

Economics and Conflict: Moving beyond Conjectures and Correlations

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Summary and Keywords

The theoretical and empirical literature on the reciprocal topics of economy and war have developed a fertile debate. Most contributions examine the liberal hope that growing economic bonds between or within nations reduce the risk of violent conflict, while an increasing number of studies also examine the destructive and redistributive effect of war, terrorism, and genocides. The article argues that most studies in the field do not provide clear microfoundations for the opportunity-cost arguments that are typically made to justify the deterring effects of increased economic interactions. To move the field forward, contributions need to focus more on how the relationship between business leaders and the government shapes decision making in periods of crisis. Recent advances have been made to understand the economic impact of massive political violence that can only be fully understood through the use of temporally disaggregated data.

Keywords: reciprocal economy–war nexus, economic bonds, violent conflict, war, terrorism, genocide, opportunity cost arguments, economic interactions, political violence

Introduction

A recurrent theme in the academic as well as popular literature on war is the claim that the prospect of an economic gain motivates small groups of potential profiteers to unleash political violence. “All wars are fought for money” is the antiwar slogan attributed to Socrates, and George Orwell wrote in a book review that “[War] against a foreign country only happens when the moneyed classes think they are going to profit from it” (Orwell, 1937/1998, p. 75). Research on the origins of civil wars has reinvigorated the hypothesis that economic incentives are a root cause of armed conflict and that rebel leaders are nothing other than profit-seeking quasicriminals (cf. Collier & Hoeffler, 2004). To illustrate this conjecture, Collier (2007, p. 21) uses the claim attributed to Congolese rebel leader Laurent Kabila that “all you needed was \$10,000 and a satellite phone” to instigate a successful military campaign. While the future president of the resource-rich country would use the money to hire a small army, Kabila used the phone to conclude contracts with mining companies: “By the time he reached Kinshasa he reportedly had arranged \$500 million worth of deals” (Collier, 2007, p. 21).

Liberal scholars have challenged the conjecture that the pursuit of economic gain by criminal rebel leaders or the capitalist class is a major cause of war and other massive forms of political violence. Their counterhypotheses are frequently built on the expectation that government leaders avoid the use of force because of its anticipated economic costs. This standard opportunity-cost argument is most prominently used in what Nye (1988) has called “commercial liberalism.” Russett and Oneal (2001) and many others have argued that growing economic bonds between states in the form of trade or foreign direct investment pacify interstate relations as the opportunity cost of relying on violence increases in line with strengthening commercial ties between these nations. Similarly, some political economy contributions to the study of civil wars expect that the risk of a rebellions decreases with the growing opportunities that an expanding economy offers to individuals in comparison to a career as a soldier or rebel (Grossman, 1991; Collier & Hoeffler, 2004). The other side of this expected utility argument is the expectation that political violence, if policy makers are foolish enough to rely on this means at all, is generally destructive and disrupts economic activities.

Classical and modern theories help explain the economic causes and consequences of violent conflict in general and the empirical evidence that has been assembled in support of, or in contradiction to, these conjectures. While opportunity-cost arguments have the potential to explain different manifestations of political violence, ranging from terrorism, over civil to interstate war, they have limitations as well. The theoretical and empirical problems that the standard opportunity-cost argument faces are increasingly recognized, especially in terms of analytical challenges (Morrow, 1999; Schneider et al., 2003A; Besley & Persson, 2008; Schneider, 2014A, 2014B). To avoid the implicit tautology of the opportunity-cost argument, international relations scholars have mainly proposed informational accounts of commercial liberalism and the Schumpeterian notion (Schumpeter, 1918/1919) of the “capitalist peace” (Weede, 1995; Mousseau, 2000; Schneider & Gleditsch, 2010) according to which free markets pacify inter- as well as intrastate relations. The so-called limited information models of both commercial liberalism and the capitalist peace advance the viewpoint that governments of states that are highly integrated into the world economy are better able to signal their resolve than more protectionist states. As these signaling games have, however, shied away from incorporating economic agents as strategic players, a rigorous theory of the interrelationship between economic incentives and armed conflict has not yet been established. Most international relations contributions still overlook the potential that political economy approaches offer for the exploration of the relationship between economics and conflict.

Improved theories are needed to deal with the challenges that the empirical literature faces, including the endogeneity problem that has been identified in the literature on civil war (e.g., Besley & Persson, 2008; Schneider & Wiesehomeier, 2008). This article presents the core findings and disputes in the literature and also covers some related areas such as the conflict-related aspects of the “resource curse.” It discusses the possible lessons that the study of the nexus between economic incentives and political violence has for the scientific analysis of international relations.

Economic Incentives and Conflict: Theoretical Perspectives

The liberal double expectation that economic incentives pacify social relationships and that political violence disrupts economic activities has a distinguished intellectual tradition in both political science and economics. In the former field, the peace-through-trade hypothesis, on which commercial liberalism is mainly founded, maintains that economic interdependence in the form of trade or investment between states reduces the risk of conflict between and within states. This optimistic expectation can be traced back to ancient and medieval philosophers, but it is most often associated with the work of Enlightenment philosophers Kant and Montesquieu (Schneider et al., 2003A), as well as leading exponents of the 19th-century Manchester school of thought, such as Richard Cobden and John Bright (see Blaine, 1973). In the 20th

century, the writings of Nobel Peace Prize laureate Norman Angell (1909) revived the optimistic viewpoint that in times of closely knit economic ties between states, war becomes a futile endeavor, or, to quote the title of his main pamphlet, a “Great Illusion.” Angell based this hope on the assumption that military conquest does not pay economically and that rational decision makers therefore have no incentive to wage war. In his memoirs, he defended this rational expectation thesis against attempts to portray it as a deterministic forecast according to which major war is impossible in times of extended economic bonds between nations (Angell, 1951).

Polachek (1980) offers the first formalization of this opportunity-cost argument. In his words, “The implicit price of being hostile is the diminution of welfare associated with potential trade losses” (Polachek, 1980, p. 60). Thus, economic bonds, which will be destroyed by war, offer an indirect deterrence mechanism. This mechanism also prevails in a strategic setting, as Polachek and Xiang (2010, p. 134) show in a critique of a signaling game Gartzke et al. (2001) had developed to move beyond standard interpretations of commercial liberalism: “. . . opportunity costs arising from economic interdependence can either deter war or reduce the equilibrium probability of war in an incomplete information model.”

Similar conjectures have been developed in economics since the pathbreaking contributions of Haavelmo (1954) and Boulding (1962). In a model of civil war onset, Grossman (1991, p. 920) shows, for instance, how government tax policy influences the risk of civil war: “too high a tax rate would be bad for the ruler both because it would depress the tax rate [. . .] and because it would increase the probability of a successful insurrection.” This reasoning has been taken up by Collier and Hoeffler (1998, p. 565), in whose initial contribution “the probability of the occurrence of war” is a decreasing function of per capita income. This means, at the personal level, that the risk that an individual joins a militia or government troops grows with the deterioration of his or her prospects to succeed in the productive sectors of the economy. Collier and Hoeffler (2004) extended this thesis with the argument that the presence of easily exploitable natural resources attracts the interest of quasicriminal rebels who ignite a war to reap the rents that they could not garner peacefully. The “resource curse,” which entices commodity-rich states to make bad investment decisions and to underprovide their population with public goods, therefore translates into an increased risk of civil war.

According to these and similar expected utility arguments, policies that strengthen the development prospect of a country should reduce its internal instability and, by extension, its external aggressiveness. One key success formula for development is economic integration (e.g., Sachs & Warner, 1995). Most of the empirical studies that have explored the impact of economic forms of what is called “globalization” since the early 1990s have implicitly or explicitly relied on an expected utility argument that builds on this link between economic interdependence, growth, and peace. A statement by Oneal and Russett (1999, p. 5) illustrates this tendency: “Fearful of the domestic political consequences of losing the benefits of trade, policymakers avoid the use of force against states with which they engage in economically important trade.” In other words, intensive economic interactions are implicitly supposed to work like a deterrent mechanism that prevents governments from using force externally and, by extension, internally (Hegre et al., 2003). The major problem with simple opportunity-cost arguments is that they assume the use of political violence away by modeling it as an “irrational act.” This renders especially the peace-through-economic-integration thesis tautological. Postulating that globalization or capitalism reduces the benefits of political violence, choosing a more aggressive stance becomes a policy option rational governments (or rebel leaders) would never pursue (Schneider, 2014A). The liberal expectation that free trade and its correlates help bring about peace persists despite the weaknesses of the unqualified baseline hypothesis, which is a recurring theme in the history of ideas in international relations (Schneider et al., 2003A). Marxists were the most radical critics of this hope, which becomes apparent in the “Theory of Imperialism” that Austro-German Marxist Rudolf Hilferding developed and that two leading politicians, Rosa Luxemburg (1913) and Vladimir Ilyich Lenin (1917), later refined. Hilferding’s early antiglobalization study *Das Finanzkapital* (“Finance Capital”) warned of the dangers of

“limitless” profit seeking. He states that “Capital becomes the emperor of the world, and it conquers with every new country the new boundary that has to be transcended” (Hilferding, 1910/1947, p. 464, author’s translation).

As no global class conflict took place in the 20th century, neo-Marxists and dependencia theorists started to revise the “Theory of Imperialism.” The most notable contribution is Galtung’s (1971) structuralist interpretation of imperialism. He argued, in line with dependencia theorists, that the division of labor between the industrialized countries and the developing world creates a conflict between the workers in the North and those residing in the South, while capitalists of the center and the periphery of the world economy support each other. This constellation prevents, in his view, a global class conflict. Unsurprisingly, this all-encompassing conjecture did not animate empirical researchers beyond the heyday of neo-Marxian thinking in political science in the 1970s.

Hirschman’s classic treatise on *National Power and the Structure of Foreign Trade* (1945/1980), on which some dependencia theorists relied, seemed to be a more promising avenue for critical research on the nexus between the economy and war. Perceiving economic interactions as implicit bargaining games, Hirschman proposed that asymmetric trading relationships establish dependencies that the more powerful state in a bilateral situation could use to maximize its influence. As Hirschman wrote (1945/1980, p. 45), “superior bargaining power enables one monopolist . . . to increase his gain at the expense of that of his partner.” The interpretation that unequal exchange affects the opportunity costs of the trading states and fuels political tensions did not, however, escape criticism at the theoretical level. Wagner (1988, p. 462) showed that asymmetries do not easily translate into bargaining advantages: “asymmetrical economic interdependence does not imply that one bargainer will be able to exercise political influence over another.” Moreover, it is not clear why the privileged side in an asymmetric relationship should consider the use of force at all (Barbieri, 2002, p. 31). Coercion seems to be the cheaper and therefore more convincing policy choice for the privileged side. While its handicapped partner might have a lower inhibition to use force, it also faces reduced capabilities to fight as a consequence of the unequal trade relationship and the limited gains from trade.

Thus, liberal hopes need not be abandoned completely, even in Hirschman’s footsteps and even if models trade interactions as a bargaining game. . . . Martin et al. (2008A) show formally and empirically that the deterrent mechanism that liberals attach to trade works for bilateral relationships on which the asymmetry argument has mainly focused. Pairs of trading states, conversely, that are not economically well integrated face a higher risk of conflict as their indirect economic costs of conflict become smaller. The same mechanism is present for states that entertain intensive multilateral trade ties. The more benefits a state can reap from globalization in this way, the less the costs matter that a conflict with one specific trade partner creates. Commercial liberalism should, in other words, take substitution possibilities into account that multilateral trade creates for states with aggressive intentions (Schneider, 2014A, p. 179).

The differentiation between bilateralism and multilateralism moves the skepticism of globalization beyond the encompassing relative gains argument that structural realists have advanced to ridicule the peace through trade hope of commercial liberalism. As Waltz (1979) says, “The myth of interdependence both obscures the realities of international politics and asserts a false belief about the conditions that promote peace” (p. 158). The realist antidote to the liberal optimism builds on the assumption, first propagated by German historicism in the 19th century, that “politics prevails, as usual, over economics” (Waltz, 1999, p. 700). In the expectation of structural liberals, the fear of arming one’s own enemy prevents lasting cooperation between states across contending alliances. Gowa (1994) offered the most precise formulation of the thesis that the security externalities of economic exchange can be used to arm against trading partners. However, Morrow (1997) showed, against this revisionist backdrop, within a completely realist analytical framework, that states can continue to trade even in times of war. Economic exchange is thus not completely endogenous to politics or, as

structural realism implies, to the polarity of the world system.

The realist failure to refute commercial liberalism theoretically did not alter the need within this school of thought at least to refine the foundations of this key proposition. Gartzke et al. (2001; Morrow, 1999) contend, based on a signaling model, that the opportunity costs that increased trade between states creates do not lift the uncertainty that is traditionally seen as a key impediment to the peaceful resolution of military crises. They believe rather, and show empirically, that movements on financial markets are a much more helpful signaling device for governments in this regard. Their model, however, does not explicitly analyze how these economic incentives affect the behavior of the economic agents and, by extension, the government which might at least partly respond to the warning of the financial community to not escalate a confrontation with another state. Schneider and Schulze (2003) disaggregate the domestic economic interests that disagree over the trade and military policies of their country. While the import competing sector is against increased military involvement by their government, the export sector accepts such adventures up to the point where the costs of conflict start to outweigh the gains that a simultaneous liberalization of the economy brings about. They contend that opportunistic governments of states in which military interests play a considerable role will opt for both economic liberalization and low-level military involvements. The empirical tests support the argument that multilateral economic interdependence can go hand in hand with increased hostility in the world system, but that the costs of war soon outweigh its benefits.

To understand the impact of economic openness on the decision to invest in conflict, one needs furthermore to consider the price of the contested resource and of investing in conflict. Neoclassical models typically assume away that actors contest a specific resource such as land and that this competition creates security costs. While free trade outperforms autarky in many instances due to the gains from trade and lower security costs, increasing exports of a land-intensive product by both parties involved increases the costs of conflict despite gains from trade. This renders autarky preferable in such a constellation (Garfinkel et al., 2015).

Such restatements of the standard argument in favor of commercial liberalism have only recently started to appear in the quickly growing literature on civil war. Most of the explicit theoretical models of civil war build on the rent-seeking models that have been introduced into the analytical literature by Tullock (1974, 1980), as well as Hirshleifer (1989), and have been generalized by Skaperdas (1996). In a model inspired by work on the resource curse (e.g., Sachs & Warner, 2001; Ross, 2012, 2015), Garfinkel et al. (2008) demonstrate that globalization can decrease social welfare if a government cannot enforce property rights and if two groups fight violently over the possession of an exportable resource like oil. This is especially the case for exporters for whom the welfare enhancing effect of free trade might be offset by the growing costs of conflict that the opening of borders and the increased exportability of the good bring about. Nevertheless, exporters of natural resources might, depending on the world price of their product, invest more in conflict in times of growing globalization: “Although for importers of oil and other natural resources opening up the economy brings the regular benefits of trade and reductions in conflict, for exporters of the same resources opening the economy to trade can very well induce increased conflict costs that more than offset the familiar gains from trade” (Garfinkel et al., 2008, p. 307).

Another possibility for modeling social conflict follows the tradition in Heckscher-Ohlin models of international trade of separating societies according to the factor endowment of the various relevant groups. This perspective assumes that globalization will benefit the abundant factor within an economy which is, by and large, capital in the developed and labor in the developing world. However, rising tensions between capital owners and workers over the foreign economic policy of a country do not necessarily translate into an increased risk of social conflict. Based on their groundbreaking work on polarization and conflict, Esteban and Ray (2008, 2011) model the interactions within a society that falls victim to both a

class and an ethnic conflict. These authors show that increased class conflict within the contending ethnicities fuels the intensity of ethnic conflict. The empirical implication of this formal result is that we should observe more ethnic than class conflict, a finding that has its counterpart in Azam's (2002, 2006) studies on the strategic use of looting. If one side suffers under plundering and its complement, one-sided violence against civilians, it will be more likely to engage in these activities as the destruction of production possibilities makes the use of force and raiding more attractive. Moreover, some war leaders will attack their own civilian support base to turn farmers into soldiers by destroying the incentives to work in the civilian sector.

Drawing on the literature on industrial organization in economics, civil war researchers have started to explore the incentive schemes that political and military leaders have to offer to their troops to reach their goals through a violent campaign (cf. Beber & Blattman, 2013). For example, a microlevel study of sexual violence in the Democratic Republic of Congo shows how "incentives" like access to drugs and "disincentives" like the threat to punish noncompliers are needed for the organization of one-sided violence (Schneider et al., 2015).

The theoretical recognition that group poverty is an important indirect source of conflict can be seen as an antidote to the polemic assertion of Collier (2007) that economic deprivation of certain groups is not systematically linked to the risk of civil war. At the empirical level, Østby (2008) and Cederman et al. (2011) add support to the general hypothesis of Esteban and Ray (1999) that the risk of conflict is largest in societies that are extremely polarized or, to refer to the less sophisticated measure used in current scholarship, in which strong horizontal inequalities exist. While polarization takes into account the within-group variation of income and the intergroup differences between the mean income, horizontal equality only considers the latter component. As Huber and Mayoral (2014) demonstrate along these lines and in confirmation of Esteban and Ray's (2008, 2011) extended model, that intragroup inequality rather than horizontal inequality is a major prerequisite of intrastate war. The theoretical backbone of this result expects that an increasing class struggle between capital and labor within a group lowers the opportunity costs of fighting in two dimensions—first, by making financial contributions to the cause more likely and, second, by rendering soldiering more attractive. These recent empirical results show in all their diversity that the refutation by empirical studies of the thesis that inequality is a major source of conflict (e.g., Fearon & Laitin, 2003; Collier & Hoeffler, 2004) has been accepted too prematurely in the literature on civil war.

Empirics I: Interstate War

As is the case in the literature on the democratic peace, empirical studies on the nexus between economic factors and the outbreak of war can be largely divided according to the level of analysis to which they subscribe. Following Bremer's (1992) pioneering study, most research designs have used a dyadic setup until the advent of network models (Maoz, 2009; Dorussen & Ward, 2010; Kinne, 2012). This is somewhat puzzling because the theoretical arguments that are tested at least with regards to commercial liberalism are most often embedded within simple expected utility frameworks and thus formulated at the monadic level of analysis (Schneider & Schulze, 2003). Moreover, the dyadic view also implicitly assumes that economic agents discriminate between countries when they decide with whom they would like to trade and that they are therefore willing to pay a political premium on their economically efficient bargains. Technically, the dyadic setup assumes that the international trading system consists of a group of bilateral relations that are independent of one other. While this makes more sense for tests of the democratic peace thesis, the reliance on pairs of states as units of analysis is an inadequate testing strategy for commercial liberalism because of the multilateral nature of economic bonds and the substitutability of trading partners (Poast, 2010; Schneider, 2014a).

Theoretically, liberal scholars advance, as indicated, the double claim that economic interactions create peace but that war destroys these very foundations of cooperation. The following section discusses this double hypothesis and evaluates the realist counterargument that political factors determine the shape of international trade and investment patterns. Economic wealth is often only used as a control variable in studies on the peace through trade relationship, so only studies that explicitly discuss the role of economic wealth on the risk of interstate war are presented.

The Link from Economic Factors to Conflict

In a concise treatise, Rosecrance (1986) popularized the liberal hope that “trading states” are less war prone than economically closed nations. This thesis, masterfully extended and embedded within the Kantian Peace theory in Russett and Oneal (2001), has found considerable support in the quantitative studies of Domke (1988), Benoit (1996), and McDonald and Sweeney (2007). Barbieri (2002) qualifies this liberal argument through an empirical study of the post-World War II period and writes, “It is the importance of trade for a country’s economy, rather than the mere volume of trade, that determines whether trade is an effective deterrent to conflict” (p. 104, italics suppressed). McDonald and Sweeney (2007) nevertheless show that policy variables—the tariff level before world war—influenced state behavior significantly. According to their calculation, protectionist states were more involved in militarized states in the first era of globalization than free-trading nations. Yet, a strong export orientation does not necessarily go hand in hand with a more prudent foreign policy stance. As Fordham (2008) shows, U.S. senators from states with a strong export sector are much more likely to support interventionist foreign policies than their counterparts from states with a strong import competing sector.

The dyadic evidence in favor of commercial liberalism is, by contrast, more mixed. The controversial studies of Barbieri (1996, 2002) tried to show that economic interdependence—the saliency of the trading relationships as well as the asymmetry of these relations—increases the risk of militarized interstate disputes. Replications and extensions of her work, however, show that the measure of trade asymmetry is highly collinear with conventional measures of economic interdependence (Oneal & Russett, 1999) and that the inclusion of variables measuring the power of dyad members into empirical models re-establishes the major tenet of “commercial liberalism” (Xiang et al., 2007).

The conclusion of the debate over whether or not interdependence and its correlates increase the risk of war has given way to evaluations of whether or not the liberal thesis is just an artifact of statistical models that are improperly specified and in which the reported significant correlations, therefore, do not exist. According to Keshk et al. (2004), the use of simultaneous equation models shows that there is no impact of war on trade, while conflict reduces trade. Hegre et al. (2010; see also Goenner, 2011) have taken up this challenge and show, based on a gravity model of conflict, that the liberal double claim holds even if one relies on the modeling technique suggested by Keshk et al. (2004). Furthermore, Keshk et al. (2010), controlling for geographic distance, present evidence in support of their original skeptical claim. However, the position advanced by these authors and by realist scholars that politics shapes trade relationships might be overstated. A gravity model by Ward and Hoff (2007) that accounts for the hierarchy of international trade suggests that the negative impact of conflict in trade lessens in dyads that rely on common exporters or importers.

Dorussen’s (2006) disaggregation of trade furthermore shows that the effect of commercial interactions varies with the kind of traded commodity. While trade generally deters conflict, this effect is stronger for manufactured goods than for food and non-manufactured goods and, thus, lootable products. Trade in metals (Goenner, 2010) and in natural resources (Colgan, 2010) might similarly increase the risk of interstate war. Theoretical work, however, shows that such qualifications of commercial liberalism might crucially hinge on the price of the traded good. Falling world prices for

natural resources, which is not the least an effect of increasing trade openness, might render some countries more conflict prone as the falling income of the exporters of this product might offset the benefits of trade associated with higher levels of economic integration (Garfinkel, Skaperdas, & Syropoulos, 2008).

Network-based studies further support the liberal hope that increasing economic interdependence pacifies states (e.g., Maoz, 2009; Dorussen & Ward, 2010; Kinne, 2012). The new techniques do not yet, however, solve the underlying theoretical problem of why business leaders should be concerned at all by the overall trade relationships of their country instead of the balance sheet of the enterprise for which they are working. If we do not assume that managers behave patriotically (which would in the long run drive them out of business), their only concern should be the competitiveness of the products that they seek to sell. This means politically that firms and their interest groups will withdraw their support in any case where a political leader engages in economically wasteful policy adventures. However, extant theoretical models of commercial liberalism do not explicitly address, as indicated, how this pressure affects governmental decision making.

The impact that economic development should have on the risk of conflict is theoretically equally ambiguous. While economically powerful states have the resources to buy security, they also become more attractive targets for military attacks. This inconclusiveness also manifests in empirical tests. While dyadic development does not reduce the probability of interstate war, an increasing level of worldwide development exerts a pacifying impact. However, as Mark, Crescenzi, and Kadera (2015) as well as Choi (2016) show in an evaluation of Gartzke and Weisiger (2014), the inclusion of these economic factors does not undermine the core tenet of the Democratic Peace thesis according to which pairs of democracies have a lower impact of democracy. Capitalism, a concept closely related to development, is also not an alternative to “republican liberalism.” Dafoe (2011) shows that Gartzke’s (2007) results in support of the Schumpeterian idea are, to some extent, the byproduct of the deletion of communist countries from the analysis and the inclusion of regional dummies.

The effect of economic growth on the risk of interstate war is, from a theoretical vantage point, also not completely clear. A broad swath empirical literature suggests that economic shocks are a key motive for a government to divert the attention of the public and to engage into hostile behavior with other nations. This thesis finds some support in the empirical literature. Hess and Orphanides (1995) argue that economic recessions entice U.S. presidents to build a reputation for military leadership during the first term; they present empirical evidence that the number of dispute initiations coincides with the onset of recessions. Brulé (2006) shows, more recently, that the diversionary tendency during economic downturns is larger for presidents who face opposition from Congress. However, other research designs do not demonstrate a major impact by economic variables on the unilateral use of force (e.g., Davies, 2002). Oneal and Tir (2006) contend, in an encompassing analysis, that economic downturns do not pose sufficient incentives for democratically elected leaders to engage in militarized disputes. This divergence of findings suggests that researchers should explore the theoretical foundations of the diversionary argument more deeply and that this area of research would profit from the kind of meta-evaluation that has been conducted in the study of intrastate (Hegre & Sambanis, 2006) and interstate war (Bennett & Stam, 2004).

Economic growth has also played an important role in studies that explore the impact of systemic factors on the risk of war. One school of thought has examined whether war contributes to the long cycles that Kondratieff (1926, 1935) identified in his analyses of the turn between expansion and stagnation in the world economy. Goldstein (1985, 1988) argues, and demonstrates through multiple sources and techniques, that economic upswings make major wars affordable but that these conflicts disrupt long-term economic growth. However, while the number and size of wars follow the power law (cf. Cederman, 2003), Beck (1991) cannot identify through the use of spectral analysis a fixed periodicity in which

the most fatal forms of interstate conflict recur in the international system.

Systemic theories that at least attenuate the assumption of a fixed wave length are more promising. Modelski and Thompson (1996) add to the cycle theories the concept of economic leaders, and they demonstrate that innovation peaks immediately before and after the outbreak of major wars; Rasler and Thompson (1989) sketch how major war, economic development, and state formation are intertwined. Yet these sophisticated macro-sociological analyses cannot solve the problem that besets systemic arguments about the causes of war. These complex models are not motivated through an incentive-based explanation at the level of the individual actor or of a specific homogeneous social group. Although systemic approaches offer the “big” picture of interstate relations, they are almost necessarily so complicated that a simultaneous test of all their implications seems daunting at best.

The Link from the Economy to Conflict

The claim that political conflict will disrupt trade has found an eloquent illustration in Keynes (1919, pp. 1–7; see also McDonald & Sweeney 2007). In his view, “insane delusion and reckless self-regard” allowed Germany to destroy the “nearly complete” internationalization of social and economic life that was present in Europe around 1914. The thesis did not find much empirical scrutiny until the publication of a provocative article by Barbieri and Levy (1999). According to these authors, war did not often affect trade between war parties in a significant fashion. Relying on an extended sample, Anderton and Carter (2001A, 2001B) conversely demonstrated that in most cases conflict shaped the international trading system severely. Controlling for the effects of war on nonbelligerent countries, Glick and Taylor (2010) support these findings. Their econometric evidence shows that the “economic costs of war arising from the destruction of trade . . . are quantitatively large, statistically significant, and highly persistent” (p. 125).

An encompassing overview by two economic historians bolsters the view that international conflict has indeed often hampered all forms of economic exchange and, through this, profoundly shaped the international economic system over the past few centuries:

Eurasian trade flows increased as a result of the *Pax Mongolica*, before diminishing again in the sixteenth century as a result of political turmoil; the comparatively peaceful nineteenth century saw an unprecedented trade expansion; World War I, World War II, and the Cold War had all large, negative, long-run effects on trade.

(Findlay & O’Rourke, 2007, p. 539, italic in original)

Although the long-term impact of interstate war on economic interactions is negative, we frequently encounter “war rallies” on financial markets. Schneider and Troeger (2006; see also Brune et al., 2015) attribute this behavior to the rational expectations held by investors who believe, correctly or incorrectly, that the impending or already started violence does not hurt the economy as badly as the alternative scenario originally suggested. They find evidence for this in the positive reactions of the Dow Jones Industrial Index to intensifications in the confrontation between Iraq and the U.S.-led alliance during the 1990s. Studies on the redistributive effects of violent conflict within societies are, by contrast, relatively rare. A partial exception is the case study by Nincic (1980), who used the cleavage between capital and labor to uncover the profiteers from U.S. military interventions. Referring to the support of the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) for the Vietnam War, he concludes that labor rather than capital derives gains from war and argues that

faced with eroding rates of profit, due in part to rising labor costs, and with actual or feared governmental

regulation, business is not likely to support a lengthy war. Organized labor, on the other hand, tends to be a reliable backer of military interventions—presumably because of its effects on wages, employment, and the redistribution of national income from capital to labor.

(Nincic, 1980, p. 114)

Most studies of the economic effect of international war show that participating countries typically need some time until they are ready to grow again (Koubi, 2005). If they have regained their competitive level, wartorn economies have sometimes a tendency to grow faster than nonbelligerent states. Olson (1982) has famously attributed this puzzling underperformance to the destruction of the close-knit networks of vested interests, dubbed “distributional coalitions,” that the defeat in a war brings about internally. While a reform of interest group arrangements did not seem necessary among the winners of World War II, the political reforms brought about in postwar Japan and Germany relied to a considerable extent on the recruitment of new elites that had not yet such a developed sense for redistribution. Olson (1982) writes that “Distributional coalitions slow down a society’s capacity to adopt new technologies and reallocate resources in response to changing conditions, and they reduce the rate of economic growth” (p. 65). Organski and Kugler (1980) link the “Phoenix factor” to neoclassical growth theory and argue that the destruction of parts of industry allows nations to invest more and to profit from the technological improvements that have happened during the war. Koubi (2005) finds evidence for the arguments made by Olson (1982) and Organski and Kugler (1980) that growth rates will differ across the winners and losers of war. Somewhat surprisingly, she detects that the growth effect is larger after civil than after interstate wars.

Empirics II: Civil War, Terrorism, and State Repression

Economic factors have played a key role in recent studies that have explored the risk of civil war and terrorism; studies on the economic origins of state repression are, by contrast, relatively rare. First, the empirical literature in this area is examined by presenting the contributions to the civil war literature.

Civil Wars

An upsurge in the economic analysis of domestic conflict was partly fueled by the interest that the World Bank acquired in this area of research for its development strategy. One of the key recommendations derived from this literature is that developing countries—or, to use Collier’s (2007) term, the “bottom billion” of the world—need development, economic openness, and targeted foreign aid to avoid or to escape from the “conflict trap” (Collier et al., 2003). However, although these recommendations are straightforward, the theoretical plausibility and robustness of their foundations appear much less convincing at second glance. First, the role of economic growth and development in the internal stability of states is much less clear than the positive correlations between GDP per capita and the risk of civil war reported in two influential studies suggest (Fearon & Laitin, 2003; Collier & Hoeffler, 2004). As Besley and Persson (2008) contend, the empirical literature has not yet fully considered the recursive effect of war on economic growth and development. However, empirical models that correct for the endogeneity of the economic variables are rare. Using rainfall as an instrumental variable, Miguel et al. (2004; see Ciccone, 2011 for a criticism) show that severe economic crises indeed trigger civil wars, a result that is clearly in line with the opportunity-cost argument popularized by Collier and Hoeffler (2004). This does not, however, mean that positive economic growth is a pure blessing. In a dynamic model, Harms and Zink (2005) show growth and distributional conflict; their results demonstrate that the relationship between the level of development and the risk of social conflict is curvilinear. In their view, the demand by the working class for a substantive reform of the

economy, which might be associated with public unrest, is more likely to occur at intermediate levels of economic development. This supports Huntington's famous expectation that "people who are poor are too poor for politics and too poor for protest" (Huntington, 1968, p. 40).

One key thesis in the civil war literature is the argument, advocated repeatedly by a World Bank research team headed by Collier (2007; Collier & Hoeffler, 1998, 2004; Collier et al., 2003), is the claim that "greed" is a key explanation for civil wars in the developing world. In their view, the access to primary commodities offers economic rents that opportunistic rebel leaders try to grab with resort to violence as a "weapon" of last resort. Collier and Hoeffler (2004) measure the endowment of an economy with natural resource exports as a percentage of gross domestic product (GDP) and expect that countries with intermediate levels of exportable primary commodities to be most at risk. According to Collier and Hoeffler's calculation, the "risk of conflict peaks when they constitute around 33% of GDP" (2004, p. 574). Collier and Hoeffler (2004) are careful to argue that this relationship is not ultimate proof that resource-rich economies always fall victim to greedy "criminals." However, their research design does not reflect the subtleties of the theoretical literature. They control for institutions that might help to mitigate the problems that resource dependence creates as a simple independent factor, although most contributions to the "resource curse" thesis perceive poor governance to be a consequence rather than a cause of high primary commodity exports (Sachs & Warner, 2001; but see also Mehlum et al., 2006). Notably, the early tests of the audience-grabbing "greed" thesis suffer under other research design problems, too. This becomes clear in the thorough replication study of Fearon (2005; see also Hegre & Sambanis, 2006), whose use of an alternative level of temporal aggregation and the imputation of missing values render the influence of the primary commodity export indicators insignificant. Nevertheless, there is considerable support by Ross (2012) that the resource abundance might destabilize countries not generally, but at least through key resources such as oil.

What has been largely overlooked in the political science literature in this context is how the presence of international firms alters the incentive structure and, in some cases, helps to instigate, or at least to prolong, conflicts. Guidolin and La Ferrara (2007) find evidence, in an event study, that those firms that possessed diamond-mining licenses in Angola reacted adversely to the death of rebel leader Jonas Savimbi and thus the event that heralded the end of this internationalized civil war. In the aggregate, the economic consequences of civil war are, however, disastrous and contribute to the "conflict trap" in which, according to Collier et al. (2003; Collier, 2007), many developing countries are caught. Murdoch and Sandler (2002) demonstrate that the "public bad" that political violence creates also contracts economic growth in neighboring countries. A pioneering case study of the Basque conflict by Abadie and Gardeazabal (2003) demonstrates that even civil wars of medium magnitude severely affect an economy. They estimate that the Franco-Spanish borderline region experienced a GDP gap of 10% in comparison to a "constructed" control region.

Development economists have advanced economic openness as a key remedy for the developing world with which the risk of civil war could be reduced. An initial evaluation of this thesis by Hegre et al. (2003) showed that globalization in the form of trade openness is indeed a pacifying factor. Bussmann et al. (2005), as well as Bussmann and Schneider (2007), replicate this result, but they also point out that liberalization, and thus the steps taken toward a higher level of economic integration, might be hazardous. They find some support for the thesis that opening an economy to foreign competition creates losers within a society at least in the short term. If these affected groups do not dispose over alternative political instruments to voice their "globalization discontent," they might turn to the use of political violence to prevent or slow down the implementation of liberalizing policies. Bussmann and Schneider (2007) expect this risk to increase during the liberalizing years. Magee and Massoud (2011), conversely, spot the turning point some years before a country changes its legislation and embarks on a globalization course.

As Martin et al. (2008A) and others correctly note, the literature that explores the nexus between the result of economic processes, such as globalization, and conflict suffer from a potential endogeneity bias. They argue, and empirically demonstrate, that trade only deters the massive use of political violence, while, according to their instrumental variable models, integration into world markets, which can be used as a substitute for internal trade, increases the risk of low-scale civil wars. Combining micro- and macro-level data and using a sophisticated instrumental variable approach, Berman and Couttenier (2015) show that negative income shocks that are caused by financial crises and other external events increase the risk that a country falls victim to an internal war and that this conflict endures. Nunn and Qian (2014), by contrast, demonstrate that U.S. food aid, especially that provided to former war-affected countries, increases the risk of internal war. To overcome the endogeneity problem, the authors ingeniously use the time variation in U.S. wheat production together with the variation with which a country had received food aid as an instrument.

State Repression and Terrorism

The mixed findings that the empirical literature on the economics of civil war offers might partly be due to the fact that it does not properly model the political options that the political actors possess. Governments, in particular, can resort to repression if they believe that some groups might rebel against the unfavorable economic or political conditions that the political regime creates for them. Interestingly, the economic causes of human rights violations have not yet been fully explored. This becomes evident in the important article by Harff (2003), who demonstrates that economic protectionism goes hand in hand with the risk of genocide and mass killings. She does not, however, discuss whether the closing of the economic and political system is just an attribute rather than a cause of the necessarily sinister and secretive political environment in which some leaders perceive the extermination of a specific group to be a viable option. One potential explanation for the negative linkage between economic integration and state repression is that sanctions will hurt economically integrated regimes much more than autarkic ones. In the view of Duvall and Stohl (1983, p. 61), the cruelest human rights violations occur in countries that have a “peripheral status in the world system” and that are therefore immune to external pressure. Cohen and Corrado (2005) argue along this line that economic globalization in the post-Cold War period has started to reduce state torture on a worldwide scale. Cingranelli and Richards (1999) lend some support to this conjecture and show that increasing participation in the global economy after 1990 is associated with less politically motivated imprisonment. Hafner-Burton (2005) further shows that the commitment to human rights agreements does not reduce state repression per se, but that preferential trade agreements, which often demand the fulfilment of political conditions from signatories, have the desired effect (Hafner-Burton, 2005, p. 594).

Against this relatively optimistic backdrop, it is not surprising that one of the consequences of economic openness—development—is also associated with a reduced incidence of human rights violations. A rich body of empirical literature supports this claim (e.g., Poe et al., 1999; Hafner-Burton, 2005). However, economic development does not necessarily reduce income inequality. Controlling for this grievance factor, Fein (1995) shows that highly unequal societies are twice as likely to experience severe human rights violations as most equal states.

The role that poverty has as a cause of terrorism is more controversial. Based on a range of sources, Krueger and Malečková (2003) and Krueger (2007) reject this popular notion and demonstrate that terrorism is more a middle-class phenomenon than an instrument that the most marginal social groups rely on. It remains, however, unclear whether this relationship is not at least partly due to the oversupply of well-educated middle-class terrorists on which “booming” terrorist networks will be able to count for some time (Bueno de Mesquita, 2005). Furthermore, dyadic development inequality is a main source of transnational terrorism, as the empirical evaluation of Blomberg and Hess (2008, p. 132) shows: “This result could indicate that terrorism is the unfortunate consequence of a widening divide between rich and

poor countries.” Enders and Hoover (2012) suggest that the relationship between income and terrorism is curvilinear, with the middle income being more conducive to this sort of political violence.

Bloomberg and Hess (2008) demonstrate convincingly that one has to distinguish between target and sender countries to understand the impact of globalization on the incidence of transnational terrorism. While Li and Schaub (2004) show that, from a unilateral perspective, economically highly integrated countries are not more vulnerable than less globalized ones in this respect, highly integrated states are, from a bilateral perspective, more at risk than more protectionist states (Blomberg & Hess, 2008). The reverse is true for the source country of terrorists. Liberal economies are thus less likely to be recruiting grounds for transnationally active terrorists. Similar results are observable for development. According to Krueger and Laitin (2008), “suicide attackers go after the rich and the powerful” (p. 172). Notably, these statistical results have only been derived from informal models of terrorist activity and that the literature on the economics of terrorism faces, like the other research topics discussed in this essay, severe endogeneity problems (cf. Sandler & Enders, 2008).

Conclusion

The literature on the nexus between economic factors and violent forms of conflict has for a long time been influenced by the opportunity cost argument that can be derived from classical economics. Many empirical studies support the claim that the growing incentives derived from productive economic activities lessen the usefulness of using force to achieve a particular goal. By extension, policy measures such as foreign economic liberalization that stimulate growth act, according to this liberal worldview, as an important deterrence mechanism. In this perspective, war, be it domestic or interstate, becomes increasingly costly the better integrated the contending parties are into the world economy.

In line with Schneider (2014A), the theoretical and empirical merits of this key proposition need to be seriously refined. Several conceptual and methodological challenges in the literature on the interrelationship between economic incentives and political violence must be seriously considered. First, the analytical literature needs to develop models which include economic agents and their special incentives. Admittedly, economic models of conflict, which build largely on the rent seeking tradition, only include unproductive armament decisions, but not the steps toward conflict, like the crisis bargaining literature does. However, to simply rely on the extant economy free models in political science to explain the interactions between politicians and economic agents is not a fruitful way to go; these models shy away from endogenizing the economic motives of conflict.

Second, models that take these incentives seriously might help us to deal conceptually with the related problems of endogeneity and simultaneity that empirically oriented studies face. A sensible economic model could start out with actors who have different endowments and who can decide how much they would like to invest in economic and conflict activities. It would then become clear that the outcomes of these decisions in the form of economic integration, development, and economic inequality are right-hand-side variables and should be modeled as such in studies of economics and conflicts. Many of these future empirical studies will rely on an instrumental variable approach or related means to deal with the endogeneity issue.

Third, a particularly promising approach is to move to lower levels of aggregation. This is particularly the case for studies of civil war where the contending social interests of a country are represented through aggregate diversity measures (cf. Schneider & Wiesehomeier, 2008). It seems more promising to identify dyads of contending social groups within countries and to collect information at this level to understand how much some of the conflicts around the world are really

influenced by economic variables, a lack of sound institutions, or the ethnic identity of the combatants. Fortunately, conflict research, especially in the domain of intrastate politics, has started to take the microfoundations of social contestations seriously, showing how subnational grievances (cf. Cederman et al., 2013) and intra-group tension (Huber & Mayoral, 2014) affect the risk of violence.

Fourth, some of the economic indicators that are used to study the economic causes of violence are only slowly changing over time. To attribute economic factors to the quick escalation of a conflict, one needs to include indicators that change at least as fast as the military action unfolds. Economic variables such as trade that remain constant during the escalatory process cannot explain why certain crises lead to war and others do not (cf. Morrow, 1999). In terms of quickly changing economic variables, financial markets are the most promising but still underutilized resource (cf. Schneider & Troeger, 2006; Guidolin & La Ferrara, 2007).

Many scholars have started to take these challenges seriously. The next generation of studies on the nexus between economic incentives and conflict will surely be based on sounder analytical footings, will be empirically disaggregated to more appropriate levels of analysis, and will be conducted with more adequate econometric tools.

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