

Authors

Jeannie Annan
International Rescue Committee

Christopher Blattman
The University of Chicago

THE CONSEQUENCES OF CHILD SOLDIERING

Christopher Blattman and Jeannie Annan*

Abstract—Little is known about the impacts of military service on human capital and labor market outcomes due to an absence of data as well as sample selection: recruits are self-selected, screened, and selectively survive. We examine the case of Uganda, where rebel recruitment methods provide exogenous variation in conscription. Economic and educational impacts are widespread and persistent: schooling falls by nearly a year, skilled employment halves, and earnings drop by a third. Military service seems to be a poor substitute for schooling. Psychological distress is evident among those exposed to severe war violence and is not limited to ex-combatants.

I. Introduction

THIS paper assesses the impact of combat on the human capital of Ugandan youth, the consequences for lifetime labor market performance, and lessons for the economic recovery of civil war-torn countries. Civil conflict has afflicted a third of all nations and two-thirds of Africa since 1991 (Marshall & Gurr, 2005). The recovery of children and young adults is a critical concern in these post-war economies, but education can take years to regain, and physical and psychological trauma may be long-lasting. Some of these conflicts involve up to a third of male youth in active combat, many of whom are children under age 18. With so many millions of young ex-combatants, injuries to human capital could hinder a nation's productivity and growth for decades. Moreover, any impact of military service on inequality, aggression, and alienation could threaten a nation's long-term stability.

The effects of combat are uncertain. The dominant view holds that these youth are traumatized, violent, social pariahs. Speaking at a 2007 U.N. conference, the French foreign minister warned that young ex-combatants are "a time bomb that threatens stability and growth, . . . not for peace and not for the development of their countries" (BBC, 2007). Former child soldiers in particular are "damaged, medicated pariahs," says a *New York Times* editorial ("Armed as Children," 2006). A growing body of ethnographic evidence portrays another view, however, finding

that resilience rather than disabling psychological trauma is the norm (Shepler, 2005; Boothby, Crawford, & Halperin, 2006; Wessells, 2006).

Virtually no representative data or well-identified causal estimates exist to judge either set of claims (Blattman & Miguel, 2010). A small literature has found large and persistent earnings and mortality gaps between veterans and non-veterans in the United States and Europe (Heaton, Newman, & Hilley, 1986; Angrist, 1990, 1993; Angrist & Krueger, 1994; Imbens & van der Klauw, 1995). For instance, Angrist (1990) finds that white American males conscripted into the Vietnam War saw a 15% reduction in their long-term earnings due to work experience lost, while Costa and Kuhn (2010) use data on U.S. Civil War veterans to link wartime stress to higher mortality later in life. The impacts of combat, however, are not uniformly bad, both U.S. studies, for instance, find that military service increased the human capital and lifetime earnings of black Americans—evidence of their otherwise poor alternatives.

Unfortunately, these findings do not generalize easily to the developing countries where most civil wars rage. They also draw on data sets with a limited range of outcomes, and so the full nature of the impact (and the causal channel) is hard to see. The sole survey-based study of the impact of civil war combat comes from a pioneering survey of Sierra Leonean ex-combatants by Humphreys and Weinstein (2004, 2007). They find that increased exposure to violence is associated with lower community acceptance but not with employability. Without a noncombatant comparison group, however, our understanding of the impact of military service remains incomplete.

One reason we know so little about these impacts is the paucity of data in war zones. To overcome this problem, we conducted a survey during the war in northern Uganda, where for 20 years, an unpopular rebel group has forcibly recruited tens of thousands of youth.

A second challenge is identifying the causal effects of military service: ex-fighters are usually a select group, including those who chose to join and those screened by the armed force. The ideal research design would be one where rebel participation was randomly or exogenously assigned. We argue that forced recruitment in Uganda resembles just such a treatable case. Under the assumption that abduction is conditionally exogenous, causal impacts can be estimated using non-combatants of the same year and place of birth as counterfactuals. Naturally, unobserved sources of selection and survival could bias the results. Hence we explicitly model the sensitivity of the treatment effects to unobserved selection to show that moderate to large amounts of selective abduction and attrition cannot account for the causal effects or change our general conclusions.

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* Blattman: Yale University, Political Science and Economics; Annan: Yale University, School of Medicine and CIRA.
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