The Legacies of Civil War:
Economic Development, Health, and Education

Clayton Thyne
Associate Professor
University of Kentucky
1625 Patterson Office Tower
Lexington, KY 40511
859-396-6871
clayton.thyne@uky.edu

The idea that war is harmful will attract few doubters. From the beginning of World War I to the end of the Cold War, an estimated 187 million people were killed or allowed to die due to human decision (Hobsbawm 1994). Civil wars have been found to be particularly harmful, and this harm has perhaps increased over time as conventional wars have been replaced with new wars that are, in Mueller’s (2003, 507) terms, “waged by packs—often remarkably small ones—of criminals, bandits and thugs.” Indiscriminate use of force and violence against civilians are recurring themes in the current literature on civil wars (e.g., Eck and Hultman 2007; Stepanova 2009). Schools are destroyed, children attacked, rape is used as a fighting tactic, economies are left in tatters, and even professional soccer players from war-torn countries behave violently on the pitch (Collier et al. 2003; Miguel, Saiegh and Satyanath 2011). With a mountain of evidence supporting this viewpoint, it is easy to take the harmful effects of civil war as a given and move on. To do so would be a mistake.

Understanding the harmful nature of civil wars is important for a variety of reasons. For one, intensive study of exactly how and what war harms puts policy-makers in a better position in deciding where to invest scarce resources. A surprisingly meager investment of peacekeepers has been found to dramatically reduce violence against civilians during conflicts, for example (Hultman, Kathman and Shannon 2013). Similarly small investments in mental health and rebuilding schools are apt to support a country in the post-war period. Second, the effects of warfare are often not as obvious as one might suspect. Children exposed to warfare are surprisingly resilient, for example, and providing mental support to parents has been found to have a trickle-down effect throughout the household (Rutter 1985). Likewise, pockets of enterprise can benefit economies even in the midst of civil conflicts, and refugees can serve as a boon to host economies (Alix-Garcia 2007; Whitaker 2002). Finally, understanding the harm
caused by warfare puts both researchers and policy-makers in a better position to prevent the recurrence of conflict. Dubbed the “conflict trap” by Paul Collier et al. (2003), scholars increasingly understand that the factors causing wars to begin, such as weak economies and corrupt governance, often only worsen during conflicts. Rates and areas of decline differ, however. Understanding how war impacts a variety of factors, therefore, is an important step forward in moving conflict countries towards long-term peace.

Though kept separately to add coherence to the chapter, it will soon become clear that the factors discussed in this chapter—health, education and economic development—are related both to each other and in feedback loops with civil war. Education promotes individual and societal health, for example, and weaknesses in each of these factors can be both a cause and a consequence of civil wars. Covering the full scope of the endogenous relationship between these factors would be far too much for a single chapter. Thus, the primary focus here is on war as an independent variable, and scant attention is paid to the feedback mechanisms that may be at work. We begin by examining the influence of civil war on health, focusing on mortality, disabilities and mental trauma. The chapter then moves to a discussion of education, parsing out where conflicts do the most harm and why. We end with a discussion of the impact of war on state economies.

Civil War and Health

Recent research on the effect of civil conflicts on health has burgeoned. Around a decade ago, Fearon and Laitin (2003) estimated the total deaths due to civil wars from 1945 to 1999 to be around 16 million. Since then, researcher have sought to uncover why and how these deaths come about, focusing on such things as deliberate targeting of civilians and less-obvious mechanisms by which people are killed during conflict (e.g., hunger and disease). Researchers
have also gained significant ground in looking beyond deaths to uncover the influence of civil conflicts on health more generally. Disabilities remain a key concern, and an expanding body work focuses on how conflict influences mental health and sexual trauma. Little debate emerges from this body of literature. Civil wars are clearly harmful. The largest areas of innovation, as this chapter will seek to elucidate, comes in uncovering the mechanisms behind the harm, figuring out where civil conflicts inflict the most damage, and attempting to provide useful policy recommendations.

**Mortality**

Death estimates due to civil wars vary a fair amount. As noted above, the 16 million estimate provided by Fearon and Laitin (2003) is frequently cited in the literature. This figure has been cited dozens of times, and even shapes the title of Patrick Regan’s (2009) analyses of how wars might be brought to an end—his effort to understand how to prevent 16 million from becoming “Sixteen Million One.” An effort to present more recent and robust battle death estimates is led by scholars at the Uppsala Conflict Data Program (UCDP). Covering 1989 to 2013, the most recent presentation of these data shows that deaths due to civil conflicts have not coincided with the decline in civil conflicts since the early 1990s. Instead, deaths are sporadic, and recent trends show an incline mainly due to the increased intensity in fighting in Central and South Asia (mainly Afghanistan, Pakistan and Sri Lanka). Though down from two earlier peaks (1991 and 1999 due to conflicts in the Horn of Africa), there is little doubt that death due to civil conflicts remains to be a plight on many states (Themnér and Wallensteen 2014; Guha-Sapir and Van Panhuis 2002; Hoeffler and Reynal-Querol 2003).

Understanding that a single death due to civil war is one too many, scholars have sought to uncover why civil wars are exceedingly bloody. Understanding why millions die in interstate
wars is simple in comparison. When two or more well-trained and well-equipped militaries face off on the battlefield, deaths are likely. However, deaths of this type account for a surprisingly small portion of deaths due to warfare. According to Holsti (1992), only around one-third of the 22 million casualties due to warfare between 1945 and 1989 were due to combat between organized armies of states. The remaining two-thirds were due to less conventional civil wars. And among the 14 million or so deaths due to civil wars during this time period, an astounding 90 percent were civilians (Cairns 1997).

Recognizing that the sheer numbers of civilian deaths is too large to cast aside as a mere bi-product of conflict, recent work has gained significant ground in explaining both why civil wars are so bloody and why civilians are so commonly the victims of the bloodshed. Leading theories focus on the power dynamics that emerge between competing intrastate actors to explain the intentional use of violence against civilians in civil wars (e.g., Hultman 2007; Kalyvas 2006; Wood 2010). From this viewpoint, violence against civilians is employed because it produces positive returns, altering the conflict landscape in favor of the belligerents who attack civilians. Several mechanism explain how these positive returns come about, and recent work helps explain why we might see violence against civilians be either collective or targeted.

Regarding collective violence, a central argument in this vein contends that success in conflict is largely determined by combatants’ control of territory. Violence is used to intimidate the population, helping to secure civilian support and deter civilian defection (Kalyvas 1999, 2006; Kalyvas and Kocher 2007). Though coerced, the resulting support allows those who perpetrate the violence to obtain information about their adversary, fill their ranks with new recruits, and acquire food, shelter and arms (Wood 2010; Wood, Kathman and Gent 2012). Targeting civilians also makes it increasingly difficult for opponents to operate in contested
areas, which may coerce opponents into concessions (Azam and Hoeffler 2002; Valentino, Huth, and Balch-Lindsay 2004; Balcells 2011; Vinci 2005). Though one might suspect that such tactics come from rebel organizations that lack the capabilities to control territory using more conventional approaches, this is not the case. Like rebels, governments use collective targeting of civilians to clear territory and ‘drain the sea’ of support around insurgents (Valentino, Huth and Balch-Lindsay 2004; Kalyvas and Kocher 2007; Lichbach 1995). And while sustained levels of collective violence may produce a backlash in the long-run (Mason and Krane 1989; Kalyvas 2006; Kalyvas and Kocher 2007), the short-term benefits of such violence often outweigh the uncertain long-term consequences (Arendt 1970).

Moving beyond the need to control territory that is common to all belligerents, we see a growing consensus among scholars who focus on the balance of capabilities to explain widespread, indiscriminate violence. This work is closely tied to more general efforts to explain how the balance of capabilities influences the type of warfare that belligerents chose (Balcells 2010; Kalyvas 2005; Lockyer 2010). The main idea is that weaker parties are apt to choose strategies like guerrilla warfare and terrorism, and then move towards more conventional approaches as they strengthen (Byman 2008; Butler and Gates 2009). In a similar vein, weak actors are apt to kill civilians indiscriminately. Kalyvas (2006) links this to information. Though selectively targeting individuals or groups may be the preferred approach, weak actors lacking the information and capabilities for selective targeting are apt to choose indiscriminate violence. Work from Hultman (2007) largely supports this viewpoint, finding that civilians are increasingly attacked after forces suffer battlefield losses. In contrast, such violence is unnecessary following battlefield gains because victories elicit popular support as civilians update their beliefs and seek to join the winning side to assure that they have a part in the
benefits that an eventual outcome may produce (Gates 2002; Lichbach 1995; Wood 2003). The most recent work in this area brings in international actors, finding that civilian victimization increases as one’s opponent receives external support (Wood, Kathman and Gent 2012).

**Disease and Disabilities**

Though deaths remain the focal point among civil war scholars, several other branches of work provide a more fine-grained approach to understanding how conflict hurt health among the survivors. Seminal work in this vein focuses on “disability-adjusted file expectancy” and “disability-adjusted life-years” (DALYs). Compiled by the World Health Organization (WHO), these measure capture both years of life lost due to disease and injury and years of healthy life lost due to long-term disability. An early World Health Organization (2000) report estimated that wars in 1999 alone accounted for 8.44 million DALYs lost. Ghobarah, Huth and Russett (2003) extend this work both theoretically and empirically. Arguing that civil wars hurt health due to changes in living conditions that make staying healthy more difficult (termed “technical regress”) and reducing the pool of government resources that can be spent on public health, these authors similarly find strong evidence that wars harm health in the immediate term. Importantly, they also demonstrate the long-term effects of war on health. On top of the 8.44 million DALYs lost due to direct warfare in 1999, they estimate that almost as many (another 8.01 million) were lost in 1999 due to the lingering effects of civil wars from 1991 to 1997. The message from this work is clear: civil wars are harmful both in the immediate term, and their effects on health linger far into the future.

More fine-grained analyses often focus on specific cases to understand the harmful effects of warfare. Using child height as a useful proxy for the health impacts of civil wars, a variety of studies have shown that exposure to civil war has a significant negative effect. For
example, Bundervoet et al. (2009) find that an additional month of exposure for children in Burundi resulted in z-scores .05 lower compared to non-affected children. Studies showing similar effects come from places like Zimbabwe (Alderman, Hoddinot and Kinsey 2006), Rwanda (Akresh, Verwimp and Bundervoet 2011), and Iraq (Guerrero-Serdán 2009). The mechanisms behind these deleterious health effects are largely due to undernourishment due to the displacement of individuals. A 2009 UNICEF report claims that two-thirds of the undernourished under 5 years of age—a full 98.5 million children—live in conflict-affected countries.

Another mechanism that has drawn increased interest is rape, which has greatly contributed to the spread of HIV and other diseases particularly in Africa (Carballo and Solby 2001). In places like Rwanda, rape was used as a weapon of war, resulting in an increase of HIV prevalence rates from around 3 to 11 percent (DelaCruz 2007). In other instances, girls exchange sex for security, forging relationship with officers in what has been termed “survival sex” (Schoepf 2002; Zack-Williams 1999). Thus, while studies on the impact of civil wars have often focused on the abduction of boys to be used as child soldiers, more recent work has shown that girls are also used as soldiers, and have the added burden of sexual exploitation and forced marriage (Geneva Declaration 2008; WCRWC 2006).

Taken together, work on the non-lethal impacts of civil war on health paints a dire picture. While battlefield deaths are clearly common, an emerging consensus demonstrates that hunger and disease are likely more lethal than munitions (Ghobarah, Huth and Russett 2003; Guha-Sapir 2005). Child deaths due to hunger and diseases accounted for almost half of the 5.4 million deaths from fighting in the Democratic Republic of Congo from 1998 to 2007 (Coghlan et al. 2008), for example, and diarrhea as the biggest killer in Darfur from 2004 to 2007.
The Legacies of Civil War - 8 - Thyne, Clayton L.

(Degomme and Guha-Sapir 2010; Depoortere et al. 2004). Though deaths directly tied to warfare should continue to be an important area of study, we must clearly think beyond the battlefield to understand the true health impacts of civil wars.

**Mental Health**

One final area that has received increasing attention in the literature is the psychological harm caused by civil wars. Much of this work focuses on children—both those who fought and those who suffered away from the battlefield. Regarding the former, a commonly cited figure claims that anywhere from 200 to 300 thousand children are being used by both governments and rebels in ongoing armed conflicts (Human Rights Watch 2007). Non-combatant children include around 20 million homeless and another 1 million separated from their parents (Betancourt and Khan 2008). Though nascent, researchers have gained significant ground in understanding how either direct combat or exposure to warfare influences mental health.

Work coming from both psychology and sociology has long understood that social ties like being in ‘connected’ neighborhoods or schools and belonging to youth groups are integral to positive mental health outcomes (Kliewer et al. 1998; Kliewer et al. 2001; Hirschi 1969). The importance of these attachments is even more profound when children attempt to cope in difficult circumstances (Rutter 1985; Werner 1989). Landmark studies from scholars like Freud and Burlingham (1944) and Henshaw and Howarth (1941) found that exposure to caring adults was integral to children being able to cope with their exposure to warfare in World War II.

More recent studies focused directly on civil wars yield similar conclusions both in terms of the harmful negative effects of conflicts and the mechanisms by which children learn to cope with warfare. Studies have shown that war-related traumatic events contribute to both short-term health distress and longer-term psychopathology in both children and adolescents (Lustig et al.
2004; Barenbaum et al. 2004; Betancourt and Williams 2008; Sany 2010). These effects are astounding when we consider the sheer number of children affected by warfare. Recent studies have shown that 39% of Iraqi refugee children in Jordan had lost someone close to them, and 43 percent had directly witnessed violence (Clements 2007). Evidence elsewhere demonstrates how these experiences influence a variety of outcomes, such as impaired learning and poor achievement in Afghanistan, Bosnia and Herzegovina, Gaza, and Sierra Leone (Betancourt et al. 2008; Elbert et al. 2009; Tamashiro 2010).

**Health beyond the Battle Zone**

Though most studies focus on the health of individuals either directly in war-torn states or the health of those who have fled, a growing body of work analyzes the health impact on people who have no direct ties to civil conflicts. Most of this work focuses on how the spread of refugees can have deleterious consequences for host states (Siverson and Starr 1991; Gleditsch 2007). Migration of individuals away from conflict areas is usually forced, as individuals flee their homes to survive. Migration can also be thought of as an economic coping strategy (e.g., Lindley 2007; Czaika and Kis-Katos 2007). Either way, we have sufficient evidence to suggest that migrants bring diseases with them when they spread to new areas. A study from Baez (2011) in Tanzania, for example, found that the civil war in Rwanda negatively affected adult height, child mortality, and spread infectious diseases. This case coincides with Montalvo and Reynal-Querol’s (2007) broader study showing an increase in malaria rates for countries that host refugees. And while neighbors bear the brunt of the negative health affects due to migration, at least some evidence suggests that civil wars can have a global effect on health. For example, Smallman-Raynor and Cliff (1991) trade the global HIV epidemic to the Ugandan civil
war in 1979, where rape and refugee flows contributed to the spread of HIV throughout the world.

Civil War and Education

Civil wars can devastate a state’s education system. Both the reasons why this happens and the long-term consequences largely mimic those from the discussion of health. Education systems are harmed sometimes as the by-product of warfare at times, and are deliberately targeted at other. The effects are often immediate and long-lasting, contributing to health declines and slower economic growth. In this section, we review the consequences of civil wars on education and seek to shed light on the causal processes behind the destruction.

The Nature of the Problem

Like health, civil wars are destructive at many levels. The destruction of the educational infrastructure has led schools to be closed in a variety of locations (Abdi 1998). For example, begun in 1983, the Sudanese civil war devastated education infrastructure of Sudan, particularly in the South (CIA 2005). Among the few schools that remained open, class sized averaged 94 students per teacher, and few building had necessary material like desks, textbooks or qualified teachers (Shalita 1994; Brander 1996). Lai and Thyne’s (2007) cross-national study of the impact of civil war on education from 1980 to 1997 shows that countries at war experience an average enrollment decline anywhere from 1.6 to 3.2 percent. Research focusing on individual countries yields similar conclusions, including work from Rwanda (Akresh and de Walque 2008), Cambodia (De Walque 2004), Tajikistan (Shemyanika 2011), Guatemala (Chamarbagwala and Morán 2011), and Cote d’Ivoire (Dabalen and Paul 2012). A recent report by UNESCO (2011) on the state of global education provides useful detail. Examining thirty-five states that experienced conflict from 1999 to 2008, they find that 42 percent (28 million) of
the world’s out-of-school, primary-age children come from conflict states. Gross enrollment ratios for secondary schools likewise lags non-conflict areas by 30 percent (48% versus 67%). Unsurprisingly, literacy rates (perhaps the most useful tool for examining basic educational attainment across states) sit at a meager 79 percent for the youth and 69 percent for adults in conflict-ridden areas.

**Mechanisms behind the Harm**

Civil wars destroy many types of physical capital, including roads, bridges and livestock, and other productive assets (Bruck 2001; Bundervoet and Verwimp 2005; Shemyakina 2011). They also damage human capital, resulting in deaths, disabilities and mental trauma. Schools are no different in this regard. Research has revealed two main mechanisms to explain why civil wars have such disastrous consequences for schools.

First, schools make ripe targets for belligerents. Diverse places like Mozambique, Sudan, Angola, Guatemala, Colombia, Afghanistan and the Philippines have seen rebels attack schools to undermine the government (Pedersen 2002). This has led state leaders to close schools in the interest of safety. Schools have been closed for months at a time due to the long-running Israeli-Palestinian conflict (Greenberg 1994), for instance, and Sengupta (2003) claims that the closure of schools has made the innocence of youth the biggest victims of the civil war in the Congo. Beyond undermining the government, both governments and rebels have found schools to be useful sources for the forced recruitment of child soldiers (O’Malley 2010). During the Sudanese civil war, for example, it was not uncommon for the military to raid schools to acquire troops (Amnesty International 2000). The long-term devastation as a result of targeting schools is revealed quite well in Liberia. During fourteen years of warfare, 80 percent of the states 2,400 schools were put out of operation. Around 800 thousand children were driven from schools
during this period, explaining the meager 28 percent literacy rate seen in the country afterwards (Dukuly 2004).

The second way in which civil wars can harm schools is less direct, but likely equally as harmful. As discussed in the next section, civil wars are devastating for a state’s economy. The drop in revenue provides a smaller budgetary pie to be allocated towards education. Compounding the decline in revenue is the shift in government expenditures towards the military in times of conflict. Sen (1990) indicates that poor states, where we see the bulk of civil conflicts, are often unable to meet the basic needs of their citizens due to high military spending and foreign debt. This problem is amplified by civil conflict as states push even more of their declining revenues to the war effort. The government in Sudan increased military expenditures from around 10 to 20 percent during their most recent civil war (Mohammed 1999), for example. This is consistent with Collier et al. (2003), who report a nearly two-fold increase in military expenditures (2.8 to 5 percent of GDP) during periods of warfare. Though Lai and Thyne (2007) do not find evidence of a direct shift from education to military expenditures, they do find an average decrease in educational expenditures 3.1 to 3.6 percent due to civil wars.

Taken together, the evidence clearly indicates that civil wars are harmful for education, whether the path is direct targeting or indirect budgetary problems. Education is strongly linked to the other two processes focused upon in this chapter. Schools can mitigate the mental trauma inflicted by warfare, restore predictability, and provide social support to children (Elbedour et al. 1993; Aguilar and Retamal 1998). Education is also directly linked to an individual and state’s economic health. Psacharopoulos and Patrinos (2004) find that an additional year of education adds around 10 percent to one’s pay in a low-income country. A plethora of work reveals a similarly strong connection between education and economic growth (e.g., Sianesi and Van
Reenen 2003). Thus, understanding how civil wars influence education helps reveal important mechanisms at work when we discuss other consequences of conflict. We now turn to a specific focus on how civil wars influence economic growth.

**Civil War and Economic Growth**

The link between civil conflict and economic growth is perhaps not as obvious as one might suspect. The conventional wisdom is that civil conflicts disrupt economies for a variety of reasons, ranging from destruction of human capital, physical capital, and the diversion of money from economically-beneficial activities like infrastructural development to less beneficial activities like weapons procurement and production. Contrasting viewpoints point to two main areas. First, conflict may spur economic development if investments to fight the conflict results in positive externalities for the economy. Second, while the correlation between civil wars and economic growth may be negative, some scholars question whether we can clearly differentiate between cases where conflict is hurting an economy versus cases where poor economies promote conflict. Empirical analyses derived from both case studies and large-N, cross-national work reveal some ambiguities. However, the overwhelming evidence indicates that civil wars cause economies to weaken. Beyond reviewing the evidence and providing support for this contention, this section attempts to clearly define the causal mechanisms by which civil wars degrade economic growth, which will hopefully put policy-makers in a better position to understand what factors can best be addressed in order to put a post-war country on the firmest footing possible to improve the state’s economic environment.

**Some Debate**
Scholars are not in complete agreement on how war influences a state’s economy, particularly when we consider both interstate and intrastate conflicts. Occasionally referred to as the “war renewal” school, some scholars suggest that war may produce beneficial effects for the economy due to improved efficiency, reducing the power of special interests, spurring technological innovation, and advancing human capital (Olson 1982; Organski and Kugler 1980; Chan 1987; Diehl and Goertz 1985; Russett 1970; Benoit 1973, 1978). This work points to places like Europe to explain that wars can help develop strong institutions, which promote growth in the long run (Tilly 1975; Blattman and Miguel 2010). Wider, cross-national studies have revealed similar outcomes (Stewart 1991; Yildirim, Sezgin and Ocal 2005). It is important to note, though, that most studies that reveal a positive influence of war on a state’s economy focus on interstate conflicts. However, some debate remains when focusing on civil wars. Sri Lanka averaged a 5 percent annual growth rate during its 30-year civil war, for example, though evidence of the harmful economic effects of civil war in places like Afghanistan, Burundi and Somalia fall in line with more conventional wisdom (Snodgrass 2004; Wijeweera and Webb 2009; Ganegodage and Rambaldi 2013).

The bulk of theories and evidence point to an overall harmful effect of warfare in general and civil wars specifically. Coined the “war ruin” school, scholars have provided a plethora of mechanisms to explain why civil wars harm economic growth. The empirical work supporting this viewpoint is vast. Cross-national studies reveal a strong, negative impact of civil wars on both short-run and long-term economic growth (Chen, Loayza and Reynal-Querol 2008; Murdoch and Sandler 2002; Kang and Meernik 2005; Collier 1999; Gyimah-Brempong and Corley 2005; Flores and Nooruddin 2009; Garriga and Phillips 2014). For example, Collier (2007) and Hoeffler and Reynal-Querol (2003) estimate that civil war reduces average yearly
economic growth by 2.3 and 2.2 percent, respectively. Studies of individual cases reveal similar trends, though variations are quite wide compared to these average effects. For example, Stewart and Humphreys (1997) compare nine countries at war to average growth rates for states in the same region not at war. Their estimates indicate that war cost ranged from a high of 113.4 percent of GDP for Nicaragua to a much lower 7.8 percent in Somalia.

Taken together, we see both theories and evidence to support both the “war renewal” and the “war ruin” points of view when we consider all types of conflict. The overwhelming consensus for studies focused on civil wars, however, reveals that internal conflicts are harmful for economies both in the short- and long-term. In the next section, we probe the causal mechanisms that drive poor economic performance for states at war.

**Human and Physical Capital**

One way that we can better understand the harmful effects of civil wars on economic growth is by focusing on the types of damage that conflicts produce. A useful way to differentiate between types of damage is to focus on human capital (human characteristics like knowledge, skills, and health) and physical capital (factors of production like machinery, buildings and roads), both of which contribute to economic growth. Though scholars recognize the endogeneity between these concepts, such that physical capital should have a positive effect on human capita, and vice versa (Caballe and Santos 1993; Graca, Saqib and Philippopoulos 1995), differentiating between the two remains a well-used tool to understand the harmful effects of warfare because the type of capital destroyed influence the rate of recovery (Barro and Sala-i-Martin 2004).

The toll that civil war takes on physical capital is vast, as fighting and looting damage houses, land, livestock and other productive assets (Bruck 2001; Bundervoet and Verwimp 2005;
Shemyakina 2011). Individual production is decreased due to these damages because they remove the means by which individuals can earn a living, making it difficult to recover in post-conflict settings (Justino and Verwimp 2006; Verpoorten 2009). Far from doomed, research shows that some private enterprises can benefit from warfare and pockets of resilience emerge in all conflict settings (McDougal 2008). Producers of staple goods, for example, can benefit from market shocks if their physical capital goes undamaged. However, the net effect of losses in physical capital is almost always negative because most individuals are consumers, and transaction costs increase when infrastructure (e.g., roads and train lines) is destroyed.

Scholars have increasingly turned to human capital to understand the harshest effects of civil wars. While destruction of physical capital harms economic growth, rebounding from such destruction is relatively swift because replacements can be imported, buildings and roads can be rebuilt, and physical capital is often quite weak in conflict states before the war began (Miguel and Roland 2011; Cerra and Saxena 2008; Collier and Duponchel 2013). Thus, scholars increasingly claim that human capital losses reveal the harshest long-term economic impacts of civil war (Barro and Sala-i-Martin 2004; Bellows and Miguel 2006).

Three main pathways help explain how destruction in human capital contribute to slow or negative economic growth. The first is directly related to the earlier discussions on health and education. Deaths, disabilities and psychological trauma due to warfare reduce or remove individuals’ abilities to contribute to household income, which can push vulnerable households below the critical threshold of survivability (Beegle 2005; Bruck and Schindler 2007). And when households suffer deaths or injuries due to conflict, they often choose to replace otherwise productive adults with child workers to compensate for lost income (Dasgupta 1993; Duryea, Lam and Levinson 2007). Though this may help household survival in the short-term, the
impact of lost schooling on the economy is to deplete the future generation’s stock of human capital (Akresh and de Walque 2008; Swee 2009; Merrouche 2006; Rodriguez and Sanchez 2009; Case and Paxson 2006; Maccini and Young 2009; Psacharopoulos and Patrinos 2004). Both forced and voluntary recruitment of child soldiers likewise hurts the capacity of the youth to accumulate skills and education, likely trapping them in long-term, low-productive activities (Blattman and Annan 2010).

A second mechanism by which civil wars hurt economies is by destroying social capital, which refers to societal norms and structures that yield trust, cooperation, and strong governance (Fukuyama 2001; Poder 2011; Kitissou and Yoon 2014; Putnam 1993). Social capital reduces transaction costs from asymmetric information, increasing cooperation in a way that allows for efficient functioning of modern economies (Algan and Cahuc 2010; Knack and Keefer 1997). As explained by Fukuyama (2001), social capital cannot be easily created or rebuilt because it derives from factors outside the government’s control, such as religion, tradition, and shared experiences. Low social capital has been linked to the onset of economic and social failures, including civil war, and further destruction of social capital during conflict is apt to make post-war economic growth all the more difficult (Robinson and Schmid 1994).

A final way in which civil wars damage human capital is the result of how states allocate funds when responding to threats. Early work often claimed that military strength was a modernizing force that promoted economic growth by maintaining stability for effective policy implementation and by controlling actors who would otherwise be slow to change (Halpern 1963; Levy 1966). More recent work, often referred to as the ‘guns for butter’ theory, claims that money allocated to the military takes away resources from social programs (Adeola 1996). Empirical analyses largely support the latter viewpoint, as numerous studies have shown the
deleterious effect of military spending on social programs that are needed for economic growth (Russett 1969; Dixon and Moon 1986; Huang and Mintz 1990; Looney 1990; Apostolakis 1992; Collier et al. 2003; Galvin 2003). Beyond crowding out investment in social programs, military spending harms economic development by increasing inflation as money is printed to pay for the war effort (Deger 1986), increasing external debt as states seek to cover war costs (Smyth and Narayan 2009), and diverting labor from more productive sectors (Deger 1985). These process are likely in any state, but they are compounded by warfare as governments face revenue declines due to lost foreign direct investment, reduced tourism, and capital flight (Phillips 2014).

Though some debate remains, the bulk of theoretical arguments and empirical evidence indicates that civil wars damage state economies, and scholars have gained significant ground in clarifying the mechanisms by which civil wars harm economic growth. One final area deserving of consideration is the influence that civil wars have on neighboring and global economies.

**Economies beyond the Conflict Zone**

The bulk of the literature linking civil wars to economic growth rightly focuses on the states that experience the conflict, as these actors are likely to face the largest challenges in post-war recovery. A newer and growing body of literature looks beyond the warring states’ borders, however, seeking to understand how civil wars influence primarily neighbors and other actors in the region. Scholars like Murdoch and Sandler (2002, 2004) have shown that having a neighbor involved in a civil war reduces economic growth. Two main mechanisms, both of which are linked to literature on the contagion effects of civil wars (Collier et al. 2003; Gleditsch 2002), shed light on this process. First, having a neighbor at war may threaten a government because the conflict may provide cheap arms and cross-border sanctuaries to potential rebels within their own country, decreasing the opportunity costs of challenging the government. Neighboring
conflicts might also produce an emulation effect as citizens see people rebelling due to conditions that they also face, particularly if ethnic similarities span the border (Kuran 1998; Lake and Rothchild 1998; Halperin 1998). The likely response to governments in these situations is to move resources to the military to deter rebellion, which (as discussed above) is likely to harm economic growth.

Second, refugees fleeing a neighboring conflict are likely to harm the host state’s economy due to uncompensated public expenditures related to the care of the refugee population (World Bank 2011). Likewise, economies can be harmed as refugees challenge neighbors for jobs (Lischer 2003) and pressure host governments to get involved in the conflict (Salehyan 2009; Salehyan and Gleditsch 2006). The influence of refugees on a host country’s economy is not altogether bleak, however, and a strong body of evidence points towards several positive economic benefits. Farmers in Tanzania benefited greatly from the increased demand for agricultural goods due to the influx of refugees from Rwanda, for example (Alix-Garcia 2007; Whitaker 2002). A recent study on the refugee camp in Daadab, Kenya likewise revealed several positive impacts of refugees on the host country’s economy, including increased trading opportunities and lower food prices (Nordic Agency for Development and Ecology 2010). Other studies point to a variety of positive impacts for host countries, including the entry of well-educated refugees to staff host country hospitals and universities (Crisp et al. 2009), and economic growth spurred by remittances sent to refugees (Jacobsen 2002; Horst and Van Hear 2002). Though it would be a stretch to say that the economic benefits to countries that host refugees outweighs the costs, there is certainly evidence to suggest that civil wars create trade-offs when it comes to the movement of people.
The Path Forward

The notion that civil war is harmful to health, the economy and education likely surprises no one. In this section, I cover the research that most directly relates to research that has sought to uncover mechanisms by which policy-makers can ease the deleterious consequences of civil conflict.

As with the flow of the chapter, I begin with health. Delineating the specific ways in which these wars harm health—whether it is by intentional targeting of civilians, undernourishment and rape, refugee flows or some other process—is useful because it provides avenues for further study and influence policy decisions about where to invest. Death and warfare go hand in hand, and civil wars are particularly harmful due to the high rate in which non-combatants are targeted. One study that seeks to develop specific recommendations for how to limit these deaths comes from Hultman, Kathman and Shannon (2013). These scholars seek to explain how UN interventions in civil conflicts influence the targeting of civilians. Using unique, monthly-level data on the type and magnitude of UN interventions and the number of civilians killed from 1991 to 2008, these authors find that robust UN peacekeeping missions—those that employ military and police forces—dramatically reduce the number of civilians targeted with violence. Their results are robust and astonishing. When no UN police are on the ground, the expected value of civilian deaths is just under 100. Placing a small UN police force of 200 personnel reduces this to only 14 deaths, and 500 police bring the estimates to near zero. Similarly, an increase of UN military troops from zero to a rather sizable 8 thousand drops the predicted number of deaths each month to under two. Given that the UN often gets involved in the most difficult cases (Gilligan and Stedman 2003), the promising conclusion from this line of work is that UN interventions save lives.
Regarding mental health, a plethora of work has linked social support to helping individuals overcome the consequences of their war experience. Three sources of social support have been outlined to be particularly important: instrumental support (assistance with carrying out necessary tasks), informational support (information and guidance to carry out day-to-day activities successfully), and emotional support (caring and comfort provided by others) (Sherbourne and Stewart 1991). Work focusing on various providers of social support indicates that family members, peers and the larger community are integral to post-war psychological health. Betancourt (2005), for example, found that war-affected Chechen adolescents internalized emotions less and had fewer behavioral problems when their connectedness to these groups increased. Similar findings come from post-war studies in Colombia (Kliwer et al. 2001), Palestine (Barber 2001) and Kuwait (Llabre and Hadi 1997).

Two particularly promising finding focused on children point to avenues for policy intervention. First, caregivers can play a role in providing a ‘protective shield’ during hardship even if the children have lost their parents (Dybdahl 2001; Miller 1996). Second, supporting the mental health of parents, particularly mothers, has been shown to have positive effects for children (Locke et al. 1996; Dybdahl 2001). This work is important because it shows that interventions can help war-exposed individuals deal with mental trauma even if they are cut off from their immediate sources of support—their families. Likewise, supporting adults as they deal with mental trauma is likely to have a trickle-down effect to children, magnifying such an investment. Given that most war-torn states have little access to health care of any type, even a meager attempt to deal with mental trauma is likely to have a significant impact on improving lives.
Improving a state’s education system offers many promising avenues for post-war investment. Evidence indicates that the harm done by civil wars lies both in underinvestment as resources are devoted to the war effort, and in destruction of both physical and human capital necessary for a well-functioning system of education (Lai and Thyne 2007). Thus, re-allocation of funds back towards education following a conflict should be a priority. Investing in the physical educational infrastructure is likewise to produce positive gains not only to education, but in economic growth as a whole.

A second main point of emphasis for improving education is devising a way to train those who have already lost years of schooling by either fighting or fleeing the conflict. A recent UNESCO (2011) report claims that 69 percent of primary school age refugees in UNHCR camps were attending school in 2008. Though this number is respectable under the circumstances, wide variation exists from one site to another, education rarely extends beyond the secondary level, and raw statistics hide high teacher-to-student ratios and weak infrastructure. Thus, improving access to and the quality of education remains a key avenue for further investment. Recent work focusing on demobilization, disarmament and reintegration (DDR) sheds some light on one promising avenue for further investment in education. Phayal, Khadka and Thyne (2014) and Humphreys and Weinstein (2007) find that those who were educated either prior or during wars face difficulties with post-war reintegration. However, even meager training opportunities during the DDR process are apt to ease the reintegration process considerably (Phayal, Khadka and Thyne 2014).
REFERENCES


DelaCruz, Juan. 2007. “A brief contribution to the debate over the impact if HIV/AIDS on economic growth.” MPRA Paper 10841, University Library of Munich, Germany.


AUTHOR BIOGRAPHY

Clayton L. Thyne is an Associate Professor of Political Science at the University of Kentucky. His research focuses on domestic conflict and instability. Specific topics include work on coups d’état, democratization, and international education policy. His most recent work has been published in the British Journal of Political Science, Journal of Politics, and International Studies Quarterly.