State Capacity, Conflict and Development

2010 Agnar Sandmo Lecture

Bergen, January 11

Torsten Persson, IIES, Stockholm University
http://www.iies.su.se/~perssont/
Overall motivation – Fragile or weak states

Central concept in development policy community
states incapable to maintain basic economic functions,
deliver basic services to citizens, keep law and order
countries with massive poverty...
... and high risks of internal conflict and political violence

Multidimensional problem
clustering of massive policy failure, income, and violence
number of institutions dysfunctional at the same time

Quite frequent phenomenon
perhaps 20-30 states failed or seriously weak
equally many states weak, others in risk zone
mainly in sub-Saharan Africa, south/central Asia – see Map
Report on ongoing research program

Joint work with Tim Besley (LSE)

on economics and politics of state building and conflicts, and their relation to development

two-fold goal: build new theory and uncover new evidence

Some questions

which economic and political factors determine a state’s capacity to raise revenue and support markets?

how does risk of conflict shape motives for state building?

does it matter if conflict is external or internal to the state?

in what ways may a weak, small state hamper income and economic growth?

what relations should we expect between resource rents, institutions, development, and civil wars?
Scope of lecture

Questions subject of much discussion and some research

Describe common theoretical framework to address them

give a sense of how questions are related

spell out some of main predictions of theory

highlight implications and relations to existing work

Illustrate some empirical regularities

show representative relations in the data

mention some more serious empirical tests
Focus on ideas rather than formalism

More precise argument in underlying papers

"Wars and state capacity", *Journal of European Economic Association*, May 2008

"Repression or civil war?", *American Economic Review Papers and Proceedings*, May 2009


"State capacity, conflict and development", forthcoming in *Econometrica*

"The logic of political violence", unpublished manuscript
1. Introduction

2. Origins of state capacity

3. Origins of internal conflict

4. Putting the pieces together
Motivation – Theory

State capacity to raise revenue, in political and economic history
fiscal powers important in themselves, for military success
and for state development, more generally
war major motive to build such capacity
‘war made the state and the state made war’ (Tilly, 1990)

Ignored, or implicitly assumed, in economic theory
state’s capacity to raise revenue from certain tax bases basically
assumed in public finance, development, political economics, ...
as is the capacity to support markets, e.g., to enforce contracts,
or to protect investors

Important to fill this lacuna
bring analysis of economic aspects of state capacity into
the mainstream of economics
Motivation – Data

Past investments shape today’s state capacity

if infrastructure critical, past building of fiscal and legal
capacity ‘revealed’ in current tax and market structures

Strong empirical pattern

clustering across countries: (financial) market development
and tax capacity positively correlated with each other and GDP

Throughout lecture – illustrate with two specific measures
of fiscal and legal capacity

fiscal capacity: total tax revenue as share of GDP,
average from the late 1970s onwards

legal capacity: index of protection of property rights (widely
used in academic literature), average over the 1980s and 1990s
– see Fig 1
Figure 1  State capacity and income
Theoretical framework – Main building blocks

Distinguish institutions and policy
  incumbent government’s choice of today’s taxation and regulation
  constrained by existing state capacity and political institutions

Incumbent invests in tomorrow’s state capacity
  weigh current costs against future expected benefits,
  under uncertainty about
  future use of revenue: spending on public goods – e.g.,
  defense against external military attack – vs. redistribution
  future levels of non-tax revenue, such as resource rents, aid
  future incumbency: may be replaced by opposition group

Identify major determinants
  which economic, political and institutional features
  promote building of fiscal and legal capacity?
Central complementarity result

Investment in each type of state capacity reinforces the other

if future legal capacity higher, market incomes and
tax bases higher as well, which raise the gain of investment
in fiscal capacity

if future fiscal capacity is higher, additional fiscal benefits
of investing in legal capacity and expanding market incomes

Implications

generally, conditions that raise the gains to investments in
one form of state capacity also tends to stimulate the other
determinants of legal and fiscal capacity should be common
**Prediction – Economic development**

*Countries with lower non-resource (market) income choose smaller investments in fiscal and legal capacity*

returns to both types of investment lower, because size of market and prospective tax bases are smaller

if total income given, larger income share of resource rents cuts investment in state capacity – weak states in Africa

if level of natural resource rents given, prediction is that both forms of state capacity positively correlated with GDP, with causality from income to state capacity

simple way to understand observed clustering of institutions at different levels of development – recall Fig 1
Prediction – Value of public goods (external conflict)

Lower expected value of public goods diminishes investment in both forms of state capacity

weak common interests make fiscal capacity less valuable

prediction: risk of external conflict does indeed promote capacity to tax – cf. research in economic and political history by complementarity, an auxiliary prediction: higher incentives to invest spill over to legal capacity to support markets
A look at the data – External conflict

Partial correlations: common-interest spending and state capacity?

How measure high demand for public goods?

share of years in external war from 1816/independence – now

How measure fiscal and legal capacity?

here: illustrate results for tax share and property rights index
(same variables as in Fig 1)
below: show correlations robust also for other proxies

What do we hold constant?

continental location, as well as other determinants
(see below): inclusive political institutions and legal origins

What do we find?

results consistent with theory – see Fig 2
Figure 2  External war and state capacity
Prediction – Political instability

Higher political instability diminishes investment in state capacity

incumbent sees higher risk that future fiscal capacity will
be used to redistribute away from its own group
also prediction of interaction effect: instability more important
for state capacity if political institutions less inclusive – anecdotal
historical and contemporary evidence
but here political instability taken as given; often tied to risk of
internal conflict – will return to this in 3 below.
Prediction and data – Political institutions

Less inclusive political institutions reduce investments in state capacity (unless political stability is very high)

weak minority protection bad for investment because public goods supplied in few states of the world, as redistribution becomes more extensive

prediction: more inclusive political institutions, e.g., democracy or parliamentary democracy, raise investments in state capacity

What do the data say?

measure inclusive political institutions by the incidence of parliamentary democracy since 1800/independence partial correlations, again, consistent with prediction of theory – see Fig 3
Figure 3  Parliamentary democracy and state capacity
Prediction – Costs of investments (legal origins)

Higher costs of either type of investment diminish both legal and fiscal capacity

a simple way to represent the “legal origins” hypothesis:
more costly support private markets with some legal traditions by complementarity, and less trivially, this should also spill over to willingness to invest in fiscal capacity

What do the data say?

use Shleifer et al measures of legal origin
find no systematic positive correlation for British (vs. French) legal origin, but do for German and Scandinavian legal origin
A further look at the data

Use other proxies for fiscal capacity

- share of formal (vs. informal) sector in GDP (World Bank)
- share of income taxes in total taxes (IMF)

Use other proxies for legal capacity

- private credit as share of GDP
- index for contract enforcement (World Bank)

Earlier results robust?

- yes, all measures of legal and fiscal capacity positively correlated with incidence of external conflict, incidence of democracy or parliamentary democracy, and German and Scandinavian legal origins – see Table 1
## Table 1  Economic and political determinants of state capacity across countries

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Past incidence of external conflict</td>
<td>0.604*** (0.142)</td>
<td>1.029*** (0.277)</td>
<td>0.635*** (0.122)</td>
<td>0.360*** (0.137)</td>
<td>0.437** (0.221)</td>
<td>0.325*** (0.108)</td>
</tr>
<tr>
<td>Past incidence of democracy</td>
<td>0.116 (0.081)</td>
<td>0.122** (0.052)</td>
<td>0.121** (0.057)</td>
<td>-0.087* (0.051)</td>
<td>0.028 (0.057)</td>
<td>0.041 (0.027)</td>
</tr>
<tr>
<td>Past incidence of parliamentary democracy</td>
<td>-0.024 (0.072)</td>
<td>-0.010 (0.066)</td>
<td>0.139** (0.057)</td>
<td>0.212*** (0.052)</td>
<td>0.180*** (0.067)</td>
<td>0.099*** (0.031)</td>
</tr>
<tr>
<td>English legal origin</td>
<td>-0.014 (0.036)</td>
<td>0.156** (0.060)</td>
<td>-0.013 (0.044)</td>
<td>-0.047 (0.037)</td>
<td>0.018 (0.046)</td>
<td>0.013 (0.025)</td>
</tr>
<tr>
<td>Socialist legal origin</td>
<td>—</td>
<td>0.023 (0.109)</td>
<td>0.011 (0.034)</td>
<td>0.096** (0.048)</td>
<td>-0.190*** (0.066)</td>
<td>-0.036 (0.034)</td>
</tr>
<tr>
<td>German legal origin</td>
<td>0.390*** (0.094)</td>
<td>0.409*** (0.070)</td>
<td>0.268*** (0.051)</td>
<td>0.178*** (0.049)</td>
<td>0.239*** (0.074)</td>
<td>0.104*** (0.030)</td>
</tr>
<tr>
<td>Scandinavian legal origin</td>
<td>0.351*** (0.034)</td>
<td>0.646*** (0.061)</td>
<td>0.321*** (0.052)</td>
<td>0.112*** (0.032)</td>
<td>0.156* (0.089)</td>
<td>0.171*** (0.049)</td>
</tr>
</tbody>
</table>

| Observations | 94                | 147                | 122                | 106                | 106                | 106                |

| Adjusted R-squared | 0.607 | 0.524 | 0.639 | 0.524 | 0.474 | 0.634 |

Robust standard errors in parentheses: * significant at 10%; ** significant at 5%; *** significant at 1%. All regression also include (seven) continental indicator variables. Socialist legal origin dropped in Col 1, as data on private credit not available in that category.
Broader implications – Growth and development

Growth by institutional deepening

more legal capacity augments efficiency of markets,
should show up as higher income growth (via TFP)
by complementarity, (expected) government size grows together
with legal capacity and income – recall Figure 1

Interesting perspective on existing empirical work

in macro data: hard find any association taxation – growth,
easy find positive correlation financial development – growth
Broader implications – The ‘genius of taxation’

Small government – low fiscal capacity

incumbent may try to boost group income, by distorting production; inefficient protection of property, tariffs, regulation rather than redistributing by broad taxes and transfers

When does fiscal capacity stay low?

if common interests weak, and political instability high
may be caught in ‘non-investment trap’, maintaining low state capacity and inefficient forms of redistribution

Implication – low fiscal capacity may be bad for income and growth

in Fig 1, positive relation between fiscal capacity and income earlier: low fiscal capacity (and taxation) related to low income (co-determined by other factors, or low income causes small state) here: low fiscal capacity may actually cause low income
Figure 1  State capacity and income
Traditional development economics

- Economic structure
- Common vs. redistributive interests
- Political institutions
- Legal origins

Market outcomes → Economic development
Summary of argument in part 1

- Economic structure
- Common vs. redistributive interests
- Political institutions
- Legal origins

Legal capacity
Fiscal capacity

Economic development
Summary of argument in part 1

- Economic structure
- Common vs. redistributive interests
- Political institutions
- Legal origins

Legal capacity
Fiscal capacity

Economic development
Summary of argument in part 1

- Economic structure
- Common vs. redistributive interests
- Political institutions
- Legal origins

- Legal capacity
- Fiscal capacity

Economic development
Overall road map

1. Introduction
2. Origins of state capacity
3. Origins of internal conflict
4. Putting the pieces together
Motivation – Conflict and state building

Risk of *external* violence

by analysis in 2, such conflict can promote state building boosts common interest, relative to redistributive (group) interest

How about *internal* political violence – civil war, repression?

not common interests – rather, extreme redistributive struggle may entail radically different incentives for investing in strong state institutions
Facts about civil war

Sadly, a widespread phenomenon

civil war has plagued many nations in postwar period
prevalence over all nations and years since 1950 above 10%,
cumulated death toll exceeds 15 million

Two big facts

prevalence varies greatly over years,
peaks above 15% in early 1990s
prevalence varies greatly over countries,
civil war and poverty (low GDP/capita) strongly correlated
see Fig 4
Figure 4  The prevalence of civil war
Facts about government repression

One-sided political violence

many governments use violent means to raise their probability of staying in power without civil war breaking out
such repression shows up in violations of human rights: executions, political murders, imprisonments, brutality, ...

Prevalence?

by strict measure, purges, about 8% of country-years since 1950
by wider measure, human-rights violations, about 32%, 1976-2006

Relation to civil war and state capacity?

purges have opposite trend to civil wars until early 1990s
peaks among higher-income countries than civil war – see Fig 5
political violence clusters with state capacity – see Fig 6
Figure 5  Prevalence of civil war and repression
Figure 6  State capacity and political violence
Need for theoretical work

Political violence, development, and state capacity?

two-way relations amongst these outcomes
also, economic and political background factors may cause all three – e.g., two parallel literatures on the ‘resource curse’

Very complex relations in the data – benefits of explicit theory

need guidance for empirical strategy
need take into account institutions and development
may enrich our understanding of civil war and its relation to repression – one-sided vs. two-sided political violence

Analytical approach

first study model of political violence, then embed in earlier framework with investments in state capacity
Simple theory of conflict – Main building blocks

Investments in violence by incumbent and opposition groups

opposition can mount insurgency to try and take over power,
financed within the group

incumbent can also arm, to raise its probability to stay in power,
financed out of public purse

no conscription: soldiers hired at market wages

Both groups face a trade-off when investing in violence

weigh costs against a higher probability of holding power,
controlling policy and seizing any redistributive cake

Which are the main drivers of conflict?

when should we observe violence, and of what type?
which economic, political and institutional determinants promote one-sided and two-sided violence?
Three alternative regimes

1. Peace – no group invests in violence
   
   real wages high, resource rents or aid low, public goods valuable, or political institutions inclusive
   
   too expensive to fight, not enough to fight over, or winner does not get much of an extra share

2. Repression – incumbent, but not opposition, takes to violence

   real wages lower, resource rents higher, public goods less valuable, or lower protection of minority interests
   
   incumbent has lower violence threshold than opposition (because of cost advantage)

3. Civil war – both groups take to violence

   even more at stake so both parties choose to fight
Prediction – Peace in common-interest states

Common-interest states are always peaceful

when most available revenue devoted to public goods,
    or available revenue split equally because of inclusive institutions,
    taking to violence is not worth the cost
in the data, very few country-years (about 0.3%) have
    simultaneous external and internal conflict
General prediction – Repression and civil war close cousins

These regimes should have similar determinants

moreover, under specific conditions, peace, repression,
and civil war become ordered states – e.g., countries and years
in repression should have lower incomes than those in peace,
but higher incomes than those in civil war

Cross-tabulation with determinants suggested by the theory

data suggest such an ordering for income per capita,
parliamentary democracy, ethnic tensions, ... – see Table 2
### Table 2 Covariates by conflict type

<table>
<thead>
<tr>
<th>Covariate</th>
<th>Peace</th>
<th>Repression</th>
<th>Civil war</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP per capita (USD)</td>
<td>4711</td>
<td>2902</td>
<td>1880</td>
</tr>
<tr>
<td>Parliamentary democracy (0,1)</td>
<td>0.34</td>
<td>0.16</td>
<td>0.09</td>
</tr>
<tr>
<td>High constraints on executive (0,1)</td>
<td>0.33</td>
<td>0.13</td>
<td>0.12</td>
</tr>
<tr>
<td>Ethnic fractionalization (0-1)</td>
<td>0.40</td>
<td>0.42</td>
<td>0.53</td>
</tr>
<tr>
<td>Tax share of GDP</td>
<td>0.21</td>
<td>0.16</td>
<td>0.12</td>
</tr>
<tr>
<td>Index protection of property rights (0,1)</td>
<td>0.63</td>
<td>0.55</td>
<td>0.42</td>
</tr>
</tbody>
</table>
Specific predictions – Violence, government income, wages

In any given country, higher resource rents or aid, and lower real wages, raise likelihood of observing civil war or repression – unless political institutions are inclusive (protect minorities) enough
test in panel data, by exploiting shocks to three different and, arguably, exogenous proxies for these determinants
natural disasters – neg. shocks to wages – raise probability of repression and civil war, but only when political checks and balances weak/outside of parliamentary democracies
security-council memberships in cold war – pos. shocks to aid – raise probability of repression, but again only in presence of weak political institutions
higher country-specific export price indexes of commodities – pos. shocks to resource rents – raise probability of repression and civil war under weak political institutions
Summary of argument in part 2, so far

- Economic structure

  - Public goods versus redistribution

  - Political institutions

  - Civil war

  - Repression

- Economic development
Revisit investment in state capacity

Embed conflict model in earlier public-finance framework

shocks to factors that endogenously raise the probability of future civil war, also have a negative effect on investments in legal and fiscal capacity

one mechanism works via expected political instability, another via the expected cost of future conflict
Predicted correlations

Expected patterns in the data

we should observe a negative correlation between prevalence of repression or civil war and fiscal and legal capacity but this reflects a set of underlying determinants, which drive up the risk of conflict and down the incentives to invest partial correlations in the data are consistent with this prediction, i.e., they have the opposite sign to the correlations with external conflict – see Fig 7
Figure 7  Different types of war and state capacity
Summary of argument in part 2

- Economic structure
- Public goods versus redistribution
- Political institutions

Civil war
- Repression
- Legal capacity
- Fiscal capacity

Economic development
Overall road map

1. Introduction
2. Origins of state capacity
3. Origins of internal conflict
4. Putting the pieces together
Putting together parts 1 and 2

Economic structure

Public goods versus redistribution

Political institutions

Civil war

Repression

Legal capacity

Fiscal capacity

Economic development
Putting together parts 1 and 2

- Economic structure
- Public goods versus redistribution
- Political institutions

- Civil war
- Repression
- Legal capacity
- Fiscal capacity

Economic development
Application 1 – Problems in Africa?

Several factors contribute to weak states

- dependence on resource rents and aid, low threat of external conflict, and weak (non-inclusive) political institutions

Same factors raise risk of internal conflict

- societies become plagued by political violence, which further weakens motives to build fiscal and legal capacities of the state, invest in violence rather than in a strong state

Weak states hamper development

- cannot support markets due to low legal capacity
- may pursue inefficient policies due to low fiscal capacity

Feedbacks from low income

- foster conflict and weak incentives to build the state
Application 2 – Lessons for development assistance?

Depends crucially on type of aid

can think of at least four types in this framework

(i) Budget support

already seen that this is mostly like resource rents
weaken motives for state building and raise the risk of repression
or civil war, unless common interests strong enough

(ii) Infrastructure or project assistance

mostly like legal capacity (raise private incomes)
strengthen motive to build the state, lessen risk of conflict
Lessons for development assistance (continued)?

(iii) Military aid (to government)
mostly like incumbent advantage in financing army
raises the risk of violence and expands the range of outcomes
with government repression

(iv) Post-conflict settlement
mostly like inclusive institutions (minority protection)
cuts risk of conflict, indirectly raising motives for state building,
but only if credible (expected by everybody) *ex ante*
Research ahead?

Integrate other aspects of state capacity
   ability to provide basic services (health, education)
   further complementarities – clustering of institutions?

Endogenize political institutions
   does better accountability and representation arise as
     *quid pro quo* for significant expansion of taxation?
   complementarity fiscal capacity – political institutions?

Just a few first steps
   very simple theoretical frameworks
   but helps approach the data in new ways
   promising stepping stone for sorting out the complex interactions
   between state capacity, conflict and development