforceability constraints, and that thus simple protocols of unmediated communication cannot achieve the same level of ex ante welfare as mediation using confidentiality.

The second major category of bargaining failure emphasized in Fearon (1995) and in the literature at large are commitment problems. These take place when parties could benefit a lot from breaking a treaty and each fighting group rationally expects the other one not to honor its commitments. Imagine for example that the peace agreement postulates a peaceful split of 50%-50% and full disarmament by both parties. If one party sticks to this deal and the other reneges and does not disarm, it can win with certainty in a surprise attack against a defenseless opponent, securing 80% and not just 50% of the “prize”. In the presence of such commitment problems, rational distrust can make the conclusion of a peace agreement with ensuing disarmament impossible.
There is again a link between this source of bargaining failure and the relevant literature of peace settlements and third-party intervention. In particular, as discussed in more detail below, third-party security guarantees and peacekeeping troops can alleviate commitment problems and relax mutual distrust (see Walter, 1997).

There are also a number of additional reasons invoked in the literature for bargaining failure, such as e.g. indivisibilities or risk-loving preferences, but these have in the literature typically been argued to be subcategories of the two major categories detailed above (see for example, Powell, 2006). Another bargaining friction that has been identified in the literature is political bias, i.e. when politicians have personal gains from maintaining the conflict while the country at large loses out (Jackson and Morelli, 2007). As discussed below, amnesties, “golden handshakes”, and other policies targeted at leaders can modify the leaders’ calculus, although at a cost in terms of justice. This trade-off between having a leader more easily agree to a settlement versus upholding the law is also known as the “peace versus justice” debate.

Another very well-known conceptual distinction in the literature concerns the motivation to fight. Collier and Hoeffler (2004) have championed the terms “greed” versus “grievance”. If rebels motivated by greed follow a logic of maximizing rents to grab, a motivation of grievance focuses on rebellion for rectifying perceived historical injustices, e.g. giving homelands back to “sons of the soil”. This distinction has proven very influential and has sparked vigorous debate, with scholars such as Collier and Hoeffler (2004) and Fearon and Laitin (2003) finding mostly greed-related factors such as oil rents to matter, while Cederman et al. (2013) stressing rather the role of ethnic political exclusion. This being said, the distinction is somewhat fuzzy, as often motivations appear to be intermeshed. Take for example the case of an ethnic minority group with oil-rich homelands and receiving a dismal share of the oil revenues (see Morelli and Rohner, 2015, for a statistical analysis of oil inequality and conflict) – if it rebels, this could well be either qualified as “greed” (it rebels as it wants more rents) or alternatively as “grievance” (it rebels as the status quo is perceived as unfair).

Given that actually both “greed” and “grievance” are simply two often interthwined types of motivation, Collier et al. (2009) have proposed to go beyond this motivational debate and to focus instead on the feasibility of conflict. The idea is that given the non-negligible number of people in every society who either seek to grab political rents or feel treated in an unfair way, there will always be a supply of potential rebel leaders and potential causes for rebellion. The reason, however, for which such rebel
entrepreneurs fail in countries such as, say, Canada or Switzerland, is that rebellion is unfeasible (high wages making it hard to attract rebel fighters, and strong state capacity making it close to impossible for a small group of armed fighters to overthrow the state), while in countries like, say, Sudan or the Democratic Republic of Congo, creating a rebel movement is easier (low wages, many natural resources, low state capacity). As discussed below, the sake of a peace agreement depends to a substantial extent on the state environment, with state capacity and a strong job-creating economy being important factors making it easier to mediate, sign and implement a peace agreement.

Finally, to complete this “tour d’horizon” of the conceptual distinctions in the conflict literature, one needs to discuss the rent-seeking approach. While in political science there is much emphasis on the “war inefficiency puzzle” and the root causes for bargaining failure, in economics *rent-seeking models of conflict using contest-success functions* receive a fair amount of attention. These formal models explain usually to a lesser extent the actual onset or not of conflict, but rather focus on the level of fighting effort exerted, i.e. the intensity of conflict. The gist of the analysis is the trade-off between a higher fighting effort leading to a larger winning probability and hence a higher likelihood to appropriate some “prize” while the cost of more fighting effort is a loss of productive activities (i.e. the opportunity cost of foregone production). This literature in economics studies among others the importance of the economic production structure, of the presence of natural resources, and of the ethnic composition of the population (see e.g. Skaperdas, 1992; Grossman and Kim, 1995; Hirshleifer, 1995; Yared, 2010; Esteban and Ray, 2008, 2011; Bevia and Corchon, 2010; Besley and Persson, 2011; Dal Bo and Dal Bo, 2011; Ploeg and Rohner, 2012; Esteban et al., 2015). In terms of policy recommendations for third-parties seeking to promote peace, a key lesson of this “conflict as rent-seeking” literature is that better job perspectives lead to higher opportunity costs of giving up well-paid jobs to join the battle field. By fostering economic recovery (e.g. through a version of a “Marshall plan”) potential mediation and peacekeeping efforts can be supported by economic forces.

With these underlying conceptual frameworks in mind we can now turn to the main focus of this survey policy paper, namely the empirical evidence on what makes peace deals more or less successful, and on the role of third-party intervention.
3. **Measuring Success of Peace Deals**

In order to be able to address the question of what may make particular types of peace deals successful or not, first of all it needs to be defined what “successful” means. We shall start with a word of caution.

### 3.1. Methodological challenge: Endogeneity and selection bias

The purpose of the current contribution is to provide an overview of the existing literature. While achieving a synthesis of the existing work on this topic allows to highlight important correlations, one always needs to keep in mind that the vast majority of studies in this literature are not able to go beyond correlations, and that these results should not be interpreted as causal estimates.

The reason for this is that conflict termination is not random but endogenously selected. For example Licklider (1995)’s famous finding that peace deals correlate with more fragile peace than decisive victories could be either due to a causal impact of peace deals on the peace duration, or alternatively, be driven by underlying confounding factors / omitted variables that make peace settlements more or less likely.\(^5\) Imagine for example that in countries with higher ethnic polarization decisive victories are more rare than in countries with a very dominant ethnic group. In this case the correlation between peace by settlement and peace fragility could be entirely spurious, i.e. fully driven by the fact that the sample with peace settlements may be more ethnically polarized, and it could well be the underlying omitted variable of ethnic polarization and not peace deals that accounts for the fragility. While I am not claiming that Licklider (1995) is wrong, this example simply illustrates that in the absence of any exogenous variation one has to be extremely cautious when interpreting the findings discussed below. This is typically the case for comparisons between peace deals versus decisive victory and also for comparisons between different types of peace agreements (again, e.g. agreements with more power-sharing provisions may arise in countries with different characteristics than other countries where peace deals contain fewer power-sharing provisions).

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\(^5\) Note that the robustness of this result has been questioned. Badran (2014) finds that ideally designed peace agreements (with a large number of provisions) lead on average to more stable peace than peace by military victory.
Another example is offered by the article of Joshi and Quinn (2017) that shows a correlation between peace agreement implementation and peace. While, again, I am not claiming that they are wrong, I am just pointing out that the correlation they uncover could potentially be driven by potential statistical biases. In particular, one could think of biases from reversed causation, as more peaceful relations make the implementation of a peace agreement easier. Or, similarly, omitted variable bias could lead to a spurious correlation, as e.g. having “doves” rather than “hawks” leading the factions involved can at the same time reduce the risk of fighting breaking out again and boost the likelihood that a peace agreement is implemented – hence the correlation between implementation and peace could be at least partly driven by an omitted third variable. This is again simply an illustrative example of the typical statistical challenges also arising for a multitude of other papers studying this research question.

Note that also when it comes to actual provisions in a peace agreement, any results need to be interpreted with much caution, as of course the content of peace agreements is also far from random and may reflect underlying conditions that directly affect the scope for lasting peace (e.g. attitudes and personalities of the leaders of the groups involved, the relative strength of the conflict parties etc). Spirling (2012), for example, finds that fading relative economic and military strength of American Indians has led to peace treaties containing less and less favorable terms for American Indians. Consider now the following correlation: Over time contracts became “harsher” and there was less fighting. If one were to naively mistake correlation for causality, this could lead to the erroneous conclusion that “harsh” treaties buy peace, while of course both the fighting operations and the content of treaties are endogenous variables driven by the fading relative strength of American Indians, which makes in this context any correlation between treaty “harshness” and peace likely to be completely spurious. While the above illustrative example is particularly striking, similar endogeneity bias may be present in many of the results studying the impact of peace treaty provisions.

In a nutshell, this difficulty of identifying causal relations is a major problem of a large part of the literature on this topic and the statistical biases potentially implied by this make it crucial to interpret many results with much caution, and consider them as indication of correlation rather than of causality. Importantly, the insistence on these limitations of the existing literature are by no means a criticism of the very competent research carried out in this field, but simply reflects the inherent difficulty to find causal results on these very challenging research questions. Still, the main take-home
message for policy makers remains the need for great caution in the interpretation of many prominent results. Keeping this caveat in mind, at least three dimensions for measuring success have been distinguished by the existing literature: Fatalities prevented, peace duration, and economic recovery.

3.2. Fatalities

First, in terms of humanitarian criteria, saving human lives is a major, very natural criterion. Curbing fatalities is often—implicitly or explicitly—used as criterion in academic research. The criterion of fatalities, resp. intensity of fighting to assess peace agreements has been used in some scholarly articles on the topic, among others by Licklider (1995) and Quinn (2015), but has only received quite limited attention. One of the reasons may be that the existing civil war data is rather precise on starting and end dates of war, but less precise and reliable when it comes to the numbers of fatalities created by fighting. For example, using this casualties criterion, Joshi (2015) shows that the implementation of provisions of comprehensive peace agreements reduce the neonatal, infant and under-5 mortality rates in post-conflict societies.

3.3. Peace duration

Second, preventing the break out of renewed hostilities in the future is another standard criterion. The criterion of peace duration, resp. likelihood of no renewed fighting after x years is the dominant criterion for judging intervention used in the existing scientific literature. It has among others been applied in Licklider (1995), Hartzell and Hoddie (2003), Quinn et al. (2007), Fortna (2007), Gurses et al. (2008), DeRouen et al. (2009), Kreutz (2010), Mattes and Savun (2010), Badran (2014), Cederman et al. (2015), Joshi and Quinn (2015), Joshi et al. (2015), Joshi et al. (2017), and Joshi and Quinn (2017, 2017b).

3.4. Economic recovery

A third criterion for measuring the success of a peace agreement is the extent and rapidity of economic recovery (e.g. how fast PPP adjusted GDP per capita reaches again pre-war levels). This criterion has been only very rarely applied in the existing
literature (see e.g. Collier, 2007). One of the reasons for this scarcity of attention and evidence may be that there are of course a large variety of factors affecting economic recovery, and pinning down statistically the effect of peace agreements on economic recovery may be even more challenging than what it already is for estimating the effect of peace deals on actual peace outcomes.

3.5. Relationship between the three criteria

While in some cases these two first criteria (saving lives, resp. making peace last longer) for defining success correlate positively (i.e. fewer future conflict years may well mean fewer fatalities), there are situations where there is a trade-off. Licklider (1995) finds that while peace settlements lead on average for identity conflicts to a more fragile peace than peace following full-blown military victory, he concludes that negotiated peace with power-sharing can often prevent the worst instances of mass killings. The underlying idea is that under negotiated settlements the likelihood is larger that all groups keep their military capability, which according to Licklider (1995) may at the same time foster protection for minority groups but also fuel the feasibility of starting anew a rebellion. A counter-argument that can be made is that even in negotiated settlements complete demobilization can be agreed upon (hence reducing the risk of fighting breaking out again) and the protection of civilians can be entrusted to international peacekeeping troops (hence reducing the risk of the government abusing civilians) (see e.g. Hartzell and Hoddie, 2003).6

Importantly, also the third criterion is obviously linked to the other two criteria for successful peace, preventing war renewal and fatalities. The most immediate connection is—as stressed by Collier et al. (2003)—that faltering economic recovery may contain the seeds for the next armed conflict. This is illustrated well not just by the two World Wars, but also by repeated conflicts in countries such as e.g. Sudan or the Democratic Republic of Congo. Put differently, the better a country does in terms of economic recovery, the lower on average the risk of conflict renewal.

Spillovers have also been identified when it comes to other armed rebels who have not signed any peace agreement with the government. Interestingly, Joshi and Quinn

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6 Note that both the first criterion (total number of fatalities) and the second criterion (years of absence of civil war) can be assessed with readily available standard indicators of conflict incidence and fatalities, such as e.g. the one from UCDP (2017).
have found that governments that kept their implementation commitments to the signatory group(s) in a negotiated settlement experienced fewer armed challenges from other armed groups in the future.

4. Main ingredients of successful peace agreements

Not only success of peace settlements can be measured using several criteria, also the relevant features and provisions of such agreements are manifold. The careful design of peace agreement and the right composition in terms of clauses and provisions may have a strong impact on whether an agreement actually achieves peace (Badran, 2014). In particular, at least five major dimensions can be defined according to which peace agreements differ. Below I shall study in depth these dimensions and assess—drawing on the existing literature—which characteristics are factors favoring success of peace settlements.

Before focusing on the major dimensions of peace agreements and their ability to potentially stop the fighting, it is important as benchmark to briefly outline what factors have in the literature been stressed to prolong fighting and make it harder to end war. First of all, the role of natural resources has been highlighted. In particular, it has been found that the availability of natural resources can help fund rebel activity, help rebels to increase their zone of activity and make conflict harder to end (Collier et al., 2004; Fearon, 2004; Berman et al., 2017). Further, it has been found that territorial control of rebels in the periphery of a country makes reaching peace harder (Cunningham et al., 2009) and the presence of a larger number of actors makes it more difficult to end a conflict (Cunningham, 2006; Cunningham, 2013). Keeping these results in mind, we shall now discuss the major aspects of peace agreements in turn and provide a synthesis of their main effects according to the literature.

7 The database “Peace Accords Matrix (PAM)” (Joshi et al., 2015) includes comprehensive accords and identifies 51 different types of ingredients (provisions). Joshi et al. (2014) find that provisions linked to a traditionally liberal mindset are frequently included as provisions (e.g. promotion of democracy, rule of law, emphasis on human rights, security sector reform, governance reform). Another classification of peace agreements has been provided by the UCDP Peace Agreement Dataset (see Wallensteen and Sollenberg, 1997; Harbom et al., 2006; Högbladh, 2012). 

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4.1. Security provision and ethnic balancing within the army

This includes an initial ceasefire as well as the subsequent demobilization, disarmament and reintegration of warring factions. As found by Berman et al. (2011), establishing security is a crucial ingredient for stabilizing a conflict area and it is hard to achieve post-conflict reconstruction without guaranteeing security. This is in line with Walter (1997) who argues that a major reason for peace settlements not being successfully put in place are commitment problems (after disarming, a given conflict faction is very vulnerable to attacks) and the elaboration of settlements is greatly facilitated by third party security guarantees.\(^8\)

In general, it has been argued that ethnic balancing in the armies is one way to reduce inter-ethnic tensions in ethnically divided countries (Wilkinson, 2015). More specifically in our context, one way to achieve some security guarantees for ethnic minority groups in post-conflict contexts is the ethnic integration of all former warring factions into a unified national army with key positions being occupied by various ethnicities. Samii (2013) finds that the extensive quota-based integration undertaken by the Burundian military has resulted in a decrease in prejudicial behavior and has globally attenuated ethnic salience within the armed forces.

As far as stricto sensu peace settlement provisions are concerned, Hartzell and Hoddie (2003) and DeRouen et al. (2009) find—using a survival analysis—that including power-sharing in the military reduces the risk of peace breaking down. Similarly, Joshi et al. (2015) find that implementing security sector reforms contributes to long-term conflict reduction not only between the parties to the accord but also between the government and other non-signatory groups in the same conflict.

Related to this, Hartzell et al. (2001) stress the importance of third party enforcement of peace agreements and Kreutz (2010) finds that the deployment of peacekeepers reduces the risk of war recurrence, while Quinn et al. (2007) find that peace settlements only statistically significantly reduce the risk of war recurrence when they are guaranteed by peacekeeping forces. The role of security guarantees in peace agreements has also been highlighted by Fortna (2007) who finds that the putting in place of demilitarized zones, security guarantees from third parties and the presence

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\(^8\) Bevia and Corchon (2010) build a game-theoretic model to show that peace agreements can be self-enforcing without credible commitment if the transfers enacted result in the potential attacker no longer having incentives to start an attack.
of peace keeping troops all make peace more likely to last longer. In line with these results, also Matanock (2017, 2018, 2018b) finds that peace agreements ensuring participation of both government and opposition/rebel parties and using outside actors as monitors and enforcers are pillars of stability and enduring peace.

Specifically, also the inclusion of mechanisms of monitoring and sharing of military intelligence have been found to make peace deals longer lasting. Mattes and Savun (2010: 511) stress that their “empirical findings suggest that provisions such as requiring belligerents to report their military information to third parties and stipulating that third parties verify the accuracy of such information through the introduction of verification sites or based on their own intelligence gathering significantly reduce the risk of renewed civil war.”

4.2. Power sharing in politics

Before studying more specifically the narrowly-defined role of power-sharing\(^9\), we shall engage in a broader discussion of virtues and dangers of democracy. The general impact of democracy on political stability has been found to be subtle. The qualitative evidence assembled by Lijphart (1999) points out that many successful and peaceful ethnically and religiously divided countries selected the “Consensus Model of Democracy” characterized by power-sharing and the decentralization of power on all levels. Statistical studies have reached a more qualified conclusion, which is unsurprising, as democracy may at the same time curb the reasons for rebellion but also increase the means to revolt (i.e. free assembly and freedom of expression make it easier to put in place a political opposition).\(^{10}\) Consistent with these countervailing forces, Hegre et al. (2001) and Fearon and Laitin (2003) have found full democracy to reduce the scope of civil conflict, while intermediate democracy levels have been associated to higher conflict risk. A similarly qualified effect of democracy has been found by Collier and Rohner (2008) who point out that in poor countries the conflict-fueling effects of democracy dominate, while in rich countries the peace-promoting channels are larger. Sunde and Cervellati (2014) conclude that democratization does

\(^9\) The term “power-sharing” is used here very broadly, encompassing all situations where different groups benefit from a part of power. The term “power-sharing” is sometimes used more narrowly in the literature, distinguishing for example “power-sharing” and “power dividing” (see e.g. Roeder, 2005).

\(^{10}\) Free elections may well in some situations fuel violence, and indeed political tensions in democracy often peak around elections (see e.g. Straus and Taylor, 2009; Collier, 2011). Esteban et al. (2015) also show that under some conditions, nascent democratization can go along with a substantial risk of mass killings of civilians.
not impact on territorial conflicts but reduces significantly the risk of conflicts over the control of government, while Wright (2008) concludes that the initial political competition in a democracy fosters its stability and drives down the conflict risk.

As far as particular aspects of democratic institutions are concerned, the rule of law, proportional representation and federalism correlate with a lower likelihood of conflict (Easterly, 2001; Reynal-Querol, 2002; Saideman et al, 2002). Finally, Besley and Persson (2010, 2011) have emphasized the role of institutional constraints for peace by dealing with economic shocks.

Zooming again in on post-conflict reconstruction, democratization has been argued to be in principle a promising part of post-conflict policies –as long as democratization takes places slowly and gradually, starting with the building of solid domestic institutions before running open elections (see Paris, 2004; Diamond, 2006). In the same vein, the statistical analysis of Brancati and Snyder (2013) finds as well that holding elections soon after a civil war ends generally increases the likelihood of renewed fighting, but that favorable conditions, including decisive victories, demobilization, peacekeeping, power sharing, and strong political, administrative and judicial institutions, can mitigate this risk. This is in line with the findings of Flores and Nooruddin (2012) that early elections in nascent democracies can trigger conflict recurrence and that delaying elections by one or two years can reduce risks. Similarly, Walter (2015) stresses the crucial importance of strong institutions in post-conflict reconstruction. Her statistical analysis of post-conflict years highlights that strong political institutions reduce the risk of repeat civil war.

As far as the sharing of political power (in the narrow sense) is concerned, there is a growing interest in understanding it better (see Francois et al. (2015) and Mueller and Rohner (2018) for recent reviews). One may indeed expect power-sharing to curb conflict incentives for opposition groups. The logic is straightforward: In the absence of power-sharing, an opposition group trades off the potential gains of conquering power with the dismal payoff of being excluded from political power and rents under democracy. In contrast, in the presence of power-sharing, even groups not reaching an electoral majority at the polls will obtain some share of power, reducing hence the additional rents that could potentially be grabbed after a coup overturning democracy.

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11 The peace promoting impact of proportional representation may come at the cost of greater and less targeted public spending and larger budgetary deficits, as stressed by Persson and Tabellini (2005).
Following this simple calculus one may well expect power-sharing to reduce the scope for conflict.

First of all, as far as the general likelihood of conflict incidence as well as conflict intensity is concerned, power-sharing has been found to correlate with peace. Gurr (2000) makes the point—drawing on a global sample of minority groups at risk—that democratization and the move from assimilation and control to pluralism and accommodation of minority groups has tended to shift ethnopolitical actions from rebellion to democratic protests. Further, it has been found that groups included in government show less propensity to engage in insurgency (Cederman and Girardin, 2007; Cederman et al., 2013). Using the same data, Michalopoulos and Papaioannou (2016) show that groups which are split by a national boundary are much more likely to be politically discriminated by the central state. They also argue that political discrimination could form part of the link between partitioned groups and violence. Mueller and Rohner (2018) find that local-level power-sharing has curbed the number of fatalities for Northern Irish districts.

These findings need to be contrasted with another strand of the literature finding a less clear-cut impact of power-sharing. Roessler (2011) stresses that power-sharing tends to reduce rebellion but at the cost of increasing the risk that included groups may attempt a coup from within. Similarly, Roeder (2009) points out that federalist solutions with ethnic homelands as main units come at the price of resulting in a higher risk of future escalating conflict that results in nation-state crises.

Also the conflict duration has been found to be affected by whether power is shared or whether given groups are excluded. Wucherpfennig et al. (2012) and Cederman et al. (2013) find that ethnopolitical exclusion leads to longer wars, and related to this, Fearon (2004) finds that sons-of-the-soil types of civil war tend to last longer.

After this brief overview of the impact of power-sharing on conflict incidence and duration, we shall in what follows address the more specific question of whether sharing of power provisions in peace agreements are a factor of success or not. Hartzell and Hoddie (2003) and Mattes and Savun (2010) conclude that the sharing of political power reduces the risk of renewed conflict, and also Joshi et al. (2017, 2017b) point out that transitional power-sharing before the first elections increases the survival of peace. Similarly, Cederman et al. (2015) find that decentralization and territorial autonomy in combination with national-level power-sharing is a powerful blend in post-
conflict contexts to curb the incentives for the flaming up again of fighting. On the same token, Walter (1997) concludes that both security guarantees and political power sharing are necessary conditions for reaching durable peace settlements. This conclusion is challenged by DeRouen et al. (2009) who find that (arguably) less costly governmental concessions such as military integration and territorial autonomy make peace agreements last longer, while political power-sharing does not have a statistically significant impact.

4.3. Resource and surplus sharing

A group receiving less than its fair share of resources may have powerful incentives to seek secession. Hence, the sharing of natural resource rents has been shown in recent research to be a crucial ingredient for political stability (see e.g. Morelli and Rohner, 2015; Esteban et al., 2017). In the same vain, Albertus and Kaplan (2013) find that an inequality-reducing land reform in Colombia –if on a large enough scale– has curbed fighting.

After providing an overview of the general nexus of resource and surplus sharing on the one hand and conflict on the other hand, we shall again zoom in more specifically on the question of how peace agreement provisions on resource and surplus sharing could potentially boost the chances of success.

Hartzell and Hoddie (2003) find that alongside political and military power-sharing, also the sharing of economic and territorial power increases peace survival (the functional form of their specification is a composite index measuring by construction the marginal impact of one additional dimension of power-sharing being included). Also Hartzell et al. (2001) and DeRouen et al. (2009) find a peace-enhancing effect of territorial autonomy. This conclusion is somewhat nuanced by Cederman et al. (2015) who find that while the sharing of territorial power through autonomy may well be part of a successful package to reduce the scope for recurrent war, its effect is greatly enhanced when combined with a political power-sharing agreement.

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12 See also the discussion in McGarry and O'Leary (2009) of successful federalist states.
4.4. Identity construction

This section focuses on religion, language and ethnic identity. Recent research has put much emphasis on both the building of inter-group trust as basic ingredient for long-run inter-group peace (see for example Rohner et al., 2013) as well as the role of group identities in preserving peaceful union in an inter-temporal setting (Esteban et al., 2017).\textsuperscript{13} Studying the impact of these factors in the particular setting of peace agreements seems crucial.

One way to construct national identities and to reconcile former foes may be the organization of reconciliation ceremonies, as studied by Cilliers et al. (2016). They have set up a randomized field experiment in Sierra Leone across 200 villages with community-level forums in which victims provide detailed accounts of war atrocities, and perpetrators confess to war crimes. They found that reconciliation on the one hand has led to greater forgiveness of perpetrators and strengthened social capital, while on the other hand the reconciliation treatment also worsened psychological health, increasing depression, anxiety, and posttraumatic stress disorder in these same villages.\textsuperscript{14}

Fortna (2007) shows for ceasefire agreements that measures enhancing confidence building between embattled communities can make peace last longer. In particular, the setting up of a joint commission for dispute settlements is found to have a more beneficial impact than dispute mediation from the outside, and political settlements of the underlying root issues having let to conflict in the first place are also associated to peace. Similarly, Joshi and Quinn (2017b) find also a peace-enhancing effect of the creation of dispute settlement provisions and of “vertical mechanisms” where local, national, and external actors meet to solve problems.

4.5. Legal arrangements

This includes among others the role of amnesties, which is another crucial dimension on which important trade-offs take place between justice versus the ease of reaching...
rapid agreements. This debate is sometimes referred to in political science as the trade-off between “peace versus justice”.

Joshi et al. (2017) find that amnesties and prisoner release before the first elections reduce the risk of peace breaking down. Dancy (2018) carries out an in-depth empirical analysis of the impact of amnesty provisions on peace duration. He finds that i) only amnesties put in place after conflict termination help to resolve civil wars, ii) amnesties have a more beneficial impact when embedded in peace agreements, and iii) amnesties providing even immunity for the most serious rights violations do not foster the prospects of peace.

4.6. Other factors

DeRouen et al. (2010) find that a higher state capacity increases dramatically the scope for success for a peace agreement. In the same vein, Joshi and Quinn (2015) conclude that the peacemaking potential of a negotiated agreement between civil war parties is substantially enhanced when reforms are put in place across many different policy domains. Further, the importance of including women’s rights and gender in peace agreements is highlighted by Buchanan et al. (2012) and Bell (2015, 2018).

Further, Ogutcu-Fu (2016) also stresses the crucial importance of “internal cohesion that increases combatants’ credibility as bargaining partners and improves the likelihood of settlement” (2016: 403). Put differently, when an actor at the negotiation table benefits from large-scale support from its constituency, any potential agreement may be more easily implementable ex post, which makes a successful settlement more likely to arise ex ante.

Finally, Mitchell et al. (2008) argue that a strong democratic community (as measured by the relative military and economic power of democracies with respect to autocracies) make third party settlement more often attempted (in particular by democratic states and international organisations) and more likely to be successful.

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\(^{15}\) On the legal nature and status of peace agreements see Bell (2006).
4.7. Complementarities between dimensions and provisions of peace agreements

Clearly, there are complementarities between the various dimensions. As discussed above, a variety of articles highlight that security guarantees and reforms can make more effective other provisions on the sharing of power and surplus in politics and elsewhere. Taking into account several of the aforementioned dimensions seems important indeed. In particular, Hartzell and Hoddie (2003) identify four different dimensions of power-sharing, namely political, territorial, military and economic, and find that having power shared in a larger number of these dimensions will foster the perspective for lasting peace.

5. Third party intervention and its impact on peace

Below we shall discuss different degrees of third party involvement, distinguishing both interventions taking place on voluntary basis and being characterized mostly by information provision and possibly by the presence of “carrots” versus non-voluntary third party interventions that may also feature the use of “sticks” and not only “carrots”, such as the mediated (military) intervention or pure military intervention. We shall also discuss how biasedness and leverage may matter. We start with the arguably “mildest” form of intervention, mediation – on which our focus lies – but shall also briefly treat more invasive forms of third party intervention.

5.1. Mediation

5.1.1. Definition of mediation

Before starting, it is key to exactly specify what we mean by mediation. This is particularly important, given that the term is sometimes used for a variety of phenomena. Much of the academic literature draws on definitions similar to the one of Bercovitch, Anagnoson, and Wille (1991: 8) which defines mediation as “a process of conflict management where disputants seek the assistance of, or accept an offer of help from, an individual, group, state, or organization to settle their conflict or resolve their differences without resorting to physical force or invoking the authority of the
law.” Following the approach applied by Wallensteen and Svensson (2014), we restrict the cases of mediation assessed to (1) in the context of armed conflicts, (2) between representatives of the main conflicting actors and (3) dealing with the conflicting issues (incompatibilities) or violent behavior.

In terms of defining particular types of mediation, a widely used classification of mediation styles is described in Beardsley et al. (2006): facilitative (mediator mostly helps to make sure that all parties have information), formulative (mediator gets more involved in negotiation, conceiving and proposing new solutions), and manipulative (mediator uses its position and leverage to influence bargaining, shifting reservation points by using “sticks” and “carrots”). We shall discuss the impact of these mediation styles further below. While facilitative and formulative mediation will be treated mostly in the current subsection, manipulative mediation is discussed in more detail further below.

It is important to understand that the use of terms varies considerably, and while some scholars consider manipulative mediation to be a sub-division of manipulation, others see it as a form of mediated military intervention, especially when a great use of leverage and “sticks” takes place. Thus, while we discuss in the various subsections means of intervention that become increasingly invasive – moving from pure facilitative mediation to full-flown military intervention, there are many grey zones and quite some overlap and several research findings may apply to different categories of intervention.

5.1.2. Conceptual discussion of why mediation “may work” and when it should be started

In the last 10 years has emerged a growing interest in applying mechanism design to peace agreements. The pioneering work of Fey and Ramsay (2009) studies the question of when there exist consistent and ex post efficient peaceful mechanisms to avoid conflict. They find that this is only the case when the costs of war are large enough. It becomes also clear from such settings that “subsidioid” peace agreements (where the total resources to distribute are larger after agreement) may be easier to sustain. This is an important result for practitioners, suggesting that in at least some

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16 There is a lively debate in the literature on the appropriate definition of mediation. In contrast to the definition we apply here, the use of the term mediation among practitioners varies and follows e.g. the United Nations Guidance for Effective Mediation from 2002.

17 See the detailed discussion of these three mediation styles in Beardsley et al. (2006).
situations the use of carrots (like e.g. promises for increased foreign aid) can make peace more likely.

There has also been a growing interest in understanding the actual “mechanics” underlying mediation. As briefly discussed above, the core of mediation is that it may favor the flow of information, which can reduce asymmetric information and hence the scope for conflict. Formally, it is possible to apply to conflict settings the standard mechanisms identified by Myerson’s (1979) revelation principle (for a non-technical discussion of this result and its limits see Myerson, 2008). Put in simple words, in communication problems (such as conflict in the presence of asymmetric information) a large number of possible messages could be sent from one actor to another. Finding an equilibrium allocation of such a game-theoretic model may well prove intractable. Here is where the revelation principle comes in. As put by Myerson (2008: 1), “the revelation principle is a technical insight that allows us, in any given economic situation, to make general statements about all possible communication mechanisms.” Thus, “for many economic purposes, it is sufficient for us to consider only a special class of mechanisms, called ‘incentive-compatible direct-revelation mechanisms’. (…) The mechanism is incentive compatible if honesty and obedience is an equilibrium of the resulting communication game” (Myerson, 2008: 2). Importantly, in these equilibria nobody has incentives to deviate and not tell the truth. In the words of Hörner et al. (2015: 1484), “attention can be restricted to equilibria in which the disputants’ reports to the mediator are truthful”, without renouncing to obtain general equilibria for a wide set of coordination mechanisms.

The result that mediation may allow to increase — by reducing information asymmetry— the set of acceptable bargains has been found by Goltsman et al., 2009; Fey and Ramsay, 2010; Hörner et al., 2015, and Mitusch and Strausz, 2015. Indeed, mediation can relax enforceability constraints, and simple protocols of unmediated communication cannot achieve the same level of ex ante welfare as mediation using confidentiality.18 Fey and Ramsey (2010: 533) also conclude that “mediator’s actions can affect crisis outcomes only if the mediator has an exogenous source of information regarding the disputants’ types”. This is an important point for practitioners and in line with Nathan’s (2014) conclusion that access to intelligence is often a requirement for successful mediation.

18 See also the non-technical survey of Ayres and Brown (1994) on such economic rationales for mediation.
Another interesting related study is Maekawa (2018) which studies both theoretically and empirically the impact of external supporters in negotiated agreements, finding that a peace agreement is more likely to emerge in situations where external supporters of the government side are dissatisfied with the current political status quo of the supported state.

In terms of the timing of mediation, the concept of “mutually hurting stalemate” has received a great deal of attention (see e.g. Toval and Zartman, 1985; Wall and Lynn, 1993, Hellman, 2012). When prolonging the dispute becomes very costly (for example, when both parties face heavy losses on the battlefield) the conflict is considered to be more likely to be “ripe” for mediation, as all contestants would typically see it more in their interest to accept a third-party mediation.

5.1.3. Selection bias: When does mediation occur?

The question of when mediation occurs is important, as various aspects of mediation are still understudied, and the potential for mediation seems far from exhausted. Svensson and Onken (2015: 78) describe well the potentially skewed distribution of mediation efforts: “Mediation is quite skewed in its geographic distribution. Hence, there is a need to pay more attention to conflicts that are currently left unmediated. Importantly, several of these conflicts are jihadist and/or religious conflicts. (…) Overall, the international community, including organizations such as the United Nations, needs to develop their instruments of, and approaches to, conflict resolution – in terms of how to identify potential moderates that can be negotiated with, to identify underlying interests as basis for negotiations, and to develop methods that combine pressure to end conflict with dialogue about solutions – in order to among others meet the contemporary jihadist challenge, and to engage more actively in other conflicts that are currently not in focus of our attention.”

Indeed, both the offer made to become a mediator of a given conflict as well as the potential acceptance of that offer are far from random (see e.g. Maundi et al., 2006; Greig and Regan, 2008; Beardsley, 2011; Crescenzi et al., 2011). In terms of quantitative evidence on when mediation occurs, existing research has found that there is a higher likelihood of a given conflict to be mediated in the face of high-intensity international events such as crisis (Dixon 1996; Bercovitch and Jackson 2001; DeRouen and Bercovitch, 2002). DeRouen and Bercovitch (2002) for example find that
internationalized civil wars, civil wars with as stake territory, as well as post Cold War conflicts are more likely to be mediated. Also domestic politics of potential mediators matter: Toubal (2003) stresses the domestic and international influences on mediation strategy, giving the following example: “Consider the mediation efforts to end the wars in the former Yugoslavia. Domestic and international concerns inhibited the United States from engaging in preventive diplomacy. The timing of the European mediators' intervention was determined not by their estimation of the “ripeness” of the conflict, but by the mediators' own domestic and foreign policy concerns (2003: 94). Related to this, Wohlfforth et al. (2018) emphasize the potential benefits in terms of prestige, moral authority and social status for successful mediator countries, discussing the case of Norway. This implies that potential mediator countries are on average often particularly keen to mediate conflicts where successful peace agreements are actually achievable (Greig, 2005).

Also the likelihood of mediation being accepted is non-random. In particular, Melin and Svensson (2009) conclude that mediation is on average only accepted in the most intense civil wars. This is in line with the aforementioned concept of the “mutually hurting stalemate” (see e.g. Toval and Zartman, 1985; Wall and Lynn, 1993, Hellman, 2012), making the point that the current conflict situation being very costly is a push-factor for making contestants accept to join the negotiation table.

As mentioned above, the presence of natural resource rents (facilitating rebel funding), the territorial control of rebels in the periphery of a country, as well as the involvement of a larger number of actors make it harder to stop the shooting and make all conflict parties join the negotiation table (see Fearon, 2004; Collier et al., 2004; Cunningham, 2006; Cunningham et al., 2009; Cunningham, 2013; Berman et al., 2017).

This systematic selection bias into mediation makes it very hard to provide unbiased and reliable statistical estimates of the causal effect of mediation on outcomes. If for example more acute crises are more often mediated, a finding of mediation leading to more fragile peace could be spurious, as it may not be mediation, but the underlying omitted variable of conflict intensity that would drive any correlation between mediation and peace fragility. Consider for illustration a hypothetical situation where mediation has no effect at all but where mediators are only called in when conflict is escalating. If one performs a naïve comparison of conflict onset risks in the presence and absence of mediation, one would find more intense fighting for the cases that were mediated. However, this would in our hypothetical example not have anything to do with
mediation, but simply be due to sample selection, i.e. only the escalating situations get mediated. Hence, mistaking correlation for causality could result in the completely erroneous conclusion that mediation has harmful effects.

One could also think of biases going in the other direction: If more cooperative group leaders are more likely to accept mediators then any mediation success could be wrongly attributed to mediation while it may have been driven by the confounding, unobserved propensity for cooperation by the group leaders (see e.g. the discussion in Dixon, 1996). Hence, the following discussion below of the existing results in the literature needs to be taken with a grain of salt, as most papers will typically only be able to display mere correlations that should not be interpreted in a causal way.

5.1.4. Does mediation help to reach an agreement?

In terms of the policy implications of mediation, there are two related questions that are at the forefront: First, does mediation actually increase the likelihood of reaching an agreement, and second, and related to this, if mediation has been instrumental in promoting an agreement, does it impact the kind of agreement that has been concluded, and its potential for success.¹⁹

We shall start with investigating the first question²⁰ before moving to the second. Dixon (1996)’s statistical analysis finds that mediation goes along with a higher likelihood of settlements and lower likelihood of dispute escalation. In contrast, Walter (1997) concludes that mediation only has a weak positive impact on the likelihood of conclusion of a successful peace agreement, missing narrowly statistical significance. According to the author, this may not necessarily mean that mediation is useless, but that it needs to be backed up by security guarantees, as discussed below. Wilkenfeld et al. (2003), Regan and Aydin (2006), Frazier and Dixon (2006), Möller et al. (2007) and Beardsley (2008) conclude that mediation increases the likelihood of reaching an agreement and stopping the fighting. These studies typically define mediation broadly, going beyond purely facilitative mediation limited to information transmission (and some of these studies do not in detail explain what exactly they mean by mediation).

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¹⁹ There exist several surveys on the mediation literature, including Wall et al. (2011), Greig and Diehl (2012), Wall and Dunne (2012), Duursma (2014) and Wallensteen and Svensson (2014).
²⁰ Somewhat related is the literature on mediation in international conflicts (see Beardsley and Dannemann, 2015).
Below we shall discuss in more detail the relative impact of different mediation styles and other forms of third party intervention.

5.1.5. Does mediation or non-mediation matter for the success of an agreement?

We shall now consider how successful different types of peace negotiations (mediated vs. non-mediated) are. Starting from formal theory, Hörner et al. (2015) and Mitusch and Strausz (2015) show —using mechanism design—that mediation can be a very effective tool, as confidentiality makes it possible to transmit information without however revealing strength and weakness. This helps addressing enforceability constraints, and it is shown that simple protocols of unmediated communication may not achieve the same level of *ex ante* welfare as mediation, as they preclude confidentiality.

Empirically speaking, the aforementioned problem of selection into mediation makes it also particularly difficult to obtain an unbiased and reliable estimate of the causal impact of mediation in the short- and long-run. Not surprisingly, the difficulty to statistically assess the nexus between mediation and peace (that is riddled with endogeneity bias) is also reflected by the fact that the results in the literature tend to be contradictory and ambiguous.

A series of articles find a potentially unambiguously beneficial impact of mediation not just in the short-run but also on long-run tension reduction (see Morgan, 1994; Wilkenfeld et al., 2003). Similarly, Regan et al. (2009) show that externally driven diplomacy increases the likelihood of termination of civil war.

In contrast, others find more contradictory results. Gurses et al. (2008) finds that peace agreements brokered by mediators tend to be less stable, i.e. there is a shorter peace duration when an agreement has been mediated. This may be consistent with the view that the short-run incentives of mediators “to obtain results” may tend in some cases to make them push conflict parties to a hastened agreement that proves brittle. In Gurses et al. (2008: 150) words, “although we find mediated agreements to reduce the duration of peace following a civil war, it is obvious that the international community should continue to provide resources to mediation attempts rather than letting the adversaries fight it out by themselves. What is also clear, however, is that much more
attention needs to be paid to the quality of an agreement. Judging from our results, it is not enough to send in a superpower or to conduct a series of mediation attempts.” This is in line with the findings of Beardsley (2008) who finds that mediation increases in the short-run the likelihood of reaching a peace agreement, but that this agreement is on average less stable than a non-mediated peace deal. In her words, “mediation has a strong short-term impact but can often inhibit long-term peace” (2008: 737).

5.1.6. Importance of mediation style and the identity of the mediator

As important starting point of many articles is the idea that conflict is often caused by asymmetric information (see Fearon, 2004; Rohner et al., 2013, Laurent-Lucchetti et al., 2018) and that one of the main functions and advantages of mediation is to facilitate the flow of information (see e.g. Savun, 2009).²¹

Apply the classical distinction of mediation styles discussed above in section 5.1.1, Beardsley et al. (2006) find that facilitative mediation has the strongest tension-reducing impact in the long-run, post-crisis era, while manipulative mediation is found to have the strongest positive effect on securing agreements and is also found to achieve overall crisis abatement. In a nutshell, this suggests that a mix of styles may be optimal. We shall in this section mostly focus on facilitative mediation, and discuss additional results on manipulative mediation further below.

The importance of leverage is highlighted by Böhmelt (2010), who finds that “Track One Diplomacy” by official actors is on average the most effective intervention form due to greater leverage, and the more so the more resources are invested. Further, the combined mediation through both unofficial and official tracks may be more promising than independent track actions. This is contradicted by Nathan (1999) who concludes that punitive measures and too much pressure from the mediator is counterproductive and precludes favorable outcomes, and by Werner and Yuen (2005) finding that “unnatural” ceasefires achieved under third-party pressure are significantly more likely to fail.

Another dimension on which one can categorize mediation is its biased versus unbiased nature. While historically unbiasedness has been seen as a necessary

²¹ Laurent-Lucchetti et al. (2018) build a model in which democratization is an alternative way to reduce asymmetric information and curb the scope for conflict.
attribute of any mediator (see e.g. Ott, 1972), in recent years this view has been challenged. The formal work of Kydd (2003, 2006) shows that an unbiased mediator wanting to maximize the likelihood of peace may have incentives to exaggerate peaceful intentions of conflict fractions, resulting in a credibility problem, which can be circumvented when mediators are biased. Svensson (2009) finds that biased mediators tend to rush less towards a quick solution but take the time to elaborate institutional settlements associated with more durable peace, such as power-sharing, third party guarantees and justice provisions. Also Gelpi (1999) and Savun (2008) conclude that biased mediators tend to be effective given that they can use leverage to influence their allies. In contrast, Rauchhaus (2006) finds that both biased and impartial mediators are effective to help reach an agreement, but that the latter outperform the former. Another nuance is emphasized by Svensson (2007) who finds that biased mediators siding with the government have a beneficial effect on negotiated settlements, while mediators biased towards rebels do not have a statistically significant impact.

It is very important to take these results on the importance of leverage with a grain of salt. As found by Beardsley (2009), disputes involving mediators without leverage are systematically different from other disputes. One first reason identified for “weak” mediators handling a peace negotiation is simply that “strong” mediators with leverage are not interested. This could potentially of course be due to a protracted situation – mediators being keen to obtain “success”, harder and lengthier cases may naturally attract less interest by superpowers. This is related to Beardsley’s finding that mediators without leverage indeed predominantly often take care of conflicts with high costs. The second reason invoked for engaging mediators without leverage are situations where at least one party suspects the opponent to have insincere motives and only use ceasefires and peace talks to build up military capacity (such in the example given of Norway mediating in Sri Lanka). The underlying rationale is that when a mediator is a small state without much leverage then leaving the negotiation table may be less costly for a contestant with insincere motives (i.e. imposing costs on Norway may have less consequences than imposing costs on the United States). Crucially, if on average mediators without leverage more often handle situations with high immediate conflict costs (according to Beardsley, 2009), with uncertain success perspectives and where one or more parties may not have a sincere interest in peace, this negative selection bias may of course lead to a severe underestimation of the effectiveness of mediation without leverage (as compared to mediation with leverage).
Beyond the level of leverage, another important distinction is with respect of the intensity scale of conflicts. Focusing on low-intensity conflicts and short-run outcomes, DeRouen and Möller (2013) find that direct mediation with all parties meeting face-to-face are the most likely to achieve short-term success. Bercovitch and Gartner (2006) show that directive strategies and international mediators are an effective tool for resolving very intense conflict, while procedural strategy and regional mediators are best suited for addressing low-intensity conflicts.

Finally, it has also been found that the sequencing of actions matters. According to Heldt (2009: 144), “the optimal approach is then to combine sequencing with nonsequencing: start by carrying out a couple of mediation attempts as quickly as possible, then switch towards moderated direct talks to create an additional large boost of 700% in the likelihood of a negotiated end.”

5.2. Peace enforcement, peacekeeping, security guarantees and monitoring

Moving from purest forms of mediation with focus on information transmission towards forms of intervention with a role for the military, the first step is the involvement of military forces as pure means of support and security guarantee, which still remains in the realm of voluntary measures. Thus, in this subsection we shall discuss the possible impact of third party peace enforcement, peacekeeping, security guaranties and monitoring. In particular, Walter (1997) finds that in order to be an effective tool to curb conflict, mediation needs to be backed up by security guarantees, and DeRouen and Chowdhury (2016) conclude that both mediation on its own as well as interacted with peacekeeping reduces the risk of renewed/continuing violence and boosts the peace duration. Relatedly, also Hartzell et al. (2001), Hartzell and Hoddie (2003), Mattes and Savun (2010) and DeRouen et al. (2010) find that security guarantees are crucial to address commitment problems and security dilemmas, and hence that having a third-party enforcer helps to make a peace deal longer lasting.

Note that this result contrasts with the theoretical predictions surveyed above in sub-section 5.1.2 where indirect mediated communication may be able to achieve in some cases better outcomes than direct communication.

In addition to this academic literature, it is of course also crucial to keep in mind the concrete advice of practitioners. Brahimi and Ahmed (2008) have in their personal experience identified the following major categories of common mistakes of mediators that can have heavy consequences: “ignorance; arrogance; partiality; impotence; haste; inflexibility; and false promises.”
An important dimension to consider is whether peacekeeping efforts enjoy multilateral support. In particular, Doyle and Sambanis (2000) find that UN peacekeeping correlates positively with democratization taking place after the resolution of a civil war, and multilateral enforcement operations are found to usually achieve the goal of stopping the shooting. As mentioned above, there is an obvious selection bias in the estimations when simply correlating UN interventions (which are non-random) with peace outcomes. To address this issue, Gilligan and Sergenti (2008) rely on matching techniques, and show that UN interventions are indeed effective in post-civil conflict interventions, while they have no effect when fighting is still ongoing. Also Hultman (2013) reaches a favorable assessment of the UN role as protector. She finds that UN peace operations are more likely in conflicts featuring high levels of violence against civilians, especially since 1999 which is the year when the UNSC first issued an explicit mandate to protect civilians. Similarly, Frazier and Dixon (2006) find that a combination of mediation and peacekeeping is particularly effective, especially under the leadership of an international organization.

5.3. Sanctions, embargoes and international jurisdiction

General economic and trade sanctions have been found to often reduce civil war duration, but can substantially hurt the civilian population (e.g., Hufbauer et al., 1990; Dashti-Gibson et al., 1997; Escribà-Folch, 2010). For example, Bundervoet and Verwimp (2005) find for Burundi that the civil war and the economic embargo had a particularly detrimental impact on the nutritional status of rural populations, due to a direct effect of the civil war and to the soaring of food prices during the embargo. Also Hultman and Peksen (2017) find that imposed economic sanctions may contribute to the escalation of conflict intensity, hence hurting the civilian population.

Targeted arms trade embargoes during civil wars have been judged in the existing literature as a potentially less costly alternative to general sanctions, but are typically hard to enforce (Brzoska, 2008; Moore, 2010; Kopel et al., 2010; Drezner, 2011; Hultman and Peksen, 2017). Brzosky (2008) find limited effects or arms embargoes, and concludes that they are most successful when embedded in a package of other

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24 In contrast, Regan (2002) finds that economic intervention—if anything—increases conflict duration.
25 A methodology for detecting illegal arms trading using stock market returns has been developed by DellaVigna and La Ferrara (2010).
policies, while Hultman and Peksen (2017) show that imposed arms embargoes are likely to reduce conflict violence.

Another form of international intervention is the “International Criminal Court”, mandated to persecute perpetrators of atrocities, such as crimes against humanity (Vinjamuri and Snyder, 2004, 2015). This international reaction to a given civil conflict or episodes of mass killings typically takes place some years after the events. It has in the existing literature been found to be somewhat of a double-edged knife: On the one hand it may be harder to convince dictators with a bad track record to step down if they face prosecution after leaving office (Snyder and Vinjamuri, 2004). However, on the other hand the International Criminal Court can give powerful incentives to new leaders to not become "criminal dictators" (Akhavan, 2001).

5.4. Mediated (military) intervention

A question still left open is whether mediation to broker a peace deal and boots on the ground to foster security are substitutes or complements. More specifically, it is important to know whether pure mediation, pure military intervention, or a combination of both coercive and non-coercive approaches deliver better results (see e.g. Walter, 2002, or Collier et al., 2008). To this end, I shall in what follows discuss the literature on the comparative advantages of different types and combinations of third party interventions to end civil wars.

An example of the mixing of military pressure and coercive mediation for pushing parties to sign a peace deal is the Dayton agreement of 1995 for stopping hostilities in Bosnia and Herzegovina. Beardsley et al. (2006: 64) discusses a further example: “A prime example of a mediator attempting to expand the zone of agreement by changing the immediate costs and benefits of violent conflict occurred during a 1972 crisis between North and South Yemen. The mediator—Colonel Qaddhafi of Libya—reportedly threatened to hold captive the delegation leaders of both sides if they did not reach an agreement. He also offered both sides close to $50 million in annual aid if they did reach an agreement. Qaddhafi clearly attempted to use both carrots and sticks as a cost maximization mediation strategy.”

Wilkenfeld et al. (2003) and Sisk (2009) find that a manipulative mediation and powerful peacemaking using pressure on average more often results in favorable crisis
management outcomes than is the case for a more restrictive facilitative mediation style. This is related to Gelpi’s (1999) finding that great powers (who typically have the largest potential for using “sticks and carrots”) are the most successful mediators. Regan and Aydin (2006) consider the combination of a variety of intervention types and conclude that “(1) diplomatic interventions are effective conflict management strategies that dramatically change the course of the events in a civil war, (2) intervention strategies that combine different approaches can be made more effective than individual components alone, and (3) the right timing of intervention efforts is also vital for war termination and settlement.” (2006: 754).

5.5. Military intervention

Military third-party interventions in conflict include for example UN resolutions, no flight zones and direct intervention (such as for example in Libya to oust Muammar Gaddafi). Typically, given the limited number of cases and the difficulty to have a reliable counterfactual, a quantitative analysis is notoriously hard.26

Again, as in the other sections above, it is important to keep in mind that it is difficult to judge statistically in a meaningful way the relative merits and pitfalls of military third-party interventions, as the decision to intervene is not random but actually driven by a variety of factors that also directly affect the future perspectives of a country. Concretely, Bove et al. (2016) highlight that there are more military interventions when (a) the country at war has large reserves of oil, (b) the relative competition in the sector is limited, and (c) the potential intervener has a higher demand for oil. Also Gent (2008) shows how the decision to intervene is non-random, biasing statistical estimations of intervention impact (see also the discussion in Gilligan and Sergenti, 2008).

Keeping this caveat of selection bias in mind, we shall describe below the conclusions drawn in the literature on the effects of military interventions. The pioneering contribution of Regan (2002) has found that not only economic but also military interventions are associated with conflicts lasting longer, and this detrimental effect of economic and military interventions is found to be larger for neutral than for biased interventions. When disaggregating the types of potential outcomes, military

26 See the literature surveys on military intervention in conflict and peacekeeping by Regan (2010) and Clayton et al. (2017). Further, for a formal model of military third-party interventions in conflict see e.g. Chang et al. (2007).
interventions during wars has been found—at least under some conditions—to hasten military victory (Balch-Lindsay et al., 2008) but delay negotiated settlement (Balch-Lindsay et al., 2008, Cunningham, 2010). It is also important to keep in mind that a military intervention by one power may well trigger further interventions by other powers that either want to bandwagon or balance the intervention (e.g. think for example of US and Soviet interventions mutually triggering each other in the Cold War) (Findlay and Tao, 2006). Sullivan and Koch (2009) study the impact of all military interventions of the 5 major powers (USA; UK, France, Russia, China) in the second half of the 20th century. They find that British interventions have the highest likelihood to reach the projected goal, and that interventions usually achieve the goal of removing a given regime (in 92% of cases) while the success rate is much more dismal when it comes to achieving policy change (25% success rate).

Importantly, not all military intervention is direct and involves “boots on the ground”. An indirect way of intervening in a conflict is the provision of military aid. An article that is able to go beyond correlations is the contribution of Dube and Naidu (2015) that exploits exogenous variations in the United States’ military aid budget to study the impact of US military aid on the conflict in Colombia. The conclusions reached are gloomy: US military assistance is found to result in a rise in attacks by paramilitaries, as well as paramilitary homicides during election years, especially in politically competitive municipalities. In contrast, guerilla violence is not affected. These results are in line with the view that this indirect intervention leads to the eruption of violence and the undermining of domestic political institutions.

While the aforementioned research has focused on two-sided fighting in civil wars, such forms of violence need to be distinguished from one-sided violence against civilians perpetrated by a powerful militarized actor (often the government, but sometimes also rebel forces). In this imbalanced situation, protecting the victims has been found to be able to mitigate the massacres. In particular, Krain (2005) finds that interventions challenging the perpetrator or supporting the victims reduce the scope for violence, while impartial interventions have no effect, and, unsurprisingly, interventions on the side of the perpetrator aggravate mass killings. Wood et al. (2012) finds a somewhat mixed pattern of the impact of intervention on violence against civilians, pointing out “that the entrance of foreign troops on the side of an actor’s adversary leads the opposed group to escalate its anti-civilian violence. By contrast, when a group receives foreign military support, it is more likely to reduce its violence levels.” (2012: 657).
In settings of complex warfare with a large number of groups, also the network structure of conflict participants needs to be taken into account when studying intervention. A recent article (König et al., 2017) builds a theory of conflict taking into account networks and estimates the resulting game-theory model using data for the Second Congo War. It highlights which actors have directly and indirectly the most detrimental impact on peace and the pacification of which bilateral rivalries may imply the largest potential for peace. It is found that taking out "key players" or bilateral pacification can be more successful than embargoes. Note that removing "key players" does not necessarily require military means, but may also be achieved by “carrots”, such as offering government jobs to rebels willing to put down their weapons.

5.6. Economic Support

Finally, the somewhat distinct dimension of economic support merits some discussion. In particular, future economic growth plays an important role for peace and stability (Collier et al, 2003). Think for example of the “Wirtschaftswunder” in Germany after World War II, which may well have contributed to the survival of the nascent democracy, and contrast it with the dire economic conditions after World War I that may have contributed to the fall of party politics and paved the way for the rise of Hitler’s nazi regime (King et al, 2008). This basic intuition is in line with systematic statistical evidence by Quinn et al. (2007) and Collier et al. (2008) finding that indeed rapid economic recovery and strong economic growth reduce the risk of conflict recurrence. In terms of policy implications this means that indeed supporting economic recovery financially from the outside may at least in some contexts be potentially promising.

A word of caution is important at this stage. While in pacified countries support for economic recovery may well play a very beneficial role, in the midst of turmoil it may well backfire. Nunn and Qian (2014) find that US food aid may—if anything—increase rather than decrease the risk of conflict.
6. Synthesis of recommendations for researchers

In this section I shall critically discuss the shortcomings and gaps in the current research on the topics covered by this report.

First, and most importantly, a substantial part of the results discussed above cannot be interpreted in terms of causal identification of factor A causing factor B. Indeed, many results can go barely beyond correlations which could be driven by confounding factors biasing the estimation. Take for example the finding that in some cases biased (partial) interventions pay off: This correlation between partiality of mediators and success could be simply due to the fact that countries with leverage and stakes in a conflict may be inclined to offer services as mediator when chances of a quick resolution are good, while when the situation is protracted and chances of an agreement are slim, powerful countries with leverage may not be interested in mediating and a country without leverage may end up taking care of the “hot potato”. If the data in this case shows that mediators without leverage have less success, this could be simply due to selection bias (i.e. they get the hard cases) and hence would tell us little in terms of policy recommendation. As discussed above at length, similar selection bias may be present for a variety of other issues, such as e.g. the presence or absence of mediation or the provisions of a peace agreements.

Second, more research is needed on how to implement peace agreements and in particular on the processes that take place to reach an agreement and how the sequencing of steps matters for the perspectives for lasting peace. While there exist various datasets compiling information of agreement ingredients and provisions, only very little research currently exists on how the procedural steps and sequencing matter, and there are still various other open procedural questions e.g. with respect of the importance of joint commissions in the post-agreement implementation.

Third, another grey zone with only little hard evidence persists concerning monetary transfers: Do leaders and their junta get “golden handshakes” when they decide to step down and open up for peace? Does “buying peace” in such ways work or does it backfire? How much does mediation cost to the mediator and to the country where mediation takes place? Who benefits from peace agreements and potential informal transfers? Could it be that the very people having started a war may get compensated for stopping it? Not much evidence exists on these issues and hence it would currently
be difficult to answer such questions in a non-speculative, fact-based way. Given that typically monetary transfers of such kind are kept secret, it is hardly surprising that not much evidence exists on this either way.

Fourth, there also only exists relatively sparse data work on the concepts of “ripeness” and “mutually hurting stalemate”. While we know that the peace agreement started at given time t and its outcome, we don’t know the counterfactual of what would have happened if it had been started at some other moment in time. We also lack good proxies for how “ripe” a conflict is for mediation, which again makes it hard to give policy recommendations on the optimal timing of mediation for real-work conflicts taking place currently. One potentially feasible and promising avenue would be to use predictions of the funding availability for rebel groups to gauge for their willingness to participate to the negotiation table (using e.g. the results with respect to the feasibility of conflict funding by Collier et al. (2009) or Berman et al. (2017)).

7. Particular Implications for practitioners

As discussed above, many results of the existing literature should not be blindly trusted and are hard to interpret, given a variety of statistical challenges and pitfalls. It is also important to keep in mind that all policy recommendation statements are to be understood in a probabilistic way. This means that no factor can always guarantee peace, and it is simply that the likelihood of conflict may go down from x% to less than x%. This means that even if factor F is a good thing on average there will typically always be some cases where F is present yet there is war while there are other examples where F is absent yet peace is maintained.

Still, some findings seem more reliable than others, and with again the necessary word of caution in mind we can below emphasize some policy conclusions for which substantial suggestive backing by hard facts exists. Based on the available evidence discussed above in the current literature review the following policy recommendations seem plausible:
A: Sharing of political and military power and resource rents may contribute to the success of a peace agreement.

As discussed above, there is both evidence for the general impact of political power-sharing (Cederman et al., 2013; Mueller and Rohner, 2018) for the importance of a balanced distribution of resource rents (Albertus and Kaplan, 2013; Morelli and Rohner, 2015), as well as power-sharing in the military (Hartzell and Hoddie, 2003, DeRouen et al., 2009, Samii, 2013, Wilkinson, 2015). At least some of these results have been obtained in statistical settings that allow to filter out a variety of potential confounding factors using among others country or group fixed effects (i.e. group-specific constants) or instrumenting power-sharing incidence with narrow electoral victories. There is also a more specific literature showing that peace agreements containing more power-sharing provisions correlate with longer-lasting peace (Hartzell and Hoddie, 2003, Mattes and Savun, 2010, and Joshi et al., 2017, 2017b, among others).

B. Security guarantees after the signing of a peace agreement can often help to maintain peace

There is a case to be made for security guarantees by impartial and independent peacekeeping troops after a political solution has been reached and a peace agreement has been signed. There is evidence by Hartzell et al. (2001), Quinn et al. (2007), Fortna (2007), Kreutz (2010), and Matanock (2017, 2018, 2018b), among others, finding that third-party enforcement of peace agreements correlates with longer-lasting peace. Especially positive effects have been found for peacekeeping widely backed by the international community and under the umbrella of a UN mandate (Doyle and Sambanis, 2000; Gilligan and Sergenti, 2008; Hultman, 2013).

C. Bottom-up initiatives of reconciliation, building trust, local cooperation and tackling concrete problems (e.g. through joint commissions) are promising factors for peace

As stressed in Rohner et al. (2013), publicizing successful inter-group business can break vicious cycles of low trust, low trade and frequent inter-group war. In this context, peaceful bottom-up, local cooperation can have beneficial effects. One prominent example of bottom-up, local cooperation to solve concrete problems is of course the European Coal and Steel Community that helped re-build trust in an Europe in shambles and eventually gave rise to the emergence of the European Union. Beyond this single example, the role of such initiatives and measures is highlighted in
suggestive correlation evidence by Fortna (2007) and Joshi and Quinn (2017b). Further, one of the very few randomized control trials in the literature, Cilliers et al. (2016), shows across 200 villages in Sierra Leone that the holding of reconciliation ceremonies causes a decrease in inter-group grievances.

D. Mediation tends to help reaching an agreement while statistical challenges make the existing evidence on long term peace stability and optimal mediator characteristics hard to interpret

A variety of articles find that the presence of mediation correlates positively with the likelihood of reaching an agreement (Dixon, 1996; Walter, 1997; Regan and Aydin, 2006; Frazier and Dixon, 2006; Möller et al., 2007; and Beardsley, 2008). This result of course potentially suffers from selection bias (i.e. the mediated conflicts may be systematically different in various relevant dimensions from conflicts ending up not mediated). However, the selection bias could go either way (being a mediator may be more attractive when chances of success are ex ante higher, but also the simplest cases with the lowest level of hostility may be solved without a mediator). Thus, although this correlation in the data falls short of conclusive evidence and needs to be interpreted with caution, it still suggests that quite plausibly mediation may well increase the peace settlement likelihood (such an effect also appears plausible in the light of the substantial theoretical work surveyed in section 5.1.2). As far as the impact of mediation on long-run stability and the comparison between different mediation styles are concerned, selection and omitted variable bias is arguably even more salient, making it in my view very hard to interpret most existing correlations in a causal way.

E. Make business not war: Offering economic opportunities helps

One of the most recurrent results in the empirical literature on conflict is that economic opportunities are one of the best ramparts against political violence. The idea is that high levels of human capital (see De la Brière et al., 2017) and access to a functioning labor market providing well-paid productive jobs creates a high opportunity cost of leaving the regular economy to engage in rebellion and appropriative activities. There is evidence that human capital accumulation, economic growth and productive employment opportunities help fostering peace (Fearon and Laitin, 2003, Collier and Hoeffler, 2004, Collier et al., 2009, Esteban et al., 2013; Rohner and Saia, 2018). At

27 Human capital levels can be boosted by a variety of policies, including e.g. school construction (Duflo, 2001) and deworming (Hicks et al., 2015).
least some of these articles manage to go beyond correlations, showing a causal impact of economic opportunities on peace, using random weather variation (e.g. Miguel et al., 2003) or creating a randomized control trial with labor market access (see Blattman and Annan, 2016). Beyond the direct effect of a strong economy, economic opportunities have also been found to foster peace by supporting democracy (Collier and Rohner 2008), and attenuating risks of conflict recurrence in particular (Collier et al., 2003; Quinn et al., 2007; Collier et al., 2008).

F. No clear-cut evidence that military interventions may in general result in sustainable peace

As for the discussion of mediation above, also the impact of military intervention is difficult to assess empirically, given the endogenous, non-random nature of the decision to intervene. Thus, the existing findings should be interpreted with caution. This being said, it is striking that none of the surveyed articles finds a clear-cut positive long-run effect of military intervention. While interventions may result in regime removal or precipitating military victory (Balch-Lindsay et al., 2008; Sullivan and Koch, 2009), and under some conditions protect civilians (Krain, 2005), their track record appears overall still very mixed. In particular, military intervention has been found to make conflicts longer lasting (Regan, 2002), delay negotiated settlement (Balch-Lindsay et al., 2008; Cunningham, 2010), trigger further escalation (Findlay and Tao, 2006), and often fail to achieve policy change (Sullivan and Koch, 2009). Importantly, one of the very few articles on the topic being able to use exogenous variation and causal identification, Dube and Naidu (2015), finds a detrimental impact of U.S. military aid in Colombia. Thus, in a nutshell, while not enough conclusive evidence exists, the aforementioned findings warrant skepticism on the peace-fostering potential of military intervention.

8. Conclusion

For a researcher it is equally important to understand what is known as to admit what is not uncovered yet. Knowing its limits is crucial, not only in science but also in peace practice. While above some general lessons of the existing literature can be drawn with fairly high confidence (Section 7), it is equally essential to keep in mind all the pitfalls, statistical biases and confounding factors that prevent us from knowing more, despite
a large number of studies published on the topic (see the discussion in Section 6). By considering the promising avenues for progress outlined in Section 6, the literature may hopefully address some of the remaining shortcomings and gaps in the coming years.
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