



Poverty and Civil War: What Policymakers Need to Know

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DECEMBER 2006

THE BROOKINGS INSTITUTION
1775 MASSACHUSETTS AVE., NW
WASHINGTON, DC 20036

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ISBN: 0-9790376-1-1

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Introduction

From Sierra Leone to Tajikistan and Indonesia's Aceh Province, civil war has erupted in countries suffering from persistent poverty or sharp economic decline. These conflicts sap already depleted national resources and further cripple the fragile economies of some of the world's poorest countries, while claiming millions of innocent lives. They may also suck in neighboring countries, exacerbate regional instability, and require costly military intervention by outside powers. Civil wars often have significant security implications for more distant peoples as they are ideal incubators of transnational security threats such as terrorism, weapons proliferation, criminal activity and infectious disease.

Recent examples of poor countries that have plunged into civil war abound. Sierra Leone was one of the world's poorest countries with a *per capita* GNI of \$180 when its brutal civil war broke out in 1991.¹ The war resulted in the U.N. authorizing the deployment of a 17,500-strong peacekeeping mission, at a cost of \$2.8 billion.² Ivory Coast – once considered a model of relative prosperity and stability in Africa – experienced steadily declining *per capita* GNI which dropped from \$1,120 in 1980 to \$650 in 2000, when civil conflict erupted for the first time since independence.

In Zaire (now the Democratic Republic of the Congo), two full-scale wars erupted in the mid-1990s, ultimately resulting in the deaths of an estimated 4 million people and requiring the eventual deployment of 17,000 U.N. peacekeepers. The conflicts' immediate precipitating factors were external.³ However, domestic factors helped fuel Congolese rebel movements that fought a simultaneous and sustained civil war. These factors likely include decades of intense kleptocracy, lack of basic infrastructure throughout the vast country, inter-communal tensions manipulated by long-time dictator Mobutu Sese Seko and his successors, and dire poverty. In 1995, Zaire's GNI *per capita* stood at \$130, making Zaire the second poorest country in the world. Today, the DRC remains violent in places and highly unstable. The risk of renewed conflict remains high, in part because economic conditions have not improved in any meaningful way: GNI *per capita* remains the second lowest in the world, having dropped to \$120.

While in recent years, civil wars have been all too frequent in Sub-Saharan Africa, they have afflicted every other region as well. In Southeast Asia, the 1997 Asian financial crisis caused a run on Indonesia's currency and that country's sudden economic collapse: after a period of steady growth, real *per capita* GNI dropped to \$670 in 1998, from a post-independence high of \$1,120 just one year earlier. The following year, in 1999, fighting erupted between government forces and independence fighters in the western province of Aceh, Indonesia's fourth poorest province, causing approximately 3000 deaths over a period of three years.⁴ In the Western Hemisphere, Haiti ranks as one of the world's poorest countries. Its *per capita* income dropped drastically from a post-independence high of \$430 in 1991 to \$260 in 1994, following a violent military coup and political upheaval which have prompted the UN to deploy four successive stabilization missions to that country. The political violence was instigated by dictatorial regimes, and is exacerbated by high unemployment rates and vast disparities in income and access to health and education. Yet Haiti's grinding poverty – GNI *per capita* remains below \$400 and has stagnated for over a decade – has certainly also contributed to the ongoing civil strife in that island nation.

The pattern is similar in the Middle East. According to the World Bank, citizens in the West Bank and Gaza have experienced a 30 percent decline in real GDP *per capita* since 1999, before the start of the

second Intifada, which has cost an estimated 3,871 Palestinian and 1011 Israeli lives.⁵ Since the cut off of international aid following Hamas' victory in Spring of 2006, these already dire economic conditions have worsened. According to a recent U.N. report, projections for the Palestinian economy "point to unprecedented unemployment, poverty and social tensions."⁶ Now these conditions combine with political divisions to threaten both civil war between Hamas and Fatah and dissolution of the Palestinian Authority.⁷

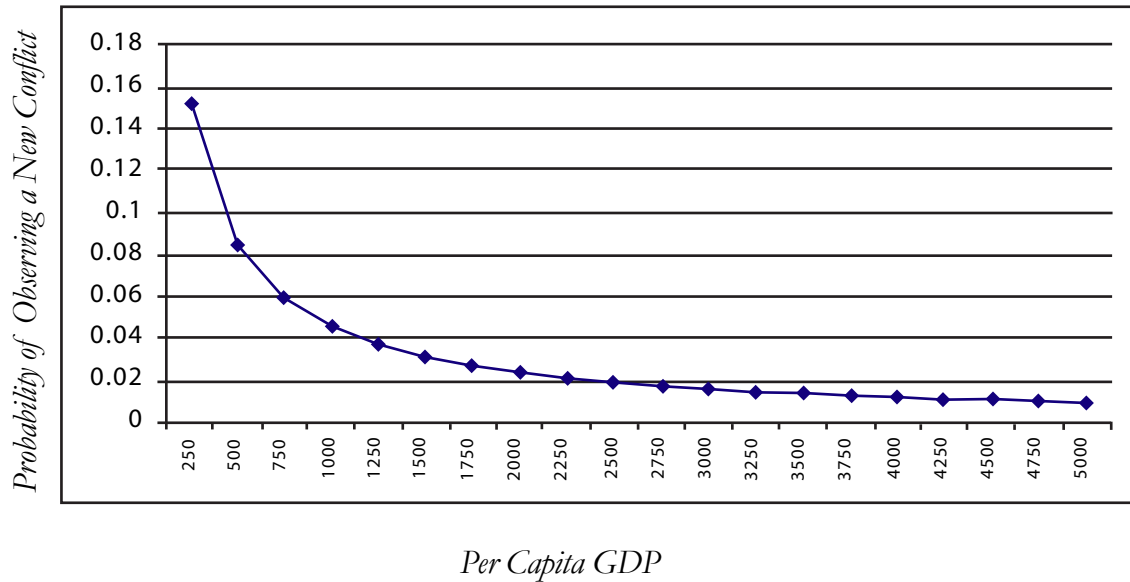
Finally, in Iraq, civil conflict is intensifying and devolving into full-scale civil war. Upon leaving the post of commander of the Multinational Corps in Iraq in late 2006, Lt. Gen. Peter Chiarelli said that finding jobs for "angry young men" and taking them "off the street" was "absolutely critical to...lowering the level of violence" and "just as important as growing the size of their army."⁸ To date, however, relatively little attention has been devoted to the economic drivers of this conflict. No doubt, the civil conflict in Iraq is rooted substantially in sectarian differences that were exacerbated by Saddam's tyranny. It is stoked by foreign jihadists, meddling neighbors and by resentment of the U.S. occupation. Yet, roughly 50 percent of Iraqis were unemployed in 2005 and real *per capita* GNI stands at only a fraction of what it was in the 1980s. Deteriorating economic conditions have almost certainly contributed in some measure to the rising violence in Iraq.⁹

These and other cases of civil conflict may each in isolation offer policymakers some useful insights. Yet, viewed together, they beg an overarching question: is there a significant and demonstrable link between income poverty and the risk that a country will slide into civil war? Could U.S. foreign policy benefit from greater emphasis on promoting economic growth and alleviating poverty? The answers to these questions bear directly on several current challenges to U.S. national security from the Middle East to South Asia and Africa.

Poverty Matters

For years, a debate has raged in academic circles over the principal causes of civil conflict. Is it ethnicity, grievance, rebel greed, topography or venal leadership? Today, an important element of this debate has been resolved: recent academic research on the causes of conflict demonstrates compellingly that countries with low income *per capita* are at increased risk of civil conflict.¹⁰ Recent statistical research on poverty and conflict suggests that for a country at the fiftieth percentile for income (like Iran today), the risk of experiencing civil conflict within five years is 7-11 percent; for countries at the tenth percentile (like Ghana or Uganda today), the risk rises to 15-18 percent.¹¹ The graph below illustrates the decline in conflict risk associated with higher increments of GDP *per capita*.¹²

Figure 1: Risk of Civil War and GDP per Capita, 1960-1999



This finding is strongly corroborated by a broad range of scholarship.¹³ It is important because it challenges the popular theory that civil conflict derives primarily from ethnic, religious or cultural cleavages. Prior research on the causes of civil war emphasized the socioeconomic, political and cultural *grievances* that can lead to widespread discontent and spark rebellion. In an influential 1993 *Foreign Affairs* article on the “Clash of Civilizations,” for instance, Samuel Huntington speculated that the “dominating source of conflict” in the aftermath of the Cold War would be ethnic differences between people with a distinct “language, history, religion, customs, institutions, and... subjective self-identification.”¹⁴ Likewise, Robert Kaplan and Daniel Patrick Moynihan have also presumed that wars caused by ethnic and cultural divisions would predominate in coming decades.¹⁵ Starting in the mid- to late 1990s, however, scholars began to reconsider the grievance hypothesis and its applicability to brutal conflicts in some of the world’s most impoverished countries, like Sierra Leone, Azerbaijan, Cambodia and Afghanistan. They questioned the notion that such wars were fought over ethnic grievances, and suggested instead that “resource wars” are fueled by the “greed” of war entrepreneurs who secure benefits from ongoing and widespread violence in their societies. This observation led to a new research agenda which sought to explain civil conflict as “a way of creating an alternative system of profit, power and even protection.”¹⁶

Nearly a decade later, this literature has produced strong empirical evidence that irrespective of ethnicity’s role, poverty as measured by low national income *per capita* bears a strong and statistically significant relationship to increased risk of civil conflict.¹⁷ Research on the political or grievance-based roots of conflict continues, and scholars acknowledge that conflict is a complex phenomenon attributable to multiple causes.¹⁸ However, recent scholarship does not dispute the finding that *per capita* income has a direct, negative relationship to civil conflict risk.

This paper reviews for policymakers, practitioners and scholars, the latest evidence that low income *per capita* is a major risk factor for civil war.¹⁹ It then examines what we don’t yet fully understand: namely,

why low income *per capita* puts countries at increased risk of civil war, and how certain other factors associated with low income *per capita* may affect civil war risk. By way of conclusion, it suggests some implications for U.S. and international policy.

Low Per Capita Income Puts Countries at Greater Risk of Civil War

Civil wars occur disproportionately in poor countries. In 2002, “more than two thirds of the poorest countries of the world [were] in conflict,” according to the OECD.²⁰ By comparison, middle-income countries are less prone to violent civil conflict, and wealthy countries have little risk of experiencing internal conflict. The evidence that conflict risk rises as *per capita* national income drops derives primarily from a series of widely-cited studies by Oxford University economists Paul Collier and Anke Hoeffler, Stanford’s James Fearon and David Laitin, and Yale University professor Nicholas Sambanis.²¹

All four studies seek to identify the root causes of conflict. Collier and Hoeffler’s second article confirms the results of their first study: it shows that countries which do not experience war are “characterized by a *per capita* income that is more than five times higher than in countries in which wars broke out.”²² Likewise, Fearon and Laitin find that in Africa, the Middle East and Asia, “\$1,000 less in income corresponds to 36 percent greater odds of [conflict] outbreak.”²³ The evidence gathered by Sambanis shows that “[t]he mean per capita GDP in countries affected by civil war at any point from 1960-1999 is less than half that of countries with no civil war experience.”²⁴ These findings are summarized in the table below:

Figure 2: Key Findings on Per Capita Income and Civil War

Source	Finding
Collier/ Hoeffler (2004)	Countries at different income levels have the following risk of experiencing civil conflict: ²⁵ -- at \$250 GDP <i>per capita</i> , a 15% risk of war within 5 years; -- at \$600 GDP <i>per capita</i> , a 7.5% risk of war within 5 years; -- and at \$5,000 GDP <i>per capita</i> , less than 1% risk of war within 5 years. ²⁶
Fearon/ Laitin (2003)	Countries at different income levels have the following risk of experiencing civil conflict: -- at \$579 GDP <i>per capita</i> , a 17.7% risk of war within 1 year; -- at \$2,043 GDP <i>per capita</i> , a 10.7% risk of war within 1 year; -- and at \$9,466 GDP <i>per capita</i> , less than 1 % risk of war within 1 year.
Sambanis (2003)	Average GDP <i>per capita</i> for countries that experienced war within 5 years is \$2,176. Average GDP <i>per capita</i> for countries that did not experience war within 5 years is \$5,173.
Collier/ Hoeffler/ Rohner (2006)	Average GDP <i>per capita</i> for countries that experienced war within 5 years is \$1,100. Average GDP <i>per capita</i> for countries that did not experience war within 5 years is \$5,764.

There are slight variations in the four studies' approach and findings. Some of the variation concerning the precise impact of different levels of *per capita* income on conflict is due to methodological differences, including different definitions of internal conflict.²⁷ Sambanis has noted that misunderstandings and disagreements with respect to coding civil wars are common in this literature and can contribute to differences in findings.²⁸ Yet, pluralism in terms of methodological approaches and conflict data across these studies has allowed for testing the robustness of the findings.²⁹ Scholars have also tested them using both in-depth case-study and cross national statistical methods and other variations in methodology, yet the statistically significant relationship between low income *per capita* and conflict holds throughout.³⁰ Furthermore, data quality has improved.³¹

Evidence also shows that income poverty influences how long civil war will last, in addition to increasing the risk of conflict onset. Fearon as well as Collier, Hoeffler and Oxford University economist Mans Soderbom have found that income per capita is inversely related to civil war duration.³² This result is particularly important given that, by some estimates, civil wars last on average between seven and sixteen years.³³

Income decline

In addition to the importance of a country's level of income *per capita*, a drop in income – measured by a country's *per capita* GDP growth rate – may also foreshadow conflict.³⁴ While the relationship between *changes* in GDP *per capita* and the chance of civil war is not as robust as a country's *level* of GDP *per capita*, there is strong evidence in its favor.³⁵ Collier and Hoeffler find a 1 percent increase in the GDP growth rate reduces the risk of conflict by about 1 percent.³⁶ They suggest that the dual effect of both low levels of *per capita* GDP and slow or negative economic growth – a poor country that is making little if any growth gains – “directly and substantially” increases the risk of conflict.³⁷ Particularly strong evidence for the conflict-inducing effects of negative growth shocks was brought to bear in a 2004 study on conflict in Africa conducted by economist Edward Miguel and others. In order to address methodological concerns about endogeneity in prior analyses of this relationship, Miguel and his peers use rainfall variation as an instrumental variable for economic growth.³⁸ They find that, for African countries, a negative growth shock of five percentage points increases the risk of civil war by nearly 50 percent in the following year.

The conflict trap

It is also clear that poverty and conflict interact in a negative, mutually reinforcing cycle. Because civil wars tend to destroy livelihoods and in some cases entire economies, a 2003 World Bank report co-authored by Collier and others describe the relationship between low income and civil war as a “conflict trap.”³⁹ The report explains that conflict exacerbates conditions of poverty for at least two reasons. First, civil wars hamper economic growth and impede properly functioning market economies. Development economist Lisa Chauvet, along with Collier and Hoeffler have worked on this issue independently and they estimate that following conflict onset, it takes a decade for a country to reestablish pre-war levels of economic activity. They find that on average, economic growth falls by 1.6 percent every year that a conflict continues in a poor country.⁴⁰

Second, the World Bank's report explains that conflict exacerbates poverty by siphoning public resources

away from other budget priorities like health care and education. Higher levels of military spending lead to a “further lowering of welfare.”⁴¹ In peacetime, the average developing country allocates 2.8 percent of GDP to military spending, while during civil war, this average rises to 5 percent.⁴² Some scholars have estimated the costs to GDP of increased military spending in developing countries experiencing conflict: over a period of seven years, this spending leads to income loss of an additional 2 percent of national income.⁴³

The “trap” effect is magnified because in addition to breeding poverty (which itself increases the likelihood of renewed conflict), conflict also breeds more conflict.⁴⁴ As the World Bank finds, “once a country has had a conflict it is in far greater danger of further conflict: commonly, the chief legacy of a civil war is another war.”⁴⁵ Collier determines that countries that have suffered a civil conflict had a 22.3 percent risk of experiencing conflict before the war started; after the war, the predicted risk of a second war jumped to 38.6 percent.⁴⁶ Furthermore, repeat civil wars come at great cost to human life. Renewal of civil conflict in Sudan, Rwanda and Angola, for example, resulted in the loss of millions of lives in the 1980s and 1990s. To date, however, there is no agreement on why conflict increases the risk of further conflict. Some posit that conflicts ostensibly fought over enduring differences based on race or religion are likely to recur.⁴⁷ Others suggest that when conflicting parties suffer great losses, retribution is likely to lead to conflict recurrence.⁴⁸ Still others argue that conflict recurs when peace-building strategies fail to deal with war profiteers who have an interest in war’s continuation.⁴⁹

In sum, there is now little doubt among scholars that low national income *per capita* increases the risk of civil war. We also know that low income *per capita* tends to prolong existing conflicts, and that a decline in *per capita* income can make more countries vulnerable to civil conflict. Because civil war impairs economic performance, exacerbating poverty, poor countries that experience conflict are at risk of getting stuck in a conflict trap.

Why Poor Countries Are at Risk

Despite the robustness of the empirical relationship between low income and conflict, there remains substantial debate as to *why* this relationship holds. There are two dominant explanations of the link between low income *per capita* and conflict. The first emphasizes opportunities for rebellion, while the other focuses on state capacity. Research on several correlates of poverty, especially large youth populations, low levels of education, and natural resource dependence, provides insight into the potential causal pathways through which income *per capita* impacts conflict risk. However, scholars have examined the influence of these various factors with varying degrees of rigor and success. In order to generate more specific policy recommendations that target the causes of a conflict as precisely as possible, future research should address these and other research gaps, refining our understanding of precisely *how* poverty impacts conflict risk.

The first explanation, put forth by Collier and Hoeffler, emphasizes the conditions under which a rebellion becomes financially and militarily viable. In their words, “in order to create and maintain a rebel organization, the rebels have to be paid and military equipment has to be purchased.”⁵⁰ While in most countries, there are some groups willing to resort to armed conflict to attain their aims, only in a small subset of these countries do rebels actually have the financing and military equipment to do so. Rebels

are thus seen as rational actors, and civil war is “the result of unusual conditions that enable a business organization – the rebel group – to be viable during what is typically a very long period of violent conflict.”⁵¹ To support their theory, Collier and Hoeffler identify and test proxies for conditions that make rebellion feasible and sustainable. They suggest, for instance, that rebels benefit from low prices for weapons and military equipment and cheap labor (e.g., recruits are more readily available when income *per capita*, economic growth or male secondary schooling rates are low).

Fearon and Laitin’s interpretation of how low income leads to rebellion is somewhat different: they also seek to identify what makes insurgency “feasible” and “attractive,” but focus on the state’s lack of capacity to deter and defeat insurgencies.⁵² Thus, a poor, weak state is more vulnerable to rebellion. In their framework, important determinants affecting the balance of power between states and rebels include: whether a state is newly independent (and thus, still fragile); political instability in a country; a large population, which requires greater police capacity to suppress insurgency; and oil dependency, which Fearon and Laitin consider to be associated with weak state capacity. For Fearon and Laitin, low national income *per capita* is particularly important: it proxies for a state’s financial, administrative, police and military capabilities. It also allows rebels to recruit “young men to the life of a guerrilla.”⁵³ They argue that high income *per capita* indicates well-developed infrastructure such as roads, and a greater degree of central government control over rural areas. More developed infrastructure and greater government control favor governments over insurgents, who can otherwise hide in less centrally controlled terrain and benefit from better knowledge of the geography and people in rural areas.

Scholars continue to investigate competing hypotheses about how poor countries offer opportunities for rebellion and lack capacity to quell civil violence. While the jury is still out on which hypothesis is more accurate, research on youth bulges, low educational attainment and resource dependence seems to reinforce Collier and Hoeffler’s opportunity cost hypothesis. By contrast, additional research is needed to determine the impact of weak state capacity on conflict outcomes.

Poor countries tend to have large youth bulges

In low-income states, demographic patterns characterized by a large youth population, known as a “youth bulge,” are more likely due to high fertility rates, and may help to explain why poor countries often succumb to civil conflict.⁵⁴ While the relationship between poverty and demographics is complicated, most scholars agree that within countries, the poorest households generally tend to have the most children.⁵⁵ Almost 60 percent of the world’s poor are under 25 years old.⁵⁶ Youth bulges are found mainly in the developing world, and are particularly severe in Africa. Multiple explanations have been advanced to explain this trend. Research shows that parents may have more children in order to cope with the scarcity of basic facilities and environmental resources in impoverished areas.⁵⁷ High fertility rates may exacerbate the ‘poverty trap’: the U.N. Population Fund reports that “[l]ong-term demographic and economic data indicate that high fertility raises absolute levels of poverty by slowing economic growth, reducing the poverty reduction that growth would have helped deliver, and skewing the distribution of consumption against the poor.”⁵⁸

Research has linked youth bulges to conflict risk, lending support to Collier and Hoeffler’s argument that poverty increases opportunities for rebellion because large numbers of youth provide a ready potential

supply of rebel combatants. For example, a recent Population Action International report finds that, “[o]n average, the decline in the annual birth rate of five births per thousand people corresponded to a decline of about 5 percent in the likelihood of civil conflict during the following decade—descending from more than 40 percent likelihood in the earliest phase of demographic transition to less than 5 percent in the latest.”⁵⁹ Henrik Urdal of Oslo’s International Peace Research Institute finds that a youth bulge, defined as the percentage of the total adult population that is aged 15 to 24 years old, in combination with high infant mortality rates (often a proxy for poverty) has a statistically significant relationship to civil war. Specifically, all else being equal, countries experiencing youth bulges of 35 percent run three times the risk of conflict compared to countries with youth populations equivalent to the median for developed countries.⁶⁰ Furthermore, the conflict-inducing effect of youth bulges is particularly severe for countries with negative growth.⁶¹ In a policy paper for the Millennium Challenge Corporation, Humphreys and University of Michigan scholar Ashutosh Varshney note that, with the exception of the former Yugoslavia, all recent episodes of mass violence have taken place in countries with high ratios of youths to adults – roughly two youths for every one adult, using 25 years of age as the threshold separating the two.⁶²

Education levels tend to be low in poor countries

Low educational enrollment is also related to poverty and bears relevance to the debate on why poverty influences conflict risk. Clearly, other factors, such as societal gender norms, impact education participation rates in a country, but overall, the under-educated tend to be concentrated in the poorest countries.⁶³ In the years 2000 to 2004, while net secondary school enrollment was 92 and 91 percent for girls and boys in industrialized countries, respectively, these figures were 26 percent and 30 percent in the least developed countries.⁶⁴

While the empirical literature on conflict has not focused as closely on educational attainment as it has on other factors like *per capita* income, some research indicates that the level of education is negatively related to conflict risk. The Political Instability Task Force found that secondary school enrollment has a statistically significant, negative relationship with conflict risk.⁶⁵ Collier and Hoeffler have also found that increasing enrollment rates in secondary schools by 10 percent can reduce the average risk of conflict by three percentage points, and that male secondary school rates are negatively related to the duration of conflict.⁶⁶ Their explanation for this relationship is that as educational attainment rises, the potential income that rebel recruits would have to forgo in order to join a rebellion rises, making it less likely that rebellion will occur. Some recent examples fit this explanation well: for instance, survey data from ex-combatants in Sierra Leone’s civil war indicates that most recruits were young and poor, and close to 80 percent had left school before joining a rebel group, in part due to school closings as the country’s infrastructure deteriorated in the lead up to the war.⁶⁷

Research on the relationship between levels of educational attainment and conflict risk remains preliminary, however. As Sambanis has noted, the quality of education (e.g., the degree to which ideology, such as nationalism, colors public school educational materials) may be as relevant to rebel recruitment as the level of education.⁶⁸ Furthermore, it is possible that in the presence of other conditions – a youth bulge and high unemployment, for instance – high levels of education may *increase* the risk of conflict, due to the frustration of unmet expectations.⁶⁹ Brookings Fellow Omer Taspinar finds that increasing poverty,

inadequate education levels (due to lack of access to, *and* poor quality, education) and rising unemployment contribute to frustration, radicalism and support for political violence in Islamic countries.⁷⁰ Further research is needed to clarify education's role in contributing to conflict.

Poor countries tend to be natural resource-dependent

Another related area of research that has generated theories about why we observe a link between poverty and conflict centers on an economy's dependence on natural resources – including oil, minerals, agricultural and lootable commodities. Conflict research on this topic builds upon an extensive economics literature demonstrating that, on average, countries that are largely dependent on exports of high-value natural resource commodities – including many countries in Africa – experience slow GDP growth relative to resource-poor countries in East Asia, for instance.⁷¹

Natural resource dependence has been linked both to the opportunity for rebellion argument, and to the weak state capacity theory. Some studies support the concept of rebellion opportunity: for example, one recent study found that only high value natural resources that rebels can easily capture and extract – “lootable” resources such as alluvial diamonds – impact the likelihood of war.⁷² For example, rebels did capture, and may have been motivated by the prospect of, alluvial diamonds in Sierra Leone, Angola and Congo, and many analysts note that this funding source caused these wars to drag on for much longer than they otherwise would have.⁷³ Other arguments stress the impact of natural resources on state capacity and conflict risk. However, scholars differ on whether resources bolster or diminish state capacity. Resources may decrease the likelihood of conflict, because governments can direct their resource wealth towards effective bureaucracy, police, and military capacity that can help to defeat opposition. This explanation applies especially well to the case of wealthy Gulf States such as Saudi Arabia.⁷⁴ The opposing view posits that countries rich in natural resources are less likely to rely on tax revenue, and thus may have little incentive to be responsive to their citizens.⁷⁵ However, the relationship between natural resource dependence and a country's risk of conflict remains disputed, despite strong evidence to support a link between the two.⁷⁶

Further research needed

These related findings afford useful insights but, pending further research, it remains difficult to determine which interpretations of the role of low income *per capita* in precipitating conflict holds in different contexts. To better test Collier and Hoeffler's explanation, Sambanis suggests using a more direct measure of the opportunity cost of rebellion, such as unemployment. High unemployment indicates a weak job market, which diminishes the opportunity costs of participation in rebellion.⁷⁷ Yet in developing countries with weak or nonexistent statistical data collection agencies and large informal economies, organizations such as the World Bank and the U.N. must collect unemployment data through household surveys. Obtaining reliable and comparable data through this method is challenging and the data often remains incomplete.⁷⁸ Still, as data improves and more innovative measurement techniques are developed, further research on these aspects of opportunity for rebellion should be possible.

Additional research is also needed to develop theory and contribute empirical evidence on state weakness. Proxies for state capacity other than income *per capita* – such as a government tax revenues *per capita* – should be developed and tested in order to improve our understanding of what aspects of state

capacity matter most.⁷⁹ Sambanis underscores the importance of attempting to disentangle state capacity issues from factors like authoritarianism and corruption, which may help states that have low income and weak public services quell opposition and rebellion through bribery.⁸⁰

Further research could also shed light on alternative explanations of the relationship between low national income and conflict risk. For instance, in addition to weakening state capacity and lowering the opportunity cost of rebellion, low income per capita may erode a country's "culture of peace."⁸¹ Where public education systems and state institutions fail to instill basic human values such as respect for human dignity, especially among vulnerable children growing up in conditions of extreme income poverty and destitution, violence can become normalized. Anecdotal evidence suggests that in places where violence has become the norm and a "culture of violence" has set in, particularly among the world's most destitute countries, this has contributed to a rise in prolonged, brutal civil conflicts.⁸² Preliminary research on indicators for the presence or absence of a culture of peace at the national level suggests some promising leads, but further empirical analysis is needed.⁸³

Additional research on *why* poverty increases conflict risk would better enable decision-makers to prioritize among a variety of policy recommendations advanced in this literature. These include: deploying post-conflict development assistance peaking in the first five years, and for ten years total after conflict ends; making aid more poverty-focused in recipient countries; designing frameworks such as the Kimberly Process to prevent rebels from exploiting lootable, high-value commodities like diamonds; encouraging poor countries to diversify their economies; improving legal accountability in weak states; and investing into educational programs that promote and support a culture of peace.⁸⁴ Yet, despite this remaining gap in the research, we now know enough to glean some core policy prescriptions.

Policy Implications

By and large, the overarching and crucial policy recommendation emerging from research to date is the need to spur economic development and reduce poverty in developing countries, especially in the poorest states, in order to reduce civil conflict risk. While other factors associated with poverty may help drive conflict, the enduring robustness of low income *per capita* as a risk factor in a wide range of conflict studies leaves little doubt that policies that increase *per capita* income in the poorest countries will reduce their conflict risk. As Collier and his colleagues state, "if... whatever factors that are genuinely causal are highly correlated with income, then policies which increase income are likely to reduce the risk of conflict, and countries with low income are likely to be more at risk than those with higher income."⁸⁵ Sambanis holds that economic development on its own is insufficient to reduce the global incidence of civil conflict, but he also argues that in combination with conflict prevention measures, "raising levels of economic development will reduce the overall prevalence of political violence in the world."⁸⁶

Crucial to achieving this goal are improved economic policies and responsible governance in developing countries. Yet policy changes in the developing world must be coupled with effective developed country support, including: further debt relief; increased market access, including through the elimination of harmful agricultural subsidies; improved incentives for private sector development, particularly job-creating small and medium domestic enterprises and foreign direct investment; sustained support for civil society, the free press, women's rights and democratic institution-building; and more concerted efforts to

prevent and terminate conflict, and to rebuild post-conflict states. Another important tool of particular interest to conflict researchers is foreign assistance. Since the 1990s, substantial evidence has shown that aid can be an effective policy instrument for promoting growth and thereby reducing poverty in low-income countries.⁸⁷ Because foreign assistance tends to have greater beneficial impact in countries with good policy environments, however, allocating aid to weak or failing states remains a matter of debate, and a challenge.⁸⁸ Nevertheless, preliminary research on aid to “poorly performing” countries offers several important arguments in support of increasing development assistance to weak and failing states.⁸⁹

First, some scholars argue that while weak states may be aid-ineffective environments, there are important humanitarian, financial and security reasons for not leaving these countries behind. A recent study estimates that 80 percent of those living in extreme poverty, or upwards of 500 million people, live in states, which, by virtue of their weak institutions or poor policies, are difficult to assist.⁹⁰ Collier’s research shows that once a country slides into extreme poverty, it tends to remain what the World Bank terms a Low Income Country Under Stress for 56 long years, costing the affected country and its neighbors an estimated \$100 billion in lost income.⁹¹ The price of experiencing civil war is higher still. Collier and Hoeffler estimate that the average conflict-torn developing country loses at least 105 percent of its pre-war GDP simply by virtue of experiencing conflict, and can cause neighboring countries to lose 43 percent of their pre-war GDP. Assuming the average GDP of low-income countries is \$19.7 billion, Collier’s conservative estimate is that the average civil war today costs developing countries about \$54 billion.⁹² A recent study commissioned by the U.K.’s Department for International Development suggests that for every £1 (\$1.84) spent on conflict prevention (including development assistance) in countries like Rwanda, Sudan and Afghanistan, the international community could save on average £4 (\$7.58) on expenditures in peacekeeping missions, humanitarian assistance and nation-building.⁹³

A second argument in favor of development assistance to low-income weak states is that many impoverished countries have the capacity to absorb higher levels of assistance than they currently receive. Development economists Victoria Levin and David Dollar find that some of the world’s most impoverished and weak countries – such as Nigeria, Niger and Republic of Congo – are “aid orphans” that receive less aid *per capita* than is justified by both their level of poverty and institutional performance, while Collier and Dollar find that countries like Honduras, Lesotho and Uganda are receiving far too little, sustained economic assistance.⁹⁴ These findings are consistent with a recent OECD Development Assistance Committee report, which concludes that while overall aid flows to the developing world have become more poverty-driven in recent years, a “disproportionate share of aid has gone to middle-income and less poor countries... compared to what a pattern of allocation driven just by poverty criteria would imply.”⁹⁵ Furthermore, Collier and Hoeffler argue that weakened post-conflict countries are especially capable of absorbing large volumes of aid.⁹⁶ Mozambique, for instance, received large amounts of aid and has achieved high rates of growth since the end of its civil war in 1992.⁹⁷ Collier and Hoeffler have estimated the effect of aid on a state with the characteristics of the average aid recipient country: in combination with improved government policies, they find that an aid increase of one dollar *per capita* in a low-income country sustained over a five-year period reduces the risk of conflict by about 30 percent.⁹⁸

Third, under certain conditions, aid to weak states may be effective irrespective of poor governance and the weak institutional environments in these countries. Several studies show that recipient countries’ quality of economic governance notwithstanding, development assistance has been an effective policy

tool for promoting growth in low-income countries, so long as aid levels remained below 25-40 percent of GDP.⁹⁹ Other scholars have shown that aid with short-term impact – aid to build roads and other infrastructure, to support agricultural and other productive sectors, and budget support – has helped spur economic growth within a short, four-year timeframe, even in countries with weak institutions or poor policies.¹⁰⁰ One study finds that aid has had beneficial impact on policy reform in a small set of countries with especially poor policy environments, although it appears to be less effective in smaller countries.¹⁰¹

Finally, very preliminary policy analysis suggests several poverty reduction strategies that may be effective in weak states. Collier's research shows, for example, that aid other than technical assistance, as well as investment into secondary education, can help even the weakest and most impoverished states "turn around," effectively steering them on a path toward economic growth and policy reform.¹⁰² As soon as a process of policy and institutional reform begins in weak states, technical assistance can then help accelerate economic growth and reduce poverty. The World Bank suggests providing more direct support for basic services such as health and education in failing states by splitting up provision into services that can each be delivered by a U.N. agency: UNICEF, for instance, might be tasked with child immunization in a failing state.¹⁰³ A more radical approach is to establish "independent service authorities," similar to the decentralized health management system created in Burkina Faso, which could be accountable to donors and responsible for the delivery of social services in low-income countries where governments have failed.¹⁰⁴ Alternatively, channeling humanitarian aid either through government agencies or NGOs to provide relief as well as support for basic services may also be effective.¹⁰⁵ Ultimately, however, additional research on potentially effective aid instruments in weak states remains sorely lacking and is urgently needed.

Despite these initial research findings and the emerging scholarly consensus that low national *per capita* income heightens the risk of civil conflict, global poverty alleviation as a means of enhancing regional and international security has not been a top policy priority, particularly in the United States. U.S. foreign assistance overall has increased in recent years. The most recent figures from the U.S. Agency for International Development indicate that U.S. Official Development Assistance (ODA) rose from \$19.7 billion in 2004 to \$27.5 billion in 2005, and now amounts to 0.22 percent of GNI.¹⁰⁶ Yet this results substantially from increases to Iraq and Afghanistan, which, as a recent Center for Global Development analysis shows, mask a *decrease* in aid to the rest of the world.¹⁰⁷ Most of the additional funding went to Iraq, which received \$7.2 billion in additional assistance in 2005. U.S. aid to Afghanistan nearly doubled from 2004 to 2005, while assistance to the rest of the world dropped slightly from \$15.9 to \$15.7 billion. Despite these increases, the U.S. still ranked second to last among OECD donor countries in terms of official development assistance as a percentage of GNI in 2005. Moreover, increases in emergency humanitarian assistance and to the President's Emergency Plan for AIDS Relief (PEPFAR) are salutary, and will help save lives. Yet this additional funding will do nothing to alleviate poverty in, or strengthen the capacity of, weak and failing states.

The President's Millennium Challenge initiative also represents a significant new U.S. investment in development. Yet its focus on providing assistance to countries with strong policy environments already conducive to reform means that the poorest, weakest states are not eligible for this increased assistance. The list of 24 countries that the Millennium Challenge Corporation identifies as eligible for assistance in fiscal year 2007 excludes the world's weakest states.¹⁰⁸ Yet as a recent paper from the Center for Global

Development notes, while aid to the poorest countries is inherently risky, it should be seen by donor countries as a form venture capital – high risk but with potentially high rewards.¹⁰⁹

Ultimately, reducing the overall incidence of conflict by stimulating economic growth and alleviating poverty in the world's poorest countries would help mitigate threats to U.S. and international security. For, when conflicts ignite, they impact directly the lives and livelihoods of those in war zones, but these wars can also destabilize entire regions, as did Liberia and Congo, and require costly international peace-keeping and humanitarian interventions. In addition, simmering conflicts can incubate virtually every type of transnational security threat. Conflict zones have been exploited by terrorists to lure foot soldiers and train new cadres—as in Bosnia, the Philippines and Central Asia. Al Qaeda blossomed in conflict-ridden Sudan and originated in Afghanistan, where the network first established training camps and bred approximately 20,000 militants who now operate in South and Southeast Asia, Africa, Europe and the Western Hemisphere. Al Qaeda is recruiting and readying future generations of Jihadis in conflicts from Kashmir to Chechnya and Iraq. At the same time, war zones provide the optimal anarchic environment for: international criminals as in Haiti and Moldova; drug producers and smugglers as in Afghanistan, Tajikistan and Colombia; weapons traffickers as in Somalia and West Africa; and deadly pathogens as in Congo, Angola and Uganda. In extreme cases, conflict results in state failure, as happened in Somalia and Afghanistan. When states collapse, the climate for predatory transnational actors is improved exponentially.¹¹⁰

U.S. foreign policy has all but ignored poverty alleviation and the destructive, costly cycles of conflict and poverty that plague many developing countries, and it currently fails to fully reflect the knowledge imparted by recent research on poverty and civil war. Indeed, combating poverty and improving governance in weak states is today the weakest area of U.S. foreign assistance programs.¹¹¹ To bolster U.S. security, President Bush instead stresses the virtues of promoting democracy despite setbacks in Iraq, Lebanon and the Palestinian Territories. Yet if the goal of democracy promotion in Iraq and elsewhere is laudable, research on the economic sources of civil war suggests that little progress is likely to be made in such countries absent a concomitant well-funded, comprehensive poverty alleviation strategy that includes the world's poorest countries.¹¹² Given the potential conflict prevention benefits that poverty alleviation would offer, as well as the significant transnational human and economic costs of civil conflict, it is past time we refocus our national security priorities and investments to reflect what we now know about poverty's significant role in fueling civil conflict.

¹ Unless indicated otherwise, data for this section is based on GNI per capita expressed in US dollars, using the Atlas method, and was drawn from the World Bank's World Development Indicators, 2006.

² United Nations, "U.N. Mission in Sierra Leone - Facts and Figures," available at <http://www.un.org/Depts/dpko/missions/unamsil/facts.html>.

³ The conflicts' roots are complex, both civil and international. In 1996, persistent attacks against Rwanda by perpetrators of the Rwandan genocide based in Zaire sparked Rwandan military intervention, initially to separate refugees from the genocidaire and to enable their peaceful repatriation. Thereafter, Rwandan involvement escalated and several neighboring countries joined with Rwanda in supporting the rebel movement that some months later drove long-time dictator Mobutu Sese Seko out of the country. In 1998, Rwanda again invaded Western Congo, this time to try to topple President Laurent Kabila. This brazen operation provoked at least five other countries to intervene in Congo and sparked what has been called "Africa's first world war."

- ⁴ Michael Ross, "Resources and Rebellion in Aceh, Indonesia," unpublished paper for the World Bank/Yale University project on the "Economics of Political Violence," 5 June 2003. See also: "Aceh Public Expenditure Analysis Shows Record Rise in Revenues but Spending Must Target Effective Services to Reduce High Poverty Levels," World Bank, 12 September 2006, available at <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/INDONESIAEXTN/0,,contentMDK:21048168~menuPK:224605~pagePK:2865066~piPK:2865079~theSitePK:226309,00.html>.
- ⁵ B'Tselem, "Intifada Fatalities," October 15, 2006, available at <http://www.btselem.org/English/Statistics/Casualties.asp>. This includes Israeli civilians and security forces killed by Palestinians, as well as Palestinians killed by Israeli security forces and Israeli civilians.
- ⁶ "U.N. Trade Body Warns of Palestinian Economic Collapse," *Associated Press*, 12 September 2006.
- ⁷ The World Bank forecasts a further decline of 27% in 2006, due to limitations on donor assistance to the Palestinian Authority. See: World Bank, "West Bank and Gaza: Economic Update and Potential Outlook," 15 March 2006. See also: Guy Chazan, "Chaos Could Doom the Palestinian Authority: Leadership Void in Territories Would Put Onus Back on Israel, Thwart Withdrawal Plan," *Wall Street Journal*, 11 August 2006.
- ⁸ Department of Defense, Press Briefing with Lt. Gen. Peter Chiarelli, U.S. Army Commander, Multinational Corps Iraq, 8 December, 2006, available at <http://www.globalsecurity.org/military/library/news/2006/12/mil-061208-dod01.htm>
- ⁹ World Bank, "Data Sheet for Iraq," 27 July, 2006, available at <http://siteresources.worldbank.org/IRFFI/64168382-1092419012421/21008619/iraqdatasheetjuly2006.pdf>. See also: "World Bank Iraq Data Sheet," 1 July, 2006, available at http://siteresources.worldbank.org/IRFFI/64168382-1092419012421/20990277/Datasheet_MNCO2_July-2006.pdf.
- ¹⁰ Empirical research on the relationship between national poverty and international war, by contrast, remains inconclusive. Some scholars maintain that when states are wealthier, they are likely to have higher trade volumes, and fighting against a trading partner would be committing "commercial suicide." Others argue that wealthier states have the resources to wage war and are therefore more likely to do so. For a recent article reviewing empirical findings on national income and conflict, see: James L. Ray, "Constructing Multivariate Analyses (of Dangerous Dyads)," *Conflict Management and Peace Science*, 22, 2005, pp. 285-7.
- ¹¹ Paul Collier and Anke Hoeffler, two prominent scholars in this field, estimate the risk to be 7.5% at the 50th percentile for GDP per capita, and 15% at the 10th percentile (Paul Collier and Anke Hoeffler, "Greed and Grievance in Civil War," *Oxford Economic Papers*, 56, 2004, pp. 563-595). Two other prominent scholars, James D. Fearon and David D. Laitin estimate the risk for countries at the 50th percentile in terms of income to be 10.7%, and 17.7% for countries at the 10th percentile (James D. Fearon and David D. Laitin, "Ethnicity, Insurgency and Civil War," *American Political Science Review*, 97:1, 2003, pp. 75-90). See Figure 2 for more detail. Illustrative examples of countries at the 10th and 50th percentile in terms of GDP per capita in 2005 USD were drawn from the IMF's World Economic Outlook Database, September 2006 Edition, available at <http://www.imf.org/external/pubs/ft/weo/2006/02/data/index.aspx>.
- ¹² The graph is drawn from Macartan Humphreys, "Economics and Violent Conflict," working paper, Harvard University, 2003. Humphreys uses data from Collier and Hoeffler, "Greed and Grievance," 2004.
- ¹³ Poverty is linked to insecurity more broadly – not just to civil conflict. For a recent discussion of the nexus between poverty and insecurity globally, see: Lael Brainard and Derek Chollet, eds., *Too Poor for Peace? Poverty, Conflict and Security in the 21st Century*, Brookings Institution, forthcoming.
- ¹⁴ Samuel P. Huntington, "The Clash of Civilizations," *Foreign Affairs*, 72:3, Summer 1993, pp. 22-28.
- ¹⁵ Robert D. Kaplan, "The Coming Anarchy: How Scarcity, Crime, Overpopulation, Tribalism, and Disease Are Rapidly Destroying the Social Fabric of Our Planet," *Atlantic Monthly*, Volume 273, February 1994, pp. 44-76 (later published as a book), and Daniel P. Moynihan, *Pandaemonium: Ethnicity in International Politics*, Oxford University Press, 1993.
- ¹⁶ David Keen of the London School of Economics was among the first scholars to investigate the role of economic agendas in civil war. See: David Keen, *The Economic Functions of Violence in Civil Wars*, Adelphi Paper No. 320, 1998.
- ¹⁷ Prior to this finding, several scholars had argued that civil conflict is rooted in economic grievances, but this research focused only on the link between income inequality and conflict, and has not produced compelling empirical evidence of this link. For evidence of this link, see: Robert Macculloch, "Income Inequality and the Taste for Revolution," *Journal of Law and Economics*, 48, 2005, pp. 93-123; and Marie L. Besançon, "Relative Resources: Inequality in Ethnic Wars, Revolutions, and Genocides," *Journal of Peace Research*, 42:4, 2005, pp. 393-415. Fearon and Laitin (2003) did not find a statistically or

substantively significant relationship between inequality and conflict. They note, however, that the quality of inequality data is poor. See: Fearon and Laitin, "Ethnicity, Insurgency and Civil War," 2003, pp. 75-90.

¹⁸ For example, evidence is mounting that ethnic fractionalization is a statistically significant risk factor for conflict. For recent scholarship focusing on ethnic fractionalization as a source of conflict, see: Marta Reynal-Querol, "Ethnicity, Political Systems, and Civil Wars," *Journal of Conflict Resolution*, 46, 1, 2002, pp. 29-54; Ibrahim Elbadawi and Nicholas Sambanis, "How Much Civil War Will We See? Explaining the Prevalence of Civil War," *Journal of Conflict Resolution*, 46, 3, 2002; and Frances Stewart, "Horizontal Inequalities as a Source of Conflict," in Fen Olser Hampson and David Malone, eds., *From Reaction to Conflict Prevention: Opportunities for the U.N. System*, Boulder, Lynne Rienner, 2002.

¹⁹ This paper focuses only on research concerning the relationship between low income and conflict. For a recent overview of the broader literature on the political economy of conflict, see: David Malone and Heiko Nitzschke, "Economic Agendas in Civil Wars: What We Know, What We Need to Know," paper presented at the WIDER development conference on "Making Peace Work," Helsinki, June 2004.

²⁰ Organization for Economic Cooperation and Development, "Helping Prevent Violent Conflict," OECD Policy Brief, October 2002.

²¹ Collier and Hoeffler, "Greed and Grievance in Civil War," 2004, pp. 563-595; Fearon and Laitin, "Ethnicity, Insurgency and Civil War," 2003, pp. 75-90; Nicholas Sambanis, "Using Case Studies to Expand the Theory of Civil War", *Perspectives on Politics*, Vol. 2, No. 2, June 2004;; and Paul Collier, Anke Hoeffler, and Dominic Rohner, "Beyond Greed and Grievance: Feasibility and Civil War," *Center for the Study of African Economies Working Paper*, 10, 7 August 2006. For an extended version of Sambanis' argument, see: Nicholas Sambanis, "Using Case Studies to Expand the Theory of Civil War", CPR Working Papers, No. 5, May 2003.

²² Collier, Hoeffler, and Rohner, "Beyond Greed and Grievance," 2006: pp. 19-20. In their 2004 paper on "Greed and Grievance in Civil War," Collier and Hoeffler analyzed data on 161 countries and 79 civil war events between 1960 and 1999 which, they argued, showed that civil war is rooted in rebels' greed, not in popular grievances. In their follow-up study, they included 208 countries and 84 civil war outbreaks covering the period from 1960 through 2004.

²³ Fearon and Laitin, "Ethnicity, Insurgency and Civil War," 2003: p. 21. Fearon and Laitin performed a multivariate regression analysis of country-level data to identify the root causes of conflict. Their study includes 161 countries and examines 122 civil war starts between 1945 and 1999. They focused more specifically than Collier and Hoeffler on indices of state and rebel strength (e.g., political instability, number of years since a country's independence and the presence of experienced guerrillas in a country).

²⁴ Sambanis, "Using Case Studies to Expand the Theory of Civil War," 2003, p. 1. In a World Bank/Yale University Case Study Project on Civil Wars initiated in 2000, Nicholas Sambanis directed research on 20 countries and 30 civil wars using a combination of qualitative and quantitative methods of analysis. Many countries in the project had "low and declining *per capita* income in the years preceding the start of the war."

²⁵ The Collier and Hoeffler study uses PPP-adjusted GDP per capita, with data drawn from the Penn World Tables income estimates and the World Bank's World Development Indicators, 1998. The Collier, Hoeffler and Rohner study uses GDP *per capita* measured in thousands of 1985 USD and lagged one year, from the World Development Indicators, 2005. Fearon and Laitin use GDP *per capita*, with data from the Penn World Tables and the Chain Index. Finally, Sambanis uses GDP *per capita* measured in constant 1995 USD, with data drawn from World Development Indicators, 2005. See: Collier and Hoeffler, "Greed and Grievance in Civil War," 2004, pp. 563-595; Fearon and Laitin, "Ethnicity, Insurgency and Civil War," 2003; Collier, Hoeffler, and Rohner, "Beyond Greed and Grievance," 2006; and Sambanis, "Using Case Studies to Expand the Theory of Civil War," 2003.

²⁶ Data provided by Humphreys (2003), drawn from Collier and Hoeffler (2004). See: Humphreys, "Economics and Violent Conflict," 2003; Collier and Hoeffler, "Greed and Grievance in Civil War," 2004, pp. 563-595.

²⁷ For instance, Fearon and Laitin define civil war as a conflict with at least 1,000 battle deaths over the entire course of a conflict, averaging 100 battle deaths per year, whereas Collier and Hoeffler use a more restrictive definition of 1,000 battle deaths each year. In contrast, the Uppsala Conflict Database, another frequently-cited source of data on internal conflict, captures smaller-scale conflicts using a threshold of 25 battle deaths per year.

²⁸ Nicholas Sambanis, "What is Civil War? Conceptual and Empirical Complexities of an Operational Definition," *Journal of Conflict Resolution*, 48:6, 2004, pp. 814-858.

- ²⁹ Collier, Hoeffler and Rohner explain that a comparison between the results of their study with Collier and Hoeffler's previous findings "provides some indication of how robust the present results are likely to prove to further inevitable improvements and innovations in data sets." See: Collier, Hoeffler, and Rohner, "Beyond Greed and Grievance," 2006.
- ³⁰ Sambanis tested several variables' statistical significance across twelve different datasets and found that *per capita* GDP was the sole variable that was statistically significant in all twelve tests. In a second sensitivity test, Sambanis and his co-author, Håvard Hegre, confirmed this finding. See: Håvard Hegre and Nicholas Sambanis, "Sensitivity Analysis of the Empirical Literature on Civil War Onset," *Journal of Conflict Resolution*, 50, 4, 2006.
- ³¹ Nicholas Sambanis. "Poverty and the Organization of Political Violence: A Review and Some Conjectures," Brookings Institute Trade Forum, 2004.
- ³² Paul Collier, Anke Hoeffler, and Mans Soderbom, "On the Duration of Civil War," Policy Research Working Paper, 2681, World Bank, September 2001; and James D. Fearon, "Why Do Some Civil Wars Last So Much Longer Than Others?" *Journal of Peace Research*, 41:3, 2004.
- ³³ Collier, Hoeffler and Soederbom find that civil wars last an average of seven years, whereas Fearon finds that they last 16 years. Collier and others also note that the average international war lasts just one year. See: Collier, Hoeffler, and Soderbom, "On the Duration of Civil War," 2001; Fearon, "Why Do Some Civil Wars Last So Much Longer Than Others?" 2004; and Paul Collier, Lani Elliot, Havard Hegre, Anke Hoeffler, Marta Reynal-Querol, and Nicholas Sambanis. *Breaking the Conflict Trap: Civil War and Development Policy*, World Bank Policy Research Report, 2003.
- ³⁴ S. Brock Blomberg and Gregory D. Hess, "The Temporal Links Between Conflict and Economic Activity," *Journal of Conflict Resolution*, 46:1, 2002, p. 74; Collier and Hoeffler, "Greed and Grievance in Civil War," 2004, pp. 563-595.
- ³⁵ Sambanis finds *per capita* GDP growth's statistical relationship to conflict risk is not robust when tested using multiple datasets with different definitions of civil war. Michael Doyle and Sambanis did, however, find a robust relationship between changes in GDP per capita and the recurrence of civil war. See: Michael W. Doyle and Nicholas Sambanis, *Making War and Building Peace: United Nations Peace Operations*, Princeton University Press, 2006.
- ³⁶ Collier and Hoeffler, "Greed and Grievance in Civil War," 2004, pp. 563-595.
- ³⁷ Paul Collier and Anke Hoeffler, "On the Incidence of Civil War in Africa," *Journal of Conflict Resolution*, 46:1, 2002, p. 22.
- ³⁸ Edward Miguel, Shanker Satyanath, and Ernest Sergenti, "Economic Shocks and Civil Conflict: An Instrumental Variables Approach," *Journal of Political Economy*, 112, 4, 2004, p. 740. The use of rainfall as an instrumental variable is a technique for addressing endogeneity – that is, that inadvertently measuring Y's influence on X rather than X's influence on Y -- in regressions using change in *per capita* GDP as an independent variable. GDP usually drops precipitously after a civil war begins, so measuring the impact of GDP on war outbreak (and not the impact of war outbreak on GDP) is conditional on correctly identifying when the war began. Miguel et al (2004) used droughts as an instrumental variable because droughts are highly correlated with drops in GDP in Africa (due to economic reliance on rain-fed agriculture), but, unlike GDP growth rates, conflict cannot plausibly affect rainfall patterns.
- ³⁹ Paul Collier, Lani Elliot, Havard Hegre, Anke Hoeffler, Marta Reynal-Querol, and Nicholas Sambanis, *Breaking the Conflict Trap: Civil War and Development Policy*, World Bank Policy Research Report, 2003; and S. Brock Blomberg and Gregory D. Hess, "The Temporal Links Between Conflict and Economic Activity," *Journal of Conflict Resolution*, 46,1, 2002.
- ⁴⁰ Lisa Chauvet, Paul Collier, and Anke Hoeffler, "The Cost of Failing States and the Limits to Sovereignty," Working Paper Prepared for World Institute for Development Economics Research, 1 September, 2006. This finding confirm other research in this area. See: Anke Hoeffler and Marta Reynal-Querol, "Measuring the Costs of Conflict," Working Paper, Oxford University, March 2003.
- ⁴¹ Collier and others, *Breaking the Conflict Trap*, 2003.
- ⁴² Collier and others, *Breaking the Conflict Trap*, 2003.
- ⁴³ Malcolm Knight, Norman Loayza and Delano Villanueva, "The Peace Dividend: Military Spending Cuts and Economic Growth," World Bank Policy Research Working Paper No. 1577, February 1996.
- ⁴⁴ Barbara F. Walter, "Does Conflict Beget Conflict? Explaining Recurring Civil War," *Journal of Peace Research*, 41:3, 2004, pp. 371-388.
- ⁴⁵ Collier and others, *Breaking the Conflict Trap*, 2003.
- ⁴⁶ Paul Collier, "Research – Conflict," Working Paper, available at <http://users.ox.ac.uk/~econpco/research/conflict.htm>.

- ⁴⁷ See: Ted R. Gurr, *Peoples Versus States: Minorities at Risk in the New Century*, Washington, D.C.: United States Institute of Peace, 2000; and, Chaim Kaufmann, "Possible and Impossible Solutions to Ethnic Civil Wars," *International Security*, 20:4, 1996, pp. 136–175.
- ⁴⁸ Stathis N. Kalyvas, "The Logic of Violence in Civil War: Theory and Preliminary Results," Estudio/Working Paper 2000/151, Center for Advanced Study in the Social Sciences, Madrid, Spain, June 2000.
- ⁴⁹ Michael Doyle and Nicholas Sambanis, *Making War and Building Peace: United Nations Peace Operations*, Princeton University Press, 2006.
- ⁵⁰ Paul Collier and Anke Hoeffler, *Essential Science Indicators*, 2006, available at http://www.esi-topics.com/nhp/2006/january-06-Hoeffler_Collier.html.
- ⁵¹ Collier, Hoeffler and Rohner note that violent rebels spend much more than an opposition party does. They cite the example of the Tamil Tigers, whose estimated annual spending on their rebellion as a proportion of the GDP of Northeast Sri Lanka, the area they control and hope to rule as an independent state, is 10,000 times as large as the main opposition party in Britain, the Conservative Party. See: Collier, Hoeffler, and Rohner, "Beyond Greed and Grievance," 2006.
- ⁵² Fearon and Laitin, "Ethnicity, Insurgency and Civil War," 2003, pp. 75-90.
- ⁵³ Fearon and Laitin, "Ethnicity, Insurgency and Civil War," 2003, pp. 75-90.
- ⁵⁴ Jeffrey Sachs and the U.N. Millennium Project, *Investing in Development: A Practical Plan to Achieve the Millennium Development Goals*, United Nations Development Program, 2005.
- ⁵⁵ U.N. Population Fund, *Population and Poverty: Achieving Equity, Equality and Sustainability*, Population and Development Strategies Series, No. 8, 2003, p. 25.
- ⁵⁶ Lael Brainard and Derek Chollet, *The Tangled Web: The Poverty-Insecurity Nexus*, 2006 Brookings-Blum Roundtable, August 2006.
- ⁵⁷ U.N. Population Fund, *Population and Poverty*, 2003, p. 26.
- ⁵⁸ U.N. Population Fund, *Population and Poverty*, 2003, p. 3.
- ⁵⁹ Richard Cincotta, Robert Engelman and Daniele Anastasion, *The Security Demographic: Population and Civil Conflict After the Cold War*, Population Action International, 2003, p. 12.
- ⁶⁰ Henrik Urdal, "People vs. Malthus: Population Pressure, Environmental Degradation, and Armed Conflict Revisited," *Journal of Peace Research*, 42:4, 2004. Others who have linked youth bulges to conflict include: Collier, Hoeffler, and Rohner, "Beyond Greed and Grievance," 2006.
- ⁶¹ Urdal, "People vs. Malthus," 2004, p. 14. Urdal tested this interrelationship between youth bulges and negative economic growth by including an interaction term in his regression analysis.
- ⁶² Humphreys, Macartan and Ashutosh Varshney. "Violent Conflict and the Millennium Development Goals: Diagnosis and Recommendations," paper prepared for the meeting of the Millennium Development Goals Poverty Task Force Workshop, Bangkok, June 2004.
- ⁶³ Collier, Hoeffler, and Soderbom find that GDP *per capita* and male secondary school enrollment rates are "highly correlated." In fact, they find that the correlation is so high that it is difficult, using regression analysis, to distinguish between their effects. Both are significant when included in separate regressions. See: Paul Collier, Anke Hoeffler, and Mans Soderbom, "On the Duration of Civil War," unpublished paper prepared for the workshop on "Economics of Civil Wars, Crimes, and Violence," University of California, Irvine, 18-20 May 2001, p. 266.
- ⁶⁴ UNICEF, *The State of the World's Children 2006*, p. 14. Available at [http://www.unicef.org/publications/files/SOWC_2006_English_Report_rev\(1\).pdf](http://www.unicef.org/publications/files/SOWC_2006_English_Report_rev(1).pdf)
- ⁶⁵ Jack Goldstone and others., *State Failure Task Force: Phase III Findings*, 2000, p. 39. Goldstone simulates a large change in infant mortality rates (from the 25th to the 75th percentile of country-year observations in his 1945-1999 dataset), and finds that this change is associated with a change in conflict risk of just 1.2% Walter finds that literacy rates are negatively and significantly related to the likelihood of civil war recurrence, but substantively, their impact is small. See: Barbara F. Walter, "Does Conflict Beget Conflict? Explaining Recurring Civil War," *Journal of Peace Research*, 41:3, 2004, pp. 371-388.
- ⁶⁶ Collier and Hoeffler, "Greed and Grievance in Civil War," 2004, pp. 563-595.

⁶⁷ Macartan Humphreys and Jeremy Weinstein, "What the Fighters Say: A Survey of Ex-Combatants in Sierra Leone," Interim Report, July 2004. Available at http://www.columbia.edu/~mh2245/Report1_BW.pdf

⁶⁸ Sambanis, "Using Case Studies," 2004, pp. 264-265.

⁶⁹ Urdal, "People vs. Malthus," 2004.

⁷⁰ Omer Taspinar, *Fighting Radicalism with Human Development: The Political Economy of Education, Employment and Freedom in the Islamic World*, Brookings Institution Press, forthcoming.

⁷¹ See: Jeffrey Sachs and Andrew Warner, "Natural Resource Abundance and Economic Growth," unpublished paper, Center for International Development and Harvard Institute for International Development, November, 1997; Jeffrey Sachs and Andrew Warner, "The Curse of Natural Resources," *European Economic Review*, 45:4-6, 2001, pp. 827-838; and Michael L. Ross, "The Natural Resource Curse: How Wealth Can Make You Poor," in Ian Bannon and Paul Collier, eds., *Natural Resources and Violent Conflict: Options and Action*, 2003.

⁷² Paivi Lujala, Nils P. Gleditsch, and Elisabeth Gilmore, "A Diamond Curse? Civil War and a Lootable Resource," *Journal of Conflict Resolution*, Vol. 49, No. 4, pp. 538-562.

⁷³ Interestingly, however, Humphreys finds that even countries with economies dependent on agricultural production – irrespective of how much they also rely on high-value commodities like oil and diamonds – are more susceptible to civil conflict. See: Macartan Humphreys, "Natural Resources, Conflict, and Conflict Resolution," *Journal of Conflict Resolution*, 94:4, 2005, pp. 524-525.

⁷⁴ Philippe Le Billon, "The Political Ecology of War: Natural Resources and Armed Conflicts," *Political Geography*, 20, 2001, pp. 561-584.

⁷⁵ Humphreys, "Natural Resources, Conflict, and Conflict Resolution," 2005, pp. 512-513. Humphreys' findings offer particularly strong empirical support for the argument that in weak states, oil is likely to be associated with conflict.

⁷⁶ For a discussion of the state of the natural resource/conflict debate, see: Ron James, "Paradigm in Distress?" *Journal of Conflict Resolution* 49, 4, 2005, pp. 443-450. Collier argues that countries with about one-quarter or more of GDP derived from natural resource exports are "acutely at risk of civil conflict." See: Collier, "Economic Causes of Civil Conflict and Their Implications for Policy," Development Research Group, World Bank, 2000. For research that questions the link between lootable, primary resources and the onset of conflict, see: Fearon and Laitin, op.cit., 2003; James D. Fearon, "Primary Commodities Exports and Civil War," *Journal of Conflict Resolution*, 49, 4, 2005, pp. 483-507; and, Michael L. Ross, "What Do We Know about Natural Resources and Civil War?," *Journal of Peace Research*, Vol. 41, No. 3, 337-356, 2004.

⁷⁷ Sambanis, "Using Case Studies," 2003, p. 20. See also: Taspinar, *Fighting Radicalism with Human Development*, Brookings Institution Press, forthcoming.

⁷⁸ Data on unemployment and on the percentage of the population living under the poverty line is available from the World Bank for only 28 of 48 Sub-Saharan African states. See: World Bank World Development Indicators 2005, p. 68. See also: Shaohua Chen and Martin Ravallion, "How Have the World's Poorest Fared Since the Early 1980s?," Development Research Group, World Bank, 2004

⁷⁹ For one such effort, see: Macartan Humphreys, "Natural Resources, Conflict, and Conflict Resolution: Uncovering the Mechanisms," *Journal of Conflict Resolution*, 49:4, 2005, p. 528.

⁸⁰ Sambanis, "Using Case Studies," 2004, p. 264.

⁸¹ The importance of promoting a "culture of peace" in conflict-prone societies was recognized by the U.N. General Assembly in a 1999 resolution. See: U.N. General Assembly, "Declaration and Program of Action on a Culture of Peace," Resolution 53/243, 6 October, 1999. The document provides a list of institutions deemed crucial for promoting peaceful societal values, including: a school system that promotes values of respect for human dignity and non-discrimination; school curricula that abide by United Nations Educational, Scientific and Cultural Organization "Education for Peace" guidelines; and equality of access to education for women, especially girls.

⁸² For instance, Brookings scholar Peter Singer suggests that increasing poverty and world income inequality have eroded traditional norms of warfare and forced increasingly young children into civil wars in Sierra Leone, Cote d'Ivoire, Angola, Colombia and Nepal: "The overwhelming majority of child soldiers are drawn from the poorest, least educated, and most marginalized sections of society, who have been forced to grow up in what one writer aptly termed a 'roving orphanage of blood and flame.'" See: Peter Singer, *Children at War*, Pantheon Books, 2005, p. 44.

⁸³ See: Joseph De Rivera, "Assessing the Basis for a Culture of Peace in Contemporary Societies," *Journal of Peace Research*, Vol. 41, No. 5, pp. 531-548.

⁸⁴ Among other studies, see: Collier, "Post-Conflict Economic Recovery," unpublished paper, International Peace Academy, April 2006. Collier has explained that growth in post-conflict countries is heavily aid-dependent, but while the need for aid is greatest immediately after a conflict, countries have limited institutional capacity to absorb large aid volumes. See: Paul Collier, "Conflict: Research," available at <http://users.ox.ac.uk/~econpco/research/conflict.htm>. See also: Fearon and Laitin, "Ethnicity, Insurgency and Civil War," 2003, p. 88. See also: U.N. General Assembly, "Declaration and Program of Action on a Culture of Peace," 1999.

⁸⁵ Collier, Hoeffler, and Rohner, "Beyond Greed and Grievance," 2006, p. 10. Collier and others point out that recent findings contradict prior research, which claimed that aid increases the risk of conflict. See, for instance: H. Grossman, "Foreign Aid and Insurrection," *Defense Economics*, 3, 1992. This research argued that because aid adds to the financial advantage of capturing state resources, aid could serve as an incentive for rebellion. Yet, as a recent World Bank report has noted, the only type of aid that is fungible and therefore susceptible to capture by rebel groups is food or humanitarian aid. See: World Bank, "Aid, Policy and Peace: Reducing the Risks of Civil Conflict," Conflict Prevention and Reconstruction Unit, Dissemination Note Number 9, February 2003.

⁸⁶ Nicholas Sambanis, "Poverty and the Organization of Political Violence: A Review and Some Conjectures," unpublished paper, Yale University, July 2004: p. 50.

⁸⁷ An influential article by economists Craig Burnside and David Dollar helped to foster the consensus that countries with strong institutions and good governance tend to use aid more effectively to promote economic growth. See: Craig Burnside and David Dollar, "Aid, Policies and Growth," *American Economic Review*, 90, 4, 2000, pp. 847-868. See also the follow-up study: Burnside and Dollar, "Aid, Policies, and Growth: Revisiting the Evidence," World Bank Policy Research Working Paper 3251, March 2004. Recent surveys of the literature on aid and economic growth support the Burnside and Dollar findings. See, for instance: Mark McGillivray, "Is Aid Effective?," *World Institute for Development Economics Research*, mimeo; and, Michael Clemens, Steve Radelet, and R. Bhavnani, "Counting Chickens When they Hatch: The Short-term Effect of Aid on Growth," *Centre for Global Development Working Papers 44*, Centre for Global Development, Washington DC, 2004. For a recent study that criticizes these findings, see: William Easterly, Ross Levine and David Roodman, "New Data, New Doubts: A Comment on Burnside and Dollar's 'Aid, Policies and Growth,'" National Bureau of Economic Research, Working Paper 9846, July 2003.

⁸⁸ For a strong, recent argument in favor of U.S. investment in programs to combat poverty and improve governance in weak states, see: Lael Brainard, ed. *Security by Other Means: Foreign Assistance, Global Poverty and American Leadership*, Brookings Institution Press and Center for Strategic and International Studies, 2006.

⁸⁹ The OECD's Development Assistance Committee has commissioned research on development assistance to weak or "difficult partnership" countries. This research is available at, http://www.oecd.org/department/0,2688,en_2649_33693550_1_1_1_1,00.html.

⁹⁰ Joanna Macrae and others, "Aid to 'Poorly Performing' Countries: Critical Review of Debates and Issues," Overseas Development Institute, July 2004, p. 11.

⁹¹ Lisa Chauvet and Paul Collier, "Development Effectiveness in Fragile States: Spillovers and Turnarounds," Center for the Study of African Economies, January 2004.

⁹² Paul Collier and Anke Hoeffler, "Reducing the Global Incidence of Civil War: A Discussion of the Available Policy Instruments," October 2004, available at www.inwent.org. A study of conflicts occurring in 78 countries recently confirms this: annual growth rates fell on average 2.4% during wars, and the human toll of war was unexpectedly high because, "even long after the war stops people are killed or maimed, mainly due to the destruction of public health infrastructure and population displacements." Anke Hoeffler and Marta Reynal-Querol, "Measuring the Costs of Conflict," unpublished paper, 2003. On the cost of conflict and state failure in the Pacific region, see: Lisa Chauvet, Paul Collier and Anke Hoeffler, "Paradise Lost: The Costs of State Failure in the Pacific," paper prepared for the World Institute for Development Economics Research, November 2006.

⁹³ Malcolm Chalmers, "Spending to Save? An Analysis of the Cost Effectiveness of Conflict Prevention," 12 June, 2004.

⁹⁴ See: Victoria Levin and David Dollar, "The Forgotten States: Aid Volumes and Volatility in Difficult Partnership Countries, 1992-2002," OECD, Development Assistance Committee Learning and Advisory Process on Difficult Partnerships, 6

January, 2005; and, Paul Collier and David Dollar, "Aid Allocation and Poverty Reduction," *European Economic Review*, Vol. 45, 2002, pp. 1470-1500.

⁹⁵ Stephen Jones and others, "Aid Allocation Criteria: Managing for Development Results and Difficult Partnerships," OECD, Report prepared for the Development Assistance Committee Learning and Advisory Process on Difficult Partnerships, 12 January, 2005, p. 6.

⁹⁶ Paul Collier and Anke Hoeffler, "Aid, Policy, and Growth in Post-Conflict Societies," Policy Research Working Paper No. 2902, World Bank, 2002.

⁹⁷ Stephen Radelet, "Aid Effectiveness and the Millennium Development Goals," Center for Global Development, Working Paper No. 39, April 2004.

⁹⁸ Paul Collier and Anke Hoeffler, "Aid, Policy and Peace: Reducing the Risks of Civil Conflict," *Defense and Peace Economics*, 13:6, 2002. Collier has attempted to identify the precise causal pathway through which aid reduces conflict risk. They have found that aid is effective only insofar as it induces economic growth, increasing per capita GDP. See: Paul Collier and David Dollar, "Development Effectiveness: What Have We Learnt?" *The Economic Journal*, 114, June 2004.

⁹⁹ See: Ramesh Durbarry, Norman Gemmell and David Greenaway, "New Evidence on the Impact of Foreign Aid on Economic Growth," CREDIT Research Paper 98/8, Centre for Research in Economic Development and International Trade, University of Nottingham, 1998; Henrik Hansen and Finn Tarp, "The Effectiveness of Foreign Aid," Development Economics Research Group, Institute of Economics, University of Copenhagen, 1999; and Michael T. Hadjimichael and others, "Sub-Saharan Africa: Growth, Savings, and Investment, 1986-93," Occasional Papers 118, International Monetary Fund, 1995.

¹⁰⁰ Michael Clemens, Steve Radelet, and Rikhil Bhavnani, "Counting Chickens when they hatch: the short term effects of aid on growth," Center for Global Development, Working Paper No. 44, June, 2004.

¹⁰¹ Lisa Chauvet and Patrick Guillaumont, "Aid and Growth Revisited: Policy, Economic Vulnerability and Political Instability" in B. Tungodden, N. Stern, and I. Kolstad (eds.), *Towards Pro-Poor Policies - Aid, Institutions and Globalization*, World Bank/Oxford University Press, 2004. On population size and its relationship to aid effectiveness, see: Chakriya Bowman and Satish Chand, "Size Matters: The Impact of Aid on Institutions," paper prepared for the World Institute for Development Economics Research, November 2006.

¹⁰² Lisa Chauvet and Paul Collier, "Development Effectiveness in Fragile States: Spillovers and Turnarounds," Center for the Study of African Economies, January 2004.

¹⁰³ World Bank, "World Bank Group Work in Low Income Countries Under Stress Task Force Report," Washington, D.C., World Bank, 2001, p. 25.

¹⁰⁴ World Bank, "World Bank Group Work in Low Income Countries Under Stress Task Force Report," 2001, p. 27.

¹⁰⁵ Macrae and others, "Aid to "Poorly Performing" Countries," 2004, pp. 12-13 and 86.

¹⁰⁶ "Aid flows top USD 100 billion in 2005," OECD, 4 April 2006, available at: http://www.oecd.org/document/40/0,2340,en_2649_201185_36418344_1_1_1_1,00.html

¹⁰⁷ See: Stewart Patrick and Kaysie Brown, "Fragile States and U.S. Foreign Assistance: Show Me the Money," Center for Global Development Working Paper 96, 14 August 2006.

¹⁰⁸ Eligible countries include: Armenia, Benin, Bolivia, Burkina Faso, Cape Verde, East Timor, El Salvador, Georgia, Ghana, Honduras, Jordan, Lesotho, Madagascar, Mali, Mongolia, Mozambique, Namibia Nicaragua, Senegal, Sri Lanka, Tanzania, Vanuatu, Moldova, and Ukraine.

¹⁰⁹ Stewart Patrick and Kaysie Brown, "Fragile States and U.S. Foreign Assistance," August 2006.

¹¹⁰ For a more detailed discussion of the links between conflict and threats to U.S. national security, see: Susan Rice, "The Threat of Global Poverty," *The National Interest*, Spring 2006; and Susan Rice, "Global Poverty, Weak States and Insecurity," in Lael Brainard and Derek Chollet, eds., *Too Poor for Peace? Poverty, Conflict and Security in the 21st Century*. Brookings Institution Press, forthcoming.

¹¹¹ See: Lael Brainard, ed. *Security by Other Means*, 2006.

¹¹² For a discussion of the greater emphasis that needs to be placed on global poverty alleviation in the long-term war on terror, see: Susan E. Rice and Corinne Graff, "Can 'Freedom Only' Secure Our Future?," *McGill International Review*, Fall 2005.

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ISBN: 0-9790376-1-1