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Violent Conflict and Gender Inequality: An Overview

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Violent conflict, a pervasive feature of the recent global landscape, has lasting impacts on human capital, and these impacts are seldom gender neutral. Death and destruction alter the structure and dynamics of households, including their demographic profiles and traditional gender roles. To date, attention to the gender impacts of conflict has focused almost exclusively on sexual and gender-based violence. We show that a far wider set of gender issues must be considered to better document the human consequences of war and to design effective postconflict policies. The emerging empirical evidence is organized using a framework that identifies both the differential impacts of violent conflict on males and females (first-round impacts) and the role of gender inequality in framing adaptive responses to conflict (second-round impacts). War's mortality burden is disproportionately borne by males, whereas women and children constitute a majority of refugees and the displaced. Indirect war impacts on health are more equally distributed between the genders. Conflicts create households headed by widows who can be especially vulnerable to intergenerational poverty. Second-round impacts can provide opportunities for women in work and politics triggered by the absence of men. Households adapt to conflict with changes in marriage and fertility, migration, investments in children's health and schooling, and the distribution of labor between the genders. The impacts of conflict are heterogeneous and can either increase or decrease preexisting gender inequalities. Describing these gender differential effects is a first step toward developing evidence-based conflict prevention and postconflict policy. JEL codes: D0, D1, I0, I1, J0, J1

In the last 50 years, more than half of all nations have been affected by internal civil conflicts, defined by Blattman and Miguel (2010) as conflicts with 25 or more deaths per year, or full-fledged civil wars, with 1,000 or more battle deaths

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per year. Following a peak in the late 1980s and early 1990s, the incidence of wars and battle deaths has declined in recent decades, but a substantial number of people, especially in poorer countries and regions, continue to suffer and are forced to cope with the consequences of destruction and death caused by violent conflict (World Bank 2011).

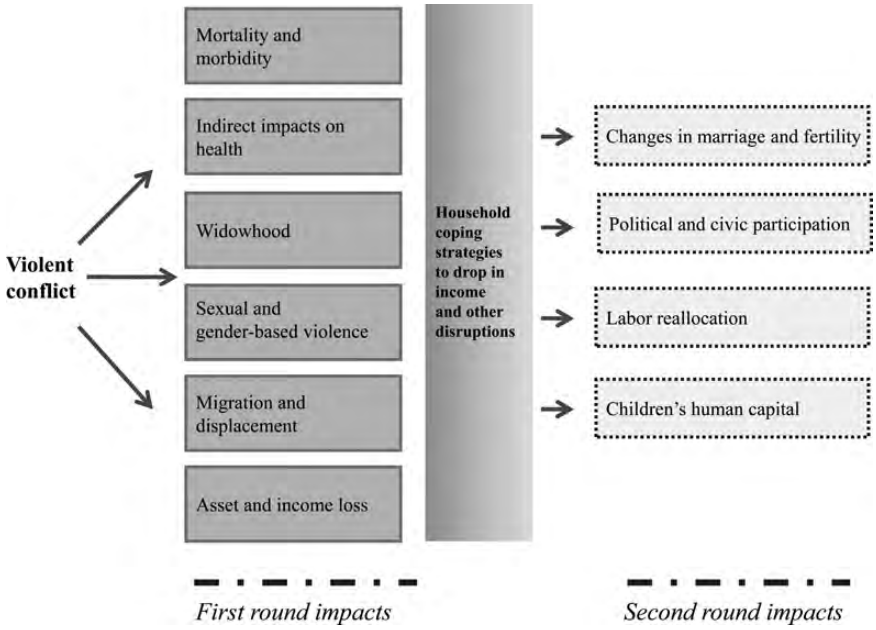
Researching the effects of violent conflict on economic development is inherently difficult. Conflict itself is difficult to measure and most often occurs in countries that are poor and that have weak institutions and infrastructure; these countries also have sparse preconflict statistics and little data-gathering capacity. However, there have been growing efforts to empirically document the impacts of conflict. These efforts have found more lasting impacts on human capital than on physical capital. Economies may recover, but people often do not (Justino Forthcoming). These human effects of conflict are seldom gender neutral. Death and destruction alter the structure and dynamics of households, including their demographic profiles and traditional gender roles.

This overview examines the emerging empirical evidence on both the differential impacts of violent conflict on males and females and the role of gender inequality in framing adaptive responses to conflict. The descriptive findings are a first step in developing evidence-based policy. To date, attention to the gender impacts of conflict and war has focused almost exclusively on sexual and gender-based violence. We show that a far wider set of gender issues must be considered to better document the human consequences of war and to design effective postconflict policies.

We borrow a framework used to identify transmission channels for the impact of economic shocks on women (see Sabarwal, Sinha, and Buvinic 2010) and use a modified version to organize our review of the evidence on the gender impacts of violent conflict. This organizing framework, detailed in figure 1, captures both the gender-differentiated effects of conflict and the adaptive responses of households and individuals to conflict. Unfortunately, this framework does not provide a direct window into the household. The evidence we present is limited by the inability of most research to observe and measure the household processes and dynamics that mediate the impacts of violent conflict on individuals and families.

The conflict literature distinguishes the direct effects of conflicts, such as the killing, wounding, and physical destruction that result from violence, and indirect effects on economic performance and human welfare. Similarly, we separate direct and indirect effects, when relevant, and underscore both first- and second-round impacts on gender differentials. First-round impacts operate through the following channels: (a) an increase in mortality and morbidity (especially of men and children) as direct and indirect consequences of violence and destruction along with a higher incidence of widowhood; (b) forced displacement and migration; (c) asset and income loss due to the disruption of markets, infrastructure destruction and damage, and deaths of household members; and (d) sexual and gender-based

Figure 1. Possible Transmission Channels for the Gender Impacts of Conflict



violence. Second-round gender impacts resulting from excess male mortality include the induction of women into political and civic participation and changes in marriage and fertility behavior. Another set of second-round impacts emerge as conflict-affected households respond to the loss of family members and declines in household income and consumption with coping strategies that involve changes in women's traditional household roles. Women respond to decreases in household income by increasing their hours of work, entering the labor force, or adjusting their time and effort in the home. Women can further cope by altering their fertility or by migrating, and households can curtail (or increase) their investments in children's health or education. We cover these second-round impacts on children because of the interdependence between women's choices and children's well-being that is especially salient in poor countries and among poor households. We also reference evidence from the economic crisis and gender literature that illuminates the gender differentials observed in response to conflict.

Background

Once wars begin, they are "development in reverse." Wars destroy physical and human capital, disrupt service delivery, divert public expenditures to the military,

disrupt the efficient functioning of markets and transport infrastructure, and lead to dissaving, capital flight, and the departure of skilled workers (Collier 2007). The World Bank (2011, 5–6) estimated that the average cost of civil war is equivalent to more than 30 years of GDP growth for a medium-size developing country and that after major episodes of violence, trade levels take 20 years to recover. Between 1981 and 2005, the poverty headcount rose in countries affected by major violence, and it fell substantially in countries with minor violence and sharply in those with negligible violence (World Bank 2011, figure F1.3). Collier and others (2003) have concluded that conflicts account for part of the growing income gap between the poorest countries in the world and other countries.

Conflicts often recur: 90 percent of the last decade's civil wars occurred in countries that had experienced a civil war since 1945 (World Bank 2011, table F1.1). The destruction of conflict contributes to "conflict traps," in which nations that are already poor and exhibit lagging human development are caught in cycles of protracted struggles and entrenched poverty. The problems of fragile conflict-affected states can also spread to their neighbors. An estimated 75 percent of refugees are hosted by neighboring states. Refugees put pressure on the resources of the host state and can bring disease. The World Bank (2011) estimated that Tanzania, a country that is making development gains, loses an estimated 0.7 percent of GDP every year for each neighbor in conflict.

In places where institutions are quickly repaired after a war to ensure political stability and facilitate the resumption of normal economic activity, there can be rapid postwar recovery. In Germany and Japan after the Second World War, the Allied powers helped to build strong institutions of governance, including participatory political institutions. In Vietnam, a commitment to maintain primary health and education during the war, particularly in the north, and intensive investment in repairing infrastructure in damaged areas in the postwar period mitigated the war's impact (Miguel and Roland 2005). However, the conditions that facilitated rapid reconstruction are not present in many modern fragile states.

Methodological Issues

Until recently, there has been relatively little rigorous work on the effects of conflict on individuals and households, including its effects on gender roles and inequalities, because large-scale, high-quality household surveys are generally not available for countries affected by violent conflict. Where these surveys are available, they do not include questions on violent behavior. Even if they have information on violence, researchers are confronted with difficult methodological problems. The foremost difficulty is the rigorous attribution of causality; war-torn countries and war-torn households often differ from peaceful countries and

peaceful households, but it is virtually impossible to design scientific experiments to test the consequences of conflict on people randomly assigned to variations in conflict situations. Furthermore, there may be reverse causality for many variables of interest: violent conflict may be both the cause and the consequence, for instance, of increased poverty. Panel studies, which can track reverse causality and document violent cycles, have been largely unavailable.

An equally serious methodological hurdle is the lack of reliable baseline information on many of the variables of interest in conflict research, such as the levels of violence before a conflict, recall errors, and possible survival bias when using ex post measures to approximate baseline information and, especially in the case of sexual and gender-based violence measures, the possibility that increased incidence may simply be an artifact of improved reporting over time. In addition to these hurdles, there is a general lack of empirical information on gender variables at the individual and household levels, difficulty in measuring intrahousehold issues when investigating gender inequalities, and logistical difficulties and risks involved in both conducting research and acting as a research subject in conflict and postconflict situations. Safety and ethical issues arise, especially in investigations of sexual and gender-based violence and interviews with combatants. Finally, conflict research generally conceptualizes conflict as a discrete event or shock, although conflict is a process that evolves over time and recurs in repeated cycles of violence (Brück and others 2010).

Despite these limitations, recent research on the consequences of conflict has advanced and has benefitted from more and better micro-level data, increased use of innovative approaches, and quasi-experimental variation. A growing number of longitudinal household-level data sets and follow-up household surveys in postconflict settings that integrate prewar data are facilitating new microstudies on the impacts of war (Blattman and Miguel 2010). Confronted with a lack of data from household surveys on violence, researchers have merged household data sets with secondary sources that register violent events and death tolls at the village or district level. An example is the work of Shemyakina (2011) in Tajikistan, which used variation in the number of incidents reported in newspapers at the "raion" (district) level to differentiate violent districts from nonviolent ones. Seeking a more satisfactory solution, Brück and others (2010) proposed adding a generic violence module to standard household surveys. The inclusion of such a module would remediate or offset the inability of survey-based research to infer the effects of violent conflict on schooling, health, and labor market outcomes disaggregated by gender.

To address the issue of attribution of causality, researchers have sought to control for unobserved heterogeneity correlated with both conflict and outcomes of interest as much as possible (e.g., using area or household fixed effects). Researchers have also used instrumental variables to control for endogeneity.

Examples of instrumental variables include proxy measures for the intensity of conflict, such as Shemyakina (2011) used for Tajikistan. The difficulty in identifying convincing instruments and the impossibility of implementing a randomized controlled trial forces conflict researchers to confront the limits of any identification strategy. Panel data, when available, minimize problems related to recall and ex post measures and enable researchers to trace the dynamics of conflict over time (e.g., Guerrero-Serdán 2009). Some studies have constructed panel data by resurveying households that had been surveyed before the conflict, such as Bundervoet, Verwimp, and Akresh's (2009) study in Burundi and Andre and Platteau's (1998) study in Rwanda.

Researchers have often empirically addressed the issue of attribution of causality using difference-in-differences, a nonexperimental technique that compares a conflict-affected group (or region) with its preconflict situation and with a control group (or region) that did not experience the conflict. The validity of this method is contingent on no other changes between the two groups (regions) at the same time as the exposure to conflict. Even if there are no other changes, there may be spillover effects from the conflict-affected group to the nonconflict control group, leading to an underestimation of the effects of conflict. The more that these studies contribute alternative explanations and perform careful checks for robustness and the more that studies by different researchers in different settings are able to observe regularities in the legacy of conflict on human development and gender inequality, the more confident we can be that the result is a valid assessment of conflict consequences rather than a spurious finding. Similar findings from related empirical literature on economic shocks add confidence to the findings.

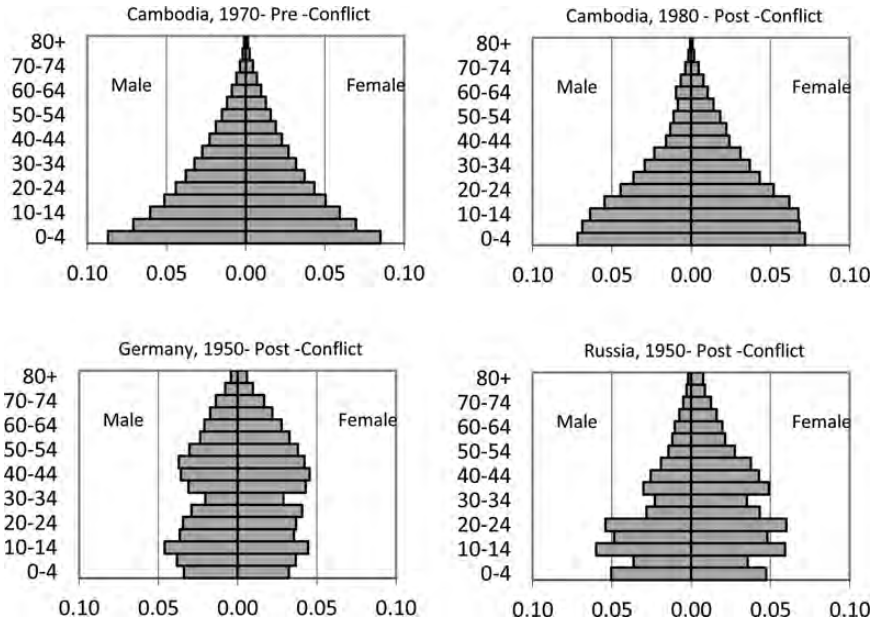
First-Round Impacts of Violent Conflict

First-round impacts of violent conflict include excess male mortality and morbidity as an obvious direct and indirect consequence of violent conflict, resulting in widowhood, sexual and gender-based violence, asset and income loss, forced displacement, or migration. These first-round impacts often result in reductions in household income and consumption, triggering coping strategies that have gender implications.

Mortality and Morbidity

Young adult men typically suffer the highest mortality in conflicts, creating a shortage of working-age males and a high share of females and widows in the population (figure 2 shows missing men in postwar age pyramids for Cambodia, Germany, and Russia). The World Bank (2011) estimated that men constitute 90

Figure 2. Estimated Population Distributions by Age and Sex



Source: Authors' analysis based on data from the United Nations Population Division (2006).

percent of the missing, whereas women and children constitute 80 percent of refugees and those internally displaced by violence. According to reports by the Truth and Reconciliation Commission, males accounted for 74 percent of reported fatalities in Sierra Leone, 87 percent of reported fatalities in East Timor and 84 percent of reported killings and disappearances in Guatemala (Cohen 2011). Similarly, Obermeyer and others (2008) reported that males accounted for 81 percent of violent war deaths in 13 countries over the period from 1955 to 2002. De Walque and Verwimp (2009) used age at marriage to partially control for being a Tutsi and estimated that adult males and educated people were most likely to die in 1994, the year of the Rwandan genocide that killed at least 500,000 people. In Kosovo, Spiegel and Salama (2000) found that men were 8.9 times more likely than women to die from war-related trauma.

The World Health Organization estimated that in the year 2000, there were 310,000 deaths due to wars. These deaths were concentrated primarily among men aged 15 to 44. Nearly half of these deaths occurred in Africa, where there were an estimated 32 male deaths per 100,000 population due to war-related injuries compared with 15 female war deaths per 100,000 population. The disability burden from war was similarly skewed toward men and toward Sub-Saharan Africa (Krug and others 2002).

The extent to which males suffer higher mortality than females varies somewhat with the nature of the conflict. Foreign armies sent to participate in a conflict tend to consist largely of young men, so excess deaths are highly concentrated among this group (Buzzell and Preston 2007). When the conflict is on home territory, women may also suffer elevated mortality, and they do so particularly as an indirect consequence of war. Using census and DHS survey data, Neupert and Prum (2005) estimated that 65 percent of the approximately 2 million deaths during the Khmer Rouge occupation in Cambodia were men. As many as 45 percent of all deaths occurred among people younger than 14 years or older than 60, suggesting that most of these deaths did not occur in combat but were an indirect result of the war. These deaths were distributed more equally between males and females.

Indirect Impacts on Health

Violent conflicts affect population health in ways that extend beyond the direct effects of violence through a combination of increased exposure to infectious disease, acute malnutrition, poor sanitation, and a lack of health services. The evidence suggests that women and children have more exposure to these indirect effects of war on health than men do. Indirect effects occur because health and other infrastructure, such as roads needed for effective health system functioning, may be damaged, and resources may be diverted away from health (Ghobarah, Huth, and Russett 2003). Vulnerability to disease may be further increased by loss of income and assets, population displacement, or orphanhood. The spread of HIV may be increased through sexual violence or otherwise increased interaction between civilians and military groups with higher HIV prevalence rates as well as through increases in refugee movements and commercial sex, and it may be reduced by the better social services often found among refugee camps (Hankins and others 2002; Mock and others 2004). Women are often at higher risk of contracting HIV/AIDS as a result of displacement and have an increased likelihood of being victims of sexual violence. In Rwanda, 17 percent of women who were survivors of genocide, and 67 percent of rape survivors were HIV positive (McGinn 2000).

Refugees can also pose significant challenges to receiving nations. A study of 135 countries from 1962 to 1997 found that for every refugee who left a malaria endemic zone, there were 2–2.7 new cases in the receiving area (Montalvo and Reynal-Querol 2007). Baez (2011) found that the flood of refugees from the genocides of Burundi and Rwanda into a neighboring region of Tanzania had adverse impacts on the health of local children, including a 7 percentage point increase in child mortality and an increase of 15–20 percentage points in infectious diseases. These findings are in line with other studies that caution that neglecting vaccination and disease control efforts in postconflict settings can lead to devastating epidemics and further fatalities (Connolly and others 2004).

Reduced access to health care may also increase mortality from chronic diseases among older people, as it did in Kosovo in 1998–99 (Spiegel and Salama 2000). This reduced access may also have severe negative impacts on women's reproductive health, resulting in gynecological problems, unwanted pregnancies, maternal mortality, obstetric fistula, and preterm babies (McGinn 2009).

Estimations of the contribution of these indirect effects has been hampered by a lack of data and difficulty establishing a satisfactory counterfactual of health outcomes in the absence of war (Murray and others 2002). In a cross-national analysis of 1999 WHO data on Disability Adjusted Life Years, Ghobarah, Huth, and Russett (2003) found that the additional burden of death and disability incurred in 1999 alone from the indirect and lingering effects of civil wars in 1991–97 was almost double the burden incurred directly and immediately from all wars in 1999. Their results are strongest for infectious diseases and traffic accidents. Overall, the authors conclude that women and children are the most common long-term victims of civil war.

Equally critical is the impact of the experiences of conflict on mental health. Several studies note poor psychosocial health after exposure to conflict, with children and adults demonstrating high levels of traumatic symptoms, stress, anxiety, aggressive behavior, and depression. However, these studies often do not identify who was exposed to trauma or compare findings with a control group that was not exposed to conflict (Ajdukovic and Ajdukovic 1999; Bayer, Klasen, and Adam 2007; Cardozo and others 2004; Husain and others 1998; Johnson and others 2008; MacMullin and Loughry 2004; Mollica and others 1997; Pham, Vinck, and Stover 2009). A meta-analysis of 25 years of research on sex differences in trauma and posttraumatic stress disorder showed that females are at greater risk of developing posttraumatic and depressive symptoms after traumatic events, whereas males report more exposure to trauma, even when comparing the frequency and severity of war trauma experienced by civilian male and female victims of war or terrorism (Tolin and Foa 2006). In one of the few studies that uses a tragic natural occurrence (i.e., random abductions by the Lord's Resistance Army) to randomize exposure to violence, Annan and others (2011) reported that women in Uganda experience greater emotional distress than men do from war violence, although men and women report similar levels of violence (approximately 25 percent of both female and male Lord's Resistance Army abductees were forced to beat, cut, or murder people). Unexpectedly, most women returning from these armed groups reintegrate socially and are psychologically resilient.

Widowhood

As result of the excess mortality of men, wars create widows. There is little empirical evidence on the economic status of these war widows, but the little existing

evidence suggests that widows and the households that many of them head are especially vulnerable to the consequences of violent conflict. Brück and Schindler (2009) noted the need to empirically study the changes that war widowhood brings to women and households, including the formation of female-headed households and subfamilies when war widows and their children take refuge in larger, male-headed households. These authors specifically examined the case of widows in the Rwandan genocide. Most of the more than 500,000 deaths from genocide were men, resulting in unbalanced sex ratios after the genocide. These authors found that genocide widows and their children face different and often more severe constraints in earning incomes because of the loss of economic resources tied to men, including male labor and land ownership, and the destruction of social networks. They hypothesized that widows may constitute a group of households that are affected differently by conflict and that require specific attention.

In follow-up work, Schindler (2010) compared male-headed households with households headed by widows in postgenocide rural Rwanda, controlling for the unequal distribution of size and composition between these household types. That study found that 23.3 percent of rural households are female-headed. Widow-headed households have a higher incidence of poverty and extreme poverty when compared to male-headed households, but they show a less pronounced gender division of labor, suggesting that the conflict triggered a change in traditional gender roles within the home. Schindler (2010) also showed that the work intensity of teenage girls, adult women, and widows is significantly higher in conflict regions with fewer males in the population, holding household wealth and community infrastructure constant (Schindler 2010).

A recent analysis of widows in Mali corroborates findings on the poverty and disadvantage faced by widows independent of a conflict situation, presenting evidence on potentially long-term negative consequences for children, particularly girl children (in terms of nutritional status), even when a widow remarries (van de Walle 2011). Widowhood is also strongly associated in developing countries with poor mental health (Das, Friedman, and Mckenzie 2008). The welfare costs of male deaths due to conflict may be reproduced intergenerationally through the constraints faced by widows.

Sexual and Gender-based Violence

Sexual violence (rape and sexual abuse) and other forms of gender-based violence (domestic abuse and beatings) have become distressingly common features associated with violent conflict, although it is extremely difficult to obtain reliable estimates of their incidence and prevalence. These types of violence can be a direct weapon of war used for ethnic cleansing and for punishing opponents, although

carefully collected evidence questions the extent to which such violence has occurred. More commonly, this type of violence may be a crime of opportunity facilitated by the general breakdown of social order, a climate of impunity, and the contagion effect of war violence. Such violence has been widely reported, for example, in the former Yugoslavia in the mid-1990s, where it is estimated that 20,000 women were raped; the Rwandan genocide in 1994, with estimates that approximately 300,000 to 400,000 women suffered rape; Somalia in the early 1990s; the conflict in Kashmir; the 15-year-long civil war in Peru; and the recent civil war in Sudan (See, for example, McGinn 2000; El Jack 2003; Human Rights Watch 1995, 1996; McGinn 2000; Swiss and Giller 1993). A global review of 50 countries found significant increases in gender-based violence following major wars (World Bank 2011).

Estimates of sexual and gender-based violence can suffer in both wartime and peacetime from serious underreporting (i.e., because people are unwilling or afraid to report gender-based violence, especially when the perpetrator is a family member) or overreporting, when incidence statistics are inflated because reporting improves with time (Nordås and Cohen 2011). This situation also occurs in peacetime, making it very difficult to accurately assess the increases in sexual and gender-based violence that are associated with conflict.

Recent evidence highlights variations in the prevalence of sexual and gender-based violence in war situations and relates this variation to combatant norms and group cohesion. This evidence shows that Bosnia and Rwanda are anomalous cases of wartime rape being used as a war weapon for ethnic cleansing. In most other cases, sexual and gender-based violence is a crime of opportunity that is often committed by relatives rather than strangers (Wood 2009, 2006). A study of sexual violence in a pediatric ward in Goma, Democratic Republic of the Congo, showed the predominance of domestic sexual violence over militarized rape. Of 500 pediatric cases treated for sexual violence at the hospital (2006–2008), nearly all were females between the ages of 10 and 18 (Kalisya and others 2011). Also in the Democratic Republic of the Congo, the results of a population-based household survey with a randomly assigned module on sexual violence (a subsample of 3,436 women) yielded a very high prevalence of rape—an estimate of more than 400,000 women were raped in the 12 months prior to the 2007 survey—and showed that the most pervasive form of sexual violence was from intimate partners and that the most conflict-affected provinces were at higher risk of sexual violence (Peterman, Palermo, and Bredenkamp 2011).

A population-based random cluster survey of adults in Liberia (conducted in 2008) is one of the few quantitative studies on the legacy of sexual violence in conflict situations. The study showed that both female and male combatants who experienced sexual violence (42 percent of all female combatants and 33 percent of all male combatants) had worse mental health outcomes than noncombatants

and former combatants who did not suffer sexual violence (Johnson and others 2008). This study made the important observation that men are also victims of sexual violence in conflict situations, but their victimization is largely underreported. The empirical literature on the consequences of domestic violence in peacetime has shown lower productivity and earnings among female victims of intimate partner violence (Morrison and Orlando 1999). Sexual and gender-based violence triggered by conflict may have similar economic outcomes, trapping victims and their families in poverty. It may also have psychosocial and reproductive health consequences. Research that tracks sexual and gender-based violence victims over time alongside appropriate controls is needed to assess the full consequences of violent conflict and to design appropriate interventions.

Migration and Displacement

Violent conflict sometimes disrupts normal life to the extent that people are forced to move elsewhere in the hope of finding more secure conditions for themselves and their families. These movements are sometimes massive, as was the case in Mozambique, where residents of approximately half of all households were internally displaced or were refugees by the end of the war (Brück 2006). By the end of 2009, it is estimated that 42 million people had been forced to leave or flee their homes due to violence—15 million refugees outside their country of residence and 27 million internally displaced persons, with women and children comprising 80 percent of all refugees and internally displaced people (World Bank 2011). Such circumstances leave women almost entirely alone to care for their families under very difficult circumstances.

Displaced people typically face significant asset losses and major economic and social difficulties in the resettlement process. By cutting off large numbers of people from economic opportunities, internal conflict can lead to a vicious cycle of displacement and household poverty from which it is difficult to escape. This situation is made worse by the destruction of social networks and the consequent depletion of important elements of people's social, economic, and political capital, including the previously mentioned constraints that accompany widowhood and female headship.

In Colombia, internal displacement has both income- and gender-differential labor effects. Annual labor income among displaced persons fell by 80 percent and recovered to only half of its predisplacement level after more than a year (Ibañez and Moya 2010). Displaced females work longer hours, earn similar wages, and contribute in larger proportions to household earnings than do rural women who do not move, but this increased contribution does not seem to strengthen their household bargaining power (Calderon and others 2011). Researchers have observed increased domestic violence against women and

violent punishment of children, both of which may be related to the traumatic events that led to displacement.

Kondylis (2010) found that in Bosnia, more able individuals are more likely to be displaced but are less likely to find work after displacement than the remaining population. In a study of the economic performance of people who returned to Rwanda after its 1997 resettlement policy for refugees from previous conflicts, Kondylis (2008) found that returns to farm labor are higher for returnees relative to stayers and suggested that such higher returns occur because upon their return from conflict-induced exile, returnees are more motivated to increase their economic performance. There may also be a positive selection into refugee status among more able individuals than observed in Bosnia.

Despite generally bleak conditions, refugee camps can sometimes offer better services than those available in the refugees' places of origin. However, people may linger in refugee camps as internally displaced people for years, if not decades. One review of global displacement trends estimated the average length of displacement at 14 years (Norwegian Refugee Council 2004). In some settings (e.g., Burma, southern Sudan, Burundi), higher proportions of refugee children were in school than those who stayed behind. Examining the 10 settings that produced the largest number of refugees as of 2002, the Women's Commission for Refugee Women and Children (2004) found that among refugees, enrollment levels decrease after grade 4 for both boys and girls, with gender differentials steadily increasing; enrollment rates were 20 percent higher among boys than girls in first grade and were nearly twice as high at the secondary level. Refugees and the internally displaced reflect highly gender-specific consequences of violent conflict and civil wars.

Asset and Income Loss

Conflicts impose shocks on the population. Recent empirical literature has begun to measure the substantial costs of violent conflict on economies and communities. These costs encompass the most immediate and observable consequences of war, such as damage to the national productive structure and the redirection of resources from productive to military uses, as well as more indirect effects on households' assets and income and other attributes of economic well-being.

Violent conflict damages public resources and services (World Bank 2011). It destroys school infrastructure, displaces teachers, and interrupts schooling, often for years. In Sudan, the destruction of infrastructure included the destruction and closure of schools and hospitals. Immunization, preventive medicine, and malaria eradication services stopped completely in the south, and malnutrition affected most of the children in the region (Teodosijevic 2003). Violent conflict also damages transportation networks and other infrastructure, crippling production in the primary and secondary sectors. In Mozambique, rail and other rural

infrastructure were severely affected (Brück 2006). As the government shifts expenditure toward the military, public investment and expenditure on maintenance experience pressure that further deteriorates public infrastructure. The postconflict legacy of these effects can be extensive.

Private assets are also lost or destroyed during fighting and looting. These assets include houses, land, utensils, livestock, and other productive assets. Livestock is a key form of savings and an insurance substitute in many developing countries that helps to smooth consumption in adverse times. Agricultural production was badly affected during the war in Mozambique, and 80 percent of cattle stock was lost (Brück 2006). In northern Uganda, many people lost all of their cattle, homes, and assets (Gersony 1997; Annan and others 2006). During the 1994 Rwandan genocide, the average cattle stock was halved, and 12 percent of households lost their homes (Berlage and others (2003) In Tajikistan, the civil war damaged the homes and livelihoods of 7 percent of households between 1992 and 1998 (Shemyakina 2011). The Burundi conflict in the 1990s was accompanied by severe asset depletion (Bundervoet, Verwimp, and Akresh 2009). In Colombia, violence significantly affected the efficiency of farm holdings as a result of the disruption of rural labor markets and limits imposed on the operation of larger farms (Gonzalez and Lopez 2007).

These losses can impoverish societies and create or entrench household poverty, leading to persistent cycles of war and poverty (Justino 2006, Forthcoming). However, armed conflict can also result in new opportunities, such as firms and households that take advantage of the redistribution of assets that often follows conflict (Justino Forthcoming).

The ability of households to respond and adapt to the asset and income shocks of war depends on a number of factors, including the often overlooked issue of civilian agency (Justino Forthcoming). Women are often severely asset and land constrained, making it difficult for them to manage farms and households in the absence or death of men. However, women are resourceful and can play important roles in helping households adapt to the shocks of war. Gender roles and inequality are clearly important in terms of how individuals and households experience the loss of assets and income during conflict and how they accommodate these losses. These factors help to explain the interaction between violent conflict and poverty and the channels through which violent conflict can perpetuate household poverty, as described in the section below on second-round impacts.

Second-Round Impacts of Violent Conflict

The massive human losses from violent conflict can exacerbate gender inequalities, as described above, but other impacts of violent conflict can reduce these

inequalities by altering the landscape of opportunities available to women. Several studies have found that households recover some of their earlier economic indices (often roughly measured) within years or decades and manage to limit the damage to human capital accumulation and losses to family members. In Sierra Leone, households' experiences of war victimization during the 12-year period of civil war from 1991 to 2002 had no strong or consistent association with households' assets, although the study only examined ownership of a stove or radio in 2005 (Bellows and Miguel 2006). In Rwanda, McKay and Loveridge (2005) and Justino and Verwimp (2006) found that per capita GDP reached its pregenocide level less than 10 years after the genocide but with increasing levels of inequality.

However, other studies have found longer-term impoverishment following violent conflict, especially for low-income households. In a small panel of rural households in Rwanda, Justino and Verwimp (2006) found that households whose dwelling was destroyed or who lost land experienced a significant decrease in average incomes. They found a 15 percentage point increase in households that were classified as extremely poor between 1990 and 2002. In a large cross-sectional study, McKay and Loveridge (2005) found that rural incomes in Rwanda had recovered to their (very low) 1990 preconflict levels by 2000. However, this recovery was due largely to the improved position of the richer households, who could take skilled labor jobs. In contrast, income levels did not recover for nearly 70 percent of the rural population (especially for the poorest 30 percent), who had small landholdings and little access to wage income.

The way that households recover from the shocks produced by violent conflict is part of their adaptive responses, and women often assume the primary responsibility for ensuring the survival of families. Women take over this pivotal economic role especially when working-aged males have died or have joined (or been forced to join) fighting units and when families are forced to move internally or to another country, and women and children form the majority of those displaced (World Bank 2011).

Below, we review the empirical evidence on some of the second-round impacts of violent conflict on individuals and households. These impacts are associated with responses that differ by gender, including adaptive responses by households to the violent shock. The demographic changes triggered by the sex-unbalanced mortality and morbidity of conflict alter or change marriage and fertility patterns and create opportunities for political participation among those who have been formally excluded. These changes are reviewed next. The destruction of assets and the disruption of state and market institutions due to conflict require households to accommodate sudden sharp declines in household income and consumption. Households reallocate labor between the genders and reallocate resources assigned to children's well-being to cope with the aftermath of these conflicts.

Changes in Marriage and Fertility

People in conflict zones alter marriage and childbearing patterns to minimize the disruptive effects of conflict on their household economy. Households that experience a decrease in income often defer marriage expenditures and childbearing until times are better. This phenomenon has been found in studies of the effects of armed conflict and in many studies of economic shocks. For example, Jayaraman, Gebreselassie, and Chandrasekhar (2009) found that in Rwanda, women living in areas that were more exposed to violent conflict during the 1994 genocide (as measured by the proportion of sibling deaths in 1994) were more likely to marry and have children later than those living in clusters that experienced less violence. Fertility can be depressed as a result of lower coital frequency, as couples are separated by male out-migration and male combat duties, and poor nutritional status and stress lower fecundity and increase spontaneous abortions (Blanc 2004).

Conflict has an additional dimension beyond other kinds of shocks in that conflict-related excess male mortality creates shortages of potential grooms. This situation may increase the search and dowry costs incurred by women's families, as Shemyakina (2009) found in Tajikistan, where women of marriageable age who lived in conflict-affected areas were one-third less likely to be married than women in less affected areas. In Cambodia, a rebound in marriage occurred after the war but could not be sustained due to a shortage of young men of marriageable age (Heuveline and Poch 2007). The shortage of grooms may lead to changes in marriage practices, such as an increase in polygamous marriages and informal unions. For instance, in the case of Colombia, the impact of male mortality due to internal conflict is partially responsible for the increasingly high frequency of consensual unions and, potentially, for female rural to urban migration (Holland and Ferguson 2006).

Fertility is frequently found to rebound once a crisis recedes. In Cambodia, fertility fell by 30 percent during the Khmer Rouge period, but it nearly doubled two years after the fall of the regime and remained above prewar levels for several years (Heuveline and Poch 2007). In Ethiopia, annual conception probabilities fell sharply in crisis years during the 1970–1982 conflict and resumed a more gradual secular decline after 1982, as the country's demographic transition proceeded (Lindstrom and Berhanu 1999). In Angola, Agadjanian and Prata (2001) found that fertility dropped when hostilities peaked and rebounded in periods of peacefulness, and these fluctuations were stronger in regions that were more affected by the fighting.

Alternately, conflict may lead to increased fertility when besieged ethnic or religious groups feel the need to increase their numbers. For example, among the Palestinian population, fertility is substantially higher than would be expected

from their level of socio-economic development (DellaPergola 2001). Families may seek to replace children lost during conflict-related disruption. Some years after the conflict in Rwanda, the number of surviving children among displaced populations was similar to that of the nondisplaced populations (Verwimp and van Bavel 2004). The displaced populations had higher fertility, but this increased fertility was offset by their children's lower chances of survival. Similarly, 30 years after the end of the Khmer Rouge period in Cambodia, Heuveline and Poch (2007) found virtually no difference in the number of surviving children between women who lost children during that period and those who did not, despite the conflict-related shortage of men.

Political and Civic Participation

Evidence suggests that violent conflict can trigger unexpectedly positive civic and political behaviors by women and other groups in the population who are largely excluded from participating in civic and political life during peacetime. Experiences of war violence are highly correlated with greater levels of social capital, community engagement, and peaceful political engagement. Carmil and Breznitz (1991) found that exposure to war led to greater political activism among groups such as Jewish Holocaust survivors and Palestinian victims of bombardment (Punamäki, Qouta, and El Sarraj 1997). Regarding El Salvador, Wood (2003) argued that government violence prompted its victims to support and even join opposition forces out of moral outrage. Similarly, in Sierra Leone, Bellows and Miguel (2006, 2009) found that individuals living in households that experienced mortality, injury, or displacement due to war are more likely to be politically active and to participate in local collective action, as evidenced by voting, attending community meetings, being more politically knowledgeable and engaging in community maintenance projects.

These findings extend to ex-combatants. Employing survey data from northern Uganda, where rebel recruitment generated quasi-experimental variation in people who were conscripted, Blattman (2009) found that abduction leads to greater postwar political participation, with a 27 percent increase in the likelihood of voting and a doubling of the likelihood of being a community leader among former abductees. Ex-combatants were also nearly twice as likely to participate in youth peace clubs. Many of the abductions were brief, especially among those younger than 11 or older than 20 years. However, the average duration of abduction was 15.3 months, and the average abductee reported receiving, witnessing, or perpetrating 11 violent acts (Blattman 2009, 233). Abductees who witnessed the most violence were also most likely to participate politically later in life. However, abduction does not generally affect nonpolitical forms of social activity, suggesting that the effects of war on participation may be uniquely political.

Another positive outcome of peace processes and political transitions has been women's increased participation in civil and political life. As survivors of conflict, the expansion of women's roles in postconflict reconstruction often leads to the emergence of women's organizations and networks. Through these organizations and networks, women mobilize to integrate a gendered perspective and women's representation into peace negotiations and throughout the post-conflict period (World Bank 2011). In Haiti, Liberia, Nicaragua, and Sierra Leone, for instance, transitional governments introduced female staffing and gender-specific service in the police force (World Bank 2011). In Timor-Leste, the transitional administration supported by the United Nations engaged women in rebuilding public institutions (UNIFEM 2009, 30–31). The new constitutions in Uganda, Burundi, the Democratic Republic of the Congo, and Nepal adopted affirmative action mechanisms, especially quotas and cooptation systems, to help empower women economically and politically.

Labor Reallocation

The loss of men in conflict and declines in household income trigger changes in the household allocation of labor. These changes include women's increased participation in the labor market, the so-called "added worker" effect in which women join the workforce to help families weather income shocks and compensate for the absence of an earning spouse or partner. Studies in industrialized countries suggest that the added worker effect was strong during the World Wars and the Great Depression, but it has become less important over time as women's status in the labor market has improved (Acemoglu, Autor, and Lyle 2004). In developing countries, however, recent evidence suggests that aggregate economic shocks yield added worker effects for women in low-income countries and low-income households, whereas "discouraged worker" effects seem to prevail for women in high-income countries and high-income households (Sabarwal, Sinha and Buvinic 2010). For instance, analyzing DHS data for 66 countries over 21 years (1985–2006), Bhalotra and Umana (2009) found that women with more education often reduce their labor force participation in response to income shocks, whereas women with less education increase their participation.

In line with the above findings on economic shocks, a study in Rwanda (Schindler 2010) observed increased labor intensity among teenage girls and adult women in districts with low sex ratios, indicating the absence of males as result of the war. Fernández, Ibáñez, and Peña (2011) found that better-off agricultural households that are targets of violence in Colombia expand their labor market supply and shift to off-farm employment to compensate for the decline in household income produced by the violent shock. Men in these wealthier Colombian households are more likely to participate in off-farm nonagricultural

work, although this work does not fully compensate for drops in consumption. Women attempt to find off-farm work, but with little apparent success. A related study of civilian displacement as result of violent conflict in Colombia (previously cited in this review) found increased labor force participation among forcefully displaced females compared to rural women who remain in rural areas and reduced participation among displaced males, but the study did not test for added worker effects (Calderon, Gáfaro, and Ibáñez 2011). If added worker effects were significant and these displaced households were low-income households, the results of these two studies of Colombia would be consistent with the findings in the literature on differential labor market allocations by gender in response to shocks for low-income versus high-income groups.

Children's Human Capital

Violent conflict negatively affects children's health and schooling. Although households attempt to mitigate this impact (often with remarkable success, under the circumstances), children's life opportunities are typically negatively affected because poor health and schooling outcomes for children can translate into significant differences in their lifetime earnings. Child stunting may be the most persistent negative economic effect of violent conflict. Bundervoet, Verwimp, and Akresh (2009, 558) estimated that the impact of child stunting from the Burundi conflict could translate into as much as a 20.5 percent reduction in adult wages. In terms of schooling, Ichino and Winter-Ebmer (2004) estimated that German and Austrian children lost approximately 0.2 years of schooling, on average, during the Second World War, with stronger effects for those with less-educated parents. This loss of schooling translates into a long-term loss of earnings of 2–3 percent, which, even in the 1980s, may have amounted to 0.8 percent of the GDP.

Health

Children are especially vulnerable to worsening health conditions during and after conflict periods. Hoeffler and Reynal-Queral (2003) found that a five-year war is associated with a 13 percent increase in infant mortality, an effect that persists during the first five years of peace. After decreasing during the decade of the 1980s, the infant mortality rate in south-central Iraq nearly doubled in 1991 and remained at this level throughout much of the 1990s (Ali and others 2003). Parental education can help, but only to a point. In Ethiopia, parental education is associated with lower child mortality in low-conflict areas but is less protective in high-conflict areas, perhaps because of acute distress caused by conflict (Kiros and Hogan 2001). Toole (2000) noted a lack of evidence suggesting any

consistent female (or male) disadvantage in mortality among displaced children. However, the data have been quite limited. Many studies have not included data disaggregated by sex and age in emergency situations (Reed 2008).

Many studies have shown that children's growth is affected by violent conflict, and some studies have reported gender differentials. Children living in high-conflict areas during the 2003 Iraq war were found to be 0.8 cm shorter than those living in low-conflict areas (Guerrero-Serdán 2009). One reason for stunting is the higher incidence of diarrhea in high-intensity conflict districts. Another possible factor, according to the author, is maternal stress. Valente (2011) observed an increased probability of miscarriage in early to mid-pregnancy in high-conflict Nepali districts. She hypothesized that maternal stress, rather than poor access to health facilities, is responsible for this increased neonatal mortality. She also found some evidence for selection effects; that is, healthier women are more likely to become pregnant and to give birth in times of violent conflict.

In an interesting twist, Akresh, Verwimp, and Bundervoet (2011) examined the effects of both civil war and crop failure on children's height-for-age z-scores. They found evidence of child stunting associated with civil war in Rwanda and Burundi but little evidence of gender or wealth differentials. By contrast, they found that a crop failure in southern Rwanda only affected girls, especially those from poor households. They suggested that this child stunting may have resulted from the sudden occurrence of the civil war, leaving parents unable to protect their children. Faced with an anticipated crop failure, poor households may have chosen to protect their sons. This finding corresponds with Baird, Friedman, and Schady (2011), who examined data from 59 developing countries and found that infant mortality rises with negative economic shocks and that female infants' survival is especially sensitive to such shocks. These authors noted the importance of implementing policies that protect the health status of female infants during economic downturns.

Conflict and other traumas, such as orphanhood, can have a lasting impact on child development through biological reactions that have been called "toxic stress," with adverse consequences for health and economic outcomes in adulthood. These reactions can potentially affect the intergenerational transmission of human capital and can have a long-term impact on societies through reduced future adult productivity. In a review of the literature, de Walque (2011) found that although many studies worldwide document the adverse impact of conflict on children and teenagers, there is wide variation in the resilience to conflict shocks. For example, follow-up studies found that among Cambodian refugee adolescents, the intensity of posttraumatic stress disorder and depression declined over time (Sack and others 1993). De Walque (2011) noted factors that contribute to posttraumatic resilience, such as placing orphans with family members, receiving

posttraumatic professional care, and reinstituting normal school life, but much more research is required on the factors that facilitate resilience to traumatic events.

Schooling

Studies in many settings have found that violent conflict has a limited impact on child schooling, even under difficult conditions. It seems that households attempt to keep their children in school. Blattman and Annan (2010) reported that the conflict in Northern Uganda had little impact on schooling for children who had not been abducted, despite the violence experienced by communities. However, abducted male youths lost nearly a year of schooling on average, were less likely to be functionally literate, and obtained lower-skilled work with lower earnings after the war. The length of abduction was strongly correlated with losses in education and literacy: each year of abduction was associated with a loss of half a year of schooling and a 9 percentage point reduction in literacy (Blattman and Annan 2010, 882, 894).

In Rwanda, Akresh and de Walque (2008) found that school-age boys and girls exposed to genocide have 0.5 and 0.3 fewer years of schooling, respectively, and are 15 percent less likely to complete third or fourth grade. The authors argued that the impact of genocide could be characterized as a negative shock that produces low levels of schooling outcomes and that disproportionately affects boys and nonpoor children who had previously enjoyed an advantage in terms of education. During the Cambodian genocide period from 1975 to 1978, the Khmer Rouge closed schools, and individuals with an urban, educated background were more likely to have died. De Walque (2006) found that a higher percentage of Cambodian males of secondary school age in 1975 had less secondary education compared with the preceding and succeeding birth cohorts. Girls were less affected, at least partly because their levels of secondary schooling were far lower than that of males before 1975 (de Walque 2006, figure 9).

Traditional gender roles can work against both boys and girls. Boys' schooling may be more affected by conflict than the schooling of girls because there are fewer expectations for the latter to participate in the labor force. In Colombia, Angrist and Kugler (2008) and Rodriguez and Sanchez (2012) found that conflict had a negative effect on teenage boys' school enrollment as a result of boys' increased labor supply. In contrast, the expectation of higher economic returns from boys' schooling may tilt the balance of resource allocation to boys in conflict-stressed conditions. In Guatemala, Chamarbagwala and Morán (2011) found that in rural areas that experienced a higher intensity of war, girls were significantly more likely than boys to suffer loss of schooling. After the war, the government's girl scholarship program helped to reduce this gap. These findings suggest that

gender-differentiated responses to child schooling are highly conflict and country specific.

Discussion

Violent conflicts have been a pervasive feature of the recent global landscape, especially in countries and regions that are poor and have weak institutions and low levels of human development. Once they begin, wars lead to further increases in poverty and leave nations vulnerable to additional cycles of violence. However, the study of war and its social and economic legacies is difficult. Those who participate in or simply live through wars often suffer from persistent injuries, receive less education, and experience a permanent decline in their productivity and earnings. However, it remains unclear which impacts are most profound and persistent, which disproportionately strike the poor, and how these effects can be contained by local institutions and economic policies (Blattman and Miguel 2010). In particular, there is very little knowledge of the factors that make some individuals and households more resilient than others to the impacts of conflict.

The direct and indirect effects of violent conflict are seldom distributed randomly in the population and are seldom gender neutral. They usually affect one gender more than the other (for example, the burden of mortality due to war violence appears to be disproportionately borne by males due to greater daily exposure to violence in combat), and they may exacerbate or shrink preexisting gender inequalities. Gender inequalities also mediate households' coping responses to the shocks inflicted by violent conflict. Until very recently, however, gender issues were not part of the empirical literature on violent conflict, except for a focus on gender when documenting sexual and gender-based violence in the context of war. As this overview of recent studies shows, gender inequalities shape and are both shaped by the responses of individuals and households to violent conflict. These inequalities are a legitimate and important focus for the policy-oriented literature on conflict.

The literature review reveals, first, the heterogeneity of impacts across contexts, conflicts, and countries for girls and boys, women and men. In Cambodia and Colombia, boys' schooling suffered more from conflict than did girls' schooling. In rural Guatemala, however, girls' schooling was more affected. In Burundi, conflict seems to have especially affected the health of boys, whereas some evidence suggests that girls' health was more affected than boys' health in Iraq. Second, the literature also shows regularities in the effects of conflict on the labor market by gender for countries and households that mirror those observed in response to economic shocks. In some settings, women cope with the loss of men's income by

joining paid employment, whereas in wealthier agricultural households in Colombia, conflict leads men to increase their participation in off-farm paid work.

Third, the evidence shows that conflict changes households' demographic profiles and that families' coping responses include adjustments in marriage and fertility behavior, such as in Rwanda. Fourth, the evidence reveals surprising resilience and adaptability in the responses of many households to the human and economic shocks of violent conflict and underlines women's contributions through alterations to their traditional labor allocation and roles in the family. This evidence suggests that unseen benefits of the costs and destruction of violent conflict may be changes in traditional gender roles and greater gender equality in the household. A follow-up empirical question is how lasting these changes are. Fifth, although many households rebound from the shock inflicted by conflict, women left alone to provide for their families may be particularly vulnerable to poverty that can persist across generations. Targeting widows and their families with postconflict assistance and resources may break this transmission channel and halt the reproduction of conflict-related poverty. Finally, the empirical evidence counters commonly held views, such as the pervasive view that sexual and gender-based violence is a phenomenon that affects only girls and women, that rape is a weapon of war rather than a crime of opportunity, or that girls and women are always worse off as result of conflict (when, in fact, they may be comparatively better off because they remain in school or are able to substitute for men in jobs and political positions). This evidence also highlights the many gaps in knowledge about the gender-differentiated effects of and adaptive responses to conflict.

There are several questions for future research. What happens to families in terms of loss of land, physical and financial capital, and livelihood when conflict occurs? How are these losses distributed within the family? How do gender roles and inequalities affect families' coping responses to these losses? How do these responses differ by gender for the poor and the nonpoor? What are the implications of civil conflict for girls and boys and for women and men in terms of psychological trauma, sexual violence and sexually transmitted infections, and schooling? What are the long-term consequences of sexual violence for female and male victims? What are the factors that foster resilience by individuals and families to the devastation produced by conflict? When, under what circumstances, and for whom does conflict create opportunities?

The concept of "violent conflict" cannot be understood by a single indicator, and different indicators may yield different effects on labor, education, and health. It is therefore of the utmost importance to be as precise as possible about the channels through which violent conflict affects the outcomes of interest. Not all channels are equally harmful; some may be gender neutral, and some may even favor girls and women. This overview has offered an organizing framework to

help identify the transmission channels for the effects of conflict on households and genders and their adaptive responses to it, but there is room for greater precision in future research.

Research on conflict-affected populations will encourage social scientists to move in new directions in several ways. Interdisciplinary collaboration, particularly with the aim of measuring psychosocial outcomes and informing public health practice, is crucial. The usual steps of research design may differ as a result of a lack of sampling frames, population mobility, and the overall difficult conditions in which conflict-affected groups live, but the goal should be to produce, to the greatest extent possible, useful and methodologically rigorous insights that can inform the design of effective conflict prevention and postconflict policies—the foremost objective of any conflict research. Gender is an important variable in this research that highlights particular conflict-triggered vulnerabilities, such as infant girls' nutritional status, boys' schooling deficits and widows' burdens, and shapes specific resilient responses to inform the design of these policies.

Notes

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