

The Violence Trap: A Political-Economic Approach To the Problems of Development

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Abstract

Why do developing countries fail to adopt the institutions and policies that promote development? Our answer is the *violence trap*. The trap is set by the unavoidable interdependence of economic and political development: key political reforms—opening access and reducing the risk of state predation—are typically feasible only when the economy reaches a given level of specialization (greater economic integration raises the costs of violence); yet the economy typically can reach high levels of specialization only when key political reforms are in place (for standard reasons). The trap entails violence because, as we show, the structure of unreformed polities (aka "natural states") ensures poor adaptive efficiency: following shocks to the distribution of military and economic power, bargaining to adjust to the shocks often fails among those with access to violence, due to problems of asymmetric information and commitment. Indeed, we show that violence is endemic in the developing world, with the median regime experiencing violent leadership turnover once every 8 years. The trap is hard to escape because whenever overt violence breaks out, leaders seeking to restore order face an unspecialized economy, to which the best response is yet another unreformed polity. Indeed, the limits on access and rents characteristic of natural states are instrumental to re-establishing peace. Yet, these rents and limits also deter specialization, thereby keeping the costs of resorting to force low and ensuring that future bargaining will be in the shadow of viable military "outside" options.

1. Introduction

To explain the problems of development – with a billion people mired in poverty and governments resistant to economic reform – economists and political scientists have proposed a wide range of development or poverty traps: self-reinforcing mechanisms

that prevent developing countries from embarking on the path of steady development. Economists, though not exclusively, tend to focus on the problems posed by increasing returns to scale.¹ In these accounts, impoverished nations are trapped in poverty because they cannot organize sufficiently large investments in—for example—education (Kremer 2003) or access to credit and capital (Sachs 2005).

Various political poverty traps have also been proposed. Here, the culprit is the state's inability or unwillingness to reform itself and adopt good economic policies. Explanations for the lack of reform include persistent internal violence (Collier 2007); incumbents' resistance to infrastructural reforms when they cannot ensure they will remain in power long enough to benefit (Besley and Persson 2011); incumbents' resistance to liberalizing reforms when they threaten their hold on power (North 1981; Acemoglu and Robinson 2006b); and the fact that the beneficiaries of the status quo (prospective losers under reform) are typically well organized, while the losers under the status quo (prospective winners under reform) are poorly organized (Fernandez and Rodrik 1991).²

In this paper, we also focus on the state's resistance to reform. However, rather than focusing on incumbents' (and other beneficiaries') incentive and ability to protect the status quo, we focus on the problem of violence.

Following North, Wallis, and Weingast (2009), we argue that the problem of violence is far more endemic and is not confined to just those states experiencing

¹ Azariadis and Stachurski (2005) provide a survey of economic poverty traps that hinge on increasing returns. Pierson (2000) considers the role of increasing returns phenomena in sustaining sub-optimal political equilibria but does not stress the consequences for economic performance.

² Other explanations include entrenched interest groups (Ekelund and Tollison 1997; Bueno de Mesquita et al. 2003, Grossman and Helpman 2001, etc.) and the absence of persistent external threats (Bates 2001).

persistent conflict (Collier 2007). Indeed, we show that violence is surprisingly common throughout the developing world, including the richest developing countries. The median number of years between violent regime changes in the poorest half of the world's countries is seven years; at twelve and a half years, it is not much higher in the richest developing countries. In contrast, the median number of years between violent regime change in the richest decile of countries is sixty years.

The endemic risk of violence implies, as many have argued (e.g., Alesina et al. 1996; Collier 2007; North, Wallis and Weingast 2009), that providing reliable means to resolve economic and political disputes non-violently is crucial to economic performance. Yet, as North, Wallis and Weingast (2009) point out and we elaborate below, developing and developed countries seek to deter recourse to violence in very different ways. Moreover, it is clear from the empirical record (on which more below) that developed states are much more successful, especially when it comes to preventing violence as a tactic of political competition. This raises the question of “resistance to political reform” in a more precise form: why do developing countries not adopt the institutional solution to the problem of violence that developed states have adopted?

Our answer, in a nutshell, is the violence trap: developing countries face an increasing returns problem in the control of violence. Sufficiently large investments in (a) raising the costs of violent domestic conflict for domestic elites and (b) reducing the arms held by domestic elites can allow a transformation of the state toward what North, Wallis and Weingast (2009) call an “open access order.” Yet, the main way to raise the cost of domestic fighting is to promote widespread Smithian specialization in the economy; and

domestic actors will be able and willing to invest in such specialization only if political reforms—e.g., those allowing anyone to form a business firm and those protecting property from state predation—are already in place. Thus, complex specialized economies capable of providing sustained growth cannot be established without reformed states and reformed states cannot be created without complex specialized economies.³

From our perspective, then, one cannot separate “political development” from “economic development.” The two processes are inherently intertwined. Moreover, we shall argue that the violence trap we identify in this paper undergirds most of the purely economic poverty traps that much of the literature focuses on.

This paper proceeds as follows. Section 2 shows that disorder has been common in polities over the last century and a half. In particular, violent successions to political power have occurred within the lifetime of most people in most countries, with many experiencing multiple such events. Section 3 views political violence as a species of bargaining failure and begins to explain the environmental conditions that foster it. Section 4 explains how natural states have sought to mitigate the problem of violence. Section 5 turns to a dynamic issue, the problem of post-shock bargaining. Because bargaining failure in the face of crises or changing circumstances often results in violence, perpetual order requires that countries facilitate bargaining. Sections 6 and 7

³ Our argument bears some resemblance to those emphasizing trade (e.g., Angell 1913 [1911], Weede 1996) or capital openness (Gartzke 2007) as a deterrent to international war. However, we focus on domestic politics and connect the nature of economic activity explicitly to the conditions for peace in a rationalist model of war (Fearon 1995).

put the various pieces of the argument together to explain why a transition from violence and poverty to peace and prosperity is so difficult to achieve.

2. The Developing Country Environment

To understand the dilemmas facing developing countries, we begin by highlighting three related features of their environment: endemic violence; distributed violence potential; and regular, if episodic shocks. We then consider how developing countries deal with these challenges, in section 3.

Endemic violence 1840-2005

Many scholars and practitioners of development associate the problem of violence mainly with failed states, such as Somalia or the Congo. Unfortunately, the problem is far more widespread; violence and violence potential are endemic to all developing countries.

To document the prevalence of violence, we consider data on regime duration in countries since 1840 (Goemans, Gleditsch and Chiozza 2009). For the purposes of this exercise, we define a regime as a state that exhibits leadership successions without violence. In other words, a regime ends when succession involves violence.⁴ Defined in this way, we have complete data on 697 regimes in 162 countries since 1840.

Table 1 presents the data on regime duration for all countries (column 1), countries in the bottom half of the income distribution (column 2), countries in the 75th-90th

⁴ This definition ignores major outbreaks of violence, such as civil wars, if they fail to alter succession. Thus, we provide a lower bound on political violence. Note also that we do not view a succession produced by an assassination as involving violence, unless the assassination was part of a serious attempt to take power. Thus, for example, the JFK-LBJ succession in the US does not count as violent.

percentiles of the income distribution (column 3), and countries in the top decile of the income distribution.⁵ The data reveal several patterns.⁶

First, violent regime change is common. Looking at all regimes, the first row shows that ten percent of all regimes in the sample last only one year; the third row, that a full half of all regimes last only eight years. Three-quarters of the regimes last only a generation (here, 24 years). Finally, only ten percent of regimes last fifty years or more, less than a human lifetime.

Second, the richest developing countries are more like poor developing countries than they are like the developed world. In the poorest half of the countries (ranked by income), fifty percent of regimes last only 7 years, and only one quarter last beyond 17 years. In countries ranking between the 75th and 90th percentiles of income—the developing world elite—the corresponding figures are 12.5 and 45.5. Finally, for the developed world (the richest decile of countries), the figures are 60 and 88. Thus, the richest developing countries move only 10% of the total distance between the third and first worlds in median duration.

Table 1: Regime Duration in years

⁵ The income ranking is based on the average post-world war II income for each country.

⁶ These findings are preliminary. First, the data in this sample are truncated at both ends. To see this, consider the United States. The data begin in 1840, and codes every country then in existence as one year old, when in fact the United States had been in existence since 1776. Similarly, the data set codes the United States in 2003 as being 163 years old, when it will presumably last many more years. Second, the GDP data is from the post-WWII era.

Percentile	Regime Duration (All Countries with Post-WWII GDP Data)	Regime Duration (below median GDP)	Regime Duration (richest quartile with richest decile removed)	Regime Duration (Richest Decile)
10	1	1	2	10
25	3	2	4	34
50	8	7	12.5	60
75	24	17	45.5	88
90	50	34	71	131
95	65	50	99	133
99	130	84	131	136

All told, then, violent attempts to seize political power are common in the developing world. The only regimes in which such attempts are extremely rare constitute the rich “developed” world – where order is perpetual.

Distributed violence potential

The data on endemic violence reflects the failure of developing countries to attain the modern Weberian ideal of a state with monopoly control over the legitimate use of violence. Indeed, the capacity to wield force in developing countries is typically inherently distributed. At certain times and places, a few may hold overwhelming concentrations of military force, as in the former Soviet Union. Yet, in most periods of history, relatively large numbers of actors—such as the formal military forces, informal militias, ethnic groups and labor unions—have had the potential to wield significant force.

Some actors' potential is already realized in the form of military capital: bows and arrows, guns, improvised explosive devices, and so on. Other actors' potential for violence depends on their wealth or their access to organized men who are readily armed. In all periods of modern history, the wealthy have been able to acquire the capital and labor to attack or defend, if they did not already possess them. Indeed, the maxim that developed in early modern Europe was that war had become a matter of financial attrition. Victory went to the state that could better mobilize taxes and loans to sustain a longer and more intense fight.⁷

Shocks

We now consider a third important characteristic of the typical developing country's environment: stochastic shifts that affect the distribution of violence potential. Changes in violence potential can be sudden and dramatic, generated by a financial crisis or an invasion by a neighboring state. They can also reflect longer-term processes, such as shifts in "relative prices" (North 1981) that affect goods produced by different factions in a state's dominant coalition; changes in technology and demography that affect the balance between the state's factions; or alterations in the international system.

3. How Developing Countries Mitigate the Problem of Violence

⁷ "Whenever this war ceases," wrote the English pamphleteer Charles Davenant in 1695, "it will not be for want of mutual hatred in the opposite parties, nor for want of men to fight the quarrel, but that side must first give out where money is first failing" Dickson and Sperling (1970,284).

In this section, we ask how actors in the developing world seek to deal with the problem of violence. We begin by reviewing NWW's discussion of how developing countries mitigate the problem of violence, by creating and distributing rents and limiting access. We then add a third element that NWW do not emphasize: personal commitments between regime insiders. We argue that these tactics are effective means to deter violence, especially in relatively static environments.

Rent-Creation

To understand the endemic violence documented in the previous section, we adopt the standard view that fighting results from a kind of bargaining failure (Fearon 1995; see also Powell 1999). Actors know that violent conflict is inefficient; that they could have peacefully reached the outcome resulting from conflict by negotiation, thus avoiding the costs of fighting, and leaving everyone better off. The challenge is to understand why their negotiations fail despite this recognition.

We envision the bargaining situation in which actors in developing countries find themselves as follows. First, the exogenous feature is the military cost of fighting. Second, there are three endogenous features: the actors' violence potentials; the actors' shares of the current regime's spoils; and the actors' "commitments," which are actions they take to reduce their own violence potential (e.g., by "disarmament") or to raise their own cost of fighting (e.g., by "exchanging hostages").

The distribution of violence potential establishes actors' payoffs from initiating fights. To illustrate in the context of a two-actor model, let v_A and v_B denote A's and B's

“violence potentials,” which depend partly on previous decisions to (dis)invest in arms; and $P_A(v_A, v_B)$ denote the probability A prevails in a conflict with B. The payoff to a risk-neutral actor from a fight is then $P_j(v_j, v_j) - c_j$, where c_j is j 's total expected cost of fighting (which will reflect any endogenous cost due, e.g., to an exchange of hostages). As is standard, we normalize the spoils of victory to 1 (Powell 1999).

A key result that follows from the bargaining perspective on violence is the *proportionality principle*: rents and privileges must be allocated in rough proportion to military power, in order to keep the peace. Specifically, let R_j denote j 's share of the rents. Then the proportionality principle implies $R_j > P_j(v_j, v_j) - c_j$ for $j = A, B$. This expression says that each player's rents must exceed their expected value of fighting. If this condition is not satisfied, then those groups with more power than rents prefer to fight for more, rather than play by the regime's rules.⁸

NWW (2009, ch 2) call polities that distribute rents in order to keep the peace *natural states* because they have been the dominant form of social and economic organization since the beginning of civilization. Indeed, until the last two hundred years, they constituted the only form of state organization.

Economists often interpret the natural state arrangements of rent-creation and privileges as “market intervention.” Unfortunately, this concept obscures the logic of the natural state. The observation that natural states create rents and manipulate markets for political purposes is correct. But viewing this phenomenon as market intervention

⁸ The idea that privileges and policy benefits must be allocated roughly in proportion to power has a long history. It is central to Barrington Moore's (1966) famous work on the “social origins of dictatorship and democracy”; and Harrington (1656) used it to explain the English Civil War (1641-49). More recently, formal models of rationalist war clearly derive the proportionality principle under conditions of complete information (cf. Fearon 1995, Powell 1999).

suggests that these countries began with competitive markets but which the state has transformed into non-competitive ones through rent-creation and regulatory policies that “intervene” into markets.

The economists’ view has the problem backwards. Countries with efficient, competitive markets must construct and protect them, including secure property rights, protections against predation, and open access to organizations, not to mention perpetual order (as Acemoglu and Robinson 2011, North 1990, and Rodrik, Subramanian, and Trebbi. 2004 have recognized). All of these features are the outcomes of political choices; they are relatively rare in the world; and they are not natural.

Limits on access

Natural states limit access to organizations (NWW 2009, ch 2). The most obvious reason they do so is that rent-creation depends on limits to competition. Entry dissipates rents, so natural states restrict those not granted privileges from forming competing organizations.

Natural states limit access to organizations for a second reason. Organizations allow new interests and groups to become powerful, potentially forcing existing elites in the natural state’s dominant coalition to share rents and authority over policy. To preserve the existing distribution of violence potential, most regimes in developing countries therefore have placed strong limits on who can form organizations. In many

cases—including Hosni Mubarak’s Egypt, Suharto’s Indonesia, and Saddam Hussein’s Iraq—all significant organizations had strong ties to the ruler.⁸

Personal commitments

Another tactic that actors in natural states may be able to deploy is the exchange of commitments: endogenous adjustments of either violence potentials or costs of fighting. We consider the possibility of such exchanges here.

Endogenous adjustments of violence potential can take the form of “arms races,” which worsen the prospects for peace, or disarmament, which can theoretically promote peace. In natural states, however, the only common form of disarmament is that imposed on outsider factions by regime insiders. There may be personal deals between insider factions—regarding demilitarizing their borders, for example—but a general and impersonal policy of domestic disarmament is, as we discuss further below, very difficult to implement in the natural state environment.

Endogenous adjustments of the cost of fighting may also help insider factions maintain peace among themselves. Bilateral cost adjustments can be arranged, for example, by the exchange of physical hostages whose lives will be at risk should the factions begin fighting; or by investment in specialization-and-exchange relationships that will be profitable if and only if the factions remain at peace. The virtue of such commitments is that they provide additional assurance to insider factions that the other

⁸ In our formal notation, limiting access is a way to reduce the violence potential (v_j) of groups outside of the elite who form the regime.

insiders will not attack them. To put it another way, endogenous cost adjustments, when available, can help the regime satisfy the proportionality principle.

Summary

All told, then, we think of a natural state as constituted by three endogenous structural features—limits, rents, and commitments—by which it mitigates the problem of violence. By denying organizational rights to factions outside the regime, it reduces their ability and hence incentive to initiate violence against the regime. By distributing rents among its insider factions in proportion to their probabilities of prevailing in fights, and fostering a matrix of personal commitments among them, it deters internecine fights.

Before proceeding, we follow North, Wallis, and Weingast (2009) in stressing that the natural state recipe for mitigating violence is not the only possible one. One way to explain this point is to begin with the following abstract proposition: if the costs of domestic conflict can be increased sufficiently for all significant domestic actors, then peace will be guaranteed. In terms of the notation developed above, as soon as $c_j > P_j(v_j, v_{-j})$ for all j , no one wants to fight. In this case, rents can be set to zero and limits on access can be relaxed—approximating an open access order—all without disturbing the peace. For, the proportionality principle is satisfied merely because the costs of fighting are universally prohibitive: $R_j = 0 > P_j(v_j, v_{-j}) - c_j$.

Of course, noting that it is abstractly possible to promote an open access order by raising everyone's costs of fighting is very different from actually doing so. Indeed, much of the discussion that follows concerns why it is so difficult to implement the reforms

creating an open access order (no limits, no rents, and impersonal commitments) when starting with a natural state (limits, rents, personal commitments).

4. Bargaining and Adaptive Efficiency

Many developing countries experience years of peace before succumbing to violence. If a bargain had been structured to satisfy the proportionality principle and thereby generate peace – why does it break down? And why is violence episodic?

The answer is that the world is constantly changing. In particular, as we suggested in the previous section, a developing country's environment involves regular changes, shocks, and crises. Many of these dynamic elements alter the balance of power so much that the existing distribution of rents and the existing matrix of commitments become inadequate to maintain cooperation and prevent violence.

As power shifts, maintaining peace requires that natural states adjust the allocation of rents to reflect the new balance of power. In particular, maintaining peace requires that groups experiencing substantial gains in coercive power be allocated more benefits, lest they be tempted to fight for them. Similarly, personal commitments among groups may need to be adjusted after power shifts; the value of previously exchanged hostages may no longer suffice to prevent violence.

Unfortunately, bargaining over the new allocation of rents and the new matrix of commitments does not always succeed, and its failure often leads to violence and regime change. In this section, we analyze how natural states, by limiting access and relying on

personal rents and commitments between regime insiders, reduce the state's adaptive efficiency.

Limiting access creates bargaining difficulties

When states deny organizational rights to segments of their populations, they necessarily worsen their ability to bargain with factions from those segments, should shocks endow them with either temporary or more enduring violence potential. The problems arise because access limits make it more likely that the regime will lack information about outside factions' abilities; and that those factions will lack clear and cohesive leadership capable of committing their followers to any deal negotiated with the regime. Let's consider each of these points in turn.

Outside factions in natural states understand that they cannot approach the regime, openly document their violence potential, and begin bargaining. If their violence potential is based on organized forces, then the leaders of those forces will be subject to legal punishment (as they have no organizational rights). If outsiders' violence potential lacks organization, then the factions' leaders will find it difficult both to measure the extent of their own fighting ability and to credibly communicate any private information they have on this matter without exposing their sympathizers to retaliation. Thus, limiting the organizational rights of outside factions virtually ensures that intractable informational asymmetries will complicate and even cripple bargaining.

Further complicating matters, a regime that prevents the opposition from organizing thereby deprives itself of an opposition leadership that can commit its

followers to any deals it might negotiate with the government. Thus, if the government suddenly faces decentralized mass action it is unable to quell—as in several countries during the Arab Spring of 2010-12—it will have great difficulty finding anyone credible with whom to negotiate. Even when agreements exist that make both sides better off, the lack of corporate organization of the opposition hinders the negotiation and implementation of these agreements.⁹

Personal rents and commitments

Both rents and commitments in natural states are personal. The rents are conferred on particular persons by virtue of their violence potentials and are typically not transferable. Commitments are made by bilateral exchanges of hostages or specialized investments in joint economic enterprises; and are similarly difficult to exchange.

During periods of stasis, the personality of rents and commitments does not pose a problem. After shocks that destroy the basis for peace, however, the personality of rents and commitments becomes a problem: in the absence of a perpetual state, it is costly to reallocate personal rents and costly to contrive new commitments. These difficulties pose another problem for post-shock bargainers.

Summary

Key design features of natural states—in particular, their propensity to deny organizational rights to regime outsiders and to rely on personal commitments between

⁹ Fearon (2012) analyzes the problems that beset bargaining when one side cannot commit to abiding by the offers it itself makes.

regime insiders—ensure that they face difficult bargaining problems after shocks to the distribution of violence potentials. Thus, they are prone to violence after such shocks.

Yet, after violence erupts, the leaders of natural states almost always retain the design features that worsen their adaptive efficiency in the first place. All that changes is that a different set of actors are denied organizational rights and a different matrix of personal commitments keep the peace between the new set of insiders.

This inability or unwillingness to reform is a key part of what we call the violence trap. In the next section, we explain why leaders of natural states find it difficult to open access and to devise impersonal commitments.

5. The Violence Trap I

We have seen that natural states are prone to episodes of violence—empirically (section 2) and theoretically (section 4). After episodes of violence, factions in a natural state have a choice. They can retain their state's natural institutional design, by creating rents, limiting access, and fostering personal commitments among regime insiders, all in a way that satisfies the proportionality condition. Or, they can attempt economic and political reform by (1) lowering rents, (2) relaxing limits on access, and (3) fostering impersonal commitments.

In this section, we consider why natural states' factions face substantial difficulties in initiating the path of reform. Significant doses of any one of these reforms violate the proportionality condition and thus make violence more likely; only large enough doses of all three reforms together have a chance of successfully establishing order on a new

basis. Thus, polities can be trapped in the inferior institutional equilibrium of the natural state because there are increasing returns to investment in rent reduction, open access and impersonal commitment.

Fostering organizational rights

Opening access to organizations in a natural state allows new entrants to compete away existing rents. If all else remains constant, this will lead to violation of the proportionality condition, whereupon powerful actors may seek to restore their rents by force.

Opening access also poses a second, deeply existential problem. Consider a regime that seeks to open access, perhaps in response to "pressure from below." What happens once the oppressed are granted organizational rights? The literature on democratization highlights elite fears that wealth will be redistributed via taxes and transfers (*cf.* Boix 2003; Acemoglu and Robinson 2005). But a more existential fear plausibly trumps the fear of redistribution in many cases: Formerly oppressed groups may use their new rights to organize militarily and crush the old regime insiders. The fear of annihilation may explain why the Tsar did not liberalize much prior to the Russian Revolution, why the Assad regime in Syria did not respond to the Arab Spring by liberalizing, and so on.

The fear of reprisals by current regime insiders will be acute when they have a history of repression, the distinction between regime insiders and outsiders coincides with other salient cleavages (ethnic, class, caste, religious), and the current underclass lack

the ability to credibly commit to a transfer of rights without violence (for example, because they lack organization). Yet, many natural states have precisely these characteristics. Steps toward an open access order are thus deterred because the state's solution to the problem of violence makes opening access a mortal threat to the incumbent insiders.

All told, most natural state leaders lack any motive to open access. Many have come to power by exploiting violence, not by cultivating a stable base of support in the opposition. Those new leaders who do have some motivation to open access may lack the means to do so safely.

Fostering impersonality

In natural states, rents and commitments are distributed to those with significant violence potential, in order to satisfy the proportionality condition and deter violence. Because allocating rents and commitments to the powerful helps keep the peace, most natural state leaders lack any incentive to convert to impersonal commitments and policies; and those with the incentive face difficult coordination problems. Let's consider each point in turn.

Because impersonal policies and rights allocate similar benefits, and make similar commitments, to a large set of people regardless of their violence potential, they reduce the rents available to prevent violence. For the most part, then, natural state leaders lack any incentive to create impersonal benefits and commitments, because they compromise the state's ability to satisfy the proportionality condition, especially as circumstances change.

Even if a regime had incentives to create widespread impersonality, it would face substantial coordination problems in doing so. To see this, consider two of the main methods of impersonal commitment – domestic disarmament and economic interdependence.

As noted in section 3, domestic disarmament is a big step that no single actor will undertake unilaterally, in a polity that currently has only personal commitments. Demilitarization of a polity works only if (a) everyone simultaneously disarms and (b) the various factions somehow assure themselves that the new national military and police forces will not be turned against them, once they no longer have private militias. Yet, simultaneous disarmament is hard to engineer, due to problems of commitment and opportunism; and ensuring the neutrality of national armed forces is difficult as well. Many contemporary natural states have not managed to turn their de jure rules outlawing private militias into consistent practical realities, as witnessed by warlords in Afghanistan, death squads in Colombia, and many other similar examples. Other regimes have not ensured the domestic neutrality of their armed forces, as witnessed by the long histories of military intervention in politics in Thailand, Argentina, and many other countries.

Next, consider investments that create impersonal economic interdependence through the standard processes of specialization and exchange. Suppose, for example, that a production chain with n specialized steps exists that produces a final product, pins, more efficiently than a single individual or faction can. If n factions each occupy one position in the specialized production chain, their total product will exceed the sum of the products that each can produce acting on its own. If pin production has to be shut down

if and only if conflict erupts between some subset of the participants in the production chain, then the factions' investments in pin production are club commitments: they raise the cost of fights erupting within the club. If pin production has to be shut down if and only if conflict erupts between any major domestic actors, then the factions' investments constitute public commitments; they ensure the factions will bear a cost when any domestic fight erupts, even one they do not directly participate in. When we refer to "impersonal economic interdependence" we mean the sort created by investments that lose considerable value upon the onset of any domestic violence (or, somewhat less stringently, on the onset of violence within a large domestic club). Such investments—which feature specialization and long supply and production chains—assure all (or many) other factions that the investor's cost of fighting them is higher.

However, no single actor would wish to undertake such intricate investments unilaterally in a natural state, as they would simply reduce their bargaining leverage and hence their rents. Just as with disarmament, complex interdependent investment can be in equilibrium only if it is widespread enough.

The cycle of violence

The natural state's reliance on rent creation, personal commitments among insiders, and limits on access imposed on outsiders results in a cycle of violence. Large enough shocks render the old commitments and limits inadequate to keep the peace. Sometimes the relevant parties negotiate new agreements in the aftermath of such

shocks but, as argued in section 4, natural states lack adaptive efficiency. Thus, in many cases, bargaining fails, violence ensues, and peace is restored only with a smaller economy and a new set of rents, internal personal commitments, and external limits on organization.

In principle, a state might break out of this cycle of violence by institutional reform, moving from the natural-state design principles of “rents, limited access, and personal commitments” to the design principles characteristic of advanced industrial democracies: “no rents, open access, and impersonal commitments.” The latter recipe satisfies the proportionality condition if every major actor is sufficiently plugged into the specialized economy that the cost of domestic conflict is prohibitive for each. However, reforming a natural state is difficult, for the reasons noted above. First, impersonal commitments are risky to undertake unilaterally or in small groups; they only become worthwhile if enough others also undertake them. Second, opening access while commitments are still largely personal threatens the incumbent regime's factions.

Thus, natural states are enmeshed in a violence trap with a similar logical structure to many other development traps in the literature. Because there are increasing returns to investment in the institutional features of open access orders, states can be caught indefinitely in the inferior institutional equilibrium of the natural state. On the one hand, large enough investments put the state within the basin of attraction of better institutions, wherein it benefits from a benign feedback loop: Specialized investments, by raising the cost of domestic violence, make such violence less likely; while lower risks of violence promote specialized investment, thereby further raising the costs of violence. On the

other hand, natural states begin in the basin of attraction of their own inferior institutions and thus face a malignant feedback loop that leads them continually back to natural state principles. The threat of violence hinders investment, especially economic integration across groups likely to fight if violence breaks out; but the lack of economic integration means a low cost of violence.

6. The Violence Trap II

In this section, we argue that the violence trap described in the previous section is the root of all development traps. Thus, economic development, defined in terms of income per capita, and political development, defined in terms of perpetual and inclusive order, cannot be separated.

Violence as the root of all traps

Most models of development or poverty traps focus on economic development and seek to explain how economic actors can be stuck in Pareto-inferior equilibria. The typical reasoning hinges on increasing returns of various sorts and the associated coordination problems they pose.

Our view is that most and perhaps all of the coordination problems highlighted by the array of purely economic models could be solved, sometimes straightforwardly, by an effective government. Indeed, coordination through government is precisely how today's developed countries solved these problems, when they were developing. The root problem is thus the inability of the government to undertake the policies that help extricate the economy from its inferior equilibrium. To illustrate our position and highlight the

difference between our approach to development and that in the previous literature, consider two examples.

First, Kremer (1993) provides a model in which the return to education depends heavily on collaborating with other educated colleagues. The economy can be stuck in the low-education equilibrium because no single individual has an incentive to invest in education without assurance that enough others will also invest.

In principle, an effective government could solve this problem by establishing universal public education, coupled with an elite training program in which some minimum number of students would be enrolled and training costs would be paid for by student loans and future surtaxes. If the problem of education were purely economic, then it would be easily solved. Governments in 19th century Great Britain and the United States, for example, initiated programs that resulted in widespread education. Because governments can, in principle, solve this type of coordination problem, the real problem underlying an “education trap” must be that governments are unable to provide effective public education.

Second, consider the following “credit trap.” “[T]he poor lack collateral almost by definition; as a result they are credit constrained. Credit constraints in turn restrict participation by the poor in activities with substantial set up costs, as well as those needing large amounts of working capital. For the poor, then, the range of feasible income-generating activities is reduced. Thus, the vicious circle of poverty: Income determines wealth and low wealth restricts collateral” (Azariadis and Stachurski 2005, pp. 350-1).

This is a common and plausible argument. Yet, effective micro-loan programs can in principle be built in developing countries. That they are so scarce, and come mostly from international agencies rather than domestic governments, suggests again that the root of the problem is not simply that the poor lack access to credit. Rather, it is that governments lack the motivation or means to improve the poor's access to credit.

The reason that so many governments fail to provide the policies that help overcome purely economic traps, such as education and credit access, is that such policies worsen the problem of violence.¹⁰ As impersonal policies, universal education and micro-lending programs contradict the logic of the natural state in multiple ways. First, both violate the proportionality principle; they require the government to expend scarce fiscal resources on a wide range of people who have little violence potential. These policies thus siphon scarce resources away from policies and privileges that induce those with high violence potential to cooperate. Second, these policies provide tools and resources to those outside of the current regime and its supporters, potentially allowing new groups to threaten the regime's rents or, more fundamentally, its existence.

Because these policies increase the likelihood of violence and regime change, political leaders seek to avoid them. When nominal programs are put in place, the money often goes elsewhere.

¹⁰ A similar argument holds for the thesis that poor countries cannot develop because they lack capital. Sachs (2005), for example, argues that poor countries need massive aid to end poverty. How did today's developed countries raise capital at an earlier stage in their development? Those countries earlier in the processes often borrowed money to invest from the countries later in the process. But sustained investment to promote development requires that investors have a strong reason to believe that they would earn a return and not have their capital expropriated. Regular shocks to natural states, however, make it very difficult for them to make the commitments needed to attract such capital.

Our argument, therefore, is that the problem of violence is the root of all economic development traps. There are many levels at which the problem of violence can be solved, ranging from the Hobbesian war of all against all, to the ideal of perpetual and inclusive order with which we began. As a natural state moves up this hierarchy, governments become more capable and more economic development traps can be overcome. Yet, the path up the hierarchy does not consist of a series of small steps. Instead, moving from the design principles of a natural state to that of an open access order often requires simultaneous and large reforms on a number of fronts—introducing impersonal commitments, opening access and reducing rents.

Moreover, the mixture of simultaneous reforms needed to make the transition touches on the military sphere (domestic disarmament), the economic sphere (economic specialization, freedom to form economic organizations), and the political sphere (freedom to form political organizations). Among other things, this means that political and economic development are mutually reinforcing or complementary: economic specialization enhances domestic peace; but domestic peace promotes specialization.

Adam Smith observed that specialization was limited by the extent of the market. We would add that the extent of the market is in part a political decision. At the national level, the policy of mercantilism sought to isolate the national economy, making it self-sufficient in as many key markets as possible, in order to allow the nation to wage war on its enemies without suffering economic dislocation. In terms of our analysis, mercantilism sought to reduce the endogenous, economic cost of fighting other nations.

Our emphasis has been on the use of specialization to increase the economic cost of fighting within the nation.

7. Conclusion

We have argued that a violence trap underpins the various development traps, both economic and political, described in the literature. We started with a simple rationalist model of (domestic) war, in which two polar kinds of state could in principle establish domestic tranquility, depending on the cost of warfare.

First, if the costs of domestic strife are relatively low, then suppressing violence requires that actors with significant violence potential be given rents, which (a) implies that limits on access to economic and political opportunities must be erected and (b) creates incentives for insiders to exchange personal commitments to deter intra-regime conflicts. In other words, if the costs of domestic war are low, then keeping the peace entails building what North, Wallis and Weingast (2009) call a natural state.

Second, if the costs of domestic strife are prohibitive, then neither rents nor limits nor personal commitments are needed to keep the peace. This suggests that open access orders—ideally with no rents, no limits and impersonal commitments—can emerge when the costs of fighting are prohibitive. Moreover, we argue that such states are uniquely capable of sustaining the economic conditions which keep the costs of fighting high.

Given these two institutional equilibria, with very different means for establishing order, we have asked why natural states do not reform, turning themselves into open access orders? Our answer is that they are caught in a violence trap.

The first part of the violence trap is that natural states lack adaptive efficiency. Their key structural features—the allocation of rents among insiders, the imposition of limits on outsiders, and the negotiation of personal commitments among insiders—are not robust to shocks (Rodrik 2000). Indeed, by worsening actors' abilities to make credible commitments and ensuring intractably asymmetric information across actors, they promote bargaining failure after shocks that alter the balance of domestic power. Thus, while natural states can be very stable in static environments, they are prone to violence in dynamic environments.

The second part of the violence trap is that natural states are unable to reform, even in the aftermath of bouts of internal violence that might motivate a search for constitutional reforms that can establish a more durable peace. In our account, the reason for this inability is that there are increasing returns in investing in domestic disarmament and economic specialization; yet such investments are essential for raising the costs of domestic fighting enough to allow political reforms that reduce insiders' rents and relax the limits placed on outsiders. Thus, political reform requires economic progress (in the form of Smithian specialization), while economic progress requires political reform.

In our view, economic development and political development are inextricably intertwined, two sides of the same coin. Most of the previous political economy literature

has analyzed how different political institutions affect economic performance (e.g., North 1990; Rodrik, Subramanian, and Trebbi 2004; Acemoglu and Robinson 2011). Here, we have emphasized the opposite direction of causality: how different kinds of economic orders – and the extent of specialization they sustain – determine the cost of domestic conflict and hence the nature of the problem of violence that political institutions must solve.

Recognizing the dual political-economic nature of development helps explain a number of puzzles of development. First, it explains why—contra Huntington (1968,1-2)—the Soviet Union and the United States were never equally developed. Although each provided an orderly society, the USSR never allowed its citizens to participate freely in either the economy or the polity, leading to its stagnation and, eventually, a tumultuous change of regime under the pressure of global competition.

Second, it explains why the various purely economic development traps highlighted in the literature (and surveyed in Azariadis and Stachurski 2005) can exist. All of these traps could be straightforwardly eluded, simply by organizing large enough investments of the appropriate kind. Thus, the problem is not the increasing returns in any particular economic area; rather, it is the underlying inability of the state to reform so that it can undertake the appropriate coordinating actions.

Third, it deepens our understanding of incumbents' resistance to reform. Most theories of such resistance, such as North (1981), Acemoglu and Robinson (2006b) and Fernandez and Rodrik (1991), essentially take the political structure as exogenously given, showing how resistance then follows. We endogenize both political structure and

resistance, explaining how leader after leader emerges in natural states with the same economic and existential fears regarding political reform, despite its well-documented potential benefits.

References

- Acemoglu, Daron. 2006. *An Introduction to Modern Growth Theory*. Princeton: Princeton University Press.
- Acemoglu, Daron, and James A. Robinson. 2006a. *Economic Origins of Dictatorship and Democracy*. Cambridge: Cambridge University Press.
- Acemoglu, Daron, and James A. Robinson. 2006b. Economic Backwardness in Political Perspective," *American Political Science Review*. 100: 115-131
- Acemoglu, Daron, and James A. Robinson. 2012. *Why Nations Fail*.
- Alesina, A., et al. 1996. "Political instability and economic growth." *Journal of Economic Growth* 1:189–211.
- Angell, Norman. 1913 [1911]. *The Great Illusion: A Study of the Relation of Military Power to National Advantage*. London: G.P. Putnam's Sons.
- Azariadis, Costas, and John Stachurski. 2005. "Poverty Traps." Handbook of Economic Growth, Volume 1A. Edited by Philippe Aghion and Steven N. Durlauf.
- Bates, Robert H. 2001. *Prosperity & Violence: The Political Economy of Development*. New York: W.W. Norton.
- Besley, Timothy and Torsten Persson. 2011. *Pillars of Prosperity*. Princeton: Princeton University Press.
- Bueno de Mesquita, et al. 2003. *The Logic of Political Survival*. Cambridge, MA: M.I.T. Press.
- Collier, Paul. 2007. *The Bottom Billion: Why the Poorest Countries Are Failing and What Can Be Done About It*. Oxford: Oxford University Press.

- Cox, Gary W., and Barry R. Weingast. 2012. "Horizontal accountability and economic growth." Working Paper, Hoover Institution, Stanford University.
- Dickson, P., and J. Sperling, "War Finance: 1689-1715" in *The New Cambridge Modern History*, vol VI (1970).
- Ekelund, Robert B., Jr., and Robert D. Tollison. 1997. *Politicized Economies: Monarchy, Monopoly, and Mercantilism*. College Station: Texas A&M Press.
- Fearon, James D. 1995. "Rationalist Explanations for War." *International Organization* 49: 379-414.
- Fernandez, Raquel, and Dani Rodrik. 1991. "Resistance to Reform: Status Quo Bias in the Presence of individual-Specific Uncertainty," *American Economic Review* 91: 1146-55.
- Fisman, Raymond. 2001. "Estimating the Value of Political Connections." *American Economic Review*. 91: 1095-1102.
- Gartzke, Erik. 2007. "The Capitalist Peace." *American Journal of Political Science* 51:166-191.
- Goemans, Hein, Krisitan Gleditsch, and Giacomo Chiozza. 2009. "Introducing *Archigos*: A Data Set of Political Leaders." *Journal of Peace Research* 46: 269-83.
- Grossman, Gene M., and Elhanan Helpman. 2001. *Special Interest Politics*. Cambridge: M.I.T. Press.
- Harrington, James. 1992[1656]. *The Commonwealth of Oceana*. Cambridge: Cambridge University Press.
- Huntington, Samuel P. 1968. *Political Order in Changing Societies*. New Haven: Yale University Press.
- Londregan, John B., and Keith T. Poole. 1990. "Poverty, the Coup Trap, and the Seizure of Executive Power." *World Politics* 32:151-83.
- Moore, Barrington. 1966 *The Social Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World*. Boston: Beacon Press.
- North, Douglass C. 1981. *Structure and Change in Economic History*. New York: W.W. Norton.

- North, Douglass C. 1990. *Institutions, Institutional Change, and Economic Performance*. New York: Cambridge University Press.
- North, Douglass C. 2005. *Understanding the Process of Economic Change*. Princeton: Princeton University Press.
- North, Douglass C., John Joseph Wallis, and Barry R. Weingast. 2009. *Violence and Social Orders: A Conceptual Framework for Understanding Recorded Human History*. Cambridge: Cambridge University Press.
- Pierson, Paul. 2000. "Increasing Returns, Path Dependence and the Study of Politics." *American Political Science Review* 94(2):251-67.
- Powell, Robert. 1999. *In the Shadow of Power: States and Strategies in International Politics*. Princeton: Princeton University Press
- Rodrik, Dani. 1999. "Where did all the Growth Go? External Shocks, Social Conflict and Growth Collapses." *J. of Economic Growth*. 4: 385-412.
- Rodrik, Dani., A. Subramanian, and F. Trebbi. 2004. "Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development" *Journal of Economic Growth* 9(2): 131-65.
- Smith, Adam. 1776 [1981]. *An Inquiry into the Nature and Causes of The Wealth of Nations*. R.H. Campbell, A.S. Skinner, and W.B. Todd, eds., Indianapolis: Liberty Fund
- Sylla, Richard. 2002. "Financial Systems and Economic Modernization" *The Journal of Economic History*, 62(2): 277-92.
- Weede, Erich. *Economic Development, Social Order, and World Politics*. Boulder, CO: Lynne Rienner.
- Weingast, Barry R. 2010. "Why Developing Countries Prove So Resistant to the Rule of Law," in James J. Heckman, Robert L. Nelson, and Lee Cabatingan, eds., *Global Perspectives on the Rule of Law*. New York: Routledge, Taylor & Francis Group.