Pillars of Prosperity

The Political Economics of Development Clusters

Chapter 5: State Spaces

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Outline

The story so far

- State capacity approach
  - Chapters 2 and 3 laid out a framework where state capacities are chosen in purposive and forward-looking way
  - this highlighted the crucial role of political instability and cohesiveness of political institutions for motives to build the state
- Political violence approach
  - Chapter 4 explored political violence and its relation to income and political institutions.
- Chapter 5: puts pieces together
  - revisit investments in state capacity with endogenous political stability (turnover)
  - common determinants and feedback effects may cluster strong state capacities in rich peaceful societies, or vice versa
  - gives new perspectives on the data

Outline

Endogenous turnover

- Return to state-capacity investments
  - political-violence model endogenizes political turnover
  - structure of model gives convenient recursive structure, where violence shapes incentives only via political instability
- Assume ξ indexes the incumbents advantage in fighting:

Assumption 5.1

$-\gamma_{I\xi}\left(L^O, L^I; \xi\right) > 0$ and $\gamma_{O\xi}\left(L^O, L^I; \xi\right) < 0$.

- Equilibrium turnover
  - define the equilibrium turnover rate (using propositions 4.1 & 4.2 and the Nash equilibrium $(\hat{L}^I, \hat{L}^O)$):

$$\Gamma(Z, \nu, \xi) = \begin{cases} \gamma\left(\hat{L}^O, \hat{L}^I, \xi\right) & Z > Z^O(\theta, \nu, \xi) \\ \gamma\left(0, \hat{L}^I, \xi\right) & Z^O(\theta; \nu, \xi) \geq Z > Z^I(\theta, \lambda_1, \xi) \\ \gamma(0, 0, \xi) & Z^I(\theta, \lambda_1, \xi) \geq Z \end{cases}$$

Comparative statics of Γ

Proposition 5.1

If Assumption 4.1 and 5.1 hold, the probability that the incumbent loses office at the end of period 1 varies with (Z, ν, ξ) as follows:

1. *An increase in Z reduces the probability that the incumbent loses office when there is either repression or civil war.*
2. *An increase in ν reduces the probability that the incumbent loses office when there is civil war.*
3. *An increase in ξ reduces the probability that the incumbent loses office when there is either repression or civil war.*

Implications for investment

- State capacity problem is recursive
- Euler equations for legal and fiscal capacity become

$$\begin{aligned} y_\pi(\pi_2)[1+(E(\lambda_2;Z,\nu,\xi,\theta)-1)\tau_2] &\leq \lambda_1 \mathcal{L}_\pi(\pi_2-\pi_1) \\ \text{c.s.} \quad \pi_2-\pi_1 &\geq 0 \end{aligned}$$

$$\begin{aligned} y(\pi_2)[(E(\lambda_2;Z,\nu,\xi,\theta)-1] &\leq \lambda_1 \mathcal{F}_\tau(\tau_2-\tau_1) \\ \text{c.s.} \quad \tau_2-\tau_1 &\geq 0 \end{aligned}$$

where

$$E(\lambda_2;Z,\nu,\xi,\theta) = \phi\alpha_H + (1-\phi)E(\lambda_2|\alpha_L;Z,\nu,\xi,\theta)$$

is *expected* value of public funds with

$$E(\lambda_2 \mid \alpha_L;Z,\nu,\xi,\theta)$$
$$= \begin{cases} \alpha_L & \text{if } \alpha_L \geq 2(1-\theta) \\ 2[(1-\theta)(1-\Gamma(Z,\nu,\xi))+\theta\Gamma(Z,\nu,\xi)] & \text{otherwise} \end{cases}$$

The two conditions

Cohesiveness:

$$\alpha_L \geq 2(1-\theta).$$

- Cohesiveness condition is unaffected
  - no effect of allowing for conflict, as common-interest states are always peaceful, by Proposition 4.1.

Stability:

$$\phi\alpha_H + (1-\phi)\,2\left[\left(1-\Gamma\left(Z,\nu,\xi\right)\right)(1-\theta) + \Gamma\left(Z,\nu,\xi\right)\theta\right] \geq 1$$

- LHS increases in Z, ν, ξ, as does violence – by Propositions 4.2 and 5.1 – which drives stability and investments in the state in same direction as violence, outside peaceful state
- later on, extension with private investment
  - make things more complex: risk of civil-war (and destruction of capital) cuts private investment, spills over to state building

Role of common interests and cohesive institutions

- Parameters ϕ and θ tie things together
  - high θ /high ϕ: we see high investments in fiscal and legal capacity, as well as low violence
  - low θ /low ϕ: we see low investments in fiscal and legal capacity, as well as repression or conflict
- Opposite link within the repression and conflict regimes
  - feedback mechanism actually means that lower θ raises investment in state capacity, as it raises the incumbent's propensity to fight, which reduces expected turnover.
- The two conditions conceptually imply the same mapping into three types of states

Common-Interest State

Proposition 5.2

Suppose that Cohesiveness holds or $\phi \to 1$. Then, we have a common-interest state, where

1. *there are investments in both kinds of state capacity*
2. *an increase in ϕ increases both fiscal and legal capacity investments, whereas changes in R, ν, or ξ have no effect on investments.*

- note that by proposition 4.1, common interest states are peaceful since there is no redistribution to fight about.

Redistributive or Weak States

Proposition 5.3

Suppose that Cohesiveness fails and $\phi < 1$, but Stability holds. Then, we have a redistributive state, where

1. *there are investments in both kinds of state capacity*
2. *a higher value of ϕ increases both fiscal and legal capacity investments, as do (weakly) higher values of R, ν or ξ.*

- A strong redistributive state might go hand in hand with higher repression.
- Here the local comparative statics (in R, ν *or* ξ) in common-interest and redistributive states are different.

Proposition 5.4

When both Cohesiveness and Stability fail, the state is weak. There is no incentive at all to invest in fiscal capacity and legal-capacity investment is lower than in a common-interest or redistributive state, all else equal.

Outline

Reintroduce Private Investment

- So far the most obvious possibility was left out of the model:
  - risk of violence reduces private investment
- Proceed like chapter 3's section on private capital accumulation.
- Simplify by keeping investments in state capacity fixed.
- Based on the analysis by Collier (1999) and Goldin and Lewis (1975) make the following assumption:

Assumption 5.2

If a civil war takes place then a share $\delta < 1$ of period-2 capital is destroyed.

- There is no destruction of capital in repression.

New timing

1. We begin with initial stocks of state capacities $\{\tau_1, \pi_1\}$, a capital stock per capita of K_1 and an incumbent group I_1.
2. All citizens choose how much capital to accumulate for period 2, K.
3. Nature determines α_1 and R.
4. I_1 chooses a set of period-1 policies $\{t_1, r_1^I, r_1^O, p_1^I, p_1^O, g_1\}$, and determines (through investments) the period-2 stocks of fiscal and legal capacity $\{\tau_2, \pi_2\}$. I_1 and O_1 simultaneously invest in violence levels L^I and L^O. If a civil war erupts, capital destruction takes place.
5. I_1 remains in power with probability $1 - \Gamma(Z, \nu, \xi)$, and nature determines α_2.
6. I_2 chooses chooses period-2 policies $\{t_2, r_2^I, r_2^O, p_2^I, p_2^O, g_2\}$.

Expected Return to Capital

- As in chapter 3, assume that $\kappa(1+\pi_s) < 1$ (institutionally constrained)
  capital is incompletely deployed in the advanced sector.
- Period-2 expected private income for an individual who saves K is:

$$Y(\pi_2; K) = (\kappa(1+\pi_2)K)^{\eta}$$

- the expected net-of-tax marginal return to capital

$$(1-\tau_2)\eta[\kappa(1+\pi_2)]^{\eta}(K)^{\eta-1}\left[1-F^{O}(R-\omega_1\overline{Z}^{O})\cdot\delta\right]$$

  - where $F^{O}(R-\omega_1\overline{Z}^{O}) = \text{Prob}\left[Z > Z^{O}\right]$ is the probability of civil war.
  - the last term captures lower return on capital in case of civil war

Optimal Private Investment

- Optimality condition for group-J members:

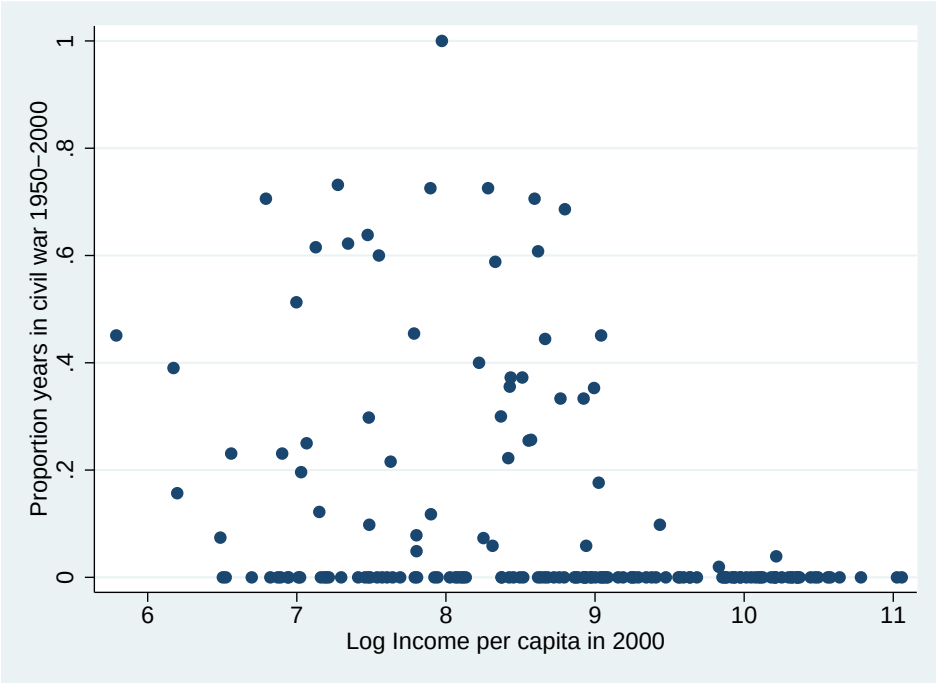
$$1 = (1 - \tau_2)\,\eta\,[\kappa\,(1 + \pi_2)]^{\eta}\left(K_2^J\right)^{\eta-1}\left[1 - F^O(R - \omega_1 \overline{Z}^O)\cdot\delta\right]$$

  - the marginal product of capital is equal to the value of foregone consumption.
  - The level of accumulation is the same for the incumbent and opposition groups.
- Investors invest less as there is a stochastic tax on capital due to likelihood of civil war.
- Taking stocks:
  - Any factor that raises risk of civil war also cuts private investment.
  - As period-2 income is increasing in capital, higher risk of civil war means lower income.
  - In weak or redistributive states, higher expected resource rents increases the chance of civil war and hence lowers investment.

Outline

Income, institutions, and conflict – Figure 5.1

- Distinct empirical patterns
  - robust correlation between low income and conflict
  - robust correlation between low state capacity and conflict
- Several theoretical interpretations possible
  - underlying parameters, such as ϕ and θ, may endogenously drive income and conflict in opposite directions
  - exogenous shocks to income may drive down the risk of conflict (by raising opportunity cost of fighting)
  - exogenous shocks to conflict propensity, via parameters such as R, ν and ξ may drive down income via lower private investment (see the extension earlier)
  - hazardous to interpret raw correlation in causal way



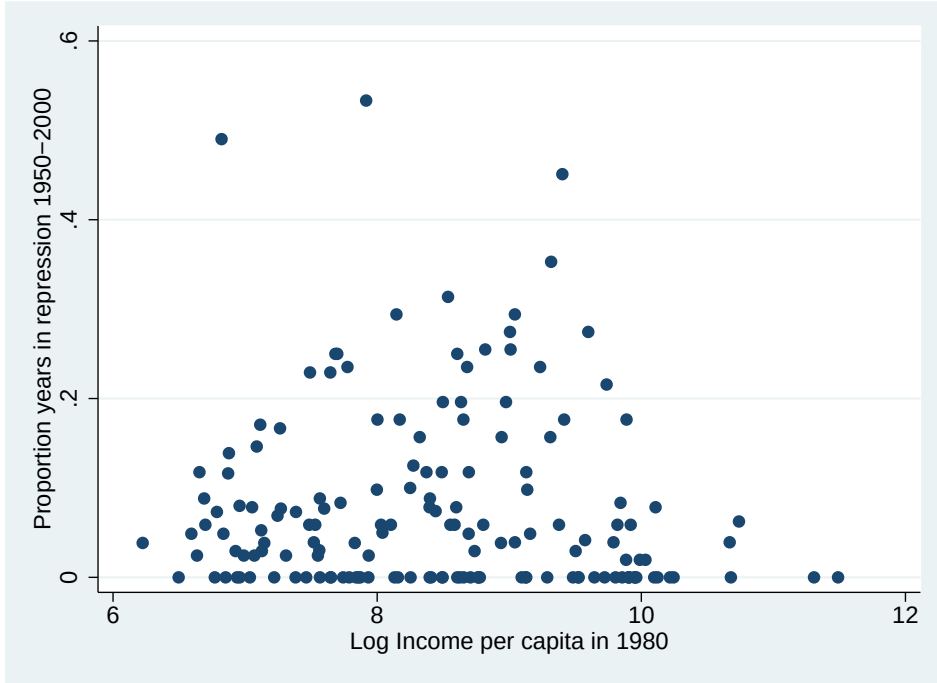


Figure 5.1 Prevalence of civil war and repression by income

Theoretical interpretations

Figures 5.3 & 5.2

- How interpret correlations between state capacity and conflict?
  - according to our framework, there are two possibilities

- (i) Raw correlations – Figure 5.2 – due to omitted θ and ϕ
  - high θ and ϕ drive high investment in state capacity, which feeds back to income; high θ and ϕ also gives low risk of violence and conflict
- (ii) Partial correlations – Figure 5.3 – due to omitted R, ν and ξ
  - given low θ and ϕ, some countries with low ν or high R more civil-war prone, and some with low ξ less repression prone
  - these factors raise γ and may cut investments in state capacity

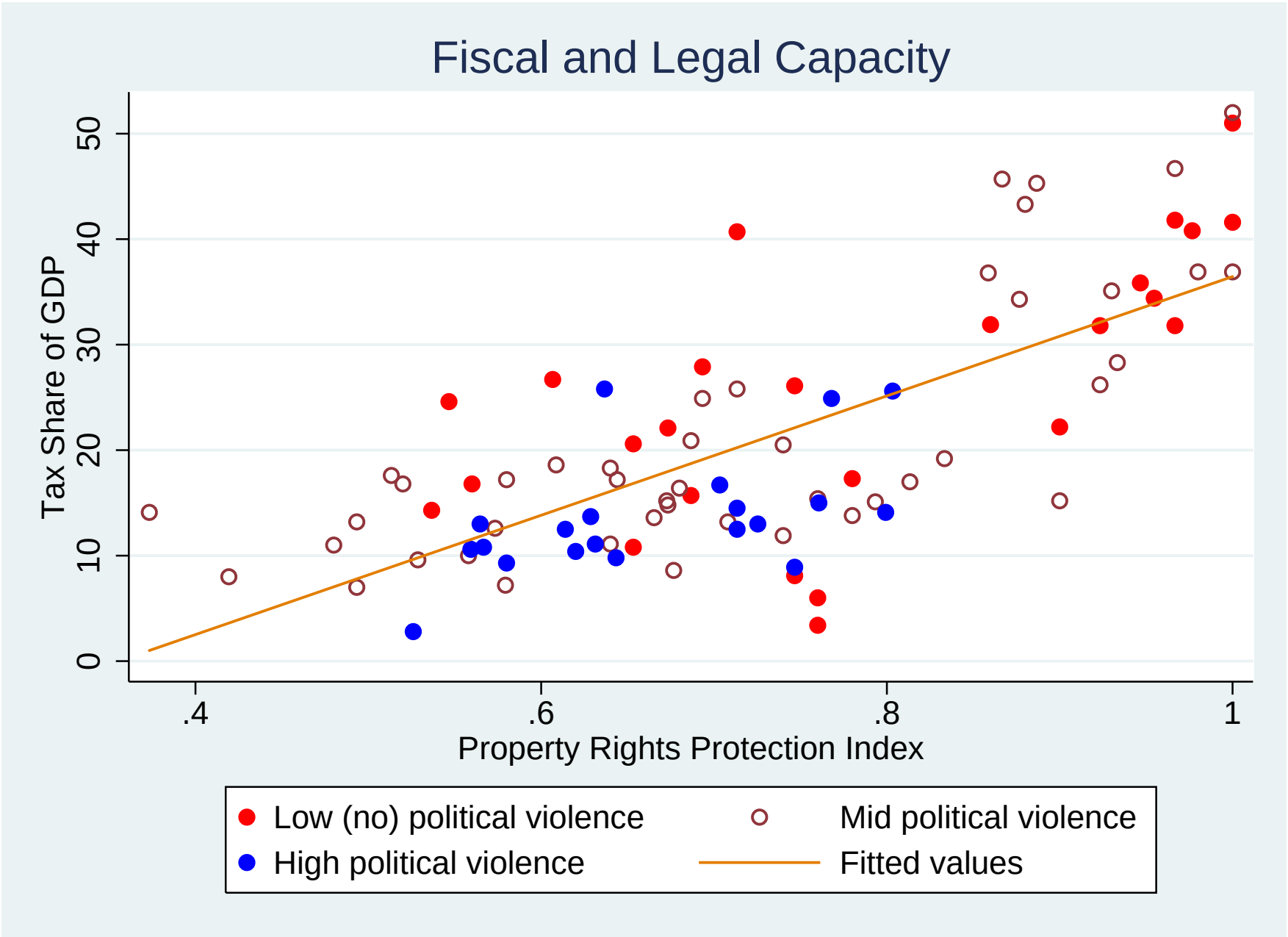
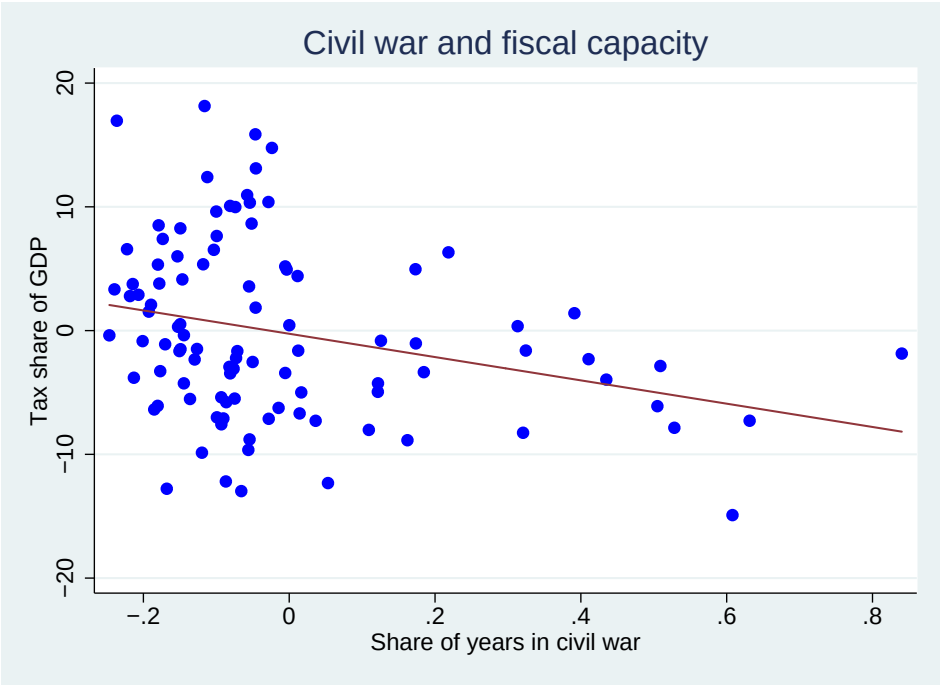


Figure 5.2 State capacity conditional on violence



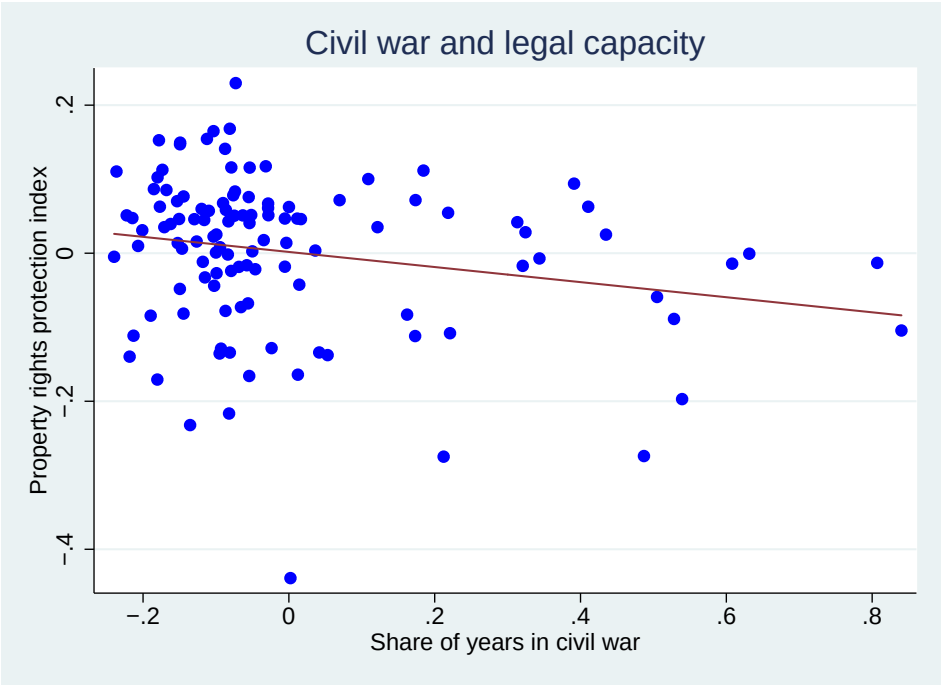


Figure 5.3 State capacity and civil war

Outline

Our state space – Table 5.1

- Put pieces together
  - combine the two typologies for types of states and violence outcomes, and their dependence on parameters in matrix form
  - reflects the joint forces of global and local comparative statics
- An *Anna Karenina* principle (cf. 1st line of Tolstoy's novel)

  "All happy families resemble each other; each unhappy family is unhappy in its own way."

Table 5.1 Our state space

- Summarize insights from our core model, so far:

	Weak	Redistributive	Common interest
Peace	low θ, ϕ, ξ, R high ν	high ϕ low θ	high θ, ϕ
Repression	low θ, ϕ, ξ, R high ν	low θ, ϕ, R high ν, ξ	n/a
Civil war	low θ, ν, ξ, ϕ high R	low θ, ϕ, ν high ξ, R	n/a