Conflict and investment: A review

SUMMARY

This article provides an overview of the literature on the bidirectional relationship between conflict and private and public investment. We consider different dimensions of investment choices, including health, fertility, migration, education, and economic activity of firms and the government. The review puts a particular focus on the existing evidence for causality running from conflict to investment in these different dimensions, and from investment to conflict.

—*Michele Di Maio and Uwe Sunde*

Economic Policy October 2025 Printed in Great Britain
https://doi.org/10.1093/epolic/eiaf006

Conflict and investment: A review across health, fertility, education, and economic activity

Michele Di Maio [1,2,*] and Uwe Sunde [2,3,4,5]

[1]Sapienza University of Rome, Via del Castro Laurenziano 9, 00161 Rome, Italy
[2]RFBerlin, Berlin, Germany
[3]University of Munich (LMU), Geschwister-Scholl-Platz 1, Munich, 80539, Germany
[4]CESifo, Munich, Germany
[5]CEPR, London, United Kingdom

*Corresponding author: Department of Economics and Law, Sapienza University, via del Castro Laurenziano 9, 00161, Rome, Italy. E-mail: michele.dimaio@uniroma1.it

1. INTRODUCTION

Conflict influences investment decisions across individuals, firms, and governments. At the household level, it interferes with choices related to fertility, health, and education, thereby undermining the accumulation of human capital. For firms, it reduces investment opportunities and constrains growth. At the aggregate level, conflict determines

The Managing Editors in charge of this paper were Dominic Rohner and Oliver Vanden Eynde, guest editors of the Special Issue on Economic Policies for Peace.

Economic Policy October 2025 pp. 973–1013 Printed in Great Britain
https://doi.org/10.1093/epolic/eiaf006

the scope for policy by governments by destroying productive capacity and infrastructures, and creating obstacles to the efficient functioning of markets. These effects, beyond their substantial human costs, lead to sharp contractions in economic activity, significant losses in output, and reductions in welfare, both in the short and long run. Importantly, this relationship is bidirectional as investment decisions can also shape conflict dynamics. Deteriorating health conditions, declining educational outcomes, and worsening economic prospects can increase the risk of conflict. Similarly, conflict may be triggered by predatory private investment or by large-scale public infrastructure projects that generate local grievances or distributional tensions.

This article reviews the economic literature on the interplay between conflict and investment, emphasizing the existence of a bidirectional relationship. We consider both the consequences of conflict for (various types of) private and public investment, as well as the role of investment for fueling or preventing conflict.

Investment in our review refers to any economic choice that involves costs accruing at some point in time, but that is related to benefits that materialize at some later point in time. These investment choices involve different actors, such as individuals, households, or firms, or the public sector. Moreover, these investments occur in various domains, including individual human capital (in the form of health and education), firm capacity (in the form of capital, production establishments, or supply and distribution networks), or economic infrastructure (in the form of public infrastructure, and public goods provision, or state capacity). While in principle investment can also relate to predation and conflict-related capacities, in the remainder of the article we exclusively refer to investments for productive purposes, such as productivity or production capacity. Importantly, investment can take different forms—from binary choices related to the extensive margin, to the intensive margin and more subtle trade-offs, involving various dimensions of investment at the same time.

Conflict in our review refers to any hostile interaction between individuals or groups of individuals that involves the use of violence. This includes a wide range of phenomena, from large-scale international or internal wars with thousands of casualties, to localized violent events that involve civil conflict, political violence and social conflict, terrorism, or any violent incompatibility between population groups. These classifications comply with those underlying the various available data sets that form the basis for empirical analyses in the literature. The precise definition of conflict typically relates to the particular research question and application.

The conceptual framework underlying our review is rooted in the classical dichotomy of production versus predation: Individuals, groups, or states engage in deliberate decisions about the use of their resources for productive purposes, or alternatively for predation and conflict. With investments involving intertemporal trade-offs, the decision to invest is made under uncertainty about the future state of the world. Individuals (or states) base their investment decisions on expectations about the respective returns, which crucially depend on whether the future environment is characterized by peaceful

interactions on markets, or by conflict and violence. Depending on these beliefs, investments might be undertaken or not, be higher or lower, and directed in particular directions.

The *research questions* that our review addresses cover a wide range of aspects: How are investment decisions of various actors in different domains affected by conflict? Which are the conditions that minimize the effect of conflict on private and public investment? How can conflict emerge as the consequence of changes in investment behavior? And, last not least, how can private and public investment create an environment that contributes to peace?

The economic and political science literature on the determinants and consequences of conflict is large and varied. Broadly, one may classify this literature into four strands focusing on different aspects. A first strand of literature has focused on the macroeconomic and politico-economic conditions that may lead to conflict outbreaks (e.g., Cervellati and Sunde 2014a), and the respective consequences of conflict for economic development (Gates et al. 2012; Mueller 2016; Bove et al. 2017; Costalli, Moretti, and Pischedda 2017; Moyer 2023) and institutional development (e.g., Cervellati and Sunde 2014b). A second strand of literature has investigated how individuals and firms cope with conflict and how conflict exposure affects their decisions, specifically investments (Brück, Naudé, and Verwimp 2013; Brancati et al. 2025).[1] A third strand of literature explores the incentives or forces that lead individuals or groups to engage in violent activities and conflict (e.g., Humphries and Weinstein 2008). A distinct fourth strand investigates the potential for government interventions or other external interventions (see, e.g., Justino 2019; Rohner 2024).

Our review organizes the vast literature on the effects and determinants of conflict along the bidirectional nexus between conflict and investment. In doing so, it presents a synthesis of the findings related to both private and public investment, namely individual and public choices related to fertility, health, education, and economic activity. The basic structure of our review is depicted in Fig. 1.

The existence of a bidirectional relationship between conflict and (private and public) investment has an important implication: there can be mutually reinforcing (or weakening) feedback loops that give rise to multiple equilibria: When a lack of productive investment erodes the benefits from these investments, this might lead to more predation and conflict, which leads to a further reduction of investment. Alternatively, a lack of investment might reduce the potential benefits of conflict. Moreover, due to the intertemporal nature, investment decisions are a channel through which beliefs may become self-fulfilling. For instance, widespread beliefs of an imminent conflict outbreak might prevent investment in productive activities, with the consequence of a lack of economic development and persistent economic grievances that in fact form the breeding

1 Verwimp, Justino, and Brück (2019), Rohner (2023), and Vesco et al. (2025) provide recent surveys of the effects of conflict on various dimensions of human development.

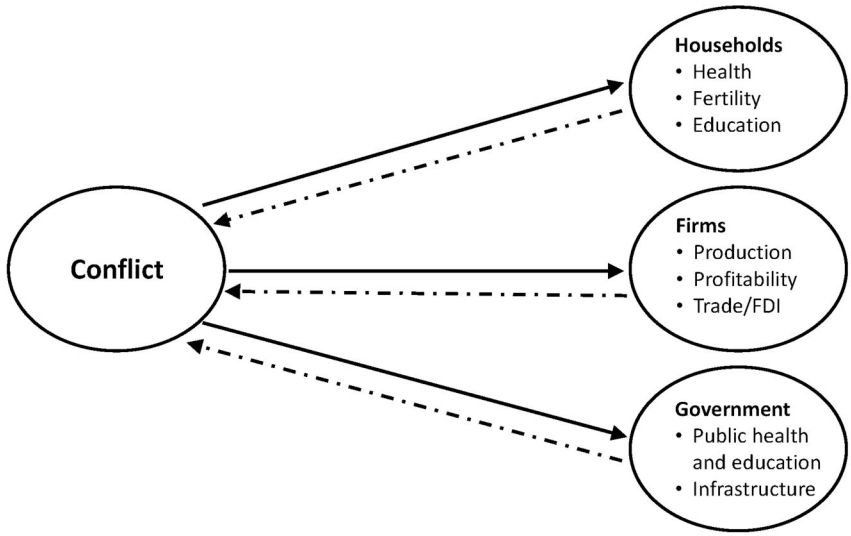

Figure 1. The relationship between conflict and investment in our review.

ground for the outbreak of conflict. In this conceptual framework, investment and conflict are thus linked through an intricate, intertemporal, and bidirectional causal relationship.

The objective of our review is to provide a useful guide through the conflict literature as to better understand both the effects of conflict on investment and of the role of private and public investment as drivers of conflict. To this end, we document the complex relationship between conflict and investment decisions across several domains, discuss relevant dimensions of causal links, and summarize existing empirical findings. The ultimate goal is to identify knowledge gaps against the background of the objective to design policy interventions to shorten, moderate, or prevent conflict. Only a solid understanding of the causal pathways and the respective empirical evidence do in fact allows for the design of policies that can help preventing conflict and maintain peace.[2] For this reason, we end our review by pointing toward open research questions to be addressed in future research.

The article proceeds as follows. Section 2 considers the relation between population, demography, and conflict. Section 3 looks at the link between health and conflict. Section 4 explores the relationship between education and conflict. Finally, Section 5 discusses the various links between economic activity and conflict. Section 6 concludes.

2 Our review—and particularly the discussion of policy implications and directions for future research—is closely related and complementary to the analysis and conclusions presented in the paper by Esposito and Wright on *Public Policies for Peace* in this issue.

2. CONFLICT AND HEALTH

Conflict mechanically affects health in various ways and thereby population dynamics due to the loss of life and the increase in mortality associated with conflict. This includes not only direct conflict-related casualties but also indirect effects through the accumulation of health deficits. In this section, we consider the nexus between conflict, health, and mortality.

2.1. The effects of conflict on health

2.1.1. Health and mortality. Worldwide, conflict is responsible for large numbers of casualties in terms of deaths and injuries. Conflict-related injuries often lead to life-long impairments, inflicting costs on individuals, their families, and communities. A large body of evidence documents the detrimental implications of conflict for health and mortality. The evidence suggests that conflict is responsible for an elevation of mortality among all age groups and both genders, and mortality due to various causes, including specific causes such as war-related deaths, deaths from communicable and non-communicable diseases, and injuries (see, e.g., Jawad et al. 2020). Conflict exposure is also responsible for elevated levels of coronary heart disease and cardiovascular disease (Jawad et al. 2019). This suggests that the implications of war-related health impairments affect all domains of human life and human development (see, e.g., Garry and Checchi 2021).

Conflict has negative effects on public health due to deteriorating supply with clean water, food, and health provision. Conflict exposure facilitates the spread of infectious diseases by its negative effects on infrastructure related to hygienic conditions; this is further amplified through conflict-induced mobility and displacement (Garry and Checchi 2021). Likewise, conflict exposure leads to a deterioration in the access to public health provision and even basic medical treatment. As a consequence, conflict often lead to the outbreak of epidemics (Wells et al. 2019; Bendavid et al. 2021).

Besides their effects on physical health, conflicts also have negative effects on psychological health, and both dimensions often interact. Di Maio and Leone Sciabolazza (2021) study the impact of conflict exposure on population health in the Gaza Strip. Their results show that individuals living in localities with greater conflict exposure have a higher probability of suffering from a physical impairment and a chronic disease. This increased incidence of physical impairments is due to the conflict-induced increase in the difficulty to reach health facilities as well as the decrease in individual incomes. Moreover, they document a higher probability of high blood pressure, which is consistent with the development of Post-Traumatic Stress Disorder (PTSD) due to the exposure to conflict-related violent events. Other evidence for long-lasting psychological consequences is reported in the context of mental health and malnutrition (Singhal 2019; Ajefu et al. 2025).

2.1.2. Child and maternal health. Children below the age of 5 years are the population group that suffers most from conflict in terms of mortality (Wagner et al. 2018; Jawad et al. 2020). A growing body of recent evidence documents the detrimental effects of conflict particularly on child health. These effects include worse health at birth (Minoiu and Shemyakina 2014; Quintana-Domeque and Ródenas-Serrano 2017), higher child mortality (Valente 2015; Dagnelie, De Luca, and Maystadt 2018), and a higher risk of retracted or limited body growth (Akresh et al. 2012a, b, Phadera 2023). In a review of the literature on child health, Kadir, Shenoda, and Goldhagen (2019) report evidence on various outcomes including mortality, injuries, limited access to health care, and conflict-related social changes affecting child health.

Part of the explanation for these patterns is the fact that conflicts particularly harm women. Especially in high-intensity conflicts, female mortality shows sharp increases. This is particularly the case for maternal mortality, leading to increased orphanhood among children (Kotsadam and Østby 2019; Wagner et al. 2019; Jawad et al. 2021).

Moreover, there are significant interactions between maternal health and child health, which are reinforced in conflict environments. For instance, in-utero exposure to the Israel-Palestine conflict led to higher probability of new-born children being underweight (Mansour and Rees 2012). Conflict exposure to conflict in Syria led to a deterioration in access to health facilities and an increase in premature births and C-sections (Ekzayez et al. 2021). Similar findings have been reported for other countries. For example, Price and Bohara (2013) report a negative correlation between conflict exposure and antenatal health care utilization in Nepal. Merging Demographic and Health Survey data with geo-localized information about the incidence of high-intensity conflicts, Amberg et al. (2023) find a significantly negative effect for access to health services such as facility-based delivery, child vaccination, or treatment of common illnesses.

The negative health effects of conflict are not confined to health and actual conflict outbreaks. Empirical evidence even suggests that the exposure to the risk of violence and conflict is associated with a deterioration in health, particularly of children (Tapsoba 2023), even if there is no actual outbreak of violence.

The effects of conflict exposure during childhood also lead to delays in child development. Evidence from survey data in combination with data on conflict exposure indicates that conflict is associated with delays in cognitive and physical development and an impairment in socioemotional development, which is amplified by reduced access to early childhood education (Goto, Frodl, and Skokauskas 2021). Likewise, conflict exposure entails the risk of malnutrition and stunting (Bendavid et al. 2021; Makinde et al. 2023). These deficits in development early in life are likely to have long-lasting consequences throughout the children's lives (Campbell et al. 2014).

2.1.3. Public health and aggregate consequences. At the population level, conflict leads to a deterioration in the provision of public health. This implies a limited ability of preventing or curtailing outbreaks of epidemics, including cholera and other highly infectious diseases (Wells et al. 2019; Bendavid et al. 2021).

The negative effect of conflict on health leads to further deterioration in economic living conditions. Reductions in life expectancy as well as increased uncertainty about survival reduce the incentives for investment in education and productivity, thereby leading to a delay or even reversal in economic development (Cervellati and Sunde 2015). Moreover, higher mortality tends to make individuals more short-sighted, which leads to a declining interest in investment with potentially large, but significantly delayed benefits, such as education (Falk, Hermle, and Sunde 2019). The deterioration of health, together with the destruction of human and social capital, entails the possibility of vicious cycles between conflict, a lack of economic development, and economic grievances that lead to renewed conflict. Moreover, conflict-induced damages to individual health and confidence might be long lasting, which makes disentangling causal pathways, and their importance is even more difficult (see also Rohner and Thoenig 2021). Public investments into public health as well as in an institutional environment that provides security and stability might play a crucial role for breaking these vicious circles.

2.2. The effect of health on conflict

Evidence for the opposite direction of causality—whether disease and epidemics may lead to increased conflict or exacerbate it—is more scarce. Historical evidence suggests an interplay between epidemics and conflict (see, e.g., Jedwab et al. 2021). The literature has shown that adverse weather and climatological shocks cause conflict by affecting incomes and economic living conditions (Miguel, Satyanath, and Sergenti 2004; O'Loughlin, Linke, and Witmer 2014). Recent work based on data from the COVID-19 pandemic has found evidence for health shocks, or measures taken to mitigate these shocks, amplifying existing grievances and thereby acting as a trigger of protests and civil violence (Iacoella, Justino, and Martorano 2025; Lackner, Sunde, and Winter-Ebmer 2025; Wood et al. 2022).

Applying more involved identification strategies, recent empirical studies have sought to identify causal effects of variation in health such as epidemic outbreaks, on conflict. For vector-transmitted infectious diseases, fluctuations in temperature and rainfall can lead to variation in infection risk. This is the case, for instance, with malaria. Exploiting this relation allows for causal identification designs. Recent work along these lines suggests that variation in disease pressure and infection risk can causally contribute to small-scale conflict such as protests or violent confrontations (see, e.g., Cervellati, Sunde, and Valmori 2017, for multi-host vector-transmitted diseases, and Cervellati, Esposito, and Sunde 2022, for the case of malaria in sub-Saharan Africa). An important implication of these findings is that investments in public health provision and the prevention of epidemics might provide a possibility to prevent or contain conflict.

Prima facie, these findings are inconsistent with Malthusian mechanisms related to population growth causing conflict, as epidemics are associated with negative, not positive, population dynamics. In light of previous work that has shown that the health-

income nexus crucially depends on whether demographic dynamics are Malthusian or not (Cervellati and Sunde 2011), this raises a question about the consistency of aggregate population dynamics and conflict. The role of demographic factors for sudden outbreaks of civil conflict and their interactions with environmental factors such as climate, weather, or natural disasters remain to be understood better.

Given the effectiveness of public health interventions and investments for mortality reduction and health improvements, they potentially exhibit a double dividend in terms of conflict prevention. Evidence on the successful roll-out of antiretroviral therapy to treat HIV in Africa supports this view (Berlanda et al. 2024). A related aspect refers to the scope for public policy. Health interventions and public investment in health infrastructure offer a possibility to intervene and re-establish trust in public institutions, which might also help reducing conflict and fostering peace (see, e.g., Brake and Razum 2024; Berlanda et al. 2024).

2.3. Future research

The literature on the health consequences of conflict has made progress over the past decades. Nevertheless, some dimensions deserve more attention in future research.

One such dimension refers to long-run consequences. Despite a growing body of evidence, studies on the effects of conflict on child development and long-run outcomes remain scarce. Another dimension for improvement concerns the consequences for psychological and socio-emotional development and their interaction with individual investments in health (or education, discussed below). Evidence shows that the development of certain psychological traits such as interpersonal preferences and risk preferences is crucially affected by conflict experiences, especially during youth (Grosjean 2016; Conzo and Salustri 2019; Coutts 2024). Research suggests that these preferences shifts persist through life and affect risk taking behavior (Bellucci et al. 2020), but their relevance for health outcomes later in life remains to be understood better. In particular, these psychological effects might compound deficiencies in health during childhood by leading to behavioral patterns that aggravate health consequences and lead to recurrent conflict. On the other hand, recent evidence suggests that survival of conflict exposure even leads to optimistic perspectives about life expectancy (Arpino, Conzo, and Salustri 2022), which tends to indicate opposite implications for investment.

A further dimension of research relates to overcoming existing data limitations. Monitoring and measurement of health outcomes in conflict-ridden areas is incomplete and thus prone to mismeasurement. Recent work has proposed statistical methods to overcome spurious results using health survey data and retrospective analysis (e.g., Boerma et al. 2019), but data deficiencies will continue to pose a major problem for scientific analysis.

3. CONFLICT AND POPULATION DYNAMICS

Conflict is closely linked to population dynamics. Population dynamics are essentially the result of dynamics in mortality, fertility, and migration. While mortality has been addressed in the context of health in the previous section, this section focuses on fertility and migration. At the level of individuals and households, fertility and migration are (at least partly) the consequence of investment decisions, which depend on environmental conditions that determine the costs and benefits associated with these investments. This section reviews the literature on the both possible direction of causality—from conflict to population dynamics and from population dynamics to conflict. While the evidence for the former direction of causality is large, the evidence for the reverse direction of causality, of demographic dynamics affecting conflict, is less clear-cut.

3.1. The effect of conflict on population dynamics

3.1.1. Fertility. Conflict exposure affects fertility behavior in various dimensions. Fertility constitutes a major investment decision by inducing parents to spend resources on child bearing and rearing for benefits that accrue in the future in the form of emotional support, economic support during old age, household support, etc. Fertility decisions are also closely intertwined with the decision to invest into the health or education of children (the so-called "quantity-quality" trade-off). This makes it clear that individual investment decisions often relate to multiple dimensions at the same time, with choices affecting not only the size of investments but also the type and intensity of investment in different domains. Conflict interferes with these complex investment decisions by altering costs and benefits. For instance, conflict exposure leads to increased child mortality, which may in turn affect fertility choices and investment in children (as well as their health, education, etc.). The use of individual data, such as from Demographic and Health Surveys, provides fine-grained information that can be combined with conflict exposure to estimate these effects. Applying such an approach for the case of the conflict in Rwanda, Kraehnert et al. (2019) find heterogeneous effects of exposure to conflict on fertility. These effects depend on the type of violence and on variation in local demographic conditions like the sex ratio. However, the findings point towards replacement effects and to negative consequence of adult mortality that affects the local sex ratio. Using a similar approach, recent work by Nepal, Halla, and Stillman (2025) finds evidence for a substitution of child quality in child quantity. Their findings show that conflict-related violence leads to an increase in fertility, but a deterioration of physical development as proxied by height-for-age.

Conflict exposure might also affect the timing of fertility. Combining geo-localized data on violent events with survey data on fertility goals and outcomes for 25 sub-Saharan African countries, Thiede et al. (2020) document that conflict exposure leads to modest reductions in preferred family size and in the probability of childbearing. These effects exhibit heterogeneity across demographic groups, and the evidence

suggests that the fertility decline is related to delays or reductions in marriage. Other work has found an influence of conflict on fertility through changes in contraceptive use and fertility behavior (Svallfors and Billingsley 2019; Lerch 2024; Torrisi 2020, 2024). In some cases, such as the Israeli-Palestinian conflict, fertility has shown an increase as a consequence of conflict-related pronatalistic preferences (Fargues 2000).

Policy interventions, such as peacekeeping missions, can have an effect on population dynamics, especially in post-conflict environments (Bove, Di Salvatore, and Elia 2022). Recent evidence indicates that increased security as a result of UN peacekeeping missions, for instance, in Liberia, led to a decline in fertility rates and an improvement of child and maternal health, by increasing the opportunity costs of child bearing and inducing women to prioritize quality over quantity of children (Gizelis and Cao 2021; Bove et al. 2024). This evidence suggests that public investment in peacekeeping and post-conflict security improvements, together with a promotion of access to education and local economic activities, moderates fertility and can induce a transition from high fertility to high investments in children.

3.1.2. Migration. Conflict not only causes casualties but also induces widespread mobility to escape conflict. This mobility can be the result of sheer force, or of deliberate decisions to leave and start afresh somewhere else. These decisions reflect investment decisions, which becomes particularly clear in the context of human trafficking, when refugees have to pay substantial upfront fees for moving to places with uncertain economic prospects. Estimates suggest that the number of individuals that are displaced and forced to migrate by conflict exceeds the number of individuals killed in conflicts by an order of magnitude (e.g., Fearon and Shaver 2021). In this context, conflict exposure acts as a critical push factor for migration decisions. A recent replication study of previous work corroborates the finding that conflict leads to massive population flows and suggests that earlier estimates might constitute a lower bound due to the use of flawed data (Shaver et al. 2025). The same study finds less evidence than previous studies that suggested that economic opportunity represents a major pull factor for international migration due to conflict, but rather suggests internal migration as the major consequence of conflict.[3] A related aspect concerns the interplay between conflict, migration, and climate change.[4] While conflict-related population dynamics are typically associated with mortality, the migration of war refugees constitutes an important dimension of population change in many countries.

3 For a discussion of the relation between conflict, international migration, and refugee flows, we refer to paper by McGuirk and Trebesch on *Geoeconomics* in this Special Issue.

4 By causing large population flows, especially rural–urban migration, climate change often reinforces tensions over local resources and across ethnic lines. This implies that the three phenomena are intimately linked. Despite growing evidence for this interplay (e.g., Abel et al. 2019; Breckner and Sunde 2019) much remains to be learned about the causal pathways. For a more detailed discussion of internal population flows as the result of climate shocks, we refer to the paper by Vanden Eynde and Vargas on *Climate change, natural resources, and conflict* in this Special Issue.

3.2. The effect of population dynamics on conflict

Considering conflict as the outcome of a deliberate decision to engage in violent rather than productive activities, one faces the question of the drivers of this decision, at the level of individuals, groups, or nations. The dominant view in the literature is that outbreaks of civil violence are trigged by incentives either for the purpose of enrichment or out of sheer despair due to dismal living conditions, coupled with the feasibility to start a conflict (see, e.g., Collier and Hoeffler 2004; Collier et al. 2003, Collier, Hoeffler, and Rohner 2009). In essence, this boils down to inequality in living conditions between individuals or population groups, and (or in combination with) stagnant or even declining economic living conditions, economic development, and development perspectives. Population dynamics play a major for both.

3.2.1. Malthusian conflict dynamics. Population growth and civil conflict are among the factors that constitute the most severe impediments for the prospects of economic development, in particular in developing countries. Historically, Malthusian population dynamics have served as explanation for conflict outbreaks and development failures. Malthusian population dynamics imply that any increase in resources per capita is reflected in (and eroded by) a population expansion. If excess population growth, due to high fertility, immigration, or other reasons, outpaces economic development, the resulting shortage of economic means will trigger positive checks to reduce population pressure on economic capacities. According to the Malthusian view, these come either in the form of epidemics, or of violent conflicts (see, e.g., Andregg 2016, for a modern perspective of this view in the context of conflict). From the perspective of long-run economic development, Malthusian dynamics and the resulting checks for overpopulation end only once the positive relationship between economic development and population growth gives way to a demographic transition that reverses the correlation between income and population. This requires income gains to be not associated with an acceleration of demographic pressure, but with a decline in fertility and, instead, an increase in productive capacity. Theories of long-run growth have therefore emphasized the role of the demographic transition as a key turning point that enabled the historical transition from a stagnant economy to a regime of sustained economic growth by shifting the focus to human capital investments at the cost of fertility (see, e.g., Galor and Weil 2000). Research has documented the empirical validity of the argument of a demographic transition as the prerequisite for sustained economic development for explaining today's comparative development differences (see, e.g., Cervellati and Sunde 2015; Cervellati, Meyerheim, and Sunde 2023).

Population pressure has traditionally been associated with conflict through Malthusian mechanisms. According to this argument, with limited or fixed resources such as arable land, increasing population, or population density leads to scarcity and

intensified competition for resources.[5] For a long time, evidence for this argument has been limited to historical accounts and case studies, and, arguably, resource scarcity and overpopulation played a role in conflicts such as the genocide in Rwanda (e.g., Andre and Platteau 1998). Early quantitative studies found systematic evidence for a positive association between population density and conflict based on cross-country variation (Fearon and Laitin 2003; Collier and Hoeffler 2004; Hegre and Sambanis 2006).

Only more recent work adopted empirical identification strategies that would provide a more credible basis for a causal effect of population on conflict. This work has used variation in weather conditions that influence population growth through resource scarcity or abundance, to identify the effect of population pressure on conflict (Brückner 2010). Recent work has presented evidence for a causal link between Malthusian population dynamics, triggered by mortality declines due to improved public health provision over long time periods, and resource-related outbreaks of civil violence (Acemoglu, Fergusson, and Johnson 2020).

An important implication of this evidence is the potentially detrimental effect of health interventions and investment in public health. By reducing mortality and under the assumption of unchanged fertility patterns, health improvements have positive effects on population growth, with adverse consequences for conflict due to the Malthusian mechanism. An important caveat regarding this argument, however, is the fundamental change in the population dynamics in the context of the demographic transition. While the association between population and resources per capita is positive before the demographic transition, this association weakens and even reverses after the transition, with the consequence of an acceleration of economic growth (Galor and Weil 2000). Theoretically, this also implies a non-monotonic relation between factors like resources, incomes, or health and mortality with population, with opposite signs before and after the demographic transition (Cervellati and Sunde 2011). In line with these considerations, recent empirical work has found that public health interventions, such as the roll-out of anti-retroviral therapy to combat HIV in Africa, has led to accelerated population growth without inducing Malthusian conflict dynamics (Berlanda et al. 2025).

Finally, it is also possible that fertility is intentionally used to influence the like-hood of winning a war. This becomes most obvious in the context of strategic fertility choices made to help minorities or certain population groups to increase their political or military power by becoming a larger share of the population (see, e.g., De La Croix and Dottori 2008; Bezin et al. 2024).

The empirical validity of a causal link between population growth and conflict remains an issue of debate. At the same time, demographic change represents a challenge for public policy in low- and middle-income countries (LMICs) in many

5 Recent work has incorporated the consideration of conflict as the result of resource competition in the long-run development context (Le Fur and Wasmer 2024).

dimensions, including fertility, health, and migration policies. Managing this challenge is key to prevent (or exacerbate) societal conflict.

3.2.2. Age structure. A related but distinct aspect of demographic change relates to changes in the age structure. Through its effects on mortality and fertility, conflict affects the age composition in ways that are visible even decades after the conflict. Both demographic change and changes in the age composition have been mentioned as potential drivers of conflict and democratic breakdown (Urdal 2006; Diamond and Goldstone 2020). However, robust evidence about the causal links remains scarce. An exception is recent work by Flückiger and Ludwig (2018), which is based on an identification approach that exploits the incidence of droughts in the birth year of a particular cohort as exogenous variation in the size of the respective birth cohort in countries in Sub-Saharan Africa. Their findings show that an increase in the size of the population group aged 15 to 19 years is associated with a higher risk of conflict. However, they only find evidence for low-level conflicts, not for high-intensity conflict and not for variation in the size of younger or older population groups.

3.2.3. Migration. Conflict-related migration entails the risk of propagating and exporting violence to other regions and countries. In addition, evidence has suggested a link between conflict migration and terrorist attacks (Choi and Salehyan 2013). The inflow of conflict migrants has been associated with intensified terrorist activities in the presence of links between the conflict and transnational terror organizations (Polo and Wucherpfennig 2022). Recent evidence suggests, however, that the association between migration and terrorism is negative if migration occurs from countries or regions without such links (Shaver et al. 2025). Likewise, there is evidence for a transmission of conflicts to other countries through refugee migration (Salehyan and Gleditsch 2006; Couttenier et al. 2019; Lange and Sommerfeld 2024). However, recent replications pose a note of caution on the universality of this evidence (Shaver et al. 2025). Empirical findings from existing studies in high-income countries suggest that public investment in refugee integration, including in policies focusing at education, facilitating labor market participation, and social services for refugees, mitigates effects on violent crime (e.g., Couttenier et al. 2019).

3.3. Future research

Important knowledge gaps on the relation between population dynamics and conflict remain to be addressed by future research.

Contrary to public perception, the evidence for the relevance of Malthusian conflict dynamics and "youth bulges" as explanations of conflict incidence is mixed and in some cases methodologically debatable. While previous research has shown that, e.g., the effect of health improvements and extensions of life expectancy have systematically different effects on population dynamics and economic growth before and after the

demographic transition (Cervellati and Sunde 2011), similar evidence for the link between population dynamics and conflict is still lacking. Likewise, more evidence is needed for the consequences for conflict of changes in health conditions for population groups of different ages. Despite indicative evidence, the role of the age composition for conflict remains an important open question for future research.

A similar lack of knowledge refers to the consequences of public health investments for the link between population dynamics and conflict. This is particularly concerning in light of the conflicting implications of existing evidence. If successful public health interventions and infrastructure improvements reduce mortality, they also have a positive effect on population growth. According to the Malthusian logic, this would tend to intensify conflict. It is therefore paramount to understand the relevance and limits of Malthusian mechanisms, as well as the conditions under which population dynamics cease to have Malthusian features.

At a broader level, research on the link between public investment in population programs aiming at fertility declines and conflict remains incomplete. At the opposite end of the spectrum, an increasing number of countries has begun to experience fertility below replacement and a shrinking population. The decline in working age population, together with changes in the age composition and, additionally in some countries imbalances in gender composition (Hesketh and Xing 2006), might have consequences for conflict that remain not well understood.

Similarly, while existing evidence points at a role for public investment in mitigating adverse effects of conflict-driven migration, studies of the causal link between public investment in refugee integration and reductions in developing countries seem to be rare. In view of increasing political tension and heated debates about migration, more research seems warranted in this important field.

4. CONFLICT AND EDUCATION

Human capital is the most important prerequisite for economic development and growth. This view is supported by empirical evidence from the literature on growth (Mankiw, Romer, and Weil 1992; Sunde and Vischer 2015; Jones 2016). Likewise, evidence from development accounting has shown that productivity related to human capital is a crucial factor in explaining comparative development differences (Jones and Romer 2010). At the level of individuals and households, education is the key determinant of productivity and labor market earnings.

4.1. The effect of conflict on education outcomes

Conflict has devastating impacts on a range of educational outcomes and the accumulation of human capital. Since education is a key determinant of earnings in the labor market, the production capacity of the economy and for the development prospects of a country, knowledge about the effects of conflict on education investment is particularly

important. Ultimately, the human capital channel constitutes a central channel through which conflict inhibits economic development. An understanding of the effects of conflict on education and human capital accumulation is therefore a prerequisite to help targeting public policy and private investments into human capital accumulation with the aim to minimize the long-run effects of conflict for economic development.

The effect of conflict on education has different facets. On the one hand, conflict leads to a destruction of infrastructure, schools, and the displacement of teachers and pupils. On the other hand, conflict reduces education returns, intensifies economic constraints and poverty as opportunity costs for education, and forces children into other occupations that prevent their school attendance (Justino 2016).

Public policy targeting human capital accumulation in a conflict-affected context is key to allow the economy to cope with possible negative effects of violence in the short and long term. Public and private investments are important complements in the process of human capital accumulation.

The literature on the effects of conflict and violence on education is vast. Numerous studies have investigated the effect of conflict on education focusing on specific countries, including Rwanda (Akresh and de Walque 2008), Tajikistan (Shemyakina 2011), Peru (Leon 2012), the West Bank (Di Maio and Nandi 2013; Brück et al. 2019), Bosnia and Herzegovina (Swee 2015), Nigeria (Bertoni et al. 2019), Cambodia (Islam et al. 2016), Colombia (Prem, Vargas, and Namen 2023), Sri Lanka (Ito et al. 2024), and East Timor (Justino et al. 2014).

By exploiting variation in conflicts across locations and cohorts, these studies document that violent conflict has a negative effect on several different education outcomes. These outcomes include school enrollment, school drop-out, attendance, years of education completed, educational achievements, the probability of passing the examinations at the end of the academic year, and university admittance (see, for instance, Shemyakina 2011; Di Maio and Nandi 2013; Swee 2015; Bertoni et al. 2019; Brück et al. 2019).[6]

While the majority of studies highlight the negative effects of conflict on education—at least for certain groups of the population—some research suggests that these effects may diminish over time or, in some cases, even be positive. For instance, La Mattina (2018) provides evidence that the adverse educational impacts of conflict can be mitigated over an individual's lifetime. Likewise, conflict experience—or the expectation of such an experience—may have a positive effect on education in the long term. For instance, under the expectation of war, it may make sense investing in education and increasing the supply of skilled workers (Aghion et al. 2019). Finally, Valente (2014) documents an increase in educational attainment and school completion among

6 The negative impact of conflict events increases with geographic proximity to the violent events and with intensity of violence (Bertoni et al. 2019; Ito et al. 2024; Michaelsen and Salardi 2020). The effects also vary depending on the type of conflict event and the timing of exposure (Ajogbeje and Sylwester 2024; Swee 2015).

individuals exposed to the Maoist insurgency in Nepal. She attributes this finding to societal changes brought about by the conflict that led to increases in the education of girls.

A large number of studies has examined the long run effects of conflict on education, based on evidence from historical episodes and from more recent conflicts (see, for instance, Ichino and Winter-Ebmer 2004; Akresh and de Walque 2008; Chamarbagwala and Moran 2011; Leon 2012; Bertoni et al. 2019; Akbulut-Yuksel 2014; Justino, Leone, and Salardi 2014; Jürges et al. 2022; Shimizutani and Yamada 2024; Guo 2020). This evidence shows that even short-term exposure to conflict and violence can have long-lasting negative effects on education. These negative impacts are protracted on those individuals who are exposed to conflict when young (Justino 2016; Shemyakina 2015; Chin, Cunningham, and Van 2023). Beyond direct educational impacts, conflict also influences the accumulation of human capital in the long term by altering labor market dynamics and delaying structural change. For example, in the case of Colombia, Fergusson, Ibáñez, and Riaño (2019) find that cohorts exposed to violence are more likely to enter low-skilled sectors and are less likely to find employment in manufacturing and services relative to agriculture. This suggests that violence hinders the reallocation of labor toward more modern sectors, potentially constraining structural transformation and economic development.

4.1.1 Effect heterogeneity. The effects of conflict on education are heterogeneous along several dimensions, including gender, age, and country characteristics. The gender effects of conflict on education crucially depend on the specific context (Buvinic, Das Gupta, and Shemyakina 2014). Some studies find that the effects are more negative for girls (e.g., Shemyakina 2011; Chamarbagwala and Moran 2011). Other studies indicate that the effect is larger for boys (e.g., Verwimp and van Bavel 2014, Justino et al. 2014). In other case, there seems not to be a gender differential (e.g., Bertoni et al. 2019). There is also evidence that the effect varies with the age of the students or school grades. For example, Swee (2015) finds that war affects the likelihood of school completion for secondary education, but not of primary education. Bertoni et al. (2019) document that the negative effect of conflict exposure on school enrolment is larger for children who are no longer of mandatory school age. Finally, the effect of conflict varies with the type of country institutions. Unfried and Kis-Katos (2023) find that education is generally unaffected by low intensity in sub-Saharan African countries while high-intensity conflicts reduce educational attainment. Yet, they find that the effect is not significant in autocracies. These very varied results suggest that violent conflict affects different individuals in different ways, depending on the specific country context, the type of conflict, and the mechanisms at play.

4.1.2. Mechanisms. While a substantial body of evidence documents the impact of conflict exposure on education, studies examining the specific mechanisms underlying these effects remain relatively limited.

Justino (2016) identifies a set of key demand and supply mechanisms. Supply-side mechanisms include the destruction of school infrastructure and resources, teacher absenteeism and school closing, and the creation of disparities in access to education. Brück, Di Maio, and Miaari (2019) document that conflict reduces the quality of the learning environment at school by decreasing the number of available classrooms and thus increasing overcrowding in the classroom in the context of the West Bank. Monteiro and Rocha (2017) show that gun fighting close to the schools reduces student's academic achievement, with the mechanisms being the violence-induced higher teacher absenteeism and temporary school closings. Finally, Justino (2016) notes that conflict may lead to unequal access to education determined by gender, ethnicity, religion, economic status, or geographical location. For instance, in the case of the Khmer Rouge regime in Cambodia, the violence targeted the more educated population (De Walque 2006). This may also continue after the end of the conflict, when the new ruling elite selectively restricts access to education to certain groups of individuals by racial, ethnic, or religious characteristics (see Bush and Saltarelli 2000).

Demand side mechanisms include the conflict-induced changes in income and the fear, trauma, and psychological shocks caused by the exposure to violent events. Several studies document the negative effect of conflict on household income as driver of the reduction in education investment by households (see, for example, Akresh and de Walque 2008; Shemyakina 2011; Justino et al. 2014). A specific way through which an income drop may lead to a reduction in education is by increasing child labor, thus reducing the learning time at school and home by the child. Rodriguez and Sanchez (2012) show that violent attacks in Colombian municipalities significantly increase the probability that children join the labor market. Di Maio and Nandi (2013) document that the imposition of closure days of the border between Israel and the West Bank—by decreasing income for Palestinian workers employed in Israel—leads to an increase of child labor and a reduction in school attendance of Palestinian children. Chin et al. (2023) show that the genocide in Rwanda forced children out of school and into child labor, thereby reducing their future earnings. Fear and perceived risk of violence, terrorism, and conflict also negatively affect education outcomes by reducing school attendance and impairing learning abilities. The increase in the fear of violence may induce parents to not send their children to school to avoid them being a possible target for violent attacks or to avoid insecurity on the way to school (see, e.g., Alfano and Görlach 2023). At the same time, a close proximity in the exposure to conflict events (in time and space) may lead to a deterioration of the psychological well-being of students, with negative impacts on education outcomes such as exam performance (Brück et al. 2019; Michaelsen and Salardi 2020). Importantly, the experience of conflict—by negatively affecting the non-cognitive skills of children—also has long-term negative impact on their educational attainment (Jürges et al. 2022).

An important yet relatively underexplored mechanism through which conflict affects education outcomes is forced displacement. The effect of displacement on human capital accumulation is theoretically ambiguous, as it involves both demand-side and

supply-side mechanisms. On the demand side, displacement is often associated with deteriorating health conditions, income losses, and heightened insecurity, all of which tend to reduce household investments in education (Shemyakina 2011; Verwimp and van Bavel 2014). On the other hand, displacement may also increase educational investments, as education represents a mobile asset that cannot be expropriated—a notion known as the "uprootedness hypothesis" (Becker et al. 2020). On the supply side, the impact of displacement is similarly uncertain. In developing countries, conflict-driven displacement often relocates individuals to areas with worse educational infrastructure, lower school quality, and teacher shortages. However, it is also possible that displaced individuals resettle in locations with better educational opportunities than those available in their place of origin. In this case, displacement may lead to improved educational outcomes through a "place-based" effect. Empirical studies provide mixed evidence on these mechanisms. Chiovelli et al. (2024) examine the impact of conflict-driven displacement on human capital accumulation in the context of the Mozambican civil war (1977–1992) and find that displacement is associated with increased educational investments, with both uprootedness and place-based effects playing a role. However, they also document a higher prevalence of social and psychological trauma among displaced individuals. Further support for the uprootedness hypothesis comes from Aksoy et al. (2025), who study school-age Syrian refugees in Turkey. Their findings suggest that increased violence in refugees' hometowns in Syria leads to improvements in school outcomes in Turkey, as students respond to diminished prospects of returning home by investing more in education. Notably, this effect is absent for naturalized students, reinforcing the idea that the perceived permanence of displacement shapes educational decisions.

4.2. Future research

Despite a voluminous literature, significant knowledge gaps still exist on the interplay between conflict and education.

One key open question concerns how households adjust their education investment decisions—such as the type of education pursued or the allocation of resources across children in the household—in response to conflict. A closely related research question concerns the spillover effects of conflict, both within and across households. These spillovers may generate complex and interdependent dynamics. Understanding these aspects is essential for assessing the broader consequences of conflict on human capital accumulation and development prospects at the level of households, regions, and countries.

Another promising avenue for future research is to document more extensively the heterogeneous effects of conflict across sensitive dimensions and the implications of these heterogeneous effects for future conflict. As discussed above, conflict can create inequalities in the access to education both during periods of violence—when certain groups are deliberately targeted—and in post-conflict settings—when the ruling elites

may impose barriers to education through language policies, curricular changes, or other segregation measures. Justino (2016) emphasizes that failing to account for these group-specific effects entails the risk of distorting policy responses aimed at restoring equitable access to education. This may even leave structural factors that could fuel future violence unaddressed.

As in the case of the relation between health and conflict, much less is known about the reverse direction of causality: how education may influence conflict. While education is expected to be important factor for preventing conflict, causal evidence for the link between long-run investments, such as education, and conflict activity is mixed and inconclusive (see, e.g., Ostby, Urdahl, and Dupuy 2019). Anecdotal evidence indicates that authoritarian regimes and dictatorships use education to reinforce an ideological supremacy or repression of opposition or minority groups. Thus, while education is typically viewed as an important factor for preventing conflict, it might well be that education breeds new conflict. On a more optimistic note, Rohner and Saia (2019) show the school construction in Indonesia has a large conflict-reducing impact. Interestingly, the channels of transmission relate to better economic perspectives, as well as increased inter-religious trust and tolerance. Their findings also indicate that school construction facilitates a transition from violent expressions of dissent to peaceful protests. Identifying the conditions under which education promotes peace rather than conflict is an important avenue for future research.

The impact of conflict on the return to education—defined as the additional income households expect from investing in their children's education—remains an underexplored area of research. Conflict-induced disruptions to economic activity, including the destruction of firms, markets, and infrastructure, may suppress demand for skilled labor, thereby lowering returns to education and discouraging both private and public investment, particularly in higher education. However, conflict-driven skill shortages may in some cases even increase returns to education for specific skill types, both during and after the conflict. This mechanism also relates to the effect of conflict on economic activity discussed in the following section.

More in general, there is a need for a better and deeper understanding of the heterogeneities and mechanisms (i.e., supply vs. demand) underlying such effects. In particular, more evidence is needed to guide on how to anticipate which mechanisms may be more relevant in different contexts, and thus which policy interventions might be the most appropriate ones.

5. CONFLICT AND INVESTMENT BY FIRMS AND GOVERNMENTS

In addition to human suffering and social disruption, conflicts entail large economic costs. According to estimates of the World Bank,[7] the direct economic losses from

7 See https://www.worldbank.org/en/topic/social-cohesion-and-resilience (last visited, March 25, 2025).

violent conflict are immense: the direct economic losses from violent conflict are estimated to amount to $19.1 trillion, or about 13.5% of global GDP in 2023.

Conflict is becoming more widespread, affecting both developed and developing countries. In 2024, 167 countries have experienced conflict events, and one in seven people worldwide has been exposed to conflict.[8] Despite the challenges imposed by conflict, economic activity persists—even in countries highly exposed to violent events. As a result, incorporating conflict into economic analysis has become essential for understanding economic dynamics in both developing and developed countries. At the same time, economic policy should be designed with the objective of ensuring the continuity of economic activity, recognizing that conflict can no longer be assumed to be an exception.

5.1. The effect of conflict on economic activity

Earlier studies on the effect of conflict on economic activity adopted a macroeconomic perspective. Only recently, the focus has moved to the analysis of the impact of the conflict at the firm level. This has been possible thanks to the increased availability of microdata on firm activity in conflict-affected settings. We discuss these two strands of the literature in turn.

5.1.1. The macroeconomic perspective. The macroeconomic consequences of conflict have been studied extensively in the literature. Conflict, civil violence, and political violence are all obstacles to economic development (Rodrik 1999; Hoeffler and Reynal-Querol 2003; Besley and Mueller 2012; Ray and Esteban 2017). Evidence robustly shows that violent conflict and political instability is associated with a decline in output and lower growth rates (see e.g., Alesina et al. 1996; Abadie and Gardeabazal 2003; Blomberg, Hess, and Orphanides 2004; Cerra and Saxena 2008). Conflict reduces and destroys both public and private capital, reducing the production capacity of countries (Collier 1999; Eckstein and Tsiddon 2004; Blattman and Miguel 2010). Moreover, conflict leads to a deterioration in public finances due to the erosion of the tax base, a reduction in other public expenditures in favor of military spending, and the destruction of infrastructures (Besley and Persson 2008; Fang et al. 2020). These effects create obstacles to investment and economic growth, not only during conflict but also when peace is restored.

The macroeconomic costs of conflict are large and long-lasting (Mueller 2012).[9] Estimates of the macro-level effect of conflict range from 1% to 4% of GDP per year of

8 See https://acleddata.com/conflict-index/index-july-2024/.

9 Economic growth theory and earlier empirical analysis suggest that countries should recover relatively quickly from war destruction (Cerra and Saxena 2008; Miguel and Roland, 2011; Bove, Elia, and Smith 2017).

conflict (e.g., Collier 1999; de Groot et al. 2022; Gates et al. 2012; Mueller and Tobias 2016; Moyer 2023). Mueller et al. (2017) estimate that in countries that suffered from intense conflict there is an average labor productivity loss of 15%. Novta and Pugacheva (2021) estimate that GDP per capita is about 28% lower 10 years after conflict onset. Conflicts have large long-term negative consequences for economic growth, reducing private consumption, investment, and trade. The effectiveness of macroeconomic policies is also reduced, suggesting that objectives and instruments to be effective need to be adapted to the conflict situation (Chami et al. 2021).

Internal and external conflicts may also have (macro)economic spillover effects on other countries (even if not involved in the conflict). These effects may be present not only when conflict spreads to neighboring countries but also when it affects regional and international trade activities by amplifying uncertainty, disrupting trade, and inducing a reconfiguration of global value chains. The direction of the effects on the neighboring countries is not obvious as different countries may gain or lose from the conflict-induced new trade patterns (Ades and Chua 1997; Murdoch and Sandler 2002, 2004; Qureshi 2013; Korn and Stemmler 2025).

5.1.2. The microeconomic perspective. The literature on the effects of conflict on firms is still relatively small, yet rapidly growing.[10] This recent expansion has also been made possible by the increasing availability of firm-level datasets from some conflict-affected countries.

Studies in this strand of literature have considered the effect of conflict on various firm-level outcomes. These include stock market returns (Guidolin and La Ferrara 2007), firm exit (Collier and Duponchel 2013; Camacho and Rodriguez 2013; Blumenstock et al. 2018), input misallocation (Amodio and Di Maio 2018), export activity (Ksoll, Macchiavello, and Morjaria 2022), firm-level trade flows (Korovkin and Makarin 2023), financial decisions (Blumenstock et al. 2024), entrepreneurship (Naudè et al. 2023), and access to inputs and market competition (Del Prete, Di Maio, and Rahman 2023).[11] These studies provide detailed analysis of the consequences of various types of conflicts in specific countries.[12]

Brancati et al. (2025) present the first global analysis of the impact of conflict exposure on firm performance, combining geo-localized longitudinal firm-level data with

10 A few papers document the effect of crime-related violence on economic activity (Pinotti 2015; Rozo 2018; Piemontese 2023; Utar 2024).

11 Two recent papers look at the effect of the peace agreement in Colombia on entrepreneurship (Bernal et al. 2024) and investments (De Roux and Martinez 2023).

12 The list of countries studied include Afghanistan (Blumenstock et al. 2024), Angola (Guidolin and La Ferrara 2007), Colombia (Camacho and Rodriguez 2013; De Roux and Martinez 2023; Bernal et al. 2024), India (Couttenier et al. 2022), Kenya (Ksoll et al. 2022), Libya (Del Prete et al. 2023), Mozambique (Custodio et al. 2024), Ukraine (Korovkin and Makarin, 2023, Korovkin, Makarin, and Miyauchi, 2024), Sierra Leone (Collier and Duponchel 2013), and West Bank (Amodio and Di Maio 2018).

information on political violence events across 89 countries between 2006 and 2019. Their results show that higher conflict exposure (as measured by the number of conflict events occurred in the 20 km radius from the firm) leads to declines in both sales and total costs, resulting in no significant effect on profits for surviving firms. The reduction in sales results from a reduction in output, which reflects conflict-induced shortages of raw materials and production inputs, as well as increased informal competition. Firms respond to declining sales by adjusting labor costs, substituting skilled workers with unskilled workers. The negative effects of conflict on firms are more pronounced in countries with high trade openness, low economic complexity, weak bureaucratic quality, involvement in illegal drug production, or an initial state of peace. In these contexts, greater conflict exposure leads to reductions in both sales and profits.

Two recent papers look at the economic spillovers to firms and localities outside the conflict areas and document that (localized) conflict tends to have aggregate consequences through the production network disruption and reorganization. Couttenier, Monnet, and Piemontese (2022) study the economic cost of the Maoist insurgency in Eastern India in 2000–2009 on the overall Indian economy, including on districts not affected by the conflict. They estimate that only 27% of the economic loss can be explained by the direct impact of conflict on firms, while the remaining 73% is due to the spread to firms in districts not affected by the conflict via the supply network. Korovkin, Makarin, and Miyauchi (2024) use firm-to-firm railway-shipment data from Ukraine during the 2014 Russia-Ukraine conflict to estimate the economic impact of production–network disruptions. They find that firms engaged in trade with conflict-affected areas experienced significant declines in output and that supplier and buyer networks underwent substantial reorganization. Their estimates suggest a 10% reduction in aggregate welfare in non-conflict areas due to these disruptions, highlighting the far-reaching economic costs of localized conflicts beyond the directly affected regions.

A few studies have considered the effects of conflict on economic activity in the agricultural sector, which is the sector that provides the livelihood to the majority of the population in developing countries. Specifically, conflicts have been shown to alter cropping practices (Bozzoli and Brück 2009), reduce agricultural productivity, reduce agricultural overall output, and modify investment decisions (Singh 2013), shifting investment to sub-optimal crops (Adelaja and George, 2019 ; Arias, Ibanez, and Zambrano 2019; Amare et al. 2025). Yet, Abay et al. (2023) show that, at least in the context of Ethiopia, farming activities remain more resilient in the short term than non-farm activities.

Finally, some studies have emphasized the negative economic effects from the *mere risk* of conflict outbreaks. For instance, conflict-related uncertainty induces losses due to foregone production and sub-optimal production choices (Rockmore 2017; Arias et al. 2019).

5.2. Domestic investments, FDI, and conflict

5.2.1. Effect of conflict on investments. The relationship between investment and conflict is a complex one.[13] On the one hand, there is evidence showing that conflict influences the size, dynamics, and type of investment projects, both at the domestic and at the international level. At the same time, there is growing evidence that investments also influence conflict. This is especially true when looking at FDI and, more in general, at the activities of multinationals in developing countries.

Most of the earlier studies looking at the effect of conflict on investment have focused on FDI and used aggregated data. Busse and Hefeker (2007) document that FDI decreases when the country is affected by external and internal conflict. Because conflict increases uncertainty and thus the risk premium of investment projects, foreign capital flows and overall investment decrease. Li et al., (2017) use aggregate data for 128 developing countries over the period 2003–2012, showing that the impact of civil conflict on FDI inflow is heterogeneous across sectors: civil conflict does not affect primary sector FDI flows, whereas the FDI inflows in secondary and tertiary sectors decrease.

The micro-economic evidence on the effects of conflict on investment is more limited and mostly considers how conflict impacts investment in the agricultural sector (e.g., Deininger 2003; Bozzoli and Brück 2009; Verpoorten 2009; Singh 2013; Arias et al. 2019). In a recent study, De Roux and Martinez (2023) investigate how the end of a conflict affects investment using microdata for agricultural producers from Colombia. They focus on the 2016 peace agreement between the Colombian government and the FARC rebels to study the effect of a reduction in violence on investments. Their findings document a large increase in loan applications for long-term investments in municipalities with a previously large presence of insurgents, that are located close to markets, and only after the peace deal is finalized. These results suggest that uncertainty is a major deterrent for investment.

5.2.2. Effects of FDI on conflict. A large literature looks at the reverse direction of causality and considers the effect of FDI on conflict.[14] Earlier studies, some of which form the political science literature, used aggregate data to study the possible role of FDI in mitigating or exacerbating political tensions across countries. Polachek, Seiglie, and Xiang (2007) show that FDI flows during the period of the late 1980s and the

13 There is a large literature on the link between investment in the mining sector and conflict (see, for instance, Berman et al. 2017; Wegenast and Schneider 2017; Christensen 2019). Most of these studies are of cross-country analyses and reach mixed findings (Blair, Christensen, and Wirtschafter 2022). We refer to the paper on *Climate change, natural resources, and conflict* in this Special Issue for a more detailed discussion about the relationship between investment in natural resources and conflict.

14 This is part of a larger literature looking at the effects of international trade on conflict (see, e.g., Amodio et al. 2021; Amodio et al. 2024; Barbieri, Schneider, and Gleditsch 2003; Blomberg and Hess 2006; Martin, Mayer, and Thoenig 2008a, b; Korn and Stemmler 2025; Mohr and Trebesch 2024; Morelli and Sonno 2017; Thoenig 2024). We refer to the paper by McGuirk and Trebesch on Geoeconomics in this special issue for a more detailed discussion of these aspects.

decade of the 1990s have reduced the degree of international conflict and encouraged co-operation across countries. Similarly, Bussman (2010) shows, using country-level data for the years 1980–2000, that inflows and stock of foreign investment reduce the risk of an outbreak of a conflict between country-pairs. Mihalache-O'Keef (2018) uses data on the stock of FDI for the period 1980–2013, to show that the effect of foreign direct investments on the probability of civil conflict onset is differentiated by the type of FDI: service sector FDI reduce the risk of civil conflict, while primary sector FDI increase it. A few papers instead look at the effect on internal conflict. Pinto and Zhu (2022) explore this link between FDI and intra-state war, using a global sample of developing countries for the period 1970–2013. They document that FDI increases the risk of a civil war onset for all types of sectors (primary, secondary, and tertiary). As for the mechanism, they argue that FDI increases market concentration, producing high rents over which states and rebels fight, which is particularly likely within weak states. Brazysde, Soysa, and Vadlamannati (2025) use data on about 10,000 FDI projects in 56 African countries from 2003 to 2017. They find that FDI in all sectors increases local conflict. Yet, most of these investment-induced local conflicts do not become civil wars, except for those associated to FDI in the extractive sector. More recently, the literature has started using more granular data. An example along this line is Sonno (2025) that shows that the activities of multinational enterprises increase the number of conflicts in the African continent during the period 2007–2018. The effect is highly heterogeneous, with sectors intense in scarce resources having a larger effect. In particular, violent events occur in areas where multinationals operate large-scale land acquisitions.

5.3. Infrastructure investment and conflict

There is robust evidence documenting the positive role of infrastructure in fostering economic growth. For instance, a number of studies have documented the positive effects of highway construction on local economic activity.[15] We already noted that conflict may negatively affect economic activity precisely by destroying these infrastructures that are key to production and trade. At the same time, conflict may reduce public investment by decreasing tax revenues. Besley and Persson (2008) note that different types of armed conflict (internal vs external) differentially influence the state's ability to raise revenue from taxes, and thus to make investments. Their model predicts that, compared to a society without conflict, civil wars weaken fiscal capacity by deepening societal divisions and reducing incentives for collective investment. In contrast, the prospect of external war fosters greater fiscal capacity investment, as it aligns group interests and strengthens state-building efforts.

While the negative impact of conflict on public investment is well documented, the reverse relationship—the effect of public infrastructure on crime, violence, and conflict—is more complex. Infrastructure investments can potentially reduce violence by improving

15 See, for instance, Keeler and Ying (1988) and Michaels (2008).

economic opportunities and state presence, thereby increasing the opportunity cost of engaging in conflict. However, they may also become strategic targets for armed groups or exacerbate tensions if access to these public goods is unevenly distributed.

A small but growing body of literature examines the relationship between transport infrastructure and conflict.[16] Transport networks serve a dual role: they are both critical assets for economic development and strategic targets for violence. Roads, railways, and ports facilitate trade, mobility, and state presence, yet their condition and accessibility can shape conflict dynamics. OECD/SWAC (2025) notes that poor road infrastructure may exacerbate conflict by isolating communities, hindering economic development, and making easier for insurgents to recruit the local populations. On the contrary, well-functioning transport infrastructures enhance state legitimacy by easing access to public services and improving economic opportunities. At the same time, insurgent groups may strategically target roads to isolate communities and weaken state presence. As a result, roads and major transport corridors in conflict-affected regions are often key hotspots for violence (OECD/SWAC 2025).[17]

More in general, the condition of the road network plays a crucial role in shaping the geography of both government and insurgent activities and the diffusion of political violence (OECD/SWAC 2025). On the one hand, a well-developed transport infrastructure is expected to ease government control over the territory, reducing the possibility for rebels to hide and facilitating the movements of government security forces or international peacekeepers (Ali et al. 2015; Müller-Crepon et al. 2021). At the same time, violent actors use transport networks to disrupt state control. A well-developed transport infrastructure can facilitate the movements of fighters, whether rebels or military (Zhukov 2012; Moreno, Gallego, and Vargas 2019).

Few recent papers use detailed microdata to test the link between transport infrastructure and conflict. Considering the whole African continent, Lin and Xu (2025) study the empirical relationship between impact of infrastructure projects and conflicts between 2002 and 2019. Their findings suggest that infrastructure projects, particularly roads, tend to reduce high-intensity conflicts like battles. However, they also tend to increase low-intensity conflicts such as riots and protests. The decrease in high-intensity conflicts is mainly attributed to reduced conflicts among stationary rebel groups, while the rise in low-intensity conflicts is concentrated in politically marginalized ethnic regions. Lebrand et al. (2024) state that the quality of infrastructure matters for its long-term effects. In the context of DRC, they show that investments in road rehabilitation

16 A large literature looks at the link between transportation infrastructure and crime. Several studies have studied at how highways construction changes crime patterns, showing an increase in burglary rates (Agnew 2020), gangs related crimes, such as homicides rate and extortions (Baires, Dinarte, and Schmidt-Padilla 2020) and in total crime index (Calamunci and Lonsky 2025). On the other hand, Montolio (2018) shows that a nationwide infrastructure investment policy implemented in the Spanish region of Catalonia has reduce crime by lowering the unemployment rate.

17 OECD/SWAC (2025) reports that around 70% of violent events and 65% of fatalities in North and West Africa occur within just one kilometer of a road.

deter violence. Yet, these effects do not last long, and violence increases again as roads progressively deteriorate. Finally, González et al. (2025) examine road construction under Paraguay's authoritarian regime. Their evidence documents that infrastructure investments were used as tools of political repression and land expropriation, providing an interesting example of a government-led infrastructure project with political and coercive objectives rather than a purely economic purpose.

While the literature on transportation infrastructure and conflict is large and varied, there is only one paper by Eberle (2020) that studies the impact of dams on local conflict. Based on data across the world during the period from 1989 to 2016, the results document strong and robust evidence for an increase in intrastate conflict in the immediate vicinity of newly built dams. However, there is no robust effect for interstate conflict. The increase in violence is more likely in ethnically polarized and fractionalized regions and in countries with low levels of political competition (which may result in poorly planned dams), suggesting that the institutional failure to account for local preferences may lead to an increase in violence.

Transportation infrastructure investments in conflict-affected settings can increase security by reducing military response times and improving economic conditions. Strengthening transport infrastructure allows governments to deploy troops more rapidly, expedite the distribution of humanitarian aid, and expand trade. Economic integration through better roads can reduce incentives for violence by creating more employment opportunities. However, uncoordinated infrastructure expansion may also create new vulnerabilities if security concerns are neglected. Insurgents may exploit large-scale road projects for their strategic advantage if the risk of immanent conflict is not considered. Unsecured roads can facilitate the movement of armed groups, while new trade routes may become targets for extortion and illicit activities. Taken together, this suggests the need for conflict-sensitive infrastructure planning. As many transport corridors traverse multiple conflict-affected states, cross-border cooperation would be key. While recent studies focusing on sub-Saharan African countries have started filling this knowledge gap, more research on this complex relationship—e.g. expanding the analysis to other regions and type of investments—is warranted.

5.4. Future research

The literature on the link between conflict and economic activity is rich and varied. Over the recent years, the literature has made considerable progress in closing knowledge gaps about the multiple ways in which conflict affects investment, production choices, trade, and ultimately economic growth and development. This has also led to a better understanding about the mechanisms through which changes in economic activity, international trade and investment flows, and international trade agreements may lead to political instability and conflict. Nevertheless, important knowledge gaps remain to be filled.

While there are now a few studies looking at the effects of conflict on firms and the mechanisms explaining them, still very little is known about the adjustment in the labor

force within the firm and in the labor market. A better understanding of this aspect would be important for estimating also the cost for the workers of the conflict-induced adjustment to the firms' activity.

Another, important aspect to be explored more is the possible effect of conflict-induced uncertainty in the economy: how does the possibility of being exposed to conflict events influence the choices of firms and of other economic actors, including the government? Understanding how expectations about the future shape firm's strategies is key to lean about the long-term effect of a conflict situation may have on firm's growth.

Our review also emphasizes that conflict is increasingly more often a condition faced by individuals and firms in many countries around the world. One important consequence of conflict is that it often fundamentally erodes trust in government institutions and their capacity to deliver services to the general population. It is thus important to understand to what extent and in which sense macroeconomic policies in conflict-affected fragile states would be different from the standard policies in a peaceful setting and how to make policies effective in contexts in which government control over the economy is weak.

A relatively under-researched topic is the interaction between the military complex and the private sector. While there is a large macroeconomic literature on the effect of military spending on GDP growth (see, for reviews, Ram 1995; Dunne and Smith 2020), empirical evidence on the microeconomic effects of military spending is more limited. As the recent survey by Ethan (2025) emphasizes, there is evidence of long-run productivity gains from military spending and of spillovers to the private sector specially in R&D activities. Yet, this evidence is mostly limited to the USA and often refers to procurements policies during historical periods such as WWII or the Cold War. It would be important to expanding our understanding of the effects by considering other countries and more recent conflict episodes.

There are important aspects of the relationship between conflict and firm-level investment decisions that require more research. For instance, it is not obvious how conflict may affect the investment strategy of a firm, how it may influence the location choice, the type, and the size of the investment, and the production technology used. Conflict may induce multinational firms to geographically diversify their operation to reduce dependence on a single location, shifting resources away from conflict-affected areas. Firms may decide to adjust to the conflict situation by changing the scale of investments, opting for smaller, more flexible projects that are easier to scale up or down depending on the evolving situation. Conflict may also influence the decision between capital-intensive and labor-intensive technologies. On one hand, firms in conflict zones may hesitate to make large, capital-intensive investments, such as infrastructure, due to the risk of damage. On the other hand, managing production that relies on a large labor force can be particularly challenging in violence-affected environments, where labor disruptions and security concerns may undermine operational stability. Finally, it would

be important to understand how each of these choices may interact with those of other firms in the same location or operating in the same sector.

6. CONCLUDING REMARKS

This review provides an overview of the complex relationship between investment and conflict along several different dimensions, including demography, health, education, and economic activity. While the literature is vast and varied, we believe there are four key take-home messages that can be useful to researchers and policy makers.

6.1. Causality runs both ways

The relationship between conflict and private and public investment in any of the topics that we considered is bi-directional. While in some cases this may be more obvious (as in the case of economic activity), in other cases this is less so (as in the case of demography and education). This implies that the analysis of the possible effect of conflict on investment always requires considering also the opposite direction of causality. This has obvious policy implications, as disregarding the reverse causality problem may lead to ineffective or even damaging policy prescriptions.

6.2. Substantial heterogeneity

The effects of conflict on investment—and the reverse—vary considerably across sectors, geographic contexts, and time periods. The heterogeneity is even more pronounced when considering the mechanisms behind the main effects. This implies that large knowledge gaps remain in the literature regarding the external validity of the results. This suggests that expanding our knowledge about different countries, regions, and historical periods constitutes an important prerequisite for the understanding of the complex relationship between investment and conflict.

6.3. Focus on identifying regularities

While documenting effect heterogeneities and the role of the specific context is paramount, another important goal for future research is to identify regularities. These regularities should ideally refer to mechanisms at the micro level, complying with the notion of methodological individualism, and how they lead to macroeconomic effects. Knowledge about regularities—in the sense of robust associations and causal pathways—are useful for both prediction and the design of policy interventions.

6.4. Spillovers and double dividends of private and public investments

Existing evidence suggests that some type of private and public investments may entail spillovers and double dividends across different domains. Examples are the potential effects of health interventions for conflict prevention, which go above and beyond their direct effects in terms of health improvements and mortality reductions. These spillovers across domains remain not well understood, and future research might try to identify and fruitfully exploit them for promoting peace. This also applies to the topics at the intersection between our theme and other closely related topics within this issue, as highlighted in several instances in our review.

Beyond these take-home messages, the review indicates the need for further research in various dimensions. Conceptually, the link between conflict and private and public investment crucially depends on the appropriability of the future benefits of investments. The more exposed investments are to attempts of predation, the greater will be the potential hold-up problems associated with conflict and, at the same time, the greater will be the incentives for predatory activities. A better understanding of the empirical relevance of heterogeneity of effects in this dimension would be desirable, yet is beyond the scope of this review.

Another aspect that has not received adequate attention is how the complementarity or substitutability of investment in different domains, especially between private and public investments, has important implications for the link to conflict. For instance, in the context of fertility and education, investment in the quantity and quality of children clearly constitute substitutes, implying that an increase in conflict has an opposite effect on these choices. Instead, an example of investment complementarity is the case in which a reduction in the supply of public education in conflict-ridden areas also decrease individual education investments, which potentially lead to a vicious circle of underinvestment and increasing violence. Viewed dynamically, these mechanisms suggest the potential for path dependence and persistence, with the possibility of multiple equilibria and the emergence of conflict-development traps. These dynamics raise critical questions about the role and design of policy and external interventions. Exploring the conditions under which these situations may emerge are fascinating avenues for future research.

ACKNOWLEDGEMENTS

The authors thank Matteo Cervellati, Dominic Rohner, Oliver Vanden Eynde, as well as the participants of the first ReCIPE conference at the Paris School of Economics and the 80th Economic Policy Panel Meeting for helpful discussions and feedback.

Conflicts of interest. None declared.

FUNDING

Financial support from CEPR and the FCDO through ReCIPE is gratefully acknowledged.

REFERENCES

Abadie, A., and Gardeabazal, J. (2003). 'The Economic Costs of Conflict: A Case Study of the Basque Country', *American Economic Review*, 93: 113–32.

Abay, K. A., Tafere, K., Berhane, G., Chamberlin, J., and Abay, M. H. (2023). 'Near-Real-Time Welfare and Livelihood Impacts of an Active War: Evidence from Ethiopia', *Food Policy*, 119: 102526.

Abel, G. J., Bottrager, M., Crespo-Cuaresma, J., and Muttarak, R. (2019). 'Climate, Conflict, and Forced Migration', *Global Environmental Change*, 54: 239–49.

Acemoglu, D., Fergusson, L., and Johnson, S. (2020). 'Population and Conflict', *Review of Economic Studies*, 87: 1565–604.

Adelaja, A., and George, J. (2019). 'Effects of conflict on agriculture: Evidence from the Boko Haram insurgency', *World Development*, 117: 184–95.

Ades, A., and Chua, H. (1997). 'Thy Neighbor's Curse: Regional Instability and Economic Growth', *Journal of Economic Growth*, 2: 279–304.

Aghion, P., Jaravel, X., Persson, T., and Rouzet, D. (2019). 'Education and Military Rivalry', *Journal of the European Economic Association*, 17: 376–412.

Agnew, K. (2020). 'Crime Highways: The Effect of Motorway Expansion on Burglary Rates', *Journal of Regional Science*, 60: 995–1024.

Ajefu, J. B., Silles, M., Sonne, S. E. W., and Ikpebe, E. (2025). 'The Long-Term Effects of Civil Conflict on Psychological Well-being', *Journal of Development Studies*, 61: 708–26.

Ajogbeje, K., and Sylwester, K. (2024). 'How Conflict Affects Education: Differences Between Boko Haram and Farmer-Herder conflicts in Nigeria', *World Development*, 177: 106540.

Akbulut-Yuksel, M. (2014). 'Children of War: The Long-Run Effects of Large-Scale Physical Destruction and Warfare on Children', *Journal of Human Resources*, 49: 634–62.

Akresh, R., Bhalotra, S., Leone, M., and Okonkwo Osili, U.O. (2012a). 'War and Stature: Growing Up during the Nigerian Civil War', *American Economic Review*, 102: 273–7.

Akresh, R., Lucchetti, L., and Thirumurthy, H. (2012b). 'Wars and Child Health: Evidence from the Eritrean–Ethiopian Conflict', *Journal of Development Economics*, 99: 330–40.

Akresh, R., and de Walque, D. (2008). 'Armed Conflict and Schooling: Evidence from the 1994 Rwandan Genocide,' *World Bank Policy Research Paper* 4606.

Aksoy, C. G., Khanna, G., Marino, V., and Tumen, S. (2025). 'Native-Refugee Education Gap', *AEA Papers and Proceedings*, 115: 427–31.

Alesina, A., Özler S., Roubini, N., and Swagel, P. (1996). 'Political Instability and Economic Growth', *Journal of Economic Growth*, 1: 189–211.

Alfano, M., and Görlach, J. S. (2023). 'Terrorism, Media Coverage, and Education: Evidence from Al-Shabaab Attacks in Kenya', *Journal of the European Economic Association*, 21: 727–63.

Ali, R., Barra, A. F., Berg, C. N., Damania, R., Nash, J. D., and Russ, J. (2015). Infrastructure in Conflict-Prone and Fragile Environments: Evidence from the Democratic Republic of Congo, Policy Research Working Paper, 7273, World Bank.

Amare, M., Abay, K. A., Berhane, G., Andam, K. S., and Adeyanju, D. (2025). 'Conflicts, Crop Choice, and Agricultural Investments: Empirical Evidence from Nigeria', *Land Use Policy*, 148: 107391.

Amberg, F., Chansa, C., Niangaly, H., Sankoh, O., and De Allegri, M. (2023). 'Examining the Relationship between Armed Conflict and Coverage of Maternal and Child Health Services in 35 countries in Sub-Saharan Africa: A Geospatial Analysis', *Lancet Global Health*, 11: e843–e853.

Amodio, F., and Di Maio, M. (2018). 'Making Do with What You Have: Cnflict, Input Misallocation, and Firm Performance', *Economic Journal*, 128: 2559–612.

Amodio, F., Baccini, L., and Di Maio, M. (2021). 'Security, Trade, and Political Violence', *Journal of the European Economic Association*, 19: 1–37.

Amodio, F., Chiovelli, G., Baccini, L., and Di Maio, M. (2024). 'Trade Liberalization, Economic Activity, and Political Violence in the Global South: Evidence from PTAs', *Economic Policy*, 39: 275–322.
Andregg, M. M. (2016). 'Demographics and Conflict', *American Intelligence Journal*, 33: 74–8.
Andre, C., and Platteau, J. P. (1998). 'Land Relations Under Unbearable Stress: Rwanda Caught in the Malthusian Trap', *Journal of Economic Behavior & Organization*, 34: 1–47.
Arias, M. A., Ibanez, A. M., and Zambrano, A. (2019). 'Agricultural Production Amid Conflict: Separating the Effects of Conflict into Shocks and Uncertainty', *World Development*, 119: 165–84.
Arpino, B., Conzo, P., and Salustri, F. (2022). 'I am a Survivor, Keep on Surviving: Early-life Exposure to Conflict and Subjective Survival Probabilities in Adult Life', *Journal of Population Economics*, 35: 471–517.
Baires, W., Dinarte, L., and Schmidt-Padilla, C. (2020). Unintended Effects of Roads: Labor, Education and Crime Outcomes in El Salvador, Working Paper, Unpublished manuscript.
Barbieri, K., Schneider, G., and Gleditsch, N. P., eds. (2003). *Globalization and Armed Conflict*. Lanham, Maryland, USA: Bloomsbury Publishing PLC.
Becker, S.O., Grosfeld, I., Grosjean, P., Voigtländer, N., and Zhuravskaya, E. (2020). 'Forced Migration and Human Capital: Evidence from Post-WWII Population Transfers', *American Economic Review*, 110: 1430–63.
Bellucci, D., Fuochi, G., and Conzo, P. (2020). 'Childhood Exposure to the Second World War and Financial Risk Taking in Adult Life', *Journal of Economic Psychology*, 79: 102196.
Bendavid, E., Broerma, T., Akseer, N., Langer, A., Malembaka, E. B., Okiro, E. A., Wise, P. H., Heft-Neal, S., Black, R. E., and Bhuttra, Z. A. (2021). 'The Effects of Armed Conflict on the Health of Women and Children', *Lancet*, 397: 522–32.
Berlanda, A., Esposito, E., Cervellati, M., Rohner, D., and Sunde, U. (2024). 'Medication Against Conflict', *Journal of Development Economics*, 170: 103306.
——, Esposito, E., Cervellati, M., Rohner, D., and Sunde, U. (2025). Health Interventions Do Not Cause Malthusian Conflict Dynamics. Discussion Paper, University of Bologna.
Bernal, C., Prem, M., Vargas, F., and Ortiz, M. (2024). 'Peaceful Entry: Entrepreneurship Dynamics During Colombia's Peace Agreement', *Journal of Development Economics*, 166: 103119.
Bertoni, E., Di Maio, M., Molini, V. and Nistico, R. (2019). 'Education is Forbidden: The Effect of the Boko Haram Conflict on Education in North-East Nigeria', *Journal of Development Economics*, 141: 102249.
Besley, T., and Persson, T. (2008). 'Wars and State Capacity', *Journal of the European Economic Association*, 6: 522–30.
Bezin, E., Chabé-Ferret, B., and De La Croix, D. (2024). Strategicfertility, Education Choices, and Conflict in Deeply Divided Societies. *Journal of the European Economic Association*, 23: 521–53.
Besley, T., and Mueller, H. (2012). 'Estimating the Peace Dividend: The Impact of Violence on House Prices in Northern Ireland', *American Economic Review*, 102: 810–33.
Blair, G., Christensen, D. D., and Wirtschafter, V. (2022). 'How Does Armed Conflict Shape Investment? Evidence from the Mining Sector', *Journal of Politics*, 84: 116–33.
Blattman, C., and Miguel, E. (2010). 'Civil War', *Journal of Economic Literature*, 48: 3–57.
Blomberg, S., and Hess, G. (2006). 'How Much Does Violence Tax Trade?', *Review of Economics and Statistics*, 88: 599–612.
Blomberg, B. S., Hess, G. D., and Orphanides, A. (2004). 'The Macroeconomic Consequences of Terrorism', *Journal of Monetary Economics*, 51: 1007–32.
Blumenstock, J., Scherer, T., Toomet, O., Herskowitz, S., Ghani, T., and Kapstein, E. (2018). Insecurity and Industrial Organization: Evidence from Afghanistan. Policy Research Working Paper WPS 8301. Washington, DC: World Bank Group.
Blumenstock, J. E., Callen, M., Ghani, T., and Gonzalez, R. (2024). 'Violence and Financial Decisions: evidence from Mobile Money in Afghanistan', *Review of Economics and Statistics*, 106: 352–69.
Boerma, T., Tappis, H., Saad-Haddad, G., Das, J., Melesse, D. Y., DeJong, J., Spiegel, P., Black, R., Victora, C., Bhutta, Z. A., and Barros, A. J. D. (2019). 'Armed Conflicts and National Trends in Reproductive, Maternal, Newborn and Child Health in Sub-Saharan Africa: What Can National Health Surveys Tell Us?', *BMJGlobal Health*, 4: e001300.

Bove, V., Elia, L., and Smith, R. P. (2017). 'On the Heterogeneous Consequences of Civil War', *Oxford Economic Papers*, 69: 550–68.
Bove, V., Di Salvatore, J., and Elia, L. (2022). What it Takes to Return: UN Peacekeeping and the Safe Return of Displaced People, *World Bank Policy Research Working Papers*, 10102.
Bove, V., Di Salvatore, J., Elia, L., and Nisticò, R. (2024). 'Mothers at Peace: International Peacebuilding and Post-conflict Fertility', *Journal of Development Economics*, 167: 103226.
Bozzoli, C., and Brück, T. (2009). 'Agriculture, Poverty, and Postwar Reconstruction: Micro-level Evidence from Northern Mozambique', *Journal of Peace Research*, 46: 377–97.
Brake, T. A., and Razum, O. (2024). 'Prevention of War: A Scoping Review on Primary Preventive Measures in Public Health', *Public Health Review*, 44: 1606201.
Brancati, E., Di Maio, M., Gatti, R., and Islam, A. (2025). Conflict and Firms' Performance: A Global View, mimeo.
Brazys, S., de Soysa, I., and Vadlamannati, K. C. (2025). 'Blessing or Curse? Assessing the Local Impacts of Foreign Direct Investment on Conflict in Africa', *Journal of Peace Research*, 62: 149–65.
Breckner, M., and Sunde, U. (2019). 'Temperature Extremes, Global Warming, and Armed Conflict: New Insights from High-Resolution Data', *World Development*, 123: 104624.
Brück, T., Naudé, W., and Verwimp, P. (2013). 'Business Under Fire: Entrepreneurship and Violent Conflict in Developing Countries', *Journal of Conflict Resolution*, 57: 3–19.
Brück, T., Di Maio, M., and Miaari, S. H. (2019). 'Learning the Hard Way: The Effect of Violent Conflict on Student Academic Achievement', *Journal of the European Economic Association*, 17: 1502–37.
Brückner, M. (2010). 'Population Size and Civil Conflict Risk: Is there a Causal Link?', *Economic Journal*, 120: 535–50.
Bush, K. D., and Saltarelli, D. (2000). *The Two Faces of Education in Ethnic Conflict: Towards a Peacebuilding Education for Children*, UNICEF Innocenti Research Centre.
Busse, M., and Hefeker, C. (2007). 'Political Risk, Institutions and Foreign Direct Investment', *European Journal of Political Economy*, 23: 397–415.
Bussman, M. (2010). 'Foreign Direct Investment and Militarized International Conflict', *Journal of Peace Research*, 47: 143–53.
Buvinic, M., Das Gupta, M., and Shemyakina, O. N. (2014). 'Armed Conflict, Gender, and Schooling', *World Bank Economic Review*, 28: 311–9.
Calamunci, F., and Lonsky, J. (2025). 'The Road to Crime: An Unintended Consequence of the Interstate Highway System', *Economic Journal*, 135: 748–72. Volume Issue Pages
Camacho, A., and Rodriguez, C. (2013). 'Firm Exit and Armed Conflict in Colombia', *Journal of Conflict Resolution*, 57: 89–116.
Campbell, F., Conti, G., Heckman, J. J., Moon, S. H., Pinto, R., Pungello, E., and Pan, Y. (2014). 'Early Childhood Investments Substantially Boost Adult Health', *Science*, 343: 1478–85.
Cerra, V., and Saxena, S. C. (2008). 'Growth Dynamics: The Myth of Economic Recovery', *American Economic Review*, 98: 439–57.
Cervellati, M., Esposito, E., and Sunde, U. (2022). 'Epidemic Shocks and Civil Violence', *Review of Economics and Statistics*, 104: 780–96.
Cervellati, M., Meyerheim, G., and Sunde, U. (2023). 'The Empirics of Economic Growth Over Time and Across Nations: A Unified Growth Perspective', *Journal of Economic Growth*, 28: 173–224.
Cervellati, M., and Sunde, U. (2011). 'Life Expectancy and Economic Growth: The Role of The Demographic Transition', *Journal of Economic Growth*, 16: 99–133.
—— (2014a). 'Democratizing for Peace? The Effect of Democratization on Civil Conflicts', *Oxford Economic Papers*, 66: 774–97.
—— (2014b). 'Civil Conflict, Democratization, and Growth: Violent Democratization as Critical Juncture', *Scandinavian Journal of Economics*, 116: 482–505.
—— (2015). 'The Economic and Demographic Transition, Mortality, and Comparative Development', *American Economic Journal: Macroeconomics*, 7: 189–225.
Cervellati, M., Sunde, U., and Valmori, S. (2017). 'Pathogens, Weather Shocks, and Civil Conflicts', *Economic Journal*, 127: 2581–616.
Chamarbagwala, R., and Moran, H. E. (2011). 'The Human Capital Consequences of Civil War: Evidence from Guatemala', *Journal of Development Economics*, 94: 41–61.

Chami, R., Espinoza, R. A., Espinoza, R., and Montiel, P. J. (eds.) (2021). *Macroeconomic Policy in Fragile States*. Oxford University Press.
Chin, Y.-M., Cunningham, S., and Van, P. H. (2023). 'The Long-term Effects of the Rwandan Genocide on Child Work', *Economic Development and Cultural Change*, 72: 329–60.
Chiovelli, G., Michalopoulos, S., Papaioannou, E., and Sequeira, S. (2024). 'Forced Displacement and Human Capital', *Mimeo*.
Choi, S.-W., and Salehyan, I. (2013). 'No Good Deed Goes Unpunished: Refugees, Humanitarian Aid, and Terrorism', *Conflict Management and Peace Science*, 30: 53–75.
Christensen, D. (2019). 'Concession Stands: How Mining Investments Incite Protest in Africa', *International Organization*, 73: 65–101.
Collier, P. (1999). 'On the Economic Consequences of Civil War', *Oxford Economic Papers*, 51, 168–83.
Collier, P., and Duponchel, M. (2013). 'The Economic Legacy of Civil War: Firm-level Evidence from Sierra Leone', *Journal of Conflict Resolution*, 57: 65–88.
Collier, P., Elliot, V. L., Hegre, H., Hoeffler, A., Reynal-Querol, M., and Sambanis, N. (2003). *Breaking the Conflict Trap: Civil War and Development Policy*. Washington, DC: World Bank.
Collier, P., and Hoeffler, A. (2004). 'Greed and Grievance in Civil War', *Oxford Economic Papers*, 56: 563–95.
Collier, P., Hoeffler, A., and Rohner, D. (2009). 'Beyond Greed and Grievance: Feasibility and Civil War', *Oxford Economic Papers*, 61: 1–27.
Conzo, P., and Salustri, F. (2019). 'A War is Forever: The Long-run Effects of Early Exposure to World War II on Trust', *European Economic Review*, 120: 103313.
Costalli, S., Moretti, L., and Pischedda, C. (2017). 'The Economic Costs of Civil War: Synthetic Counterfactual Evidence and the Effects of Ethnic Fractionalization', *Journal of Peace Research*, 54: 80–98.
Couttenier, M., Petrencu, V., Rohner, D., and Thoenig, M. (2019). 'The Violent Legacy of Conflict: evidence on Asylum Seekers, Crime, and Public Policy in Switzerland', *American Economic Review*, 109: 4378–425.
Couttenier, M., Monnet, N., and Piemontese, L. (2022). The Economic Costs of Conflict: A Production Network Approach. CEPR Discussion Paper 16984.
Coutts, A. (2024). 'The Age of Consequences: Unraveling Conflict's Impact on Social Preferences, Norm Enforcement, and Risk-Taking', *Journal of Economic Behavior & Organization*, 218: 48–67.
Dagnelie, O., De Luca, G. D., and Maystadt, J. -F. (2018). 'Violence, Selection and Infant Mortality in Congo', *Journal of Health Economics*, 59: 153–77.
de Groot, O. J., Bozzoli, C., Alamir, A., and Brück, T. (2022). 'The Global Economic Burden of Violent Conflict', *Journal of Peace Research*, 59: 259–76.
De La Croix, D., and Dottori, D. (2008). 'Easter Island's collapse: A tale of a population race', *Journal of Economic Growth*, 13: 27–55.
Deininger, K. (2003). 'Causes and Consequences of Civil Strife: Micro-level Evidence from Uganda', *Oxford Economic Papers*, 55: 579–606.
Del Prete, D., Di Maio, M., and Rahman, A. (2023). 'Firms Amid Conflict: Performance, Production Inputs, and Market Competition', *Journal of Development Economics*, 164: 103143.
De Roux, N., and Martinez, L. (2023). 'Uncertainty, Peace, and Investment: Evidence from Credit Microdata in Colombia', Mimeo.
De Walque, D. (2006). 'The Socio-demographic Legacy of the Khmer Rouge Period in Cambodia', *Population Studies*, 60: 223–31.
Diamond, L., and Goldstone, J. (2020). 'Demography and the Future of Democracy', *Perspectives on Politics*, 18: 867–80.
Di Maio, M., and Nandi, T. (2013). 'The Effect of the Israeli–Palestinian Conflict on Child Labor and School Attendance in the West Bank', *Journal of Development Economics*, 100: 107–16.
Di Maio, M., and Leone Sciabolazza, V. (2021). 'Conflict Exposure and Health: Evidence from the Gaza Strip', *Health Economics*, 30: 2287–95.
Dunne, J. P., and Smith, R. P. (2020). 'Military Expenditure, Investment and Growth', *Defense and Peace Economics, 31*, 6: 601–14.
Eberle, U. J. (2020). 'Damned by Dams? Infrastructure and Conflict', *CEP Discussion Paper 1694*.

Eckstein, Z., and Tsiddon, D. (2004). 'Macroeconomic Consequences of Terror: Theory and the Case of Israel', *Journal of Monetary Economics*, 51: 971–1002.
Ekzayez, A., Alhaj Ahmad, Y., Alhaleb, H., and Checchi, F. (2021). 'The Impact of Armed Conflict on Utilisation of Health Services in North-West Syria: An Observational Study', *Conflict and Health*, 15: 91.
Falk, A., Hermle, J., and Sunde, U. (2019). Longevity and Patience. CRC 190 Discussion Paper 201, University of Munich.
Fang, X., Kothari, S., McLoughlin, C., and Yenice, M. (2020). The Economic Consequences of Conflict in Sub-Saharan Africa, IMF Working Paper 20/221.
Fargues, P. (2000). 'Protracted National Conflict and Fertility Change: Palestinians and Israelis in the Twentieth Century', *Population and Development Review*, 26: 441–82.
Fearon, J., and Laitin, D. (2003). 'Ethnicity, Insurgency and Civil War', *American Political Science Review*, 97: 75–90.
Fearon, J., and Shaver, S. (2021). Civil War Violence and Refugee Outflows, ESOC Working Paper 25, Princeton University.
Fergusson, L., Ibáñez, A. M., and Riaño, J. P. (2019). 'Conflict, Educational Attainment, and Structural Transformation: La Violencia in Colombia', *Economic Development and Cultural Change*, 69: 335–71.
Flückiger, M., and Ludwig, M. (2018). 'Youth Bulges and Civil Conflict: Causal Evidence from Sub-Saharan Africa', *Journal of Conflict Resolution*, 62: 1932–62.
Fur, L. T., and Wasmer, E. (2024). Fighting for Resources Conflict: A Unified Growth Model of the Great Divergence, CEPR Discussion Paper 19955.
Galor, O., and Weil, D. N. (2000). 'Population, Technology, and Growth: From Malthusian Stagnation to the Demographic Transition and Beyond', *American Economic Review*, 90: 806–28.
Garry, S., and Checchi, F. (2021). 'Armed Conflict and Public Health: Into the 21st Century', *Journal of Public Health*, 42: e287–e298.
Gates, S., Hegre, H., Nygård, H. M., and Strand, H. (2012). 'Development Consequences of Armed Conflict', *World Development*, 40: 1713–22.
Gizelis, T. I., and Cao, X. (2021). 'A Security Dividend: Peacekeeping and Maternal Health Outcomes and Access', *Journal of Peace Research*, 58: 263–78.
González, F., Miquel-Florensa, J., Prem, M., and Straub, S. (2025). 'The Dark Side of Infrastructure: Roads, Repression and Land in Authoritarian Paraguay', *Economic Journal*, 135: 653–69.
Goto, R., Frodl, T. T. and Skokauskas, N. (2021). 'Armed Conflict and Early Childhood Development in 12 Low and Middle-Income Countries', *Pediatrics*, 148: e2021050332.
Grosjean, P. (2016). 'Conflict and Social and Political Preferences: Evidence from World War II and Civil Conflict in 35 European Countries', *Comparative Economic Studies*, 56: 424–51.
Guidolin, M., and La Ferrara, E. (2007). 'Diamonds are Forever, Wars are Not: Is Conflict Bad for Private Firms?', *American Economic Review*, 97: 1978–93.
Guo, S. (2020). 'The Legacy Effect of Unexploded Bombs on Educational Attainment in Laos', *Journal of Development Economics*, 147: 102527.
Hegre, H., and Sambanis, N. (2006). 'Sensitivity Analysis of Empirical Results of Civil War Onset', *Journal of Conflict Resolution*, 50: 937–61.
Hesketh, T., and Xing, Z. W. (2006). 'Abnormal Sex Ratios in Human Populations: Causes and Consequences', *Proceedings of the National Academy of Sciences of the USA*, 103: 13271–5.
Hoeffler, A., and Reynal-Querol, M. (2003). 'Measuring the cost of conflict', World Bank Report.
Humphries, M., and Weinstein, J. M. (2008). 'Who Fights? The Determinants of Participation in Civil War', *American Journal of Political Science*, 52: 436–55.
Iacoella, F., Justino, P., and Martorano, B. (2025). 'Lockdown and Unrest: Inequality, Restrictions and Protests During COVID-19', *Journal of Conflict Resolution*, 69: 1309–39.
Ichino, A., and Winter-Ebmer, R. (2004). 'The Long-run Educational Cost of World War II', *Journal of Labor Economics*, 22: 57–86.
Islam, A., Ouch, C., Smyth, R., and Wang, L. C. (2016). 'The Long-term Effects of Civil Conflicts on Education, Earnings, and Fertility: Evidence from Cambodia', *Journal of Comparative Economics*, 44: 800–20.

Ito, T., Li, J., Usoof-Towfeek, R., and Yamazaki, K. (2024). 'Educational consequences of first-hand exposure to armed conflict: The case of the Sri Lankan Civil War', *World Development*, 173: 106430.
Jawad, M., Hone, T., Vamos, E. P., Cetorelli, V., and Millett, C. (2021). 'Implications of Armed Conflict for Maternal and Child Health: A Regression Analysis of Data from 181 Countries for 2000–2019', *PLOS Medicine*, 18: e1003810.
Jawad, M., Hone, T., Vamos, E. P., Roderick, P., Sullivan, R., and Millett, C. (2020). 'Estimating Indirect Mortality Impacts of Armed Conflict in Civilian Populations: Panel Regression Analyses of 193 Countries, 1990–2017', *BMC Medicine*, 18: 266.
Jawad, M., Vamos, E. P., Najim, M., Roberts, B., and Millett, C. (2019). 'Impact of Armed Conflict on Cardiovascular Disease Risk: A Systematic Review', *Heart*, 105: 1388–94.
Jedwab, R., Khan, A. M., Russ, J., and Zaveri, E. D. (2021). 'Epidemics, Pandemics, and Social Conflict: Lessons from the Past and Possible Scenarios for COVID-19', *World Development*, 147: 105629.
Jones, C. I. (2016). 'The Facts of Economic Growth', in J. B. Taylor and H. Uhlig (eds) *Handbook of Macroeconomics*, Vol. 2, Chapter 1, pp. 3–69. Amsterdam: Elsevier.
Jones, C. I., and Romer, P. (2010). 'The New Kaldor Facts: Ideas, Institutions, Population, and Human Capital', *American Economic Journal: Macroeconomics*, 2: 224–45.
Jürges, H., Stella, L., Hallaq, S., and Schwarz, A. (2022). 'Cohort at Risk: Long-term Consequences of Conflict for Child School Achievement', *Journal of Population Economics*, 35: 1–43.
Justino, P., Leone, M., and Salardi, P. (2014). 'Short- and Long-Term Impact of Violence on Education: the Case of Timor Leste', *World Bank Economic Review*, 28: 320–53.
Justino, P. (2016). 'Supply and Demand Restrictions to Education in Conflict-affected Countries: New Research and Future Agendas', *International Journal of Educational Development*, 47: 76–85.
—— (2019). 'Governance Interventions in Conflict-Affected Countries', *Journal of Development Studies*, 55: 1364–78.
Kadir, A., Shenoda, S. S., and Goldhagen, J. (2019). 'Effects of Armed Conflict on Child Health and Development: A Systematic Review', *PLoS One*, 14: e0210071.
Keeler, E., and Ying, J. S. (1988). 'Measuring the Benefits of A Large Public Investment: The Case of The US Federal-Aid Highway System', *Journal of Public Economics*, 36: 69–85.
Korn, T., and Stemmler, H. (2025). 'The Persistence of Trade Relocation from Civil Conflict', *Journal of Development Economics*, 172: 103376.
Korovkin, V., and Makarin, A. (2023). 'Conflict and Intergroup Trade: Evidence from the 2014 Russia-Ukraine Crisis', *American Economic Review*, 113: 34–70.
Korovkin, A., A. Makarin, A., and Miyauchi, Y. (2024). Supply Chain Disruption and Reorganization: Theory and Evidence from Ukraine's War. Mimeo.
Kotsadam, A., and Østby, G. (2019). 'Armed Conflict and Maternal Mortality: A Micro-level Analysis of Sub-Saharan Africa, 1989-2013', *Social Science and Medicine*, 239: 112526.
Kraehnert, K., Brück, T., Di Maio, M., and Nisticò, R. (2019). 'The Effects of Conflict on Fertility: evidence From the Genocide in Rwanda', *Demography*, 56: 935–68.
Ksoll, C., Macchiavello, R., and Morjaria, A. (2022). 'Electoral Violence and Supply Chain Disruptions in Kenya's Floriculture Industry', *Review of Economics and Statistics*, 105: 1–45.
Lackner, M., Sunde, U., and Winter-Ebmer, R. (2025). 'Covid-19 and the Forces Behind Social Unrest', *Plos One*, 20: e0314165.2025.
La Mattina, G. (2018). 'How Persistent is the Effect of Conflict on Primary Education? Lon-run Evidence from the Rwandan Genocide', *Economics Letters*, 163: 32–5.
Lange, M., and Sommerfeld, K. (2024). 'Do Refugees Impact Crime? Causal Evidence from Large-scale Refugee Immigration to Germany', *Labour Economics*, 86: 102466.
Lebrand, M., Mueller, H., Schouten, P. and Steinbuks, J. (2024). Road Investment and Violence in DRC: Perishable Effects, World Bank Policy Research Working Paper, 11071.
Leon, G. (2012). 'Civil Conflict and Human Capital Accumulation: The Long-term Effects of Political Violence in Perú', *Journal of Human Resources*, 47: 991–1022.
Lerch, M. (2024). 'Societal Upheaval and Contraceptive Transition', *Population and Development Review*, 50: 625–47.

Li, C., Murshed, S. M., and Tanna, S. (2017). 'The impact of civil war on foreign direct investment flows to developing countries', *Journal of International Trade and Economic Development*, 26: 488–507.
Lin, Y., and Xu, M. (2025). 'Roads to Peace or Discord: How Does Infrastructure Shape Conflict Dynamics in Africa?', Mimeo.
Makinde, O. A., Olamijuwon, E., Mgbachi, I., and Sato, R. (2023). 'Childhood Exposure to Armed Conflict and Nutritional Health Outcomes in Nigeria', *Conflict and Health*, 17: 15.
Mankiw, N. G., Romer, P., and Weil, D. W. (1992). 'A Contribution to the Empirics of Economic Growth', *Quarterly Journal of Economics*, 107: 407–37.
Mansour, H., and Rees, D. I. (2012). 'Armed Conflict and Birth Weight: Evidence from the Al-Aqsa Intifada', *Journal of Development Economics*, 99: 190–9.
Martin, P., Mayer, T., and Thoenig, M. (2008a). 'Civil Wars and International Trade', *Journal of the European Economic Association*, 6: 541–50.
—— (2008b). 'Make Trade Not War', *Review of Economic Studies*, 75: 865–900.
Michaels, G. (2008). 'The Effect of Trade on the Demand for Skill: Evidence from the Interstate Highway System', *Review of Economics and Statistics*, 90: 683–701.
Michaelsen, M. M., and Salardi, P. (2020). 'Violence, Psychological Stress and Educational Performance During the "War On Drugs" in Mexico', *Journal of Development Economics*, 143: 102387.
Miguel, E., and Roland, G. (2011). 'The long-run impact of bombing Vietnam', *Journal of Development Economics*, 96: 1–15.
Miguel, E., Satyanath, S., and Sergenti, E. (2004). 'Economic Shocks and Civil Conflict: An Instrumental Variables Approach', *Journal of Political Economy*, 112: 725–53.
Mihalache-O'Keef, A. S.(2018). 'Whose Greed, Whose Grievance, and Whose Opportunity? Effects of Foreign Direct Investment (FDI) on Internal Conflict', *World Development*, 106: 187–206.
Minoiu, C., and Shemyakina, O. N. (2014). 'Armed Conflict, Household Victimization, and Child Health in Côte d'Ivoire', *Journal of Development Economics*, 108: 237–55.
Mohr, C., and Trebesch, C. (2024). Geoeconomics. CESifo Working Paper 11564.
Monteiro, J., and Rocha, R. (2017). 'Drug Battles and School Achievement: Evidence from Rio de Janeiro's Favelas', *Review of Economics and Statistics*, 99: 213–28.
Montolio, D. (2018). 'The Effects of Local Infrastructure Investment on Crime', *Labour Economics*, 52: 210–30.
Morelli, M., and Sonno, T. (2017). 'On Economic Interdependence and War', *Journal of Economic Literature*, 55: 1084–97.
Moreno, L., Gallego, J., and Vargas, J. (2019). More Roads, More Conflict? The Effect of Rural Roads on Armed Conflict and Illegal Economies in Colombia, Universidad De Rosario Working Paper, 248, 1–49.
Moyer, J. D. (2023). 'Blessed are the Peacemakers: The Future Burden of Intrastate Conflict on Poverty', *World Development*, 165: 106188.
Mueller, H. (2012). 'Growth Dynamics: The Myth of Economic Recovery: Comment', *American Economic Review*, 102: 3774–7.
—— (2016). 'Growth and Violence: Argument For a Per Capita Measure of Civil War', *Economica*, 83: 473–97.
Mueller, H., Piemontese, L., and Tapsoba, A. (2017). *Recovery from conflict: Lessons of success*, Policy Research Working Paper 7970, World Bank, Washington, DC.
Mueller, H., and Tobias, J. (2016). 'The cost of violence: estimating the economic impact of conflict'. IGC.
Müller-Crepon, C., Hunziker, P., and Cederman, L. E. (2021). 'Roads to Rule, Roads to Rebel: Relational State Capacity and Conflict in Africa', *Journal of Conflict Resolution*, 65: 563–90.
Murdoch, J. C., and Sandler, T. (2002). 'Economic Growth, Civil Wars and Spatial Spillovers', *Journal of Conflict Resolution*, 46: 91–110.
—— (2004). 'Civil Wars and Economic Growth: Spatial Dispersion', *American Journal of Political Science*, 48: 138–51.
Naudé, W., Amorós, J. E., and Brück, T. (2024). State-Based Armed Conflict and Entrepreneurship: Empirical Evidence, in W., Naudé and B., Power (eds) *Handbook of Research on Entrepreneurship and Conflict*, Chapter 7, pp. 106-40. Edward Elgar Publishing.

Nepal, A. K., Halla, M., and Stillman, S. (2025). 'Violent Conflict and the Child Quantity-Quality Trade-Off', *Journal of Demographic Economics*. Doi: 10.1017/dem.2023.2.
Novta, N., and Pugacheva, E. (2021). 'The Macroeconomic Costs of Conflict', *Journal of Macroeconomics*, 68: 103286.
OECD/SWAC. (2025). *Roads and Conflicts in North and West Africa, West African Studies*. Paris: OECD Publishing.
O'Loughlin, J., Linke, A. M., and Witmer, F. D. W. (2014). 'Effects of Temperature and Precipitation Variability on the Risk of Violence in Sub-Saharan Africa, 1980–2012', *Proceedings of the National Academy of Sciences*, 111: 16712–7.
Ostby, G., Urdahl, H., and Dupuy, K. (2019). 'Does Education Lead to Pacification? A Systematic Review of Statistical Studies on Education and Political Violence', *Review of Educational Research*, 89: 46–92.
Phadera, L. (2023). 'Unfortunate Moms and Unfortunate Children: Impact of the Nepali Civil War on Women's Stature and Intergenerational Health', *Journal of Health Economics*, 76: 102410.
Piemontese, L. (2023). 'Uncovering illegal and underground economies: The case of mafia extortion racketeering', *Journal of Public Economics*, 227: 104997.
Pinotti, P. (2015). 'The Economic Costs of Organised Crime: Evidence from Southern Italy', *Economic Journal*, 125: F203–F232.
Pinto, P. M., and Zhu, B. (2022). 'Brewing Violence: Foreign Investment and Civil Conflict', *Journal of Conflict Resolution*, 66: 1010–36.
Polachek, S., Seiglie, C., and Xiang, J. (2007). 'The Impact of Foreign Direct Investment on International Conflict', *Defence and Peace Economics*, 18: 415–29.
Polo, S. M. T., and Wucherpfennig, J. (2022). 'Trojan Horse, Copycat, or Scapegoat? Unpacking the Refugees-Terrorism Nexus', *Journal of Politics*, 84: 33–49.
Prem, M., Vargas, J. F., and Namen, O. (2023). 'The Human Capital Peace Dividend', *Journal of Human Resources*, 58: 962–1002.
Price, J. I., and Bohara, A. K. (2013). 'Maternal Health Care Amid Political Unrest: The Effect of Armed Conflict on Antenatal Care Utilization in Nepal', *Health Policy and Planning*, 28: 309–19.
Quintana-Domeque, C., and Ródenas-Serrano, P. (2017). 'The Hidden Costs of Terrorism: The Effects on Health at Birth', *Journal of Health Economics*, 56: 47–60.
Qureshi, M. S.(2013). 'Trade and Thy Neighbor's War', *Journal of Development Economics*, 105: 178–95.
Ram, R. (1995). 'Defense Expenditure and Economic Growth', in Keith Hartley and Todd Sandler (eds.), *Handbook of Defense Economics*, Vol. 1. Chapter 10, pp. 251–74, Elsevier B. V.: Amsterdam.
Ray, D., and Esteban, J. M. (2017). 'Conflict and Development', *Annual Reviews of Economics*, 9: 263–93.
Rockmore, M. (2017). 'The Cost of Fear: The Welfare Effect of The Risk of Violence in Northern Uganda', *World Bank Economic Review*, 31: 650–69.
Rodriguez, C., and Sanchez, F. (2012). 'Armed Conflict Exposure, Human Capital Investments, and Child Labor: Evidence from Colombia', *Defence and Peace Economics*, 23: 161–84.
Rodrik, D. (1999). 'Where Did All the Growth Go? External Shocks, Social Conflict, and Growth Collapses', *Journal of Economic Growth*, 4: 385–412.
Rohner, D. (2023). 'Conflict, Civil Wars, and Human Development', In K.F. Zimmermann (ed.) *Handbook of Labor, Human Resources and Population Economics*, pp. 1–16. London and New York: Springer.
—— (2024). 'Mediation, Military, and Money: The Promises and Pitfalls of Outside Interventions to End Armed Conflicts', *Journal of Economic Literature*, 62: 155–95.
Rohner, D., and Saia, A. (2019). Education and Conflict Evidence from a Policy Experiment in Indonesia, HiCN Working Paper 304, Households in Conflict Network.
Rohner, D., and Thoenig, M. (2021). 'The Elusive Peace Dividend of Development Policy: From War Traps to Macro Complementarities', *Annual Review of Economics*, 13: 111–31.
Rozo, S. V. (2018). 'Is Murder Bad for Business? Evidence from Colombia', *Review of Economics and Statistics*, 100: 769–82.

Salehyan, I., and Gleditsch, K. S. (2006). 'Refugees and the Spread of Civil War', *International Organization*, 60: 335–66.
Shaver, A., Krick, B., Blancaflor, J., Liu, X., Samara, G., Ku, S., Hu, S., Angelo, J., Carreon, M., Lim, T., Raps, R., Velasquez, A., de Melo, S., and Zuo, Z. (2025). 'The Causes and Consequences of Refugee Flows: A Contemporary Reanalysis', *American Political Science Review*, 119: 526–34.
Shemyakina, O. (2011). 'The Effect of Armed Conflict on Accumulation of Schooling: Results from Tajikistan', *Journal of Development Economics*, 95: 186–200.
—— (2015). 'Exploring the Impact of Conflict Exposure During Formative Years on Labour Market Outcomes in Tajikistan', *Journal of Development Studies*, 51: 422–46.
Shimizutani, S., and Yamada, E. (2024). 'Long-term Consequences of Civil War in Tajikistan: The Gendered Impact on Education and Labor Market Outcomes', *Defence and Peace Economics*, 35: 72–85.
Singh, P. (2013). 'Impact of Terrorism on Investment Decisions of Farmers: Evidence from the Punjab Insurgency', *Journal of Conflict Resolution*, 57: 143–68.
Singhal, S. (2019). 'Early Life Shocks and Mental Health: The Long-term Effect of War in Vietnam', *Journal of Development Economics*, 141: 102244.
Sonno, T. (2025). 'Globalization and Conflicts: the Good, the Bad, and the Ugly of Corporations in Africa', *Economic Journal*, 135: 1108–40.
Swee, E. L. (2015). 'On War Intensity and Schooling Attainment: The Case of Bosnia and Herzegovina', *European Journal of Political Economy*, 40: 158–72.
Sunde, U., and Vischer, T. (2015). 'Human Capital and Growth: Specification Matters', *Economica*, 82: 368–90.
Svallfors, S., and Billingsley, S. (2019). 'Conflict and Contraception in Colombia', *Studies in Family Planning*, 50: 87–112.
Tapsoba, A. (2023). 'The Cost of Fear: Impact of Violence Risk on Child Health During Conflict', *Journal of Development Economics*, 160: 102975.
Thiede, B., Hancock, M., Kodouda, A., and Piazza, J. (2020). 'Exposure to Armed Conflict and Fertility in Sub-Saharan Africa', *Demography*, 57: 2113–41.
Thoenig, M. (2024). 'Trade in the Shadow of War: A Quantitative Toolkit for Geoeconomics', in O., Dube, M., Morelli, and D., Ray (eds) *Handbook of the Economics of Conflict*, Chapter 8, pp. 325–80. Amsterdam: Elsevier.
Torrisi, O. (2020). 'Armed Conflict and the Timing of Childbearing in Azerbaijan', *Population and Development Review*, 46: 501–56.
—— (2024). 'Violent Instability and Modern Contraception: Evidence from Mali', *World Development*, 177: 106538.
Unfried, K., and Kis-Katos, K. (2023). 'The Heterogeneous Effects of Conflict on Education: A Spatial Analysis in Sub-Saharan Africa', *Journal of Peace Research*, 60: 968–84.
Urdal, H. (2006). 'A Clash of Generations? Youth Bulges and Political Violence', *International Studies Quarterly*, 50: 607–30.
Utar, H. (2024). 'Firms and Labor in Times of Violence: Evidence from the Mexican Drug War', *World Bank Economic Review*, lhae037.
Valente, C. (2014). 'Education and Civil Conflict in Nepal', *World Bank Economic Review*, 28: 354–83.
—— (2015). 'Civil Conflict, Gender-Specific Fetal Loss, and Selection: A New Test of The Trivers–Willard Hypothesis', *Journal of Health Economics*, 39: 31–50.
Verpoorten, M. (2009). 'Household Coping in War- and Peacetime: Cattle Sales in Rwanda, 1991–2001', *Journal of Development Economics*, 88: 67–86.
Verwimp, P., and van Bavel, J. (2014). 'Schooling, Violent Conflict, and Gender in Burundi', *World Bank Economic Review*, 28: 384–411.
Verwimp, P., Justino, P., and Brück, T. (2019). 'The Microeconomics of Violent Conflict', *Journal of Development Economics*, 141: 102297.
Vesco, P., Baliki, G., Brück, T., Döring, S., Eriksson, A., Fjelde, H., Guha-Sapir, D., Hall, J., Knutsen, C. H., Leis, M. R., Mueller, H., Rauh, C., Rudolfsen, I., Swain, A., Timlick, A., Vassiliou, P. T. B., von Schreeb, J., von Uexkull, N., and Hegre, H. (2025). 'The Impacts of Armed Conflict on Human Development: A Review of The Literature', *World Development*, 187: 106806.

Wagner, Z., Heft-Neal, S., Bhutta, Z. A., Black, R. E., Burke, M., and Bendavid, E. (2018). 'Armed Conflict and Child Mortality in Africa: A Geospatial Analysis', *Lancet*, 392: 857–65.
——, Heft-Neal, S., Wise, P. H., Black, R. E., Burke, M., Boerma, T., Bhutta, Z. A., and Bendavid, E. (2019). 'Women and Children Living in Areas of Armed Conflict in Africa: A Geospatial Analysis of Mortality and Orphanhood', *Lancet Global Health*, 7: e1622–e1631.
Wegenast, T., and Schneider, G. (2017). 'Ownership Matters: Natural Resources, Property Rights, and Social Conflict in Sub-Saharan Africa', *Political Geography*, 61: 110–22.
Wells, C. R., Pandey, A., Ndeffo Mbah, M. L., Gaüzère, B. A., Malvy, D., Singer, B. H., and Galvani, A. P. (2019). 'The Exacerbation of Ebola Outbreaks by Conflict in the Democratic Republic of the Congo', *Proceedings of the National Academy of Sciences*, 116: 24366–72.
Wood, R., Reinhardt, G. Y., RezaeeDaryakenari, B., and Windsor, L. C. (2022). 'Resisting Lockdown: the Influence of COVID-19 Restrictions on Social Unrest', *International Studies Quarterly*, 66: sqac015.
Zhukov, Y. M. (2012). 'Roads and the Diffusion of Insurgent Violence: The Logistics of Conflict in Russia's North Caucasus', *Political Geography*, 31: 144–56.

Economic Policy, 2025, 40, 973–1013
https://doi.org/10.1093/epolic/eiaf006
Conflict and investment: A review