The Causes and Consequences of Development Clusters: State Capacity, Peace and Income*

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Abstract

Three important aspects of development – per-capita income, state capabilities, and (the absence of) political violence – are correlated with each other at the country level. The paper discusses the causes of such development clusters and highlight two explanations: common economic, political and social drivers, and complementarities (two way positive feedbacks). It also draws out preliminary policy implications of these patterns of development, and proposes topics for further research.

Keywords: income per capita, state capacity, political violence

1 Introduction

Most studies of economic development deal with the causes and consequences of the vast differences in average material living standards across countries. Despite years of academic and policy focus, the raw income differences make salutary reading. In 2011, for example, the ratio of Luxemburg's GDP per capita to Liberia's exceeds 160, according to the Penn World Tables (PWT 8.0, series CGDP^e). The question why some countries are rich, while others are poor remains a central question not only in economics, but also in other social sciences, every bit as much as when Adam Smith wrote the *Wealth of Nations* a quarter of a millennium ago.

Here, we emphasize the correlation of income and two other important development outcomes. First, poor countries are often plagued by violence, including government repression and civil war, in the wake of internal conflicts of interest. Second, poor countries tend to have limited state capacities, which make them ineffective in raising revenues, supporting markets and providing public goods that lie behind advances in human development. At the other end of the spectrum, we see countries that have not only high income but also working institutions, policies in good order, and peaceful resolution of conflicts. The focus on a multidimensional concept allies us with influential commentators on the nature of development – such as Myrdal (1974) and Sen (1987) – who have long cautioned against taking an excessively one-dimensional perspective.

Figure 1 – State Capacity, Violence and Income – about here

The close correlation of development outcomes is clearly illustrated in Figure 1, which plots an index of three dimensions of state capacity (explained in Section 2[1]) against an index of peace (i.e. the absence of violence) defined over the prevalence of repression and civil war between 1975 and 2006.[2] The

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[1] The measure is an equally weighted sum of the three dimensions of state capacity.

[2] This is measured by two sources of data. For repression, we use the Political Terror Scale based on reporting by *Amnesty International* as available on http://www.politicalterrorscale.org/. We measure terror on the fve point scale used there. Civil war is measured as in the UCDP/PRIO Armed Coflict Dataset version 4-2007, 1946-2006, as a discrete variable for each country-year observation. The peace index in coutry i is then:

$$1 - (0.5) \times repress_i - civilwar_i$$

where: $repress_i$ is the average terror scale score (normalized to lie in $\{0, 1\}$) measured

observations are differentiated by income, which we represent by terciles of GDP per capita.[3]

Why do we see this clustering between income levels, state capacities and violence? A priori, it is plausible that: (i) income is both a cause and a consequence of violence and state capacities, (ii) violence and state capacity cause each other, and (iii) the correlations reflect common background variables. Therefore, isolating a specific unidirectional channel of causation – by a well-designed theory or empirical strategy – can only shed partial light on the complete picture. To explain the clustering of good or bad outcomes, we need an approach that ties the three dimensions of development together. In this paper, we discuss such an approach, building on our recent and ongoing research (the former is summarized in Besley and Persson, 2011a). This approach emphasizes the need to study *common factors* which shape a range of development outcomes, and to understand *complementarities* (positive two-way feedbacks) between different performance dimensions. To get at both these elements, we put the incentives to *invest* in state capacity and violence – and how these are shaped by existing economic, political and social conditions – at center stage. The approach we describe provides an analytical window on the common concept of a "fragile state", a graphic illustration of multidimensional cases of ill-being and a target for many specialized programs of development assistance.

To situate our approach in the literature, we now briefly relate it to existing approaches that aim at understanding income levels, state capacities, and violence.

Approaches to income differences Solow (1956) started the modern work on economic growth, with many subsequent additions (see e.g., Aghion and Howitt,1998). This approach attributes persistent income differences to technology. In particular, endogenous growth models show how technology reflects incentives for R&D or adoption, which in turn depend on the policy environment. Lewis (1954) framed economic development in terms of misallocation, stressing reallocation of resources towards more productive uses.

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as the average for the country between *in non-civil war years*; *civilwar$_i$* is the average number of years in civil war between; both indexes are computed over the period 1975-2006. This way, a completely peaceful country receives a score of 1, a completely repressed country, a score of 0.5 and a country in full-time civil war a score of 0.

[3]We divide the sample of countries into three equal-sized groups based on their GDP per capita in 2000 according to the Penn World Tables.

Many successors emphasize how various transactions costs may inhibit this process, and how policy could overcome these obstacles (see, e.g., Stiglitz, 1988). Thus, both the Solow and the Lewis traditions suggest that failures to achieve growth and development are ultimately due to policy failures.

One possible reason for poor policies is that policymakers do not have the relevant knowledge. Observers of the East Asian miracle, like Amsden (1992) and Wade (1990), suggested that more should be learned about the policy successes in "developmental states". But it may be difficult to import precise policy knowledge from policy trajectories in another country. This is reflected in the new branch of development economics, which seeks more reliable knowledge through micro-level program evaluation by randomized-control-trials (RCT) – see Banerjee and Duflo (2011). Such knowledge might serve as a catalyst for a better policy environment. Yet, little is known about to scale up successful programs and consider the consequences of externalities and general-equilibrium effects.

Another possible reason for poor policies is that the state has the relevant knowledge, but lacks the will to choose good policies. Bauer (1972) was an early critic of development policy along these lines. His criticism dovetails with approaches that relate poor policy to institutional failures. North and Thomas (1973) and North and Weingast (1989) started this discussion with analyses of historical experiences, Bates (1981) applied a similar logic to post-colonial Africa, while a more recent approach in this tradition can be found in Acemoglu and Robinson (2012). A common idea in this approach is that weak investment incentives in the private economy reflect bad institutions, especially to limit the extractive power of the state.

In our approach, governments may have enough knowledge about good policies and the will to implement them, but still lack the ability – i.e., the state capacity – to carry them out. Political institutions still play a key role as a driver of state-capacity investments. A willing government can pursue better policies to reduce resource misallocation and spur technological change, provided it has invested enough in the state's capacity to support markets and raise revenue. With knowledge about which policies best deliver public goods, a willing government can implement them if it has invested enough in the capacity to raise revenue.

Approaches to state capacity   Many debates in development have touched upon state capacity, but it is only recently that economists have focused on

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it. For example, traditional normative public finance hardly ever touch upon lacking administrative infrastructure as important constraints on the taxes that governments can raise or the public goods they can deliver.[4]

The lack of attention to the role of state capacity by economists contrasts with other social scientists. Many political and economic historians see the state's capacity to raise revenue as an important phenomenon in itself. Moreover, they link this capacity to thirsts for military success and regard it as a key determinant of the successful development of nation states (see, e.g., Hintze 1906, Tilly, 1975, 1985, or Brewer, 1989). Dincecco (2011) is a more recent account of the fiscal history of early modern Europe which emphasizes the same themes as in this paper. However, on the whole, historians have not systematically explored how the states's capacity to raise taxes relates to its capacity to support markets by the legal system or its capacity to augment markets by a public-goods delivery system.[5]

Political scientists such as Levi (1988) and Migdal (1988) have also emphasized that many developing countries too weak states and hence lack the capacity to raise revenue and govern effectively. Development scholars, such as Herbst (2000), hypothesize that some African countries would have stronger states if external wars had been more frequent on the continent.

Our approach underlines how military needs could provide a motive to build the power to tax. However, what we offer is more than a formalization of old ideas. Our concept of state capacity – like the view of development that we are suggesting – has multiple dimensions. In addition, we emphasize the complementarities between these dimensions, as well as the complementarity between state capacity and income. Thus, a government willing to invest in market support is also willing to invest in revenue-raising capacity, and as better market support raises income, this further strengthens the motives to invest in the state.

Approaches to political violence By now, both political scientists and economists have worked extensively on the causes of civil war. An empirical literature has progressed from mainly cross-sectional inference to panel-data

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[4]Howevere, see early theoretical and empirical work by Cukierman, Edwards, and Tabellini (1992) on how the use of seigniorage depends on the efficiency of the tax system, and how the strategic choice of the latter depends on factors like political stability and polarization.

[5]However, Strayer (1970) stresses the building of fiscal and judicial institutions in the early development of European states.

studies, which exploit within-country variation – see the survey by Blattman and Miguel (2009). A largely independent literature, surveyed in Davenport (2007), has explored the determinants of government repression and violations of human rights. The main focus in both strands is to explore empirical regularities, in some cases searching for credibly exogenous variation. But the links between theory and evidence on violence are limited. In fact, the two surveys both lament that so few studies forge links between theory and data.[6]

A clear pattern in the data is the strong correlation between civil war and low income levels. This is commonly seen as a relation from income to civil war, with two leading interpretations – Collier and Hoeffler (2004) argue that it reflects a low opportunity cost of fighting at low income, while Fearon and Laitin (2003) argue that it reflects low-income countries having poorer state capacity. Most of the empirical work takes income as given. In a broad perspective, this is problematic, however, since violence and income may well have common determinants. For example, one view on the "resource curse" is that resource dependence may cause low income and growth, another is that resource dependence may cause civil war. On top of this, realized civil wars are likely to exert a negative impact on income.[7]

Our approach to three-dimensional development clusters embeds the analysis of political violence in a wider setting. First, it sees government repression and civil war as alternative outcomes, but the two have the same underlying determinants. Second, it allows for two-way feedbacks between income and political violence. Finally, it probes for an "equilibrium correlation" by considering the effect of the same economic, political and social forces on the investments in state capacity and political violence, and by allowing the political instability generated by political violence to affect the investments in state capacity.

Roadmap The remainder of the paper is organized as follows. The next section discusses the scope of state capacity and the logic of state-capacity

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[6]There are certainly exceptions, however, such as Dal Bó and Dal Bó (2006) and Fearon (2008)

[7]See Collier (1999) for a discussion of the effects of civil war on income and Skaperdas (2011) for a more general overview of the various losses due to civil war. Recent work, starting with Miguel, Satyanath and Sergenti (2004), addressed the reverse-causality problem by isolating *exogenous* variation in income, e.g, instrumenting income growth with weather shocks.

investment. We discuss how common factors shape investments in different functions of the state. This highlights complementarities between different state capacities, and positive feedbacks between state capacity and income. Section 3 discusses the forces that shape political violence. Following our emphasis on common factors, we relate the factors that shape violence to those that shape state capacity, and per our emphasis on complementarities, we discuss the two-way feedbacks between income and (absence of) violence. Section 4 puts these pieces together to illustrate two forces behind developments clusters: (i) some drivers of state capacity and (absence of) violence are common, and (ii) there are two-way positive feedbacks between each pair among income, state capacity and peacefulness. Section 5 discusses some policy implications, while Section 6 suggests topics for further research.

2 State Capacity

We use the concept of state capacity to stand for a range of capabilities that are needed for the state to function effectively. State capacity is not fixed but accumulated over time, sometimes through one-off reforms with long-lived consequences. However, it may also share features with physical capital stocks and depreciate without periodic replacement investments. In this section, we discuss the scope of state capacity, as well as the factors that shape it.

2.1 The Scope of State Capacity

State capacities sit somewhere between policies and political institutions. Institutions in the sense of North (1990) – namely rules of the game that (formally and informally) shape social interactions – help shape the incentives to build state capacity. But the same institutions may independently shape the other central outcomes of development clusters: political violence and income. In fact, this is an important point in our overall argument. As the phrase suggests, state capacity constrains the set of policies a government can implement – e.g., a working income tax requires investment in infrastructure for monitoring and compliance. Actually, the term was coined by the historical sociologist, Charles Tilly, to describe the power to tax.[8] But one can think about state capacity in a wider domain.

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[8]See, for example, Tilly (1990).

Dimensions of state capacity   We are interested in investments that contribute to three key functions of government.

The first is to *support markets*, in various dimensions. One is to secure private property rights to ownership of physical and human assets. Abolition of slavery was primarily enforced by government actions, to establish free labor supply. Creation of secure titles to land and other assets is another important dimension of market support. Similarly, introduction of anti-discrimination policies widen trading opportunities. In all these cases, policies of effective market support require a series of costly and durable investments. For example, public land and property registries have to be built, functioning court systems require trained officials and a number of courts on top of written statutes, and so on. We use the term "legal capacity" as a catch-all for this dimension of state capacity.

The second function is to *augment markets*, mostly by supplying under-provided public goods. But policies to limit inequality also belong, as do paternalistic policies to counter imperfect individual decisions. Stretching the concept further still, regulation of externalities also augment markets. As effective market support, effective market augmentation depends requires investments. Running an effective public health system requires significant investments in delivery, trained personnel, structures, and equipment. Thus, the state's ability to turn resources into public goods and services depends on its "collective capacity".

The third function is to *raise revenue.* Most government activities require revenues from a tax system with the power to enforce payment of statutory taxes. This must be underpinned by recruiting and training of tax inspectors and investing in systems of monitoring and compliance. As incomes go up – in a country over time, or in a cross-section of countries – governments use more broad-based taxes on labor, capital and value added (see Besley and Persson, 2013), displacing more easily collected border taxes and seigniorage. We use "fiscal capacity" for those investments that support the collection of taxes, especially broad-based taxes.

Figure 2 Legal, Collective and Fiscal Capacity about here

Figure 2 shows measures of fiscal capacity (the share of income taxes in total revenue in 1999 as measured by Baunsgaard and Keen, 2005), legal capacity (the World Bank's Doing Business index on contract enforcement as measured in 2006) and collective capacity (based on school attainment and

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life expectancy in 1999[9]). It illustrates clearly that the three state capacities are positively correlated with each other, although not perfectly so. This covariation suggests that they are likely to be determined by similar factors. The figure also illustrates a clear correlation with income per capita in the year 2000.

2.2   The Logic of State Capacity Investments

Building state capacities can be thought of as an investment problem. We first examine some abstract features of this problem, recognizing that we risk losing contact with specific examples.

Preliminaries   Assume, as a starting point, that a state exists with an established monopoly over market support, market augmentation, and revenue collection, even though it took time for most states to exert this monopoly. We focus on state capacity investments by a unitary state, but bring up the issues that arise for decentralized states in the concluding section. Think about a standard capital investment problem, where costs today must be weighed against benefits tomorrow by the relevant decision makers. However, as state capacities are property of the state, modeling state-capacity investment means modeling collective choice. This raises two questions: (i) How are choices made at a point in time in a polity with different interest groups? and (ii) How does the prospective replacement of the present decision maker affect intertemporal choice?

Before getting to the problems of collective choice, we discuss how state-capacity investments might be chosen by a single benevolent dictator. While this is unrealistic, it highlights a number of drivers. It also gives a clear benchmark, which makes us see more clearly which additional drivers stem from collective decisions.

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[9]This is essentially the UN's "Human Development Index" without income per capita. For each indicator and country i sample of countries $\mathcal{C}$, we measure:

$$\frac{x_i - \min\left\{x_j\right\}_{j \in \mathcal{C}}}{\max\left\{x_j\right\}_{j \in \mathcal{C}} - \min\left\{x_j\right\}_{j \in \mathcal{C}}}.$$

We weight the two measures equally to create a single index on $[0, 1]$. The school attainment data are from Barro and Lee's data, while the life expectancy data are from the World Development Indicators.

A normative benchmark The standard benevolent-dictator model of public investment follows the classic account of Arrow and Kurz (1970). As the dictator is *benevolent,* her objective aggregates the payoffs of all groups in society. This can be done in many ways, beyond the Utilitarian objective used in many applications. What is needed is an intertemporally consistent method of preference aggregation – a social welfare function which is used to value investments.

State capacities affect individual payoffs only indirectly. To have a return, an investment in state capacity must expand the set of feasible policies, so as to permit higher consumption of private or public goods. If properly measured, these benefits are reflected in national income.[10] Optimal state-capacity investments for a social planner equate the future expected marginal benefits (spread over a number of time periods) with the present marginal cost of foregone consumption as measured by the shadow price of public funds. The optimality condition therefore resembles a standard Euler equation. State-capacity investments thus have a standard cost-benefit interpretation (see e.g., Dreze and Stern, 1987). In this sense, state-capacity investments are similar to other public investments: they should be targeted towards the highest social return.

Complementarities This benchmark approach generates two sources of complementarity, which are central to understanding the link between state capacity building and economic development.

Two-way feedbacks between state capacity and income The social-planner problem sheds light on the link between economic growth and state capacity. The typical growth process involves higher incomes as well as structural change, e.g., by extending the domain of markets. Higher income will provide a natural boost to investments in some kinds of state capacity. Citizens may demand more intensively goods best produced by the state, creating higher returns to investing in collective capacity and fiscal capacity. Larger prospective tax bases also mean that a given investment in fiscal capacity tax generates larger revenues. Thus, the marginal return to such investment may increase. Higher returns to fiscal capacity investment also arise with greater formal-sector employment and a higher proportion of em-

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[10]We ignore the well-known fact that this is not always the case (see e.g., Atkinson, 2005)

ployment in large and easier-taxed firms, particularly when investments in third-party reporting are made (see Kleven et al, 2009). Moreover, greater use of financial markets provides a more transparent basis on which to tax corporate income and to monitor the firm for tax purposes (see Gordon and Li, 2009). Higher educational attainment – a cause and consequence of growth – means that specialized training may raise state capacity in all its forms. Structural change expanding markets will not only increase the ability to tax, but also the demand for legal capacity. This is particularly true in more contract intensive sectors such as financial intermediation. In sum, there are multiple sources of two-way positive feedbacks between income and state capacity.

Feedbacks between forms of state capacity The planner problem also illustrates the complementarities between different forms of state capacity. Besley and Persson (2009) make the argument for legal and fiscal capacity. Suppose a government contemplates an investment to encourage participation in the formal labor market: in a low-income country, this may be a legal framework supporting the formal sector. Such legal-capacity investment is more attractive after a fiscal-capacity investment raising the effective tax rate on labor – it now yields additional tax revenues, which can be used for lower tax rates or more collective consumption. But the complementarity runs both ways. The legal-capacity investment supporting formal-sector employment encourages a fiscal-capacity investment that improves labor-income tax compliance, since the broader tax base implies more revenues. Such complementarities can explain why governments make simultaneous investments in different state functions. But they also suggest that project-by-project, cost-benefit appraisal of individual state-capacity investments could seriously understate their benefits.

Natural resources and aid The normative benchmark also illustrates a first common determinant of state capacity. Governments often have access to revenue from sources other than taxation. Ownership of natural resources is an important case in point. International aid is another important example in many poor countries. Such public revenues are likely to substitute for fiscal capacity, which diminishes fiscal-capacity investments and spills over to other aspects of state building due to complementarities between fiscal capacity and collective or legal capacity. Resource and aid dependence may

also have a direct effect on legal-capacity building, as such income sources typically do not require the development of an effective market economy. So we would expect highly resource intensive economies to have lower levels of state capacity, all else equal.

Legal Origins   The importance of legal origins in influencing a range of outcomes has been emphasized by La Porta et al (2008). An approach emphasizing investments in state capacity can make sense of these findings. Legal origins may have a direct impact on costs for building capacity with some kinds of underlying legal codes being more supportive of certain kinds of legal capacity. The presence of complementarities with other state capacities would lead to spillovers into other spheres of state action. Moreover, any direct effects on activity and development, e.g. through the development of financial markets, will indirectly boost the incentives to invest in state capacity. Thus legal origins may be a second common determinant of state capacity.

Collective decision making   How policies are chosen by multiple decision makers with competing interests is *the* bread-and-butter issue in political economics. Some models in the literature effectively boil down the aggregation of diverse preferences into something like a problem for a single decision-maker – e.g., a median voter, whose identity does not change over time. However, such models of politics are limited in scope: in general, the map from interests to policy decisions depends on the structure of political institutions in place. For example, there are systematic differences in policy outcomes across proportional representation and majoritarian electoral systems, as well as across parliamentary and presidential forms of government (Persson and Tabellini, 2003). This suggests that institutions do matter for preference aggregation and policy-making. We now explore the consequences of this for state capacity building.

Cohesive political institutions   The way political institutions aggregate preferences and distribute political power is an important determinant of state-capacity investments. Besley and Persson (2009, 2011a) develop a particular view of the mechanics. They consider a specific, but important, policy cleavage: how state revenue is split between broad-based and narrowly targeted programs. In their stylized model of politics, this decision is made

without commitment by policymakers who just maximize the interests of their group. Absent any institutionalized constraints on executive behavior, this favors overspending on narrow programs targeted to the special interests of the ruling group. Classic examples would include spending on tertiary education by a wealthy and well-educated ruling elite, or public programs targeted to the home region of the ruling group. However, executive power could be constrained by institutional forces: an electoral system inducing the ruling group to gain wider appeal to be (re)elected, rules for legislative decision-making inducing executives to seek broad agreements, or an independent judiciary enforcing rules for minority protection. Transparent decision-making, supported by free media, might also make it harder to get away with narrowly focused uses of political power.

Besley and Persson (2011a) call political institutions that induce greater spending on common-interest public goods "cohesive". Such institutions may also support common-interests in other ways. For example, they may ensure that property rights are extended broadly to all citizens, without discrimination against groups not directly represented in the winning coalition. More cohesive institutions create a stronger general interest to invest in an effective state. Less cohesive institutions allow the state to be run more in the interest of a narrow segment of the population, which weakens the motive to improve the core functions of revenue collection, market augmentation and market support. Nevertheless, governing groups in such states may decide to invest in state capacities to the extent that these support the ruling group's specific ambitions.

Cohesive political institutions are an important common driver of different state capacities as they encourage all three forms of state capacity. Moreover, legal capacity will also support economic development and hence higher income through improving investment incentives, specialization and the scope of the market.

Common interests   A similar logic explains why underlying political cleavages can shape the incentives to invest in state capacity. For any level of institutional cohesiveness, it will be harder to agree on common-interest use of the state when society's cleavages run deeper. Thus, the approach predicts that polities with stronger common interests invest more in the state, all else equal.

A leading historical example is the presence of external threats, which

promote a common demand for a strong defence. For example, Britain's state-capacity developments have been closely linked to the need to prepare for war and to pursue naval hegemony given its empire-building. Even though Britain was ruled by an elite at the time, it helped to create a sense of common-purpose among them. Common interests are also likely to be stronger in the absence of ethnic or religious polarization. Since these cleavages are often the result of geography and/or history these become indirect determinants of state-building motives.

Political stability   Another important feature of political systems is that a ruling group might have a more or less secure hold on power. Historically, hereditary authority often allocated political power, especially in monarchies, whereas elections often allocate political power in modern political systems. Thus, expected political turnover reflects the political institutions in place.

How does expected political turnover affect state capacity? One first-order effect comes via the discounting by incumbent politicians of the value of state-capacity investments. Plausibly, investments are more valuable to an incumbent group that expects to continue its hold on power rather than being ousted. As incumbency brings greater control rights over policy, a wider set of policies is most valuable when a group can control their use. This suggest a positive link between political stability and state-capacity investments, as emphasized in Besley and Persson (2010). However, there is also an important interaction with the cohesiveness of institutions. An incumbent government constrained by cohesive institutions has more circumscribed control rights, and can therefore tolerate higher expected political turnover without compromising the incentive to invest. High political instability is therefore likely to damage state-capacity investment the most when political institutions are noncohesive.

2.3   The Bottom Line

Typology: three types of state   Drawing on the arguments in this section, Besley and Persson (2011a) suggest that three stylized forms of state can emerge based on incentives to invest in state capacity. Even though no actual state fits perfectly with any of these forms, the typology provides a useful way of summarizing the logic of state-capacity investment.

Common Interest States Revenue is spent for the benefit of all groups in society e.g., on public goods, broad-based transfer programs and as defense against external threats. Political institutions are sufficiently cohesive, with strong constraints on the executive, to drive outcomes close to the normative benchmark. These institutions constrain the political power of incumbents, which gives them strong incentives to invest in state capacity with long-term benefits knowing that future rulers will continue to govern in the collective interest. Common interest states tend to have effective systems of revenue collection with broad-based taxation, strong collective provision using universal programs for health, education and retirement. They also have legal and regulatory systems which provide the foundations for a strong market economy. While common-interest states are heterogenous, they are concentrated in western Europe and North America.

Special Interest States Special-interest (or redistributive) states are run to favor a ruling group which is weakly constrained by political institutions. However, its rule is entrenched with high political stability. Investments in state structures primarily serve the interests of the ruling group, albeit with a possible motive to pacify its citizens. But this limits the domain of the state and makes the motives to invest in state capacity weaker than in common-interest states, all else equal. Special-interest states too are heterogeneous, and include oil rich states such as Kuwait or Saudi Arabia, but also some one-party autocracies such as China. In these cases, the ruling elite is well-entrenched and able to take a long-term view. In special-interest states, rulers use the state as the key vehicle for promoting their own power base. Thus, special-interest states can have a focus on rasing income levels, when this suits the interests of the ruling elite.

Weak States Like special-interest states, weak states have weak constraints on the ruling group. But unlike special-interest states, they have political instability. This gives very weak incentives for incumbent groups to invest in state capacity. Thus, the abilities to raise revenue and serve the collective needs of the citizens remain subdued. Weak states also suffer from legal institutions with poorly developed property rights and lack of market support. Some rulers may choose to by-pass the state entirely and build predatory institutions outside of state structures. This further weakens incentives to invest in state capacity. Weak states are found in places like

Afghanistan, Haiti, and Congo and, to varying degrees, among other African countries.

Graphical Summary Figure 3 graphically summarizes the argument in this section in a simple flow chart, which focuses on investments in fiscal and legal capacity. The chart illustrates the two-way positive feedbacks between state capacity and income. Moreover, it shows that the two forms of state capacity have a set of common determinants, due to the complementarities between them. One is economic structure: e.g., the importance of non-tax incomes in the form of natural resource rents or international development assistance. Another is social structure: e.g., the cleavages in society over ethnicity or religion, as forged by geography and history. Yet another is political structure: e.g., the cohesiveness of political institutions, political stability, and – importantly – the interactions between the two.

Figure 3 Determinants of State Capacity about here

3   Political Violence

Whether in offensive or defensive mode, violence is close to the heart of the state. But – setting aside the historical work on state capacity – it is only recently that violence has been integrated into our understanding of state behavior, institutions and development.

A free-standing literature on civil conflict has emerged in political science and economics. This has identified some important empirical regularities: civil war is more prevalent where there is greater poverty and less cohesive political institutions. The correlation with poverty is one aspect of development clusters. But establishing the direction of causality remains a difficult problem, even though some progress have been made on it. In common with our approach to state capacity, we find it useful to think of a two-way feedback loop between income and violence.

Civil war is only one manifestation of political violence. Many states achieve apparent peace only by engaging in one-sided violence against their citizens, for example, by locking up opposition groups and stamping out protest. In such cases, we see repression rather than civil war.

The literatures on civil war and repression run largely in parallel but, as we argue in this section, the two forms of violence may really be viewed as two

sides of the same coin. Over the post-war period, repression has generally declined when civil war has been on the rise. Looking across countries, repression without civil war takes generally takes place in a higher range of the world income distribution than does civil war. These regularities are illustrated in Figure 4.[11]

Figure 4 Civil War and Repression about here

3.1 The Logic of Political Violence

Violence and the state   The vast literatures on civil war and repression are surveyed by Blattman and Miguel (2009) and by Davenport (2007), respectively. In line with our overall goal of understanding the forces behind development clusters, we do not discuss the detailed findings here. Instead, we focus on the prospective common drivers to political violence and weak state institutions and on the two-way relation with income. This approach suggests important parallels between the state's capacity for violence and its other capacities. We have already remarked that external warfare and national defence may be key drivers of fiscal capacity. But the use of violence may also be important in securing power internally. Historically, coercion and repression, rather than the victory via the ballot box, was the main method for incumbents to sustain their political power. Violence may not be monopolized by the state, however. Civil wars clearly illustrate how some groups may be motivated enough to capture the state – or achieve autonomy – that they make their own investments in violence.

Investments in violence   Investments in violence can usefully be thought of as forward-looking and strategic. The simplest way to model them is as the Nash equilibrium outcome of a simultaneous-move game, where investments affect the probability of holding political power (see Besley and Persson, 2011c). The outcome from fighting can be modeled by a conflict function which have been widely used in rent-seeking and conflict models (see, e.g., Garkinkel and Skaperdas, 2007). This function maps the resources vested in fighting into the probability of victory for one party, so the expected benefit

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[11]The civil war indicator comes from the PRIO/Uppsala data base. Here, we measure repression as equal to one if there is a positive value for a given country-year of the "Purges" variable in Banks (2005). This variable is available for much longer than the political terror scale used in Figure 1.

from investing derives from the higher probability of capturing the state. Each group chooses its equilibrium investment in violence at a point in time – given how much the other group is investing – by optimally trading off the cost of investment against its effect on the probability of holding political power times the expected benefit of holding political power.

3.2   The Bottom Line

Three states of violence   This simple approach based on the logic of costs and benefits is useful for articulating the forces that shape the use of violence. It seems natural to suppose that the state has some kind of innate advantage in fighting due to its access to resources and/or the machinery of government. If this is the case, three outcomes are possible:

   Peace   This is an equilibrium where neither the government nor any opposition group chooses to invest in violence. Peace is the outcome when the benefits to capturing the state are small relative to the cost of fighting. It is more likely when political institutions are cohesive, since this reduces the policy bias across incumbent and opposition and hence the benefits to fighting. It may also reflect the absence of important cross-cutting cleavages along religious or ethnic lines. Moreover, higher average income increases the opportunity cost of fighting by raising wages. This is consistent with the observation that rich countries with cohesive political institutions seem to have little political violence.

   Repression   Repression is an equilibrium when the state chooses to use its comparative advantage in violence to establish and maintain its hold on power. This will tend to occur in countries with non-cohesive political institutions, but an effective military or an opposition that is relatively fragmented or poorly organized. When institutions are non-cohesive, a bigger prize in the form of more valuable natural resources or a large flow of (cash) aid can also increase the likelihood of repression.

   Civil war   When more than one group, including the government, takes to violence we get an equilibrium with civil war. This may be because the benefits of capturing the state are even higher than in the repressive state.

It may also reflect an opposition that is better organized, or has access to income from natural resources or outside military assistance.

This discussion suggests two very different flavours of domestic "peace". Countries with latent conflict are at peace only because the incumbent regime is dominant and represses any nascent opposition. This is far from the alternative system with peaceful transitions of power, where the state does not use its apparatus to influence political outcomes. Citizens in many Arab countries lived under repressive regimes before the Arab spring. The question now is whether the alternative to repression is peace or civil war. In Syria, repression has given way to a bloody civil war. In Egypt, however, we saw a brief promise of peace which has now descended back into repression, in all likelihood due to the powerful military being intent on preventing civil conflict.

Graphical summary   The determinants of violence emphasized in our discussion of possible equilibria coincide with the drivers of state-capacity investments in Section 2. Of course, this is not a coincidence but a reflection of viewing both phenomena through a similar lens. Making the comparison explicitly, we see a systematic result. The economic, political, and social variables that positively affect the motives for building state capacity state tend to negatively affect the motives to engage in repression or civil war. This parallel is highlighted in Figure 5, which shows a similar flowchart to Figure 3, except that the outcomes at the center are the two forms of political violence rather than state capacity.

Figure 5 Determinants of Political Violence about here

Thus, forces that create cleavages in society are not only less conducive to state building, but also more conducive to the use of violence because they make the benefits of capturing the state greater, ceteris paribus. This includes noncohesive political institutions, and ethnic or religious social cleavages. States where large natural resource rents or aid flows are under control of the incumbent group also have higher expected returns to fighting.

In terms of feedbacks between violence and income, civil conflict is likely to have the most negative consequences for income, since such violence is uncoordinated, involving multiple parties. This will lead to the destruction of physical and human capital. In the other direction, a lower income level makes it cheaper to invest in violence via the opportunity-cost channel.

Recalling Figure 3, we can also think about feedbacks between violence and state building. Due to its effect on political instability, prospective civil war feeds into one of the drivers of state-capacity investment. This, together with the fact that such violence occurs mostly where political institutions are noncohesive, implies that a greater risk of civil war weakens the motives to invest in state capacity. So states prone to civil war are more likely to be weak states. The link to repression is more equivocal. One-sided political violence by a group, which raises its own probability of maintaining power, can increase political stability and hence provide an incentive to invest in state capacity even when institutions are noncohesive. Thus repressive outcomes tie rather naturally to the case where a special interest state emerges.

4 Types of state

Putting the pieces together Combining the approaches in the previous two sections, we can see why state capacity, violence and income may naturally cluster as in Figure 1. Figure 6 illustrates the two channels that we have highlighted throughout: common drivers and two-way feedbacks.

Figure 6 Why Development Clusters about here

The common drivers of state capacity and political violence include underlying economic factors, like resource or aid dependence, and social factors which shape demands on government policy, like the homogeneity of preferences and the commonality of interests. Also crucial are political institutions, in particular how cohesive they are and how they regulate political turnover. The two-way feedbacks concern the linkages between income and violence, income and state capacity, as well as different forms of state capacity. Such feedbacks have particular resonance with Myrdal's view of development, which emphasizes the need for a broad approach as well as one that appreciates feedback loops.[12]

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[12]By *development* I mean the *movement upward of the entire social system*, and I believe this is the only logically tenable definition. This social system encloses, besides the so-called economic factors, ... the distribution of power in society; and more generally economic, social, and political stratification; ... The dynamics of the system are determined by the fact that among all the endogenous conditions there is *circular causation*, implying that if one changes, others will change in response, and those secondary changes in their turn cause new changes all around, and so forth." (Myrdal, 1974, pp. 729-30).

Changing development paths Changes in exogenous conditions can be important triggers that put a state on a different dynamic trajectory. These could be reforms towards cohesive institutions, at what Acemoglu and Robinson (2012) refer to as "critical junctures". Besley, Persson and Reynal-Querol (2013) show theoretically and empirically how such reforms can come about after the death of an entrenched leader since this can change the incentives to create cohesive institutions by creating greater political instability. Changes in geopolitical conditions that alter the nature of military threats could also have far-reaching consequences. The experiences of South Korea, Taiwan or Finland would be hard to explain without reference to the specific threats that they faced from the 1950s onwards. They parallel the forces unleashed by military rivalries between European states in an earlier period which created an existential threat to many polities. Such threats and rivalries can put a lid on domestic conflicts and this, in turn, can create a spur of growth which feeds back further onto state building and peace.

The Anna Karenina matrix The underlying nature of the state shapes how violence is contained or manifested, as well as incentives to create and maintain specific state capacities. In Besley and Persson (2011a), we suggest a matrix of possible outcomes, based on the three-way classifications of states in Section 2 and of political violence in Section 3. We call this the "Anna-Karenina matrix" in honor of the first sentence in the Tolstoy novel that "all happy families resemble each other; each unhappy family is unhappy in its own way". Our approach emphasizes the common features of successful economies and the states that have evolved to support them. The upper right corner of this Anna-Karenina matrix highlights a key development cluster, which encompasses important aspects of what we mean by development: an absence of political violence, high public and universalistic provision of key goods and services, a strong legal framework for markets and a broad-based tax system. According to the approach we have discussed, it may be caused by strong common interests and or cohesive political institutions.

Figure 7 The Anna Karenina Matrix about here

Underdevelopment is a departure from these conditions, and the heterogeneity reflects the unhappy families in Tolstoy's apposite quote. Some apparent departures may be inconsequential. For example, the U.S. is hardly an underdeveloped state – even though it does not have a VAT or universal

health care provision, it has all other characteristics of a favorable development cluster, including one of the highest living standards in the world. Among poorer countries, a variety of different outcomes are possible. The propensity for violence, lacking conditions for market development, poor institutions for collective provision, and a lower tax take in GDP cluster with income and each other in various ways. The different outcomes, leading to a multiplicity of low-end development clusters, are particularly important to recognize when thinking about how the international community might provide development support. Failure to take this multi-dimensionality into account can easily lead to mistaken diagnoses and low returns to such assistance.

States that have failed to create even the most basic centralization of power typically fail in all dimensions. Some of the most intractable problems arise in countries such as Somalia and Afghanistan where basic law and order is still limited and private capacities for taxation, law and collective provision are arguably more important than state capacity. In such cases, the first step to build an effective state may be a decision to create a central state. However, given the cleavages and fragmentation that underpin the status quo, this is not straightforward. To different degrees, these issues pervade African states which were created out a pattern of colonial rule where nationality was super-imposed on a cultural and ethnic map. This is far from an ideal starting point for building state capacities.

5   Policy Implications

All contemporary approaches to development recognize the crucial role that effective policy can play. The one we discuss in this paper provides a distinctive perspective. In this section, we draw out some general and abstract policy implications – specific studies have to look at concrete country circumstances.

Institutional reform   Our approach is consistent with the maxim of "getting the institutional framework right". But it suggests that proponents of political reform should carefully distinguish between executive constraints and open access to power. We have argued that institutional cohesiveness is primarily achieved via executive constraints. These may be multidimensional, strengthening both judicial and parliamentary oversight, and perhaps

increasing transparency in policy making. Increases in openness, allowing a wider range of citizens to participate as candidates and voters, play quite a different role in our framework. In the absence of executive constraints, more openness could lead to greater political instability and hence weaker incentives to invest in state capacities and stronger motives for an incumbent to repress.

This perspective on the role of institutions shares the basic message of Acemoglu and Robinson (2012) that governments need to be constrained from using the state to further private interests at the cost of the public interest. However, we place less emphasis on the effects on private investment, choosing instead to focus on the dynamic consequences of institutions for investments in state capacity and political violence.

Outside policy interventions and state capacity Our approach suggests that stronger state capacities can be viewed as a direct objective of policy. This has indeed become the focus of a number of initiatives regarding "capacity building" in poor economies. But our approach points to a distinct difference between finding more effective ways of delivering public services outside the state, and doing so by changing how state structures work. The former may give better outcomes, which is certainly valuable, but does not contribute to the process of state building. This bears on the appropriate use of knowledge created in the RCTs championed by Banerjee and Duflo (2011). Without enough collective capacity, there is no guarantee that knowledge is turned into effective policy, and without enough fiscal capacity the resources to scale up programs may not be generated internally. Reaping long-run benefits may thus require complementary investments in state capacity. But in environments that lack cohesive institutions, getting this going is not straightforward. The complementarities at the heart of our approach suggest that it is difficult to view outside interventions as a set of independent events.

Outside policy interventions and political violence Our approach also gives some insight into possible consequences of outside interventions when political violence is a possibility. Aid in the form of generous direct budgetary support can encourage governments to step up their repression to hang on to the prize of staying in office. Of course, this may not be the intention of aid policy. But the dilemma faced by donors who confront countreis

where violence is prevalent is real, as illustrated by the recent history of assistance to Afghanistan or Egypt. That aid policy is influencing an equilibrium process for investments in violence and state capacity must be considered, however difficult it may be difficult to assess the empirical magnitude of such margins. Our approach certainly does not simplify the analysis of external intervention, and we do not have much empirical knowledge about such responses to aid.[13] This may explain the temptation to focus on incremental interventions which are small enough to have little impact on the state or the political equilibrium. But it is important to debate how much progress can be made without attention to the wider macro-picture.

Contingencies in development assistance   It is also important to recognize that low-end development clusters are likely to have multiple causes. Some drivers will be hard to correct, such as underlying social cleavages that reflect history and/or geography. While the legacy of colonialism may have led to an arbitrary endowment of political geography, redrawing this to encourage state building and peacefulness seems like a very remote possibility. But sometimes opportunities arise, as the split between the Slovak and Czech Republics, to engineer a more propitious starting point. The recent creation of an independent South Sudan comes with huge challenges, but the next step is to consider how one might create preconditions for an effective state.

Further, international assistance comes in many flavors and needs to be tailored to the specific circumstances, as discussed at length in Besley and Persson (2011b). A key point is that the approach discussed in this paper allows us to think about how policy-making, as well as investments in state capacity and violence, might respond to different types of assistance. Also, whether budget support, technical assistance, military aid, post-conflict support, or capacity building is the most effective form of intervention depends on the type of state, as the preconditions are very different in the different cells of the Anna-Karenina matrix. While we remain far from settled knowledge, this may still be a promising approach to think about the macro aspects of development assistance.

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[13]See, however, Nunn and Qian (2013) on the effect of US food aid on civil conflict.

6 Further Research

This article has focused on an approach to better understand the clustering of income, state capacity and the absence of political violence, where purposeful investments in state building and violence are at center stage. This research agenda that we have discussed is at a preliminary stage. While the picture it paints may be seductive, much knowledge is missing on many different components.

Some of the missing knowledge is conceptual. In some contexts – by design or circumstance – there are multiple investors in state capacity rather than the single government monopoly we have assumed. Historically, centralized states emerged gradually from diffused local power structures, which more closely resembled protection rackets with private tribute, where legal capacity was inherent in customary law and practice, and collective capacity had little organized provision of public goods. Such conditions still prevail in some low-end development clusters. Multiple investors in state capacity can also be inherent in government design. One important topic is to study state capacity investment in federal states where different functions constrained by state capacity are decentralized, perhaps to different degrees, such that pervasive complementarities are not necessarily present. And negative spillovers across boundaries, for example when building fiscal capacity, can be an issue.

Another issue concerns the role of NGOs. Some NGOs directly provide public services, sometimes relying on the collective capacity of outside governments or international organizations. This could act as a substitute for indigenous state capacity, which may weaken the host country's incentives for building it. It is important to analyze the longer-run incentives created by frequent, albeit well-intentioned, external intervention based on sound humanitarian logic. Some forms of NGO activity can be geared towards a better functioning state. Providing better knowledge and/or technical expertise is a case in point, which can raise common interests in society. Some NGOs also try to monitor government behavior, e.g., in the resource sector. This can potentially complement efforts to build cohesive institutions. The role of external organizations in improving state capacity is thus an important area for further investigation.

The approach also poses new challenges for measurement and empirical work. For example, little is known about how far specific forms of investment in state capacities have measurable returns, and how the investments themselves can best be measured. Better measurement is also necessary for an

empirical understanding of what drives state capacities. While we can learn a certain amount from differences in institutions, it is not straightforward to turn this into causal evidence on drivers of state capacity, violence or income. Institutions affect the economy in different ways, making it hard to isolate specific mechanisms. Finally, we have stressed some concrete policy margins on which interventions may have an impact. But it is more difficult to come to grips with the empirical magnitudes of complementarities, feedback loops and the equilibrium responses of investments in violence and state capacity, especially when observed reforms are small-scale and specific. Most likely this will best be done by a mixture of estimation and calibration. Such an approach would also have the potential to provide a better join between micro and macro research on development.

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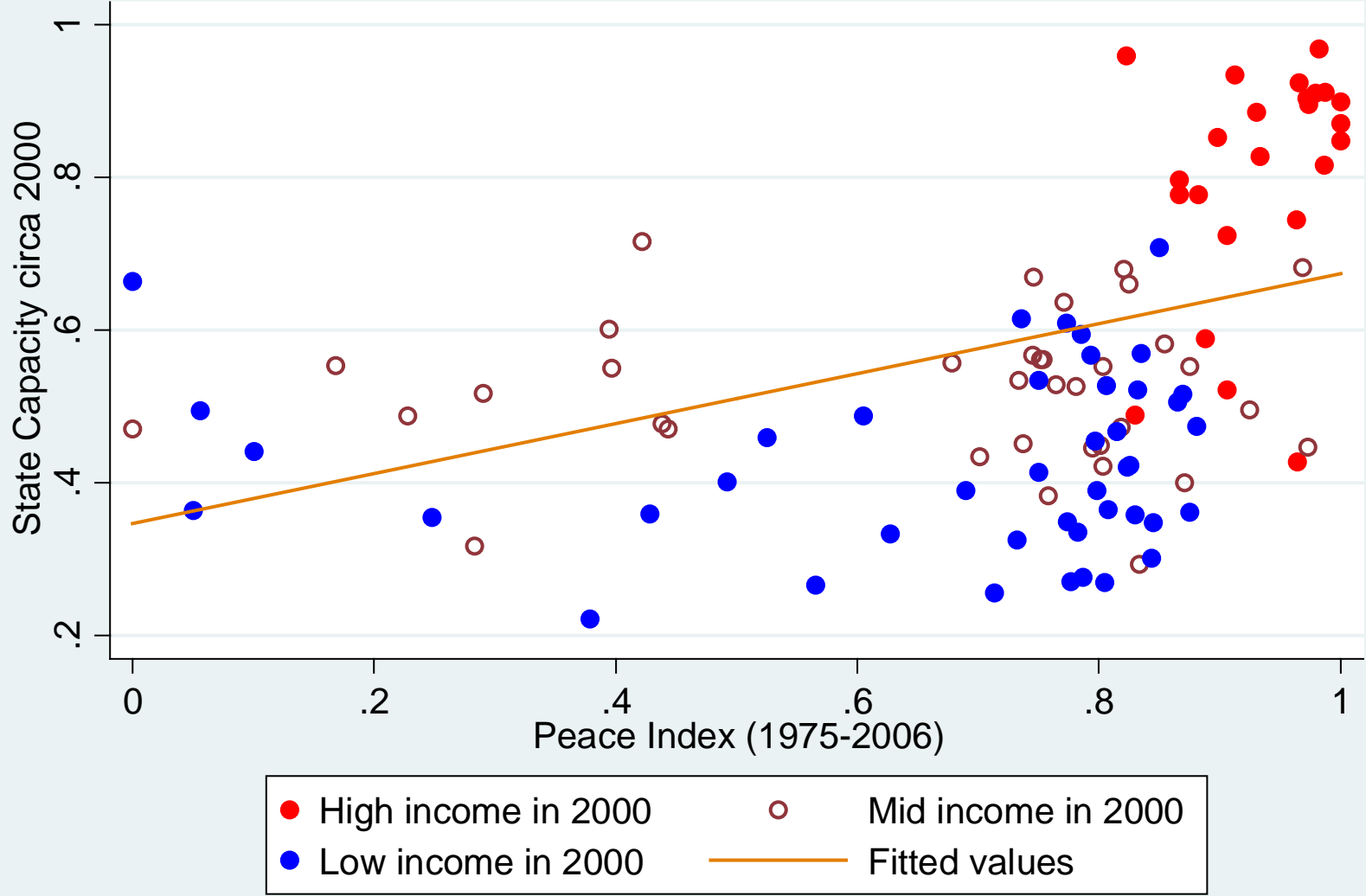
Figure 1: State Capacity, Peace and Income
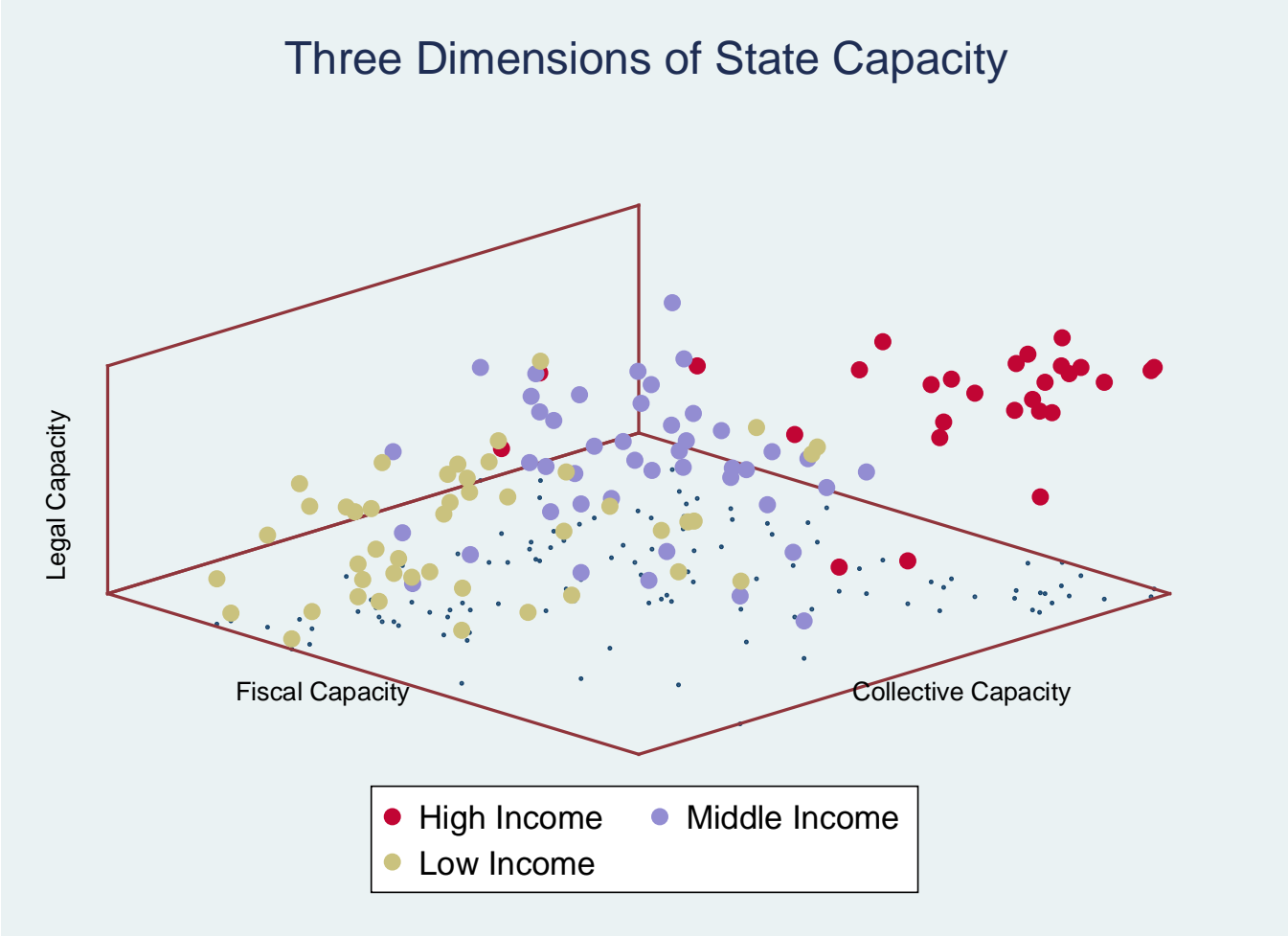
Figure 2: Three Dimensions of State Capacity

Three Dimensions of State Capacity

Legal Capacity

Fiscal Capacity

Collective Capacity

- High Income
- Middle Income
- Low Income

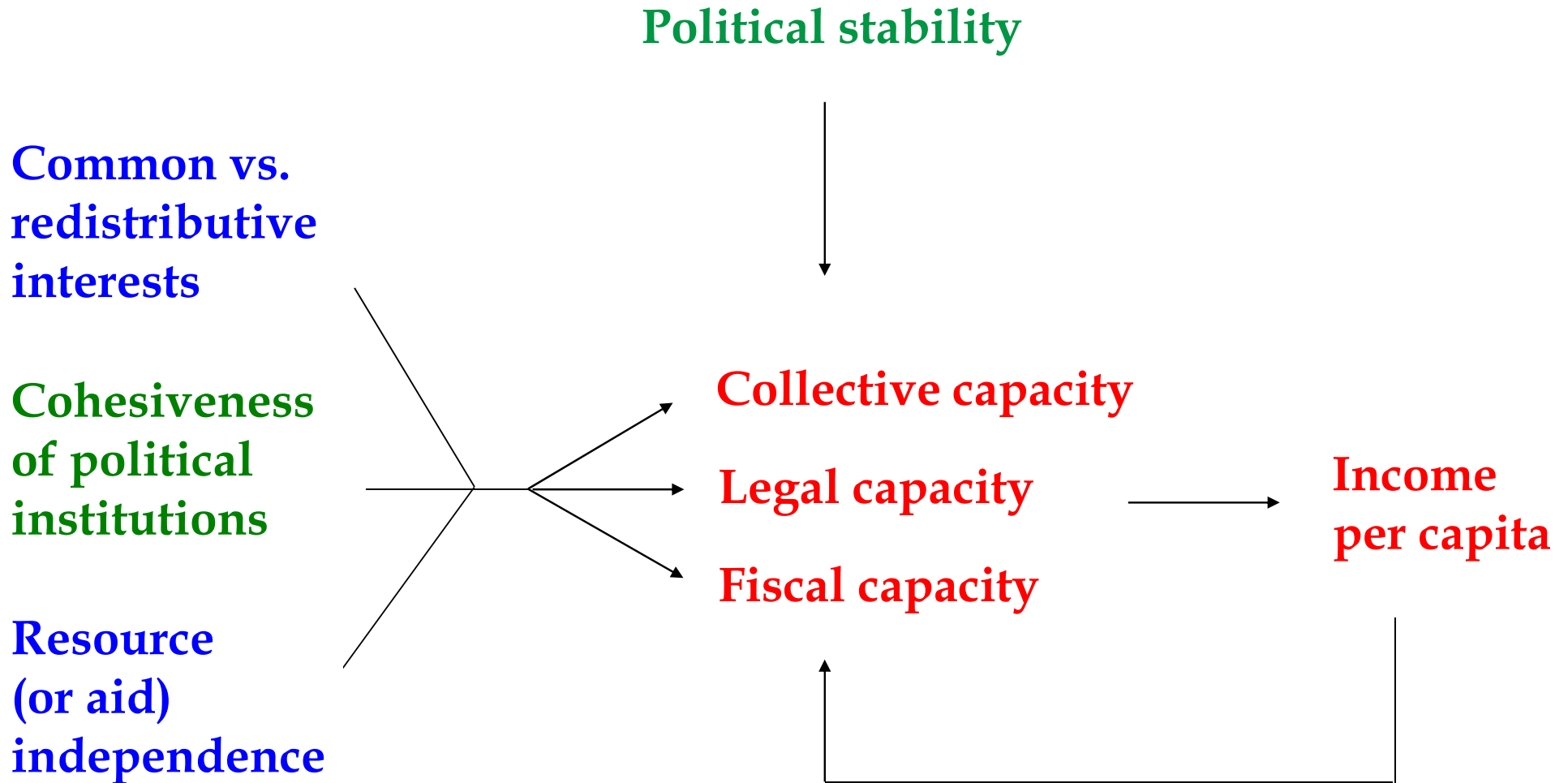Figure 3 What determines different types of state capacity and why do they vary together?

Figure 4 Prevalence of civil war and repression over time and countries
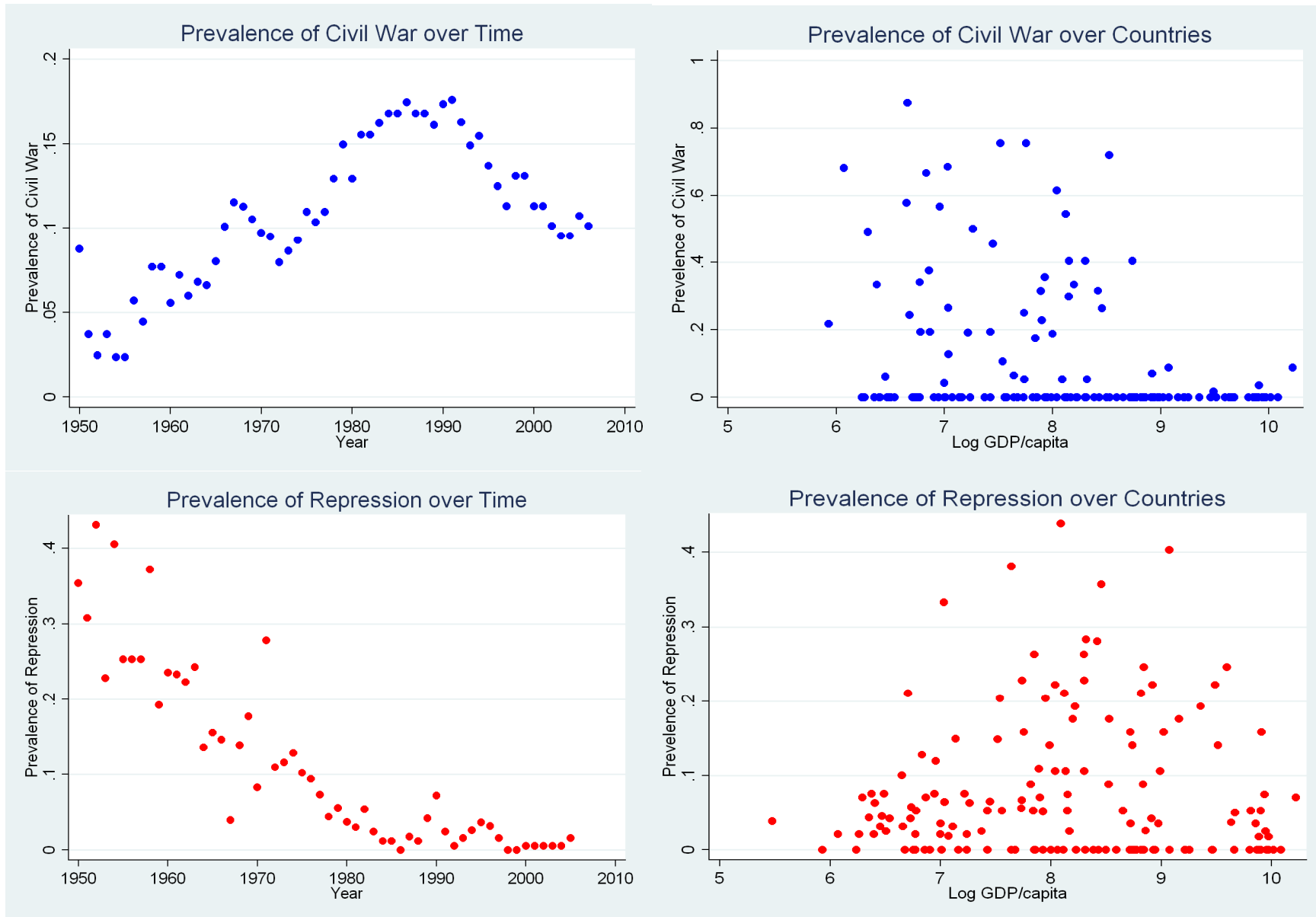
Figure 5 What forces drive different forms of political violence ?

Common vs. redistributive interests

Cohesiveness of political institutions

Resource or (cash) aid independence

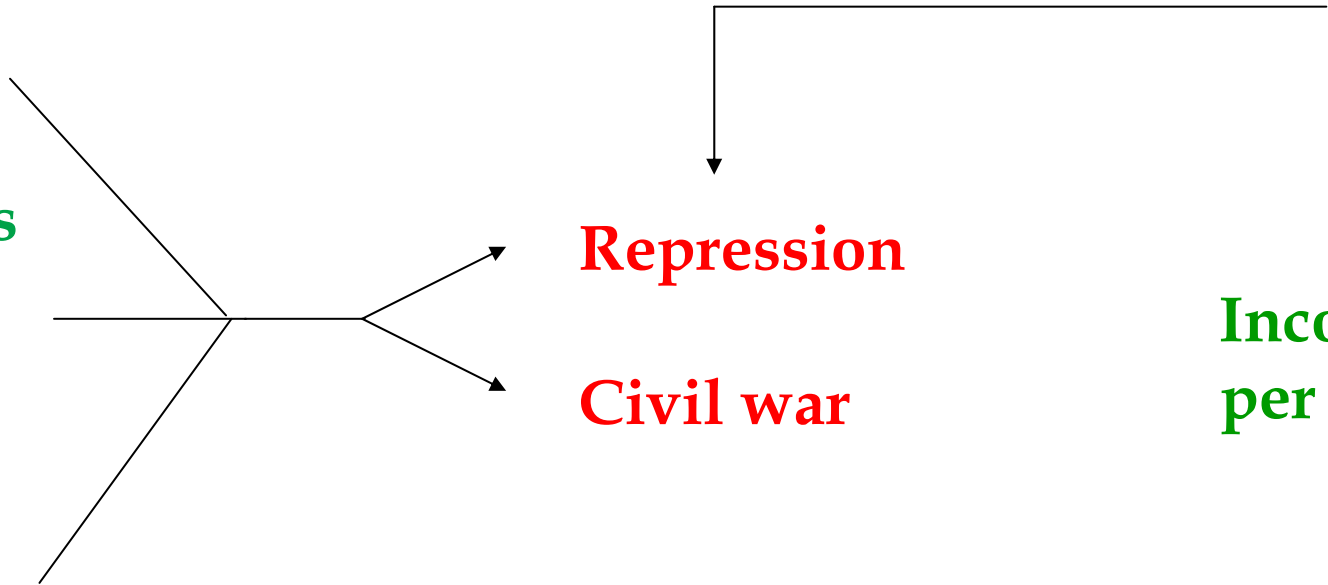**Repression**

Civil war

Income per capita

Figure 6 What explains the clustering of state capacity, violence and income ?

Common vs. redistributive interests

Cohesiveness of political institutions

Resource or (cash) aid independence

Repression
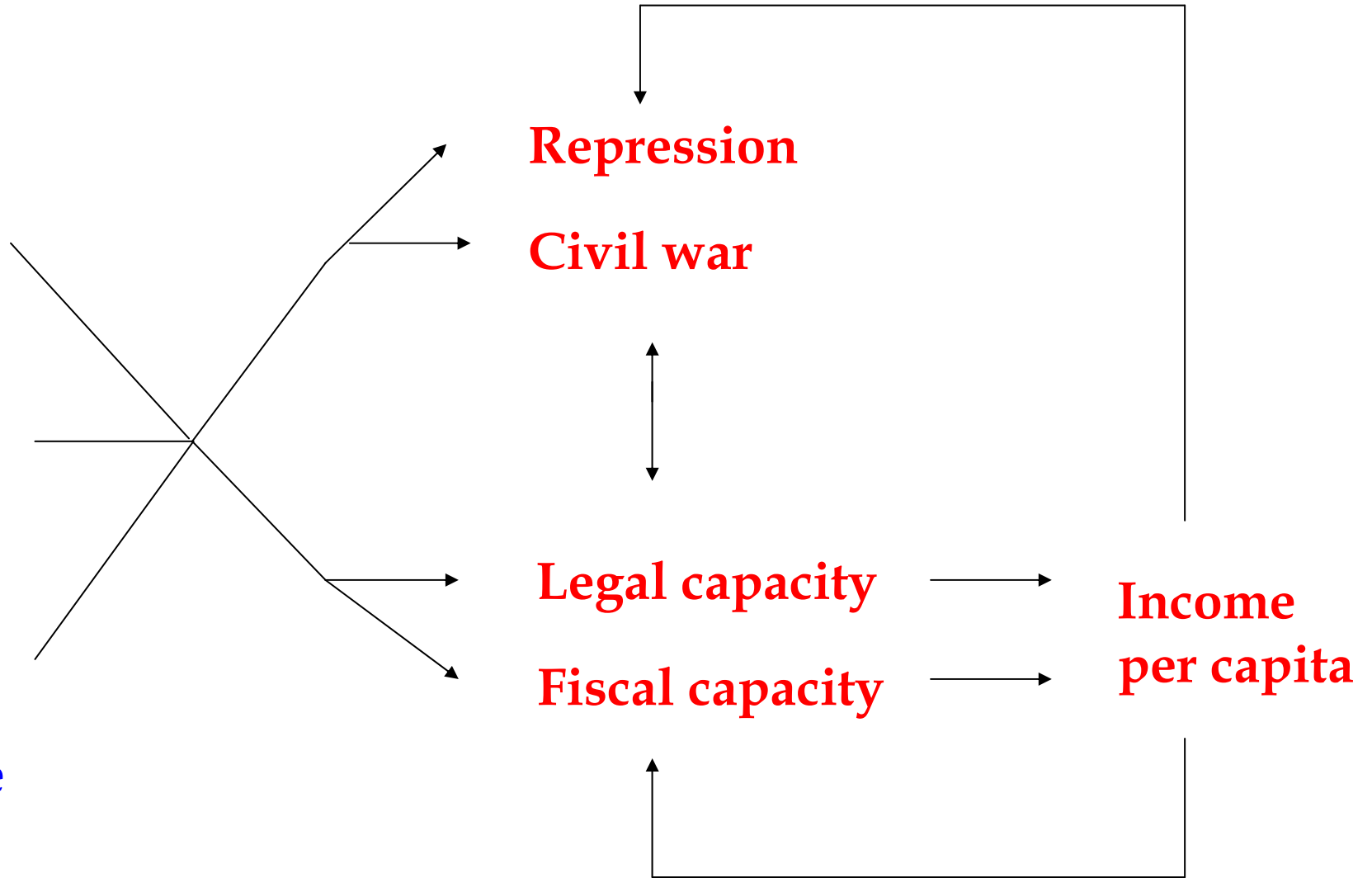
Civil war

Legal capacity

Fiscal capacity

Income per capita

Figure 7 The Anna Karenina Matrix

	Weak	Special-interest	Common-interest
Peace	weak common interests non-cohesive institutions high military effectiveness poorly-organized opposition	strong common interests non-cohesive institutions low natural turnover	strong common interests cohesive institutions
Repression	weak common interests non-cohesive institutions low military effectiveness poorly-organized opposition	weak common interests non-cohesive institutions high military effectiveness poorly-organized opposition	N/A
Civil war	weak common interests non-cohesive institutions low military effectiveness well-organized opposition	weak common interests non-cohesive institutions high military effectiveness well-organized opposition	N/A