Conflict and development

Recent research advances and future agendas

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Abstract: We survey selected parts of the growing literature on the microeconomics of violent conflict, identifying where academic research has started to establish stylized facts and where methodological and knowledge gaps remain. We focus our review on the role of civilian agency in conflict; on wartime institutions; and on the private sector in conflict. Future research requires new and better sources of data on conflict and conflict impacts, including from household surveys in conflict-affected areas. Impact evaluations can also be valuable sources of insights about how conflict impacts on people and how peacebuilding and reconstruction can be improved. We also see the need for much more detailed studies on the long-term impacts of conflict; on the linkages between agriculture, food security, and conflict; on the role of technology for peace; and on the micro–macro linkages of conflict, as well its macroeconomic costs. Finally, future research would benefit from linking analysis of large-scale violent conflict with other forms of violence, instability, fragility, and humanitarian crises.

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1   Introduction

The last two decades have seen an explosion of research on the relationship between violent conflict and economic development. Until the mid-1990s, research on violent conflict was largely dominated by international relations approaches and methods, with limited interest among development economists or development studies scholars—or indeed mainstream development institutions. Interest in violent conflict among the development community started to change with the realization that the group of countries that would not fulfil the Millennium Development Goals by 2015 had one characteristic in common: they were affected by armed conflict. The 2011 World Development Report on 'Conflict, Security and Development', published by the World Bank (2011), firmly established armed conflict at the centre of development policy and research. At the same time, the intractable development and security challenges in both Iraq and Afghanistan helped persuade a larger audience that our knowledge base on conflict and development was weak and that the jury was out on how best to achieve development and security in conflict and fragile states.

Despite a slow start, research on the relationship between conflict and development has generated hundreds of studies over the last two decades. But the focus of research has changed substantially in terms of theoretical approaches, empirical methodologies, and use of different data. This paper reflects on the main advances in conflict research over the last two decades and suggests a number of future agendas.

2   Recent advances in conflict and development research

Recent research on conflict and development has generated a number of important advances, including: (i) a shift from state to more micro levels of analysis, (ii) recognizing the importance of civilian agency in conflict contexts, (iii) a focus on the role of wartime institutions, and (iv) a stronger focus on the role of the private sector in conflict-affected contexts.

2.1   Shifting to the micro level

The first main advance has been a shift from state to micro levels of analysis. Research on violent conflict during the 1980s and 1990s was largely focused on the security and capacity of states to provide services and public goods and to maintain the rule of law. This research was very useful in advancing understanding about global patterns that drive some types of conflict, but it was less useful in uncovering mechanisms that may explain sub-national patterns of conflict, including variation in types, forms, and consequences of violence, and variation in the consequences of violent conflict across social groups and regions. Limited attention was also paid to individuals beyond immediate humanitarian needs.

The recent focus has shifted from states to people and communities.[1] This has happened on both sides of the equation: research now asks who engages in violence, as well as who is affected by violence. As discussed in Justino et al. (2013, pp. 290), questions being asked include: 'Who are the people affected by violent conflict? How do they live? What do they do to secure lives and

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[1] See HiCN (n.d.) and MICROCON (n.d.).

livelihoods? What options do they have? What choices do they make? Why are they affected by violence and how? How does violence change their options and choices?'

This new emphasis on people and on micro-level processes has generated a wealth of rigorous evidence, data, and analysis on group, household and individual welfare and behaviour in conflict settings, and the spatial differentiation of conflict patterns at the sub-national level (see Justino 2009, 2012; Balcells and Justino 2014). In particular, this research has shown that the legacies and duration of violent conflict are closely interrelated with how people and groups behave, make choices, and interact, and has driven a new policy focus on people-centred approaches to development in conflict-affected settings.

2.2   Civilian agency in conflict contexts

The second related advance has been a greater emphasis on civilian agency. Although civilians constitute the bulk of the victims of armed conflict, many build tremendous resilience in the face of violence (Justino 2012, 2013). People living in areas of violent conflict carry on with their daily lives, in many cases across generations and decades of conflict, and adapt to processes of conflict and violence in order to survive. Some people succeed in 'navigating' the conflict, others do not (Zetter and Verwimp 2011; Justino 2012). Their choices and behaviour (voluntary or involuntary), in turn, shape dynamics of conflict on the ground including where to fight, with whom, and for how long (Justino 2013; Arjona 2015), and set the stage for how interventions to build peace, stability, and economic prosperity in conflict-affected contexts may succeed or fail (Autesserre 2010).

Recent research has also shown that, although violent conflict is associated with many adverse outcomes for civilians, in some cases experiences of recruitment and victimization may result in increased individual political and social participation and leadership once the war is over (Bellows and Miguel 2009; Blattman 2009), and in stronger forms of altruism and social cooperation (Voors et al. 2010). Although results are mixed, taken together this research suggests that civilian experiences of violence beyond victimization are central to how social relations, markets, and political structures are organized during and after violent conflict.

2.3   Wartime institutions

The third advance has been a better understanding of how institutional transformations during conflict affect post-conflict processes. An emerging research agenda has argued that understanding societies and economies affected by armed conflict is not possible without an in-depth understanding of the nature of the violence and, importantly, the nature of the institutional changes caused by it (Justino 2013, 2016b). Central to this research is the observation that violence is endogenous to how institutions emerge and are sustained in conflict areas (Cramer 2006; Justino 2013). For a long time, social science theorized armed conflict as a departure from social order, rather than as intrinsic to the creation and change of institutions. As a result, a large literature refers to armed conflict as a symptom of 'state collapse' or 'state failure' (Zartman 1995; Milliken 2003; Ghani and Lockhart 2008).

However, the collapse of state institutions is not always associated with the collapse of order (Kalyvas et al. 2008). In reality, political actors occupy the space left by weak or absent state institutions by building new institutions that advance war objectives. These are often violent, but not everywhere nor at all times (Kalyvas et al. 2008; Mampilly 2011; Arjona 2015; Arjona et al. 2015). Examples of these actors include the Revolutionary Armed Forces of Colombia (FARC), the Liberation Tigers of Tamil Eelam (LTTE), Hamas, Hezbolah, Taliban, and more recently ISIS. These groups have in common the fact that their institutions are persistent and last even though

the conflict may be over. Recent research has developed new theoretical approaches and empirical methods to understand these 'wartime institutions' (Mampilly 2011; Arjona 2015; Justino 2016b), and has documented the implications of rebel institutions for the reintegration of ex-combatants and war-affected civilians, state-civilian relations, and processes of state formation in the aftermath of violent conflicts.

This research has important policy implications because acknowledging that conflict-affected contexts are not blank slates rising from anarchy and disorder significantly affects the way we understand the types of society that emerge in the post-conflict period. It explains why conflict, violence, and instability persist in some countries, why in other settings violent conflict changes into different forms of violence, criminality, and situations of 'no peace, no war', and why in some countries peace and stability succeed, leading to democratic and inclusive societies (Justino 2013, 2016b).

2.4   The private sector

The role of the private sector in post-conflict development and peace durability is embedded at both the local and national levels. Entrepreneurship can have stabilizing effects at the local level, while large-scale investment and capital deepening can support institutional stabilization. Since the late 1990s, the role of economic stabilization and investment in peacebuilding and stabilization has been analysed in significant depth. What remains is a gap in the literature on local-level entrepreneurship and firm behaviour in post-conflict settings, and the impact that entrepreneurialism has on both peace and conflict duration (Brück et al. 2013). Entrepreneurs and firms are tenacious, and show a capacity to adapt and survive during conflict and in the post-conflict recovery period, which can have positive and negative effects on the evolution or conflict and peace processes (Brück et al. 2013).

While the private sector can play a negative role in the prosecution of conflict, due to reliance on networks with government and militant actors, it can also play a significant role in speeding up the process of stabilization after conflicts end (Peschka et al. 2011). At a macro level, when conflicts end and efforts are made to spur private sector growth, policies need to be oriented towards establishing predictable regulatory processes, developing a credit market, stimulating foreign investment, and deepening human capital (Kusago 2005). Many of these policy issues must be addressed as an economic agenda during the implementation of peace processes, so that informal economies and demobilized fighters can be transitioned into the peacetime economy (Nitzschke and Studdard 2005). As private sector actors enter into post-conflict markets, there needs to be awareness that the private sector may have played a role in the conflict and the ability to account for risks associated with bringing a new commercial agenda into a fragile political environment (Bray 2009). Well-defined corporate social responsibility, regulatory and legal frameworks, and cooperation between government, international, and commercial actors can create a space in post-conflict settings for sustainable investment, particularly in small and medium enterprises (Berdal and Mousavizadeh 2010).

While the macro aspects of commercial behaviour in war-to-peace transitions have been well researched, the microdynamics of entrepreneurship in conflict and post-conflict environments remain under-surveyed. Entrepreneurship in conflict-affected and post-conflict settings is not inherently good, as certain types of entrepreneurship can be destructive in nature (Desai et al. 2013). Without effective institutions there will be space for raiding resources, so non-cash microcredit can be an effective way to provide resources while mitigating tendencies to raid resources (Sanders and Weitzel 2013). Even when firms can be established, the intensity of conflict will have an impact on the depth of human capital available to firms. As conflicts are more intense, there is less human capital availability in the post-conflict period, leading to smaller firms and

slower recovery (Collier and Duponchel 2013). Bozzoli et al. (2013) point out that displacement also affects entrepreneurship, driving down self-employment wages in areas people are displaced to. While macro-level policies and strategies for private sector engagement can be managed through regulation and policy, as well as coordination between governance and private sector actors, the microdynamics of entrepreneurship and firm establishment are far more complex. Further survey and microdata collection across cases can help ground comparative analysis of entrepreneurship and firm establishment at the local level in conflict-affected and post-conflict environments.

3   Future agendas

While the study of conflict and conflict processes has expanded significantly, with wider recognition of the complexity of conflict and socio-political processes, much remains to be known about how people, countries, and institutions change during and in the aftermath of conflicts. Several areas look promising, and we discuss these in turn below.

3.1   Better data

Despite great advances in recent years, evidence remains sparse, scattered, and largely based on isolated case studies. Moreover, policy interventions in conflict-affected contexts are rarely evaluated and monitored rigorously, though this is changing rapidly. Comparable evidence across different conflict-affected contexts requires investment in appropriate methodological systems, as well as closer engagement between researchers, the international policy community, and local governments (including statistical offices). The research agendas proposed above involve close engagement with mechanisms and relationships that are not easy to map, analyse, and understand. Building rigorous evidence on these complex relationships is a challenging but not impossible task given the recent improvements in data availability and in analytical qualitative, quantitative and experimental methods to better understand conflict dynamics at different levels of analysis. Better knowledge will in turn result in better and more effective policy interventions.

Micro-level and household data can go a long way towards bridging the analytic gap between country-level data and event causality during and after conflict within local communities. Understanding these causal chains is critical because conflict and violence have lateral impacts between communities, as well as vertical impacts on how the collective behaviour of communities and households shapes national institutions in post-conflict environments. Verwimp et al. (2009) and Justino et al. (2013a) describe three directions of microdata from conflict settings, and how these impact on the micro–macro understanding of how violence shapes local and national socio-political processes. The first is localized data collection which has focused on household data collection that specifically compiles information on conflict and violence. The second is the use of sub-national data collected through surveys and censuses that was not conflict-specific, and then analysing that data in conjunction with existing conflict event datasets. The third approach is in-depth quantitative/qualitative case analysis that provides rich information on specific places affected by violence. This kind of data and analysis can help policy makers and practitioners tailor their programmes to meet national needs, but with an understanding of how different communities need to be accommodated to achieve aggregate outcomes.

Brück et al. (2016) go into greater depth about the methodological challenges and solutions to doing microdata collection in conflict-affected regions. The World Bank's Living Standards Measurement Surveys (LSMS) provide household-level data on quality of life and economic participation, as well as some conflict-specific questions, that can be used to understand the impact

of conflict on household economic behaviour and living standards. National census data and other types of standardized household data collection can be used to understand localized impacts of conflict. Reliable household data can be used to estimate mortality rates during conflict (Verpoorten 2011), while Rohner et al. (2012) used Afrobarometer survey data from Uganda in combination with ACLED geographic conflict data to investigate how conflict in Uganda affected social capital. Weidmann (2009) used a similar technique to do analysis on the impact of conflict on ethnic concentration in Bosnia. Novel survey approaches for understanding individual behaviour during conflict include surveys of ex-combatants, atrocities and genocide events, displaced populations, post-conflict reconstruction, and surveys of civilians in post-conflict settings. Brück et al. (2016) note that these kinds of surveys come with a mix of challenges, including methodological issues with sampling, bias, and recall issues, as well as practical issues such as access to insecure environments and managing ethical issues when working with traumatized populations.

As survey research increasingly becomes possible, the volume of microdata from many studies can be difficult to compare across time and space. Specific surveys will be looking at dynamics in one location that are not comparable to another, so it will be important as the field grows to focus on panel and longitudinal surveys. Panel data on conflict and development has been successfully gathered in a variety of locations. Brück et al. (2014) completed the Life in Kyrgyzstan Survey, gathering responses between 2010 and 2012 from 3,000 households, which included modules on conflict and allowed researchers to better understand development outcomes at the household level.[2] The Maharashtra Household Longitudinal Surveys, run in 2010 and 2012, helped researchers see for the first time how community-level violence impacted economic development at the household level for families in India (Gupte et al. 2014). The *Encuesta Longitudinal Colombiana* is the largest longitudinal survey on conflict-affected communities, covering 10,000 households in 2010 and again in 2013.[3] This survey shows the variations and impacts across different conflict-affected regions of Colombia and highlights different challenges that regions will face as the peace process continues to solidify. These examples show that micro-level surveys and data collection, especially when done as representative panels, can provide data that links the micro to macro levels in conflict analysis as well as providing reliable baseline data to improve peacebuilding and development evaluation systems.

3.2   Better monitoring and evaluation

Evaluating project outcomes in development programming is difficult even in settings not affected by conflict and violence. Evaluating impact in conflict-affected settings, and using evaluations to measure development impacts in these regions, is significantly harder. Puri et al. (forthcoming) note that it is a significant challenge to identify whether aid in humanitarian settings is allowing people to return to a reasonable standard of life, and whether the aid is being delivered in the right volume to the right places. They describe these issues in terms of effectiveness and efficiency. Overall the policy and academic communities are recognizing that effective humanitarian aid delivery, and the evaluation of humanitarian response outcomes, cannot be ad hoc. Donors, governments, and communities need to use the large volume of available data to plan responses and to develop procedures for evaluation and monitoring ahead of time.

Field experiments and randomized control trials (RTCs) represent the current state of the art for policy and programme impact evaluation. Bozzoli et al. (2013) provide a comprehensive analysis

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[2] See Life in Kyrgyzstan (n.d.).

[3] See ELCA (n.d.).

of how to set up and implement RTCs in conflict-affected and post-conflict environments. They highlight the importance of treatment and control sample randomization, baseline surveys, and survey instrument tests, as well as ethical issues such as informed consent and security risk management when working in conflict zones. These kinds of evaluation mechanisms are neither overly expensive nor complex to implement if done well. One key thing is to make sure that sample sizes and sampling strategy meet the requirements for the evaluation context—often samples need not be larger than 600–2,000 to collect representative data. Another mechanism for understanding the impact of policies is field experiments. Fearon et al. (2009) tested the impact of community-driven development (CDD) programming on social cohesion in post-conflict Liberia by creating treatment and control groups of villages, and then allowing everyone in the village to either keep money or contribute it to a collective pot. They found in the communities that participated in CDD that people were statistically more likely to contribute to the pot than people in the control communities. These findings led the World Bank to expand its CDD programming in Liberia.

While evaluation is manageable at the project level, and many scientific techniques for project and impact evaluation exist, a key challenge remains to implement good evaluation into institutional policy. Blum (2011) notes that, while progress has been made, many of the 'low hanging fruit' have been picked and now the peacebuilding evaluation field is having to address larger structural problems with effective evaluation. Three areas offer particular challenges: scale, weak results, and accountability between implementers. These are all in relationship to donor-level issues with evaluation. Scale is a problem when multiple localized efforts at peacebuilding take place, and the results are not evenly distributed. Perhaps one place experiences great results while another project fails. What then is the threshold for multiple successes to outweigh the failures before the policy community determines that a country is peaceful? Weak results and accountability related to one another. Weak results are also in the eye of the beholder. At the local level, a project team needs relatively granular information to understand their impact, while a policy maker needs generalizable results across a portfolio of projects. When results do not translate between the field and headquarters it becomes challenging to maintain accountability.

There are efforts underway in the implementation and policy communities to deal with the structural problems presented by multiple agencies and implementing partners operating in similar spaces and evaluating impact across these agencies. Search for Common Ground, a Washington, DC-based peacebuilding non-governmental organization (NGO), is the organizing partner in the Design Monitoring and Evaluation for Peace (DM&E for Peace) consortium. The DM&E for Peace consortium provides members with agreed-upon materials, processes, and strategies for evaluating peacebuilding and development programming. The OECD also provides a standard strategy for evaluating peacebuilding and humanitarian response programming to all Development Assistance Committee (DAC) member states. Such protocols are likely to become more prevalent as the field of policy evaluation in conflict-affected countries develops further.

3.3   Long-term and intergenerational impacts of conflict

The impacts of conflict and violence are not only immediate but continue to affect multiple generations. Impacts can be on economic access and activity, health, and social stability. How these impacts affect households depends heavily on how people are able to adapt to a conflict-affected environment and the rapid changes that come when a conflict ends (Justino 2009, 2012). These intergenerational effects are magnified by the adaptation and changes that take place within governance and social institutions during the course of a civil war. Household and individual adaptability over time, especially in relation to larger-scale changes in post-war institutions, has significant intergenerational effects on economic development. These effects can be seen in how youth and women are affected by changes in economic, household stability, and human capital outcomes (Justino 2012).

Intergenerational impacts of conflict and violence, along with being felt in institutions and economic outcomes, are also acutely felt among women and youth in terms of health outcomes (Ghobarah et al. 2004), with the impacts on second generations embedded in biological and psychological pathways (Devakumar et al. 2014). Women are at high risk of being targeted during violence, with rape, trafficking, and prostitution becoming more likely. These effects entail further health risks, including physical and mental trauma. The physical risks, such as sexually transmitted infections, present direct risks to babies in utero, since access to quality medical care is limited. There is also evidence that mental and psychological distress and trauma are passed to children in utero as well as after birth. For instance, field surveys by Usta et al. (2008) of women who were affected by the 2006 Israel–Hezbollah violence in southern Lebanon show that women who lived in violence-affected areas were more likely to be affected by domestic violence, had experienced violence at the hands of soldiers, and experienced long-term mental health issues after the conflict ended.

These impacts, many of which are passed on to children, can have social, economic, and health consequences for future generations. Research by Catani et al. (2008) on the mental and psychological impacts of violence and disasters on children in Sri Lanka showed that over time, children exposed to multiple stressors, including conflict and natural disasters, were significantly more likely to suffer from post-traumatic stress disorders than unaffected children. In Burundi, Bundervoet et al. (2009) used panel data on health and growth among children to identify the effect of conflict on the long-term health of children. They found that among cohorts of children affected by violence there were significant differences in height compared to children who were unaffected. These results are also seen in the impact on intergenerational health among children who grew up during the Biafra War in Nigeria (Akresh et al. 2012). Children and adolescents affected by the conflict showed reduced physical stature as adults, leading to both shorter life spans and decreased economic opportunity. These effects have an impact on intergenerational human capital. Chamarbagwala and Moran (2011) show the compound effects of civil war on children from disadvantaged groups, using data on school attendance over time in different sub-national departments in Guatemala. As children from disadvantaged groups experienced higher levels of violence, they attended significantly fewer years of school than those that did not, which reinforced socio-economic disadvantages over time.

The findings around short- and long-term impacts of conflict on educational attainment are important, and have been documented across multiple cases. Justino et al. (2013b) use the case of Timor Leste to explain the long- and short-term impacts of the civil conflict on education attainment for boys and girls. While there were significant long- and short-term impacts on boys exposed to the violence, girls were impacted in the short term but experienced less impact in their long-term educational attainment. This is explained by factors such as girls being able to take advantage of educational development programmes in ways that boys could not due to economic trade-offs at the household level that pushed boys to drop out of school. These results, which show that conflict has a significant impact on education access and outcomes, are in line with findings from: Justino (2016a); Akresh and de Walque (2011) on differences in educational outcomes for children who were affected by the 1994 Rwandan genocide; Alderman et al. (2006) about health and educational attainment among Zimbabwean pre-schoolers affected by violence and household shocks; and Shemyakina (2011) showing that Tajik girls in conflict-affected regions of Tajikistan were less likely to complete their mandatory schooling.

The combination of health and educational impacts across generations can have significant effects on a country's economic and political development as well as its inequality (Bircan et al. 2017), and these negative effects can lead to long-term state fragility and increased risk of returning to conflict. The studies above represent pioneering efforts to better understand the long-term impact of civil

conflicts, but much remains to be understood in comparative terms and in expanding the countries covered by adequate longitudinal data to date.

3.4 Linkages between agriculture, food security, and conflict

As global markets for food become more interconnected and changes in the environment and climate impact farming and agriculture, the role of food security in conflict prevention will become increasingly important. The relationship between food security and food aid in conflict-affected settings is complex. As Stewart (1998) explains, conflict-affected economies and polities are far more complex than those that just rely on aid, and there are a variety of ways that food aid can actually exacerbate or lengthen a conflict. Nunn and Qian (2014) added further evidence to the problematic relationship between food aid and civil conflict with their econometric analysis demonstrating a causal relationship between an instrumental food aid variable and conflict risk. This evidence has shown the importance of developing a deeper understanding of the causal effects of food shocks and food security in the peacebuilding and development space.

Food prices and price shocks in relation to outbreaks of violence have been an area of increased scrutiny in development economics and conflict studies. Smith (2014) provides evidence that changes in food aid have a statistical relationship with violence and unrest in urban settings in Africa. He finds that a price spike predicts an increased likelihood of riots and urban violence in the corresponding month and that food price shocks are drivers of unrest. This finding is supported across a wider range of types of unrest and food price shocks, indicating the global importance of tracking food price as a function of unrest and violence (Weinberg and Bakker 2015). Van Weezel (2016) did a deeper analysis of food price changes and violence from 1990 to 2011 finding evidence that while rising food prices, particularly related to low-value-added primary products, did correspond with violence, food aid remained a relatively weak predictor of violence across models.

While food price shows a clear relationship with instability, new analysis that combines food security and climate change can provide further insight into the food/conflict nexus. In Indonesia, where rice is a staple food crop, changes in minimum temperature during peak December growing season led to decreased food access in later months and a corresponding increase in violence (Caruso et al. 2016). Challenges emerge when including climate factors in conflict analysis. While water access and scarcity are critical to supporting agricultural production, and policies need to be developed to support sustainable water use (Munir and Qureshi 2010), climate and water access can have surprising effects on the likelihood of conflict outbreak. One perverse issue that emerges has to do with the impact of water and rain on the increased likelihood of civil conflict (Hendrix and Salehyan 2012; Saleyhan and Hendrix 2014). As rain and water access increase, there is more capacity for fighting, as well as more resources and assets that facilitate the emergence of conflict. Yet post-conflict settings also entail varied challenges related to the experience of conflict and displacement, differentiating these scenarios from 'development as usual' (Bozzoli and Brück 2009; Bozzoli et al. forthcoming; Brück and Schindler 2009). These findings indicate that further research is required to develop a deeper understanding of the different climate-driven drivers of food access and security, and violence.

3.5 Technology and peace

Since the mid-2000s, the technology and peace agenda among donors, NGOs, and researchers has grown significantly (Bott and Young 2012). The field is quite new though, so there is still an emerging debate about how these new technologies affect localized conflict and peacebuilding, have potentially negative effects on democratic participation, and support hybrid forms of micro–macro peacebuilding (Tellidis and Kappler 2016). The now-classic example of new technology

being used for conflict management is the development of the Ushahidi mapping platform in Nairobi during the 2007–08 Kenyan election violence. The software, which displayed data on a map, could be linked to other software platforms that parsed social media and could receive text messages in order to gather microdata on what people were witnessing in local settings (Goldstein and Rotich 2008). The Ushahidi project was innovative and compelling, drawing the interest of donors at a time when the push for localized data was increasing. This has led to a debate about the positive and negative effects of technology on conflict and peace.

New technologies, such as mobile phones and social media, create new opportunities and capacities for organizing violence. Pierskalla and Hollenbach (2013) use ACLED's geographic event data on violence in Africa to model the relationship between mobile phone access and the likelihood of violence, finding that where there is higher access the likelihood of violence is higher. Bailard's (2015) analysis of organizational and collective action processes in organizing violence support Pierskalla and Hollenbach (2013), noting that mobile phones make it easier to organize collective violence between ethnic communities. These results are reinforced by evidence that, in African regions with high levels of centralized broadcast media, people are more likely to remain passive, while regions with only peer-to-peer communication networks, such as social media, are more likely to experience violence (Warren 2015). There are also questions about whether these technologies aid repressive regimes. Gohdes (2015) finds that in Syria media and communications blackouts are implemented by the government prior to military operations to weaken the organizational capacity of opposition forces, while Heydemann and Leenders (2011) note that, after the Arab Spring, Middle Eastern governments quickly learned how people digitally organized, and modified their processes for repression.

While there are risks posed by new technologies, there is also evidence that they can support peace and civil society organizing (Shapiro and Siegel 2015). These include increased capacity to collect micro-level data, for civil society to organize to prevent violence, and for hybrid processes of governance between local and national entities to emerge. Humphreys and van der Windt (2016) performed a field experiment testing the validity of data submitted by mobile phone in Eastern Congo, finding that crowd-seeded data in the Kivu regions was useful for tracking conflict and development data at the local level. New technologies also make it possible for communities to organize and recognize their own definitions of conflict and peace indicators. For example, Firchow and MacGinty (2016) demonstrated how mobile phones can be used to support local data collection on perceptions of stability and the risk of violence.

While these technologies come with the risk of increasing violence or repression, there are theoretical and practical ways in which they can support peace and participatory governance. Martin-Shields (2013) explains that large-scale participation in information sharing in Kenya had the positive effect of allowing civil society actors to intervene in rumours of violence. Guttieri (2013) notes that new technologies can support civil–military interaction, and Dorn (2011) furthers this by explaining how new technologies, especially mobile phones, provide peacekeepers with granular information about ongoing threats to their operational environments. Further, while peer-to-peer communication in isolation can lead to higher risks of violence, Martin-Shields (2016) contends that the likelihood of technology leading to peace or violence has more to do with whether people recognize the authority of the source of information and are willing to act on the information they are receiving.

The technology sector is having an increasingly significant impact on development and peacebuilding outcomes globally. Access to these technologies in the developing world, and indeed even in conflict-affected environments, means that emerging research and policies will need to account for them. This area for policy and research is developing rapidly and will increasingly figure into development and peacebuilding outcomes in the 21st century.

3.6 Linking micro and macro levels of analysis

One key challenge for a future research agenda on the complex institutional dynamics linking conflict, violence, and development processes is the establishment of more rigorous knowledge of how the micro-level dynamics of conflict are related to macro-level social, economic, and political processes (Kalyvas et al. 2008). Can micro-level findings provide true foundations to understand macro phenomena? Can this new focus on the micro level explain why conflict persists and mutates, and how peace may emerge?

We now have a good understanding of how the behaviour, choices, and aspirations of individuals, households, and groups in conflict-affected settings may evolve independently of the state, regional, or international dimensions of the conflict. At the same time, local conflict processes have important implications for wider conflict processes, including the strength and authority of state and non-state groups, and the level of support they command among local populations. Bringing together these two perspectives is essential as the international outlook on security becomes increasingly complex.

Some progress is starting to be made (see Balcells and Justino 2014). New research agendas have argued for the need to develop further the links between micro and macro levels of analysis through meso-level processes, including technologies of rebellion, wartime institutions that result from interactions between civilians and armed groups, civilian organization and local collective action, local political interactions and patronage systems, and local markets and business interactions (Balcells and Justino 2014). Hopefully, other social sciences and the development community will follow suit in order to generate more comprehensive understandings of 'how the security and capacity of states may be closely entwined with the security and welfare of their people' (Justino 2013: 302).

3.7 The global costs of conflict

The costs of conflict and violence impact civilians and institutions at a variety of levels, but calculating specific numbers for losses and costs due to conflict is challenging (Brück and de Groot 2013). The Institute for Economics and Peace (IEP) (2014, 2017) produces an estimate of the overall global cost of violence that is often cited in the media. The IEP uses a relatively straightforward method of accounting for a variety of economic and social costs related to conflict and violence annually, determining that in 2015 the global costs of violence were US$13.6 trillion in PPP. This annualized number does not measure issues like the cross-border effects of violence, and suffers from problems associated with attempting to make point estimates of hard-to-measure costs such as the economic impact of trauma. Nor does it allow for the identification of how these macro numbers impact local governance institutions or macroeconomic losses such as tax revenue. De Groot et al. (2015) use a different statistical technique to estimate the accrued costs over time imposed by conflict. Using an integrated economic model they estimate that between 1960 and 2007 the global economy would be US$10.7 trillion larger without conflict. They also note that rich countries experience positive economic effects during conflict, while poor countries are negatively affected. In this way, conflict and violence have a tendency to exacerbate the gap between the developed and developing world.

De Groot (2010) manages to address the complexity of the costs associated with conflict spillover, looking specifically at the economic effects of bordering countries in Africa. He finds that conflict-affected countries and countries that share a contiguous border suffer the most from conflict, while countries that do not share a contiguous border with a conflict experience a positive spillover effect. At the micro level this could represent a brain drain, as individuals with the capacity to move away from the conflict do so, taking their human and financial capital with them. Abadie

and Gardeazabal (2003) explore the costs in terms of gross domestic product (GDP) losses and firm stock performance in the Basque Country after the onset of terrorism there and in response to the potential for a peace agreement. They note a 10 percentage point difference in GDP when comparing economic outcomes to a synthetic model where there is no terrorism. As a natural experiment they find that after the 1998–99 truce, firms with most of their operations in the Basque Country experienced improved stock performance.

The costs and losses associated with violent conflict have impacts on micro and macro social and institutional performance. Lost economic growth means less revenue for governments, who are then unable to support local-level governance and service delivery. Improvements in stock performance, increased capital growth, and high levels of human capital are key to developing linked local and national systems of governance, so further research on the costs of conflict and violence remain crucial in the conflict and development spheres.

3.8   Beyond civil wars

Conflict research has been dominated by the analysis of a restricted number of failed states riven by civil wars, mostly in Africa (see, for instance, Collier 2007). This literature has provided important insights into the destructive role of wars, highlighting the emergence of 'conflict traps' in countries affected by civil wars during the post-Cold War period and the role of violent conflict as 'development in reverse'. This research has been less useful in identifying the mechanisms that may explain why some conflict-affected countries have historically been able to successfully transition to peace and stability, while others remain trapped in cycles of violence and insecurity.

One way to advance this important research question would be to shift the focus of conflict analysis to countries where some of these processes of transition are currently taking place. Failed civil war-riven countries constitute only a minority of contexts where violence and conflict persist (World Bank 2011). Most of the world's violence takes place in countries where democratic systems are in place (even if at times they are incomplete) and the state is able to provide (some) public goods, but where political conflict, instability, and insecurity persist. Examples of such countries include many of the 'Arab Spring' nations, most of Latin America and Asia and several African countries that have recently emerged from long civil wars, such as Mozambique, Angola, Sierra Leone, and Burundi, to mention a few. These countries are places where social change is taking place at a fast pace but final outcomes in terms of peace and development remain unknown. Democratic structures and strong state institutions co-exist in many of these countries alongside instability and violence, where violence takes a variety of forms including criminal armed violence, civil war, guerrilla insurgency, urban violence, and communal rioting. A closer focus on these countries—or areas within countries—could potentially allow us to rigorously observe how violent conflict and institutional change interact to shape the complex transition of modern societies towards peace, prosperity, and stability.

3.9   Fragility

Another area beyond more traditional definitions of conflict and violence is the concept of fragility. Modern threats to stability have expanded beyond political violence, with climate change, natural disasters, and public health risks posing a challenge to stability in many countries with otherwise stable systems of governance. By encompassing environmental and geographic risks, along with more traditional indicators such as political stability and economic capacity, fragility can indicate where resources need to be directed pre-emptively to prevent social and political breakdowns that can lead to violence.

The main indices of state fragility for the development community are produced annually by the OECD and World Bank. The annual States of Fragility report (OECD 2015, 2016) uses a set of five clusters to disaggregate and codify different aspects of state fragility: institutions, economic foundations, justice, resilience and violence (OECD 2015, 2016). These are arranged as a Venn diagram, so that analysts and policy makers can see which countries have the highest exposure to a spectrum of risks. One of the key goals of this report is to better understand which states are the most fragile and to assess the relative distribution of overseas development aid in light of that. The OECD's fragile states analysis has been built on the World Bank's annual integrated fragile states list (OECD n.d.), which started as the non-public Low Income Countries Under Stress (LICUS) list and turned into the publicly available Harmonized List of Fragile States. Inclusion in the LICUS/Harmonized lists is based on a country's country policy and institutional performance assessment score (World Bank n.d.). This score covers a wide range of economic, governance, and social factors that influence the resources and support the bank allocates to that country's portfolio. Both the World Bank and OECD in looking at fragility have focused on multi-dimensional aspects of risk, including social, political, and environmental factors that go beyond active conflict and violence.

The ways in which the OECD and World Bank conceptualize fragility are not without problems. Kaplan (2015) points out that many of the measures used by the OECD in the States of Fragility report (OECD 2015) are the outcomes of fragility, as opposed to being purely causal. This leads to problems with miscategorization and makes it difficult to identify solutions for decreasing fragility. Another problem with these indices is that they focus on internal issues facing the state, without being able to clearly measure or articulate the negative impacts of external variables like international arms flows (de Weijer 2015). One of the problems is that increasing the level of complexity in a measurement scheme inevitably becomes less generally descriptive, ending up with the position that every state is fragile in different ways. The scientific literature on fragility helps fill conceptual gaps in the policy literature.

Grävingholt et al. (2012) use empirical analysis of government and society attributes to develop typologies of fragility that are less prone to problematic groupings of countries found in policy-oriented indices. They focus on a state's authority (monopoly on violence), capacity (ability to deliver services), and legitimacy among the citizenry, and then code states by their varying levels across these groups. This builds on Goldstone's (2008) explanation that state failure is driven by losses of legitimacy and effectiveness of the state. As these two factors decrease, pathways for state predation, rebellion, and institutional stagnation open up, leading to state fragility and potential failure. This leaves the question of how to make states less fragile. Chauvet and Collier (2008) analyse the factors that empirically shorten a country's classification as 'fragile', using simulations based on regression models of development indicators' effect on fragility. They find that overall increases in aid have significant effects on strengthening states, and that strengthening the secondary education sector has a particularly strong effect.

Further scientific research, in conjunction with policy efforts, can lead to a better understanding of how hybrid forms of fragility in developing and middle-income countries can increase the risk of conflict and violence. It can also help identify specific pathways for bringing countries out of fragility, using a mix of economic, social, and governance policy tools at national and sub-national levels in at-risk states.

4 Final reflections

Despite important recent advances in understanding the relationship between violent conflict and development processes, we still have very limited knowledge about the lives of populations in areas of violence and conflict and interactions with local forms of (state and non-state) institutional change. Notably, we need to better acknowledge that the security of lives and livelihoods in contexts of enduring violent conflict depend on endogenous institutional factors linked to political and social distributions of power during and in the aftermath of violent conflicts. There is also a pressing need for better data collection and evaluation systems: rigorous evidence on conflict processes, how lives carry on, and the effectiveness of interventions in contexts of violence is scarce and unsystematic. In addition, there is a lack of understanding of different forms of violence and conflict as most conflict research to date has focused on civil wars.

These new areas of research have considerable implications for policy agendas in conflict-affected countries. One-third of all aid to developing countries in 2009 was directed to fragile and conflict-affected countries (OECD 2011). However, development interventions and recovery programmes tend to overlook the fact that conflict processes entail complex forms of political and social institutional transformation that are not well understood. Understanding how and when to intervene to strengthen the economic and physical security of people affected by conflict and violence requires detailed and systematic knowledge and better evidence of how the dynamics of conflict evolve and affect the post-conflict period in terms of new social and political alliances and market relations. This understanding is important because it will shape how political and development interventions may support or fail to support local populations.

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