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Political order, development and social violence

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Abstract

Why are some countries more prone to social violence than others? Despite the fact that annual deaths due to homicides worldwide outnumber those due to organized armed conflict by a factor of roughly 3 to 1, this question has received very little attention from conflict and development specialists in recent years. As a modest first step in addressing this gap in the literature we draw together insights from the conflict and criminology literatures to develop a model of social violence that accounts for both political-institutional and socio-economic factors. While there is an extensive literature on the socio-economic determinants of social violence, there are only a handful of studies that consider the significance of political-institutional arrangements. Using cross-country estimates of homicides produced by the World Health Organization as an indicator of social violence, we test our model using OLS regression analysis for a sample of more than 120 countries. We find that countries with ‘hybrid’ political orders experience higher rates of social violence than those with strong autocratic or strong democratic regimes, and that weakly institutionalized democracies are particularly violent. We also find robust associations between indicators of poverty, inequality and ethnic diversity and social violence. These results indicate that social and political violence share some common underlying causes. We conclude by suggesting that the apparent global decline in organized armed conflict and the concomitant rise in social violence in recent decades may be linked to world urbanization and the ‘third wave’ of democratization in the global South, although further research is required to confirm this hypothesis.

Keywords

economic development, homicide, inequality, political institutions, poverty, social violence

Introduction

In recent years substantial attention has been devoted to understanding the causes and consequences of organized political violence, such as civil wars. By contrast, there are comparatively few cross-country studies by development scholars that address the causes and consequences of interpersonal or ‘social’ violence – that is, acts of violence between individuals or small groups of individuals.1 Yet social violence arguably represents a far greater threat to human security worldwide than organized political violence. According to data produced by the World Health Organization (WHO), in 2002 there were approximately 170,000 war-related deaths but over 500,000 deaths due to interpersonal violence worldwide, while in 2004 the counts were 182,000 and 598,000, respectively (WHO, 2004, 2008). Moreover, there has been a marked global decline in armed political conflict since a peak in the early 1990s, and a rise in social violence, sometimes attributed

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1 We do acknowledge a substantial literature which has considered the social and economic causes of cross-national homicide (Chamlin & Cochran, 2005; LaFree, 1999; Lim, Bond & Bond, 2005; Messner, 1983, 2003; Pratt & Cullen, 2005; Pratt & Godsey, 2003; Pridemore, 2002). Such studies, however, largely overlook the political dimensions of social violence and homicide, and focus almost exclusively on developed or OECD countries.
in the literature to the ‘third wave’ of democratization, as well as contemporary urbanization trends (Fajnzylber, Lederman & Loayza, 2000; Harbom & Wallensteen, 2010; Moser & McIlwaine, 2006; Rodgers, 2009).2

While the heavy costs of large scale political violence are clear to even the casual observer, the costs of social violence are more difficult to articulate and quantify. Nevertheless, widespread social violence is theoretically understood to be a fundamental obstacle to socioeconomic progress. Endemic social violence impedes development by forcing individuals and small groups to bear the burden of defence (of person and property) and contract enforcement, thereby diverting scarce resources away from growth-enhancing investments (Bates, 2001). Although empirical research on the aggregate costs of violence is limited, recent studies indicate that acute insecurity results in higher expenditure on medical services and law enforcement activities, lost productivity due to injury or premature death, reductions in the hours employees are willing to work (e.g. shift work that requires individuals to travel at night), higher insurance premiums for firms, and private expenditure on personal security provision (Freire & Polèse, 2003; Soares, 2006; WHO, 2002). In countries with high rates of social violence these direct and indirect costs can add up to a sizable fraction of GDP.

In this article we seek to explain why some countries are more prone to social violence than others by drawing together theoretical perspectives and empirical evidence from studies produced in the ‘political economy of conflict’ and criminology traditions. In doing so we aim to build a bridge between the conflict and criminology literatures which, to date, have largely evolved in isolation. In recent years conflict specialists have made great strides in understanding the risk factors associated with political violence utilizing cross-country empirical analysis, but have yet to extend these findings to the more prosaic – but equally pernicious – manifestations of social violence. Conversely, criminologists have largely focused on the social determinants of criminal violence in developed countries at national or subnational levels, generally overlooking the political-institutional correlates of social violence across countries (Karstedt & LaFree, 2006) – the central focus of the present article.

We argue that a significant fraction of the wide variation in levels of social violence across countries can be explained by variation in political-institutional arrangements. Following Huntington (1968), we hypothesize that countries with coherent political orders, whether autocratic or democratic, are likely to exhibit lower levels of social violence than ‘hybrid’ ones.3 Building on recent findings in the conflict literature, and expanding considerably the country coverage found in the criminology literature, we investigate the associations between different kinds of hybrid political orders and homicide rates (a proxy for social violence) across countries. However, political-institutional factors cannot account for variation in homicide rates across countries with similar political-institutional characteristics. To explain this residual variation we also examine social-economic factors that both criminologists and conflict specialists have found to be associated with both criminal and political violence including poverty, inequality and ethnic diversity. In other words, we are interested in determining whether political and social violence share some common underlying causes.

We present a synthetic model in which social violence is a function of political-institutional and socio-economic factors and test this model with an original dataset that exploits estimates of violence-related deaths from the WHO. Our initial empirical results indicate a strong correlation between hybrid polities and high homicide rates, as expected. A more nuanced model, in which hybrid political orders are disaggregated by specific political-institutional characteristics, reveals that weakly institutionalized democracies are uniquely prone to social violence. We also find levels of poverty, inequality and ethnic diversity to be robust predictors of homicide rates across countries. While the links between poverty, inequality, ethnic diversity and social violence are fairly well theorized, the mechanisms linking national-level political institutions to social violence are less well understood and require further research. In particular, the fact that weakly institutionalized democracies have the highest risk profile points to the need for a better understanding of the political dimensions of social violence.

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2 Moser & McIlwaine (2006) provide a more nuanced typology of violence while Rodgers (2009) argues that the dichotomous categorization used here is false as social violence often has political undercurrents. A more precise definition of social violence is provided in the following section, and we return to the question of the line between political and social violence in the discussion.

3 Huntington (2006[1968]: 1) argued that the maintenance of political order requires ‘strong, adaptable, coherent political institutions’ and that ‘the differences between democracy and dictatorship are less than the differences between those countries whose politics embodies consensus, community, legitimacy, organization, effectiveness, stability, and those countries whose politics is deficient in these qualities’.
Political order and social violence

We define social violence as acts of violence committed by individuals or groups that do not actively reflect an attempt to contest the authority of a state. Examples include assault, murder, gang violence and communal violence. This definition contrasts with that of political violence, which we understand to be perpetrated by organized groups of armed individuals acting with the explicit aim of defying or challenging (and, if successful, appropriating) the authority of a state to monopolize the legitimate use of violence within its borders. In the context of this article, we focus specifically on lethal social violence (i.e. homicide) rather than the broader category of criminal violence (i.e. assault, rape, domestic violence, etc.). Not all deaths from homicide are considered criminal in nature (e.g. in a case of lethal self-defence), hence homicide estimates are a good indicator of lethal social violence and not necessarily indicative of violent criminality in general.

Our empirical model of social violence is informed by a synthesis of theories derived from the criminology and conflict literatures. Underpinning the model is an assumption that a ‘Hobbesian equilibrium’ of violence naturally prevails in any given society in the absence of political order – that is, an institutionalized political regime inhabited by agents willing and able to provide dispassionate enforcement of the rule of law. Following classical political theory and sociology, we therefore assume that the consolidation of a coherent political order is a first-order condition for reducing violence in a society.

In line with recent developments in the conflict literature, we classify countries in our sample according to two characteristics of their political-institutional arrangements: the terms of executive recruitment and the degree of political participation (Goldstone et al., 2010). Countries with non-competitive executive recruitment and non-participatory decisionmaking processes are classified as autocratic; those with fully open recruitment and political participation are classified as full democracies. Between these poles there exist four intermediate regime types, which we refer to collectively as ‘hybrid’ political regimes. One of the key findings of recent research on state failure and civil war is a strong correlation between hybrid political regimes and the likelihood of political instability and conflict (Gates et al., 2006; Goldstone et al., 2010; Hegre et al., 2001; Hegre & Sambanis, 2006). In particular, these studies find that strong democratic and strong autocratic regimes are less prone to political instability and violence than hybrid polities in which institutions governing executive recruitment and political participation align in ‘inconsistent’ ways (Gates et al., 2006).

There is a parallel between this finding and those of criminologists seeking to explain variations in homicide rates across countries and over time. LaFree & Tseloni (2006) find a strong correlation between ‘transitional’ political institutions and higher homicide rates in a cross-country study employing a sample of 44 countries. However, their study is explicitly aimed at testing whether or not countries experiencing democratic transitions experience higher rates of homicide. They do not examine whether or not an inverted-U shaped relationship between political regime type and homicide exists more generally. Moreover, their sample consists almost exclusively of European and Latin American countries, resulting in a substantial sample bias. By contrast, Eisner (2001) examines the secular decline in homicide rates observed across Western European countries over the last several centuries utilizing a handful of well-documented case studies. Significantly, he notes homicide declines in both absolutist and democratic regimes, arguing that the consolidation of states’ monopoly of violence within their territories was the crucial factor – a finding that hints at the possibility of an inverted-U shaped relationship between political regime type and social violence.

We propose several possible mechanisms through which political regime type may affect levels of social violence, although it is beyond the scope of this article to assess their validity empirically. First, in the conflict literature the hypothesized mechanism linking hybrid political institutions to the probability of civil war relates to the ability of states to effectively suppress organized armed resistance. Goldstone et al. (2010: 191) argue that every country contains groups with grievances that may inspire rebellion, but that ‘it is where regimes are paralyzed or undermined by elite divisions and state-elite conflicts that revolutionary wars can be sustained and states lose out to insurrections’. If this logic is extended to more mundane forms of everyday violence, it can be argued that elite competition in hybrid political orders impedes the ability of states to enforce the rule of law, hence reducing the credibility of the threat of third-party enforcement for deviance that (generally) encourages individuals to internalize the costs of enforcing laws by exercising self-control.

4 While these studies primarily analyse the onset or incidence of conflict, the severity of civil conflict has been shown to be significantly lower in democracies, with no clear effect found for hybrid regimes (Lacina, 2006).
A second possible mechanism linking elite competition in hybrid political orders to social violence was proposed by Elias (1978) in relation to declining homicide rates in Europe. Elias argued that the consolidation of nation states was associated with increasing social and economic interdependence among ruling elites, the concomitant development of norms of self-control in the upper tiers of society, and the subsequent internalization of these norms among the popular classes. According to Eisner (2001), in articulating this causal chain between political order and social violence Elias emphasized the primacy of the process of state consolidation (or elite conciliation) in stimulating social-psychological changes that ultimately led to lower levels of criminal violence. If Elias’s theory is correct, we would expect violent elite competition in a context of ambiguous or unstable institutions of executive recruitment to result in the legitimization of violence as a means of achieving one’s objectives across classes within a society, resulting in lower degrees of self-control and higher levels of social violence.

Elites competing for political power may also seek to mobilize groups along ethnic, racial, or class lines and encourage them to victimize a designated ‘other’ community. This danger is particularly acute in weakly democratic regimes where electoral competition encourages intergroup contestation. Furthermore, where political participation is neither fully open nor fully closed, marginalized groups may take up arms against the state (i.e. engage in political violence), or alternatively target rival groups in society that are perceived to be privileged, thereby resulting in higher levels of social violence.

In sum, polities with weakly institutionalized mechanisms of executive recruitment encourage elite competition, which in turn may stimulate violence by undermining the rule of law, eroding norms of self-control, and possibly by encouraging differentiated social groups to victimize one another. Where political participation exists in limited form, competition between rival parties, and between marginalized and non-marginalized groups, may present a further risk of political contestation being channelled into acts of social violence. In other words, the quality of a political order is contingent upon the institutional arrangements that underpin it. Based on this theory, we expect to find hybrid polities (and weakly institutionalized democracies in particular) to exhibit higher rates of social violence than non-hybrid polities, all other things being equal.

**Socio-economic conditions and social violence**

Empirical evidence suggests that countries with similar political-institutional characteristics experience different rates of criminal violence, and that individual countries experience fluctuations in rates of violence over time despite stable political-institutional regimes (LaFree & Drass, 2002). This implies that a political-institutional explanation of cross-country variation in levels of social violence is incomplete. In order to account for this residual variation we turn to theoretical propositions and empirical evidence linking socio-economic conditions to violence. In particular, we focus on the possible effects of poverty, inequality and ethnic diversity.

Empirical studies of the determinants of political violence generally find a positive association between poverty and the probability of conflict (Collier & Hoeffer, 2004; Fearon & Laitin, 2003; Goldstone et al., 2000; Hegre & Sambanis, 2006). By contrast, the widely-hypothesized link between inequality and political conflict has not been robustly established in empirical studies. While some studies find inequality to be associated with low-level conflict (Alesina & Perotti, 1996; Muller & Seligson, 1987) or humanitarian emergencies (Nafziger & Auvinen, 2002), most notable studies find no relationship between inequality and civil war (Collier & Hoeffer, 2004; Fearon & Laitin, 2003). However, several authors have noted that different kinds of inequality exist and may have differential impacts. In particular, it has been argued that horizontal inequalities (i.e. inequality between groups) can lead to the politicization of group identities and stimulate intergroup (as opposed to interclass) violence (Osby, 2008; Stewart, 2001).

In the criminology literature, the empirical evidence linking poverty and inequality to violence is more consistent. In a meta-analysis of 214 quantitative criminological studies, Pratt & Cullen (2005) find strong support for hypothesized associations between poverty, inequality and criminality across a variety of geographic units (e.g. neighbourhoods, cities, US states). However, there is broad recognition that poverty and inequality have differential effects. Generally speaking, poverty is associated with higher levels of less violent crimes (such as property crimes) while inequality is more strongly associated with violent crimes, such as assault and homicide (Thorbecke & Charumilind, 2002). Several cross-country studies confirm the inequality–violent crime link (Cole & Gramajo, 2009; Fajnzylber, Ledgerman & Loayza, 2002a,b), but the poverty-violent crime link has largely been ignored in the cross-country literature (Pridemore, 2008).

Scores of studies in both the civil war and criminology literatures have also investigated a hypothesized association between ethnic diversity and violence. In the civil war literature, a correlation has been established, but not consistently (Hegre & Sambanis, 2006; Laitin, 2007).
This may reflect measurement issues given the ‘robust negative relationship between social divisions and economic performance’ (Blattman & Miguel, 2010) and the theoretical linkages between conflict, ethnicity and inequality (Alesina & La Ferrara, 2005; Alesina & Perotti, 1996; Easterly & Levine, 1997). Ethnic dominance has been shown to increase the risk of wider civil conflict (Collier & Hoeffler, 2004), whereas ethnic fractionalization increases the risk only for low-level conflict (Hegre & Sambanis, 2006). This suggests a possible interaction effect between inequality and ethnic diversity that has not been explored in the criminology literature despite a well-established finding that racial and ethnic diversity increases the probability of criminal violence across countries and across geographic units within individual countries (Cole & Gramajo, 2009; Fajnzylber, Lederman & Loayza, 2000; Pratt & Cullen, 2005).

Theoretically, the relationships between poverty, inequality and the propensity of individuals or groups to behave violently are intuitive. Poverty creates positive incentives for individuals to use any means necessary to acquire needed resources and reduces the opportunity cost of using risky strategies (such as violence) to do so. Similarly, inequality may exacerbate inter-class or inter-group grievances, thereby inspiring individuals or groups to turn on their leaders or each other, even if the opportunity costs of doing so are high. This tension may be particularly acute in contexts of greater ethnic diversity. Although the evidence is mixed, we expect to find greater levels of poverty, inequality and ethnic diversity to be positively associated with levels of social violence.

Other factors associated with violence

While political-institutional and socio-economic factors constitute the core of our model, there are a range of other factors which have been associated with both political and social violence that we also factor into our model. The first is population age structure. Goldstone (2002) notes that historical episodes of political instability and violence have often been associated with the demographic phenomenon of ‘youth bulges’ – that is, a period during which there is an unusually high proportion of young persons relative to adults in a population. Young males in particular are the main protagonists in political and criminal violence (Elbadawi & Sambanis, 2000; Mesquida & Wiener, 1996; Neapolitan, 1997; Neumayer, 2003). Theoretically, large youth cohorts may reduce the opportunity costs of engaging in violence where saturated labour markets render membership in a rebel organization or gang an attractive option as a livelihood strategy (Collier & Hoeffler, 2004). Sizable youth cohorts may also engender frustration or aggression where access to education and job opportunities are scarce (Cincotta, Engelman & Anastasion, 2003; Goldstone, 1991).

The youth bulge theory has found some empirical support in longitudinal cross-country studies of political violence (Urdal, 2006), but has not been firmly established. Among criminologists it is a stylized fact that the overwhelming majority of acts of violent crime are committed by young men (Neapolitan, 1997). Yet there is inconsistent empirical evidence of a link between youth bulges and criminal violence in the cross-country literature, with some studies finding no effect (Cole & Gramajo, 2009; Fajnzylber, Lederman & Loayza, 2002b) and others finding a positive and statistically significant effect (Conklin & Simpson, 1985; Krahn, Hartnagel & Gartrell, 1986; LaFree & Tseloni, 2006).

A second demographic phenomenon traditionally associated with elevated risk of violence is urbanization. Early sociologists such as Weber and Durkheim argued that the social dislocations associated with ‘modernization’ – that is, urbanization and industrialization – create conditions ripe for social violence as traditional social institutions break down and are gradually replaced by ‘modern’ (i.e. formal-legal) ones. More recently, scholars have suggested that rapid urban growth may create a volatile sociopolitical atmosphere conducive to violent confrontations between individuals and groups competing for scarce resources and opportunities – a dynamic exacerbated by the social strains associated with the integration of rural migrants into city life (Cole & Gramajo, 2009; Goldstone, 2002). From a criminological perspective, the generalized anonymity of city living is assumed to reduce the probability that a criminal act will result in punishment, and there is some evidence from research in the USA that larger cities experience higher homicide rates than smaller ones or rural areas (Glaeser & Sacerdote, 1999). However, the authors of this study conclude that the underlying cause is not city size per se but rather that larger cities have higher proportions of single-parent households, a finding consistent with the evidence from criminology studies that ‘family disruption’ is a robust predictor of criminal violence across geographic units (Pratt & Cullen, 2005). Overall, higher levels of urbanization have not been robustly linked to higher levels of violence, but the relationship between rates of urban growth and violence has not been adequately explored in cross-country studies.

There is some evidence that countries which serve as significant producers or transhipment hubs of illegal
drugs experience higher homicide rates (Fajnzylber, Lederman & Loayza, 2000, 2002b). There is also evidence that countries at war experience higher rates of social violence and that this effect is correlated with the intensity of the conflict as measured by the number of battle deaths (Archer & Gartner, 1984). This may reflect a breakdown in the rule of law within the country where the conflict is playing out, or the social legitimization of violence in an aggressor country fighting abroad. Another persistent finding in the criminology literature is that Latin America is the most violent region in the world, even when all other hypothesized determinants of (criminal) violence are taken into account. In our empirical model we attempt to control for each of these factors.

Empirical analysis

Our measure of social violence is the number of deaths due to intentional injury per 100,000 population as estimated by the WHO’s Global Burden of Disease Project (Mathers et al., 2003; WHO, 2004, 2008). Within the ‘intentional injury’ category, the WHO distinguishes between deaths that are due to self-inflicted injury, violence (i.e. homicide) and war. We use the estimates of deaths due to violence, which includes deaths resulting from stabbing, firearms, fights, blunt objects, and abuse. This indicator has been employed in previous studies as a measure of national homicide rates and is generally considered to be more robust than the widely used crime statistics produced by the United Nations Office on Drugs and Crime (UNODC). UNODC data are based on victimization surveys which differ widely in their collection methodologies, definitions and reliability (UNODC, 1999). By contrast, the WHO data are generated using a standardized collection methodology based on the reports of medical professionals rather than police authorities. To date, the WHO has produced estimates of violence-related deaths for 191 countries for the years 2002 and 2004. Given the close proximity of these years and the nature of our explanatory variables, exploiting the panel nature of the data was deemed methodologically unsuitable (Hibbs, 1973). We therefore employ averaged rates of social violence for each country in our sample for the years 2002 and 2004. We eliminated all countries for which political-institutional data were unavailable, reducing our maximum sample size to 160 countries. Table I provides descriptive statistics of social violence rates for this sample broken down by region. These regional estimates are consistent with the results of previous criminological studies, which find Latin American countries to have substantially higher rates of criminal violence than other regions. However, due to the broader country coverage of our sample relative to previous studies, the table reveals that it is in fact sub-Saharan African countries that suffer, on average, from the highest rates of violence in the world.

To assess the hypothesized associations between political-institutional factors and social violence we use the Polity IV database (Marshall & Jaggers, 2009), which categorizes countries on a 21-point scale from fully autocratic to fully democratic based on the nature of institutions governing the openness of executive recruitment, competitiveness of executive recruitment, constraints on the chief executive and competitiveness of political participation. Political regimes have often been classified in the conflict literature as autocracies, anocracies or democracies based on where they fall on this 21-point scale. Given that different studies use different Polity score thresholds to delineate between polity types, and criticisms of the arbitrary nature of coding political regime types using such methods, we employ a more nuanced typology suggested by Goldstone et al. (2010). Based on Polity IV ratings of executive recruitment and the competitiveness of political participation, this new typology classifies countries into five distinct political regime types: full autocracies, partial autocracies, partial democracies, partial democracies with factionalism, and full democracies. We employ this

<table>
<thead>
<tr>
<th>Region</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America &amp; Western Europe</td>
<td>19</td>
<td>1.4</td>
<td>1.17</td>
<td>0.22</td>
<td>5.67</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
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<td>2.84</td>
<td>2.28</td>
<td>0.73</td>
<td>10.78</td>
</tr>
<tr>
<td>South Asia</td>
<td>7</td>
<td>6.63</td>
<td>3.73</td>
<td>3.62</td>
<td>14.23</td>
</tr>
<tr>
<td>Eastern Europe &amp; Central Asia</td>
<td>28</td>
<td>6.77</td>
<td>6.59</td>
<td>1.33</td>
<td>31.3</td>
</tr>
<tr>
<td>East Asia &amp; Pacific</td>
<td>20</td>
<td>7.77</td>
<td>7.09</td>
<td>0.58</td>
<td>21.09</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>23</td>
<td>18.24</td>
<td>17.11</td>
<td>3.34</td>
<td>77.5</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>44</td>
<td>19.28</td>
<td>10.01</td>
<td>2.64</td>
<td>55.56</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>10.87</td>
<td>11.54</td>
<td>0.22</td>
<td>77.50</td>
</tr>
</tbody>
</table>
typology but add an additional ‘transitional’ category for countries that are in a political interregnum or period of institutional transition.5 Table II provides descriptive statistics of social violence for the 160 countries in our dataset according this typology.

As expected, hybrid polities (i.e. partial autocracies, partial democracies and transitional regimes) exhibit substantially higher average rates of violence than coherent polities (i.e. full autocracies and full democracies). Moreover, partial democracies – and especially those that have factional political competition – have the highest rates of violence (alongside ‘transitional’ regimes).

To test our hypotheses concerning the associations between political regime type, socio-economic factors and social violence we employ ordinary least squares (OLS) regression analysis. Our socio-economic variables include indicators of poverty, inequality and ethnic diversity. Following Goldstone et al. (2010) and Pride-more (2008) we use a country’s infant mortality rate (UN, 2008b) as a proxy for poverty and log transform values to normalize the sample distribution.6 We make use of the Standardized World Income Inequality Database (SWIID) for our estimates of inequality (Solt, 2009). SWIID GINI estimates attempt to correct for certain factors that have undermined the comparability across countries and over time of similar indices of inequality (Deininger & Squire, 1996; UNU-WIDER, 2008). The database provides two estimates for each country and year: an indicator of ‘gross’ income inequality and an indicator of ‘net’ income inequality. We use the former value. Our measure of ethnic diversity is a composite index of ethnic and linguistic fractionalization from Alesina et al. (2003). For the OLS analysis we log transform the values of social violence to correct for a non-normal distribution.

Our control vector includes a measure of youth as a percentage of the adult population to account for the possibility that population age structure influences rates of social violence (UN, 2008a). To control for the possibility that rapid urbanization leads to heightened levels of violence we use the average annual urban growth rate for the period 2000–05 (UN, 2008c). This is in contrast to several previous studies that purport to test this hypothesis but incorrectly use levels of urbanization as opposed to rates of urban growth (Fajnzylber, Lederman & Loayza, 2000, 2002b). We include a dummy variable that captures whether or not a country is a major producer of illegal drugs, following Fajnzylber, Lederman and Loayza (2000). To control for the previously observed correlation between war intensity and social violence we include the natural log of the average number of war deaths per 100,000 population in 2002 and 2004 for each country from the WHO database. To capture possible unobserved regionally-specific effects we incorporate regional dummy variables in some of our specifications. Owing to data restrictions, our sample size drops to between 126 and 159 countries (depending on the specification). Nevertheless, the remaining countries account for over 95% of the total world population and 97% of total world GDP. This represents a significant step forward in terms of country coverage vis-à-vis previous empirical studies of criminal violence. Full details of all variables used, time periods covered and sources are presented in Appendix A.

Table III presents the results of our first model, which uses a binary polity classification to test the simple hypothesis that coherent political orders are less prone to social violence than hybrid ones. Fully autocratic and fully democratic regimes are coded as 0; all others are

### Table II. Homicides per 100,000 by regime type, average 2002 & 2004

<table>
<thead>
<tr>
<th>Regime Type</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full democracy</td>
<td>37</td>
<td>3.29</td>
<td>4.00</td>
<td>0.22</td>
<td>15.40</td>
</tr>
<tr>
<td>Full autocracy</td>
<td>14</td>
<td>6.58</td>
<td>5.83</td>
<td>0.73</td>
<td>19.34</td>
</tr>
<tr>
<td>Partial autocracy</td>
<td>36</td>
<td>12.25</td>
<td>9.06</td>
<td>1.10</td>
<td>39.69</td>
</tr>
<tr>
<td>Partial democracy</td>
<td>34</td>
<td>14.37</td>
<td>12.30</td>
<td>1.06</td>
<td>55.56</td>
</tr>
<tr>
<td>Transitional</td>
<td>15</td>
<td>14.49</td>
<td>14.42</td>
<td>0.79</td>
<td>42.17</td>
</tr>
<tr>
<td>Partial democracy w/ factions</td>
<td>24</td>
<td>15.79</td>
<td>15.77</td>
<td>2.25</td>
<td>77.50</td>
</tr>
</tbody>
</table>

5 These are countries coded as –66, –77 and –88 in the Polity IV database. Vreeland (2008) argues that the common practice of coding states at war as transitional regimes artificially inflates the likelihood that a correlation will be found between transitional status and civil war onset. While this is a potential problem for civil war studies it is not a concern here as our dependent variable measures social violence. We ran our models with a hybrid polity variable that both included and excluded transitional regimes with no discernable differences. Similarly, the results for models that both included and excluded the transitional category from our six regime type classification did not differ significantly.

6 For a further discussion of the use of infant mortality rates as a measure of poverty in cross-national homicide studies, see Messner, Raffalovich & Sutton (2010).
considered hybrid and coded as 1. Columns 1, 3, 4 and 5 confirm the hypothesis that countries with hybrid political institutions have higher rates of social violence than coherent autocracies or democracies, and that this result is robust to a variety of controls. Columns 2, 3, 4 and 5 demonstrate that levels of poverty, inequality and ethnic diversity are positively and significantly correlated with social violence, as expected. Turning to our control variables, the coefficient on youth bulge is large, positive and highly significant in column 1, but insignificant once socio-economic factors are incorporated into the model.\(^7\)

As expected, our indicator of war intensity is positive and significant across all specifications while urban growth and the drug dummy\(^8\) are consistently insignificant. Dummy variables for Latin America, sub-Saharan Africa, Eastern Europe and Central Asia, and East Asia and the Pacific are positive and significant. Overall, this basic model explains roughly 64% of cross-country variation in rates of social violence without accounting for regionally-specific effects, and over 72% once these are taken into account.

In Table IV we run the same model with polity type disaggregated by replacing the hybrid polity dummy with dummy variables for each regime type described above, using full democracies as a reference category. Most of the coefficients on the regime-type dummies are positive, as expected, although only those on the partial democracy dummies are statistically significant. The rest of the results are consistent with the previous model: the coefficients on the socio-economic indicators are positive and generally highly significant; youth bulge is positive and significant until infant mortality is added; the drug dummy and urban growth indicators are consistently insignificant; our indicator of war intensity is consistently positive and significant; and the regional dummies for Latin America, sub-Saharan Africa and Eastern Europe and Central Asia are positive and significant. Once insignificant factors are excluded, this model explains around 66% of cross-country variation in rates of social violence; with regional dummies included the variation in social violence rates accounted for by the model rises to 74%.

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### Table III. Political order, socio-economic development and social violence: OLS results (1)

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hybrid polity</td>
<td>0.729*** (0.177)</td>
<td>0.526*** (0.185)</td>
<td>0.468** (0.182)</td>
<td>0.378** (0.182)</td>
<td></td>
</tr>
<tr>
<td>Gini</td>
<td>0.0521*** (0.0105)</td>
<td>0.0468*** (0.0103)</td>
<td>0.0480*** (0.00905)</td>
<td>0.0219** (0.0109)</td>
<td></td>
</tr>
<tr>
<td>Ethnic diversity</td>
<td>1.073*** (0.329)</td>
<td>0.902*** (0.325)</td>
<td>0.856*** (0.320)</td>
<td>0.544* (0.302)</td>
<td></td>
</tr>
<tr>
<td>Infant mortality</td>
<td>0.286** (0.144);</td>
<td>0.202 (0.143)</td>
<td>0.265*** (0.0827)</td>
<td>0.246*** (0.0928)</td>
<td></td>
</tr>
<tr>
<td>Youth bulge</td>
<td>4.379*** (0.932)</td>
<td>0.246 (1.636)</td>
<td>0.202 (1.590)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban growth</td>
<td>0.0847 (0.0821)</td>
<td>0.0280 (0.0809)</td>
<td>0.0363 (0.0787)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug dummy</td>
<td>0.298 (0.205)</td>
<td>0.0546 (0.202)</td>
<td>0.0651 (0.196)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ln of war deaths</td>
<td>0.253** (0.108)</td>
<td>0.249** (0.114)</td>
<td>0.206* (0.112)</td>
<td>0.214* (0.111)</td>
<td>0.345*** (0.104)</td>
</tr>
<tr>
<td>EAP</td>
<td>0.508* (0.258)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>ECA</td>
<td>0.638** (0.244)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAC</td>
<td>1.193*** (0.317)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>MENA</td>
<td>−0.309 (0.328)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA</td>
<td>0.180 (0.407)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSA</td>
<td>0.928*** (0.343)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>−0.624** (0.313)</td>
<td>−1.784*** (0.350)</td>
<td>−1.573*** (0.348)</td>
<td>−1.654*** (0.305)</td>
<td>−1.030*** (0.359)</td>
</tr>
<tr>
<td>Observations</td>
<td>159</td>
<td>126</td>
<td>126</td>
<td>127</td>
<td>127</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.467</td>
<td>0.616</td>
<td>0.641</td>
<td>0.637</td>
<td>0.726</td>
</tr>
</tbody>
</table>

Standard errors in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1.

\(^7\) This is due to a collinearity issue. Countries with high infant mortality tend to have high fertility rates, high (adult) mortality rates, and hence youth-biased age structures. Our data confirm this: infant mortality rates and population age structures are highly correlated (\(r = .87\)). This correlation raises the possibility that the link between youth bulges and violence found in previous studies may be due to inadequate controls for poverty. However, the close correlation between the two makes it difficult to tease apart independent effects.

\(^8\) We also use an alternative dummy variable (not reported here) which includes countries sharing a border with drug producing or trans-shipment countries to test for cross-border effects of drug related activity. When socio-economic conditions are controlled for, drug producing, transporting and neighbouring countries do not experience significantly greater rates of social violence.
and sensitivity of our results. Tests for normality, skewness and kurtosis confirm that assumptions of normality are generally upheld across all specifications, except for those in which regional dummies are included. This is to be expected and does not invalidate our results as the skewness and kurtosis are a clearly a result of the addition of a series of dichotomous variables. Moreover, the direction and magnitude of the coefficients in the model are essentially the same whether or not these regional dummies are included. Tests for multicollinearity indicate that no variance inflation factor (VIF) statistic exceeds the recommended cutoff of 10. To ensure that our results were not biased by heteroscedasticity we ran a battery of tests, including White’s test, Cameron-Trivedi test, Breusch-Pagan test and the Cook-Weisberg test. All of these confirm that assumptions of homoscedasticity are upheld. We assessed the effects of influential observations and outliers with Stata’s *dfbeta* tests and found no problematic values. However, a visual inspection of residual versus fitted plots indicated that one observation appeared to be an outlier in our sample, though re-running all model specifications with this observation excluded yielded nearly identical results. The only notable difference was that the coefficient on ethnic diversity in specification 9 became significant. Finally, we conducted Ramsay’s test for omitted variables across all specifications and found no evidence that omitted variable bias is a concern.

**Discussion**

While our empirical results are generally consistent with our expectations, our statistical strategy does not in itself provide an adequate basis for causal inference. It could be argued, for example, that high rates of violence undermine the legitimacy of political institutions and actors, thereby perpetuating political turmoil and inhibiting the consolidation of a coherent political order (Diamond, 1999; LaFree, 1998). However, political consolidation is historically interpreted as a response to endemic violence. In other words, high rates of violence may in fact serve as an impetus for the institutionalization of political order under certain conditions.

The picture is even more complicated when we consider the interactions between political order, socio-economic conditions and social violence. If Huntington and Bates are correct in arguing that the establishment of political order suppresses violence, paves the way for investment and growth, and reduces poverty, then a virtuous cycle of falling violence and falling poverty may
ensue. Poverty decline in such a case would contribute to a reduction in incentives for individuals to forgo self-control and commit violent acts. Our data are certainly consistent with this hypothesis. Figure 1 provides a graphical illustration of the relationships between political regime type, social violence and national income per capita. The black line represents the mean violence rate of countries clustered by regime type; the grey line represents GDP per capita plotted in the same way. The roughly inverse relationships between regime type and violence (on the one hand) and regime type and income (on the other) provides a striking graphical illustration of the links between these variables, demonstrating that the poorest and most violent countries are those with hybrid political institutions, while strong autocracies and democracies exhibit less violence and higher incomes. This is consistent with the hypothesis that coherent political institutions are good for growth, whether or not they reflect democratic values – although the least violent and wealthiest countries in the world tend to be fully institutionalized democracies.

A vicious cycle of high levels of inequality and high rates of violence may also be hypothesized. The costs of violence fall hardest on the poorest strata of society, who tend not only to be the primary perpetrators of lethal violence, but also the primary victims. As a result, violence ensnares the poorest, while those with the means to insure themselves against the worst consequences of violence (e.g. with private security and medical care) may be able to steadily improve their lot, thereby exacerbating overall social inequality. And if socio-economic differentiation happens to fall along ethnic lines, this may further enhance the probability of intergroup violence born of perceived injustice. In other words, there may be endogenous relationships between poverty, inequality, ethnic diversity and violence that we are unable to identify with the data and methods employed here. Moreover, it may be the case that particular constellations of socio-economic conditions have different risk profiles depending upon political-institutional context. While identifying such interaction effects or employing instrumental variable approaches was beyond the scope of this article, this is an avenue of research that demands further attention.

Teasing apart such complex relationships requires more comprehensive longitudinal data. When such data become available, it may be possible to identify causal relationships and interaction effects, as well as develop a more fully specified model of social violence. For example, there are two factors that have proved to be significant determinants of criminal violence in previous cross-sectional and time-series studies that we were unable to

![Figure 1. Regime type, homicide and income](image_url)
incorporate into our models due to data restrictions: ‘family disruption’ and ‘violence inertia’. Family disruption refers to the breakdown of two-parent households. Although we experimented with cross-country data on orphan populations, limited coverage and quality concerns ultimately resulted in the omission of this variable. Similarly, the lack of adequate time-series violence data restricted our ability to control for past rates of violence to capture inertia effects. Incorporating measures of family disruption and violence inertia into the basic model presented here is likely to improve its explanatory power. Ideally, a better specified model would capture sufficient variation to render regional dummy variables insignificant.

Our research design also precludes the possibility of testing two key historical hypotheses that have been advanced to explain the recent decline in armed conflict and rise in social violence noted in the introduction: the ‘third wave’ of democratization and the inexorable progression of world urbanization. The proliferation of democracies following the end of the Cold War has been interpreted as giving rise to a broadening of the channels of political contestation among both elites and the popular classes. From this perspective, the proliferation of social violence is seen to be a consequence of the often weak and imperfect nature of new democratic institutions, insofar as political contestation occurs in the absence of institutionalized self-restraint. At the same time, acts of violence between individuals and groups aligned with opposing political factions may occur without fomenting organized armed rebellions partly due to the possibility of electoral contestation (Koonings & Krujts, 1999).

Similarly, the global trend towards increasing urbanization has been interpreted as contributing to a critical shift in historical conflicts over resources and rights, with contemporary social violence in cities reflecting an implicit continuation of past political conflicts (Rodgers, 2009). Although we found no evidence that rates of urban growth are correlated with levels of violence, there are strong theoretical reasons to suspect a link between world urbanization and the transformation of conflict. In brief, when political, socio-economic and geographical marginalization coincide, organized armed rebellion against the state is a likely (and historically prevalent) response. However, urbanization lessens the geographical dimension of marginalization while throwing class-based and identity-based differentiation more starkly into relief. In doing so, urbanization may aggravate low-level conflicts between differentiated groups, contributing to the shift away from activities explicitly directed at challenging state power and towards social violence stimulated by perceived inequalities between groups. This hypothesized effect of urbanization on the transformation of conflict is unlikely to be captured by cross-sectional analyses but may be identifiable with panel data or case study-based historical comparative research.

Conclusion

Civil wars, which are rare and destructive, have received substantial attention from development scholars in recent years. By contrast, the causes and consequences of social violence have received little attention despite the fact that social violence arguably represents a far greater threat to human security worldwide. However, our analysis suggests that political violence and social violence are associated with similar risk factors, including hybrid political orders, poverty, ethnic diversity, and certain constellations of inequality. As more data become available, it may be possible to design explicit tests of causality and explore other factors which may condition the relationships we have outlined.

We also suggest further research into what many perceive to be a historical transformation in the manifestation of conflict: from organized armed rebellion fought over resources and rights in the countryside, to endemic social violence in the world’s rapidly growing urban areas. The evidence for this perceived transformation remains very thin. If this trend is indeed established empirically, future research could explore how the recent ‘third wave’ of democratization in the global South, coupled with world urbanization trends, relate to this transformation, as well as the role that local and national political institutions can play in mitigating social violence in contexts of political and demographic transition.

Replication data

Data can be found at http://www.prio.no/jpr/datasets.

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References


Appendix A. Variable descriptions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log of homicides per 100,000, average 2002 &amp; 2004</td>
<td>The natural log of deaths due to intentional injury per 100,00 population, averaged for 2002 and 2004 (WHO, 2004, 2008)</td>
</tr>
<tr>
<td>Political regime type</td>
<td>Following recent methodology (Goldstone et al., 2010) using the exec and parcomp variables from the Polity IV dataset (Marshall &amp; Jaggers, 2009). Values were calculated based on the average scores of these two variables from 2000–05. A regime was coded as transitional if it experienced a coding of −66, −77 or −88 on the Polity2 variable in any year from 2000–05.</td>
</tr>
<tr>
<td>Ln infant mortality</td>
<td>The natural log of the Infant Mortality Rate, 2000–05 (UN, 2008b)</td>
</tr>
<tr>
<td>GINI</td>
<td>The GINI gross score from the Standardized World Income Inequality Dataset (Solt, 2009). We use the nearest value within 10 years of 2003 (mid-point between 2002 and 2004).</td>
</tr>
<tr>
<td>Ethnic fractionalization</td>
<td>Ethnic and Linguistic Fractionalization score (Alesina et al., 2003)</td>
</tr>
<tr>
<td>Youth bulge</td>
<td>Youth population as a proportion of the total adult population, calculated as the population aged 15–29 as a percentage of the population aged 15 and over (UN, 2008a)</td>
</tr>
<tr>
<td>Urban growth rate</td>
<td>Annual percentage change in the urban population, 2000–05 (UN, 2008c)</td>
</tr>
<tr>
<td>Ln war deaths rate</td>
<td>The natural log of deaths due to war per 100,000 population, averaged for 2002 and 2004 (WHO, 2004, 2008). A value of 1 is added to each averaged war death rate to enable log transformation in the event of a zero value.</td>
</tr>
<tr>
<td>Drug production</td>
<td>Dummy variable coded 1 if a country was listed as one of the US government’s ‘Major Illicit Drug Producing and Transit Countries’ for any year from 2000–05 (US Department of State, 2000–05)</td>
</tr>
<tr>
<td>Regional dummies</td>
<td>Dummy variable according to World Bank classification of world regions (World Bank, 2008)</td>
</tr>
</tbody>
</table>