

SYMPOSIUM ON CONFLICT AND GENDER

Armed Conflict, Gender, and Schooling

Mayra Buvinić, Monica Das Gupta, and Olga N. Shemyakina

The impact of armed conflict on gender differentials in schooling appears to be highly context-specific, as the review of the literature and the findings from the three studies in this symposium reveal. In some settings boys' schooling is more negatively affected than that of girls. In others, the reverse is the case. Effects are largely shaped by events surrounding a conflict, pre-war gender differences in educational attainments, and education and labor market opportunities in the absence of war. Rigorous evaluations of post-conflict policies and aid projects can provide useful information to address educational needs and gender differentials in these environments. JEL codes: I20, J10, O12

This symposium focuses on the link between schooling and armed conflict, and gender differentials in these links. This overview briefly reviews the recent literature on these links, and then discusses the contributions made by the three studies in this symposium. The studies indicate that the impact varies greatly depending on the context in which the conflict takes place.

Armed conflict can cause long-lasting damage that goes well beyond the immediate death and destruction. Several reviews document how armed conflict damages physical, human, and social capital, constrains economic growth, and affects the well-being of populations.¹ During armed conflicts, households adopt a variety of coping strategies that are also commonly used in response to economic shocks.² However, these strategies may be less effective in settings affected by

Mayra Buvinić is a Senior Fellow at the United Nations Foundation, Washington, DC 20036; her email address is mayra.buvinic@gmail.com. Monica Das Gupta is a Research Professor at the University of Maryland, College Park, MD 20742; her email address is mdasgupta@gmail.com. Olga N. Shemyakina (corresponding author) is an Assistant Professor at the School of Economics, Georgia Institute of Technology, Atlanta, GA 30332; her email address is olga.shemyakina@econ.gatech.edu. This work was funded by a grant from the Government of Norway to the World Bank. The views expressed in the article belong to the authors' and should not be attributed to the World Bank or any affiliated organization or member country.

1. See for example the reviews by Blattman and Miguel 2010; Buvinić et al. 2013; Collier et al. 2003; and Justino, Leone, and Salardi (2014).

2. For some of the literature on the responses to economic shocks, see Kochar 1999; Morduch 1995; and Rose 1999; 2001.

THE WORLD BANK ECONOMIC REVIEW, VOL. 28, NO. 2, pp. 311–319
Advance Access Publication October 14, 2013

doi:10.1093/wber/lht032

© The Author 2013. Published by Oxford University Press on behalf of the International Bank for Reconstruction and Development / THE WORLD BANK. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com

armed conflict since households are exposed not only to economic shocks but also to damaged physical and service infrastructure, and high risks to personal safety. Shocks induced by natural disasters may have similar impacts on households' well-being, but such shocks are less disruptive of trust and social networks than armed conflict (e.g., [Cassar et al. 2011](#); [Rohner et al. 2011](#)).

WHAT DO WE KNOW ABOUT THE IMPACT OF ARMED CONFLICT ON SCHOOLING?

A large body of literature indicates that exposure to economic shocks in early childhood can have a negative and long-lasting impact on the health and educational attainment of individuals, in turn affecting their long-term earnings and well-being in adulthood.³

Similar to economic shocks, many studies also find that armed conflict negatively affects children's educational attainment. The magnitude of the loss and the relative impact on girls versus boys depends on contextual factors. In some settings, armed conflict is found to reduce boys' educational attainment more than that of girls. One reason is that boys may be enlisted in the military, argues a study on Bosnia and Herzegovina ([Swee 2011](#)); another is that they may be sent out to work to help the household cope with the conflict-induced shock. [Rodriguez and Sanchez \(2012\)](#) find that municipality-level exposure to conflict in Colombia increases the chances both of children aged 6-17 dropping out of school and of adolescent boys being employed.

Boys' schooling attainment may also decline more relative to girls' in settings where girls had low schooling during the pre-conflict period (and therefore had less to lose). For example, [Akresh and de Walque \(2010\)](#) use two Demographic and Health Surveys (DHS) collected before and after the 1994 genocide in Rwanda and find that boys from non-poor families who were of school-going age during the war suffered greater declines in their education compared to girls or boys from poorer households. They relate this result to violent targeting of wealthy Tutsi households and communities during the genocide. Similarly, the long-term effect of the collapse of the educational system during the Khmer Rouge period in Cambodia reduced secondary school attainment more for boys, since girls were less likely to be in school during the pre-conflict period ([de Walque 2006](#): Figure 9). In a related study, [Merrouche \(2011\)](#) finds that individuals from Cambodian regions with high levels of landmine contamination lost an average 0.5 years of education with a similar effect for boys and girls.

In other settings, girls' schooling is more affected by armed conflict, possibly because parents seek to protect their girls from rape and other threats to their honor, as suggested by studies on the civil war in Tajikistan ([Shemyakina 2011](#)) and the insurgency (a low intensity conflict) in Punjab, India ([Singh and Shemyakina 2013](#)). Economic effects also came in play, as households in rural

3. See for example the reviews by [Almond and Currie 2011](#); and [Strauss and Thomas 2008](#).

Punjab that had both boys and girls may have substituted the educational expenditure towards boys at the expense of girls in the face of uncertainty (Singh and Shemyakina 2013).

Small losses in schooling during armed conflict can translate into large losses in lifetime earnings. Ichino and Walter-Ebmer (2004) examine the educational attainment of children born in 1920-1949 in four European countries and find that the cohorts born in 1930-1939 (these who reached age 10 during or soon after the war) completed less schooling than other cohorts under consideration. This negative effect was observed only for children living in Austria and Germany – which were heavily engaged in World War II – but not for children from Sweden and Switzerland which were neutral during the war. The authors suggest that military service of fathers and/or their death in the war was one of the primary channels through which conflict had an impact on schooling. Further, the authors find that the war was associated only with a small loss schooling, but this small difference reduced the likelihood of obtaining higher education degrees by the affected cohorts and made a substantial impact on their lifetime income. Disaggregating the data by the intensity of the conflict, Akbulut-Yuksel (2009) finds that boys and girls of school-going age during the war who lived in German cities heavily targeted by allied bombings achieved a significantly lower education level than those living in areas exposed to fewer bombings.

The importance of the intensity of violence is also illustrated by Chamarbagwala and Morán (2011), who explore the effect of differing levels of violence on primary education attainment by children who were of school-going age during the 30 year long war in Guatemala. Rural Mayan children who were of school age during the period of worst violence (1979-84) and who lived in the departments with high intensity of human right violations lost the most schooling.

By contrast, in settings with long-running low intensity conflict where access to schooling is likely to be little disrupted, education level can increase. De Groot and Goksel (2011) observe that in the Basque country, the demand for higher education by citizens from the middle level education group went up.

Two studies explore the effect of random abduction by the Lord Resistance Army (LRA) in Uganda on former child soldiers. Former male child soldiers were found to have lower education and earnings, and were less likely to be employed in skill or capital intensive occupations than those who were never abducted (Blattman and Annan 2010). The story was different for females. Educated females were more likely to be abducted, due to their perceived value as midwives, note-takers and radio-operators (Annan et al. 2011). These young women were less likely to be released, and during their abduction they were forced into marriages faster than those with less education. Abduction alone did not have a significant effect on women's schooling, which Annan et al. explain by the lack of opportunities for women in Uganda in general. However, female abductees who had children during their abduction (“forced mothers”) were

eight times less likely to re-enroll in school than female returnees without children. Foltz and Opoku-Agyemang (2011) focus on the effect of low intensity conflict in 2000-2005 on general population in Uganda and find little gender differential in school attainment.

In contrast to most studies that focus on children of school-going age, León (2012) also investigates the effect of exposure to political violence in Peru in *utero* and till age 6 on schooling attainment. Children's exposure to violent events during these early years of life is negatively and statistically significantly associated with children's long-run school attainment. By contrast, regional exposure to violence during one's *primary* schooling years has a negative impact only in the short but not the long run. León attributes the observed long-run effects to factors such as the deaths of teachers⁴ on the one hand, and on the other, to the poorer health of individuals affected early in life (as measured by their weight-for-height and height-for-age z-scores), and potentially poorer health of mothers due to the conflict. He does not differentiate between the impacts of violent events on schooling of boys versus girls.

Some studies have focused also on the effect of conflict on the *quality* of schooling. Brück et al. (2013) study the relationship between student test scores and district-level fatalities during the 2nd Intifada in Palestine. In both the West Bank and the Gaza Strip, the chance to pass the secondary school final exam was lower in school districts with higher fatality levels. In the West Bank (but not the Gaza Strip) the observed effect is stronger for boys than girls. The authors cite as a possible reason that boys in this region are more exposed to injuries, serious accidents, and post-traumatic stress disorder. Additionally, using various measures of school quality, the authors establish that the decline in test scores could be attributed to the negative effect of conflict on the quality of schooling.

In Turkey, Kibris (2013) finds substantially lower test scores in the regions affected by the low intensity Kurdish-Turkish conflict, and suggests that an inability to attract and retain good teachers by these regions is one of the channels through which this conflict has affected educational outcomes. Monteiro and Rocha (2012) find a negative impact of gang violence in Brazilian favelas on students' math test scores. The closer the school's location is to violent events, the lower are the test scores. Violence within three to four months before the Prova Brazilia exam (but not after) has a negative impact on the exam test scores. Local violence by drug gangs has a large negative impact on school resources (turnover of principals, teacher absenteeism and school closures). The authors find no substantial effect of violence in the previous academic year on this year's student test scores, indicating that schools are resilient in reconstituting themselves.

4. León (2012) notes though that both the insurgents and the government forces, left schools intact but often destroyed other infrastructure.

THE CONTRIBUTION OF THE PAPERS IN THIS SYMPOSIUM

The studies in this issue evaluate the effect of armed conflict on primary school attainment by gender in Timor-Leste, Nepal and Burundi. The authors draw on a variety of datasets collected by international and local organizations and use rigorous data analysis methods to study these effects. These studies help us understand how different institutional environments surrounding the conflict and post-conflict reconstruction shape gender differences in schooling outcomes. The studies by Valente and by Verwimp and Van Bavel focus on the short-term effects of the conflicts in Nepal and Burundi respectively, while Justino, Leone, and Salardi explore both, the short and long-run effects of the anti-colonial struggle of Timor Leste. All studies focus on the educational experiences of the cohort that was of school age during the conflict.

Valente (2014) focuses on the 1996-2006 Maoist insurgency in Nepal. The conflict was driven by the insurgents' strong ideological agenda to improve the social and economic standing of disadvantaged groups, and eliminate caste, gender and ethnicity driven inequalities in Nepal. The author uses the 2001 and 2006 DHS data and several district level conflict-intensity variables to identify the impact of armed conflict on educational outcomes of children of school-going age during this war. The intensity of Maoist activity in a district as measured by the number of deaths is associated with increased girls' schooling attainment, while the effect for boys is smaller and not so robust. However, conditional on the number of deaths, a rise in Maoist abductions – that often targeted school-age children – decreased educational attainments of girls in more affected districts.

The conflict escalated in 2001, so in addition to the standard difference in difference regression framework, Valente augments the analysis by exploring the effect of change in violence between 2001 and 2006 on the educational attainment of children who were of primary schooling age in these survey years. For instance, the 10-year olds in 2001 were exposed to less conflict than the 10-year olds in 2006, who experienced an intensified conflict for most of their schooling years. Examining education of children of comparable age but exposed to differing degrees of conflict exploits more fully the available data, and the results show that the duration of exposure to more intense conflict dramatically changes outcomes with children surveyed in 2006 obtaining more education than children surveyed in 2001. This innovative technique is possible due to the timing of the surveys. The study also credibly shows that different aspects of conflict may have varying impact on outcomes.

Valente suggests that an increase in female educational attainment during conflict was primarily linked to the Maoists' efforts to remove educational barriers for the disadvantaged groups of population and in particular, women. Women were actively present within structures of Maoist organizations; participated in politics and were viewed as important to the spread of Maoist propaganda as they had access to other members of the household (Ariño 2008). Thus, the

engagement of women and the goals of the Maoists, argues Valente, may have contributed to an increased educational attainment during the conflict, and especially by girls in the Maoist controlled districts.

Justino, Leone, and Salardi (2014) focus on the long-term struggle against occupation and colonization of Timor Leste by Indonesia. The intensity of violence during this long conflict varied over time and space. Post-conflict development in Timor Leste was characterized by a strong role of the international organizations, and a reconstruction process that benefited girls in particular. Under the East Timor Transitional Authority (ETTA), school fees were substantially reduced which increased enrollment of girls, children from poor households and rural areas (World Bank 2003). Also in Timor-Leste, the displaced tended to quickly move back to their places of residences and to re-establish community-run schooling programs (Justino, Leone, and Salardi 2014).

The authors study the impact of the conflict on school *attendance* in 2001, immediately following the 1999 wave of violence, a short-term outcome, and on primary school *attainment* in 2007, a longer-term result. In the analysis, they use the same cohort of individuals surveyed in different years. To examine the effect of the conflict on school attendance, the authors construct a panel-like dataset using retrospective data on school attendance for three consecutive years from a cross-sectional survey (i.e., before, during and after the 1999 wave of violence). The short-term effect of household level conflict exposure (as measured by displacement and damage to dwelling) is a reduced primary school attendance for boys and girls.

The identification of conflict exposure to violence over a longer time period is performed by exploiting variation in peaks of violence and in different forms of warfare that took place in Timor Leste at different times. In the long-run, the authors observe a substantial loss in educational attainment of boys, but not girls, who grew during different periods of violence. They explain this result by a higher workforce participation rates among boys, and the substitution by households of future gains from investment in education for current consumption.

Burundi experienced an armed conflict since 1965, with conflicts erupting almost every 10-15 years. The conflict was sustained by the economic differences and long-standing grievances between Hutu and Tutsi. Verwimp and Van Bavel evaluate the impact of the 1993-2000 war in Burundi and the 1993-1994 massacres on the educational attainment of boys and girls who were of primary school age at the time, using individual and household survey data collected in 2002. They use several province- and child-level conflict intensity measures. To differentiate households by their economic status, the authors use self-reported retrospective data on the household *pre-war* (1993) economic characteristics. This differentiation of households by their pre-war economic status is important, as post-war wealth status is likely to be affected by the conflict. Similar to Akresh and de Walque (2010) study for Rwanda, they find that the negative effect of conflict on education is significantly more pronounced for boys (but not girls) from non-poor households – reducing the gender gap in schooling. They

attribute this finding to the predominance of non-poor boys amongst those sent to school in the pre-conflict period, so they had the most to lose from schooling disruption during the conflict. In pre-war poor-households, educational attainment of both, boys and girls declined. Further, the authors note that the negative effect of displacement on education is particularly strong for children who had to move multiple times, especially these from poor households.

DISCUSSION

The three studies in this issue illustrate how the context shapes the impact of armed conflict on children's schooling, including gender differentials in schooling. In several settings, boys' schooling is more negatively affected than that of girls – sometimes because boys are withdrawn by their families to contribute to household income, as in Timor Leste (Justino, Leone, and Salardi 2014), or because they are drafted into serving in the conflict. Where boys have much greater access to schooling than girls in the pre-conflict situation, as in Burundi (Verwimp and Van Bavel 2014), boys are more affected by the conflict-induced reduction of access to schooling, which reduces the gender gap in schooling. Elsewhere, as in Nepal (Valente 2014), where insurgents were ideologically motivated to reduce inequalities in access to schooling, a greater presence of insurgents (as measured by killings) helped increase girls' access to schooling – except when the insurgents stepped up abductions. In cultures which emphasize protecting girls' reputations and consequently their marriageability, conflict's disruptions can reduce their access to schooling. All these differences prevail despite the fact that conflict typically disrupts schooling infrastructure and teachers' ability to fully perform their duties that should affect education of boys and girls in a similar manner.

Rigorous evaluation research is needed on post-conflict societies and policies, including the effectiveness of post-conflict reconstruction efforts in addressing gaps and gender inequalities in schooling created by the conflict, as well as the effectiveness of aid projects in improving children's school outcomes.

REFERENCES

- Akbulut-Yuksel, M. 2009. "Children of War: The Long-Run Effects of Large-Scale Physical Destruction and Warfare on Children." IZA Discussion Paper. IZA-Institute for the Study of Labor, Bonn, Germany.
- Akresh, R., and D. de Walque. 2010. "Armed Conflict and Schooling: Evidence from the 1994 Rwandan Genocide." IZA Discussion Paper. IZA-Institute for the Study of Labor, Bonn, Germany.
- Almond, D., and J. Currie. 2011. "Human Capital Development Before Age Five." In D. Card and O. Ashenfelter, eds., *Handbook of Labor Economics*, Vol. 4, Part B, pp. 1315–486. Amsterdam, The Netherlands: Elsevier.
- Annan, J., C. Blattman, D. Mazurana, and K. Carlson. 2011. "Civil War, Reintegration, and Gender in Northern Uganda." *Journal of Conflict Resolution* 55(6): 877–908.

- Ariño, M.V. 2008. "Nepal: A Gender View of the Armed Conflict and Peace Process." *Quaderns de Construcció de Pau* No.4. Escola de Cultura de Pau, Barcelona, Spain.
- Blattman, C., and J. Annan. 2010. "The Consequences of Child Soldiering." *Review of Economics and Statistics* 92(4): 882–98.
- Blattman, C., and E. Miguel. 2010. "Civil War." *Journal of Economic Literature* 48 (1): 3–57.
- Brück, T., M. Di Maio, and S. Miaari. 2013. "Exposure to Violence and Student Achievement in Palestine: Evidence from the Second Intifada." DiW Berlin Working Paper. Berlin, Germany.
- Buvinić, M., M. Das Gupta, U. Casabonne, and P. Verwimp. 2013. "Violent Conflict and Gender Inequality: An Overview." *The World Bank Research Observer* 28(1): 110–38.
- Cassar, A., P. Grosjean, and S. Whitt. 2011. "Civil War, Social Capital and Market Development: Experimental and Survey Evidence on the Negative Consequences of Violence." University of San Francisco, San Francisco, CA.
- Chamarbagwala, R., and H.E. Morán. 2011. "The Human Capital Consequences of Civil War: Evidence from Guatemala." *Journal of Development Economics* 94(1): 41–61.
- Collier, P., V.L. Elliot, H. Hegre, A. Hoeffler, M. Reynal-Querol, and N. Sambanis. 2003. *Breaking the Conflict Trap: Civil War and Development Policy*. Washington, DC, and New York: World Bank and Oxford University Press.
- de Groot, O.J., and I. Göksel. 2011. "Conflict and Education Demand in the Basque Region." *Journal of Conflict Resolution* August 55(4): 652–77.
- de Walque, D. 2006. "The Socio-Demographic Legacy of the Khmer Rouge Period in Cambodia, in Population Studies." *Population Studies* 60(2): 223–31.
- Foltz, J.D., and K.A. Opoku-Agyemang. 2011. "Low-Intensity Conflict and Schooling Outcomes: Evidence from Uganda." Unpublished Working Paper. University of Wisconsin, Madison, WI.
- Ichino, A., and R. Winter-Ebmer. 2004. "The Long-Run Educational Cost of World War II." *Journal of Labor Economics* 22(1): 57–86.
- Justino, P., M. Leone, and P. Salardi. 2014. "Short- and Long-Term Impact of Violence on Education: The Case of Timor Leste." *The World Bank Economic Review* 28(2): 320–53.
- Kochar, A. 1999. "Smoothing Consumption by Smoothing Income: Hours-of-Work Responses to Idiosyncratic Agricultural Shocks in Rural India." *Review of Economics and Statistics* 81(1): 50–61.
- Kibris, A. 2013. "The Conflict Trap Revisited: Civil Conflict and Educational Achievement." Working Paper. Sabanci University, Istanbul, Turkey.
- León, G. 2012. "Civil Conflict and Human Capital Accumulation: The Long Term Effects of Political Violence in Perú." *Journal of Human Resources* 47(4): 991–1023.
- Merrouche, Q. 2011. "The Long Term Educational Cost of War: Evidence from Landmine Contamination in Cambodia." *Journal of Development Studies* 47 (3): 399–416.
- Monteiro, J., and R. Rocha. 2012. "Drug Battles and School Achievement: Evidence from Rio de Janeiro's Favelas." NEUDC 2012 Presentation. Dartmouth, NH. http://www.dartmouth.edu/~neudc2012/docs/paper_260.pdf. Last accessed: August 8, 2013.
- Morduch, J. 1995. "Income Smoothing and Consumption Smoothing." *Journal of Economic Perspectives* 9(3): 103–14.
- Rodriguez, C., and F. Sanchez. 2012. "Armed Conflict Exposure, Human Capital Investments and Child Labor: Evidence from Colombia." *Defense and Peace Economics* 23(2): 161–84.
- Rohner, D., M. Thoenig, and F. Zilibotti. 2011. "Seeds of Distrust: Conflict in Uganda." Working Paper No. 417. Department of Economics, Center for Institutions, Policy and Culture in the Development Process, University of Zurich, Zurich, Germany.
- Rose, E. 1999. "Consumption Smoothing and Excess Female Mortality in Rural India." *Review of Economics and Statistics* 81(1): 41–49.
- . 2001. "Ex Ante and Ex Post Labor Supply Response to Risk in a Low-Income Area." *Journal of Development Economics* 64: 371–88.

- Shemyakina, O. 2011. "The Effect of Armed Conflict on Accumulation of Schooling: Results from Tajikistan." *Journal of Development Economics* 95(2): 186–200.
- Singh, P., and O. Shemyakina. 2013. "Gender-Differential Effects of Conflict on Education: The Case of the 1981-1993 Punjab Insurgency." HiCN Working Paper N 143, Households in Conflict Network.
- Strauss, J., and D. Thomas. 2008. "Health over the Life Course." In P. Schultz and J. Strauss, eds., *Handbook of Development Economics*, Vol.4. Amsterdam, The Netherlands: North-Holland.
- Swee, E.L. 2011. "On War and Schooling Attainment: The Case of Bosnia and Herzegovina." Unpublished manuscript, University of Melbourne, Melbourne, Australia.
- Valente, C. 2014. "Education and Conflict in Nepal." *World Bank Economic Review* 28(2): 354–83.
- Verwimp, P., and J. Van Bavel. 2014. "Schooling, Violent Conflict, and Gender in Burundi." *World Bank Economic Review* 28(2): 384–411.
- World Bank. (2003). "Timor-Leste Poverty Assessment: Poverty in a New Nation: Analysis for Action. Volume II." Joint Report of the Government of the Democratic Republic of Timor-Leste, ADB, JICA, UNDP, UNICEF, UNMISSET and the World Bank. <http://purl.pt/915/1/cd1/ta100/ta140%20All-Vol2-Final.pdf>. Last accessed: March 4, 2012.