

Zvi Griliches Lectures 2011
Pillars of Prosperity
The Political Economics of Development Clusters

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**E. Development Assistance, F. Political Reform,
and G. Lessons Learned**

The story so far

Developed comprehensive core model

with determinants of investments in different aspects of state and in political violence – resulting typologies of investment and violence states summarized in Anna Karenina matrix

Implications for development policy – theme of part **E**

how can we think about the effects of different types of foreign intervention, in different types of states, taking into account effects on policy plus investments in state capacity and violence?

Endogenous political institutions – theme of part **F**

given the importance of cohesiveness, what are the most important forces that may shape it?

What have we learned more generally? – theme of part **G**

E. Development Assistance

1. Motivation

Foreign aid flows

in post-war period, foreign aid seen as main vehicle for improving the situation of poor and violence-stricken countries with badly functioning states

rising in real terms to local peak around end of cold war then falling but increasing again – 2009 value of ODA (USD 123 billion) is highest figure ever recorded

less impressive trends as share of donor countries' GDP, or per capita in receiving countries

largest receiving regions: Sub-Saharan Africa (33%), Middle East/North Africa (21%), South/Central Asia (15%)

many different types: budgetary support, project aid, technical assistance, post-conflict assistance, military aid...

Aid and other outcomes – Figures 6.1-2

Aid and income

(obviously) negatively correlated

Aid and violence

positively correlated – could reflect correlation with income,
but results in part **D** suggest also a link from aid to violence

Aid and state capacity

negatively correlated with both fiscal and legal capacity
could reflect omitted income, but theory suggests a likely
negative link from aid to state capacity

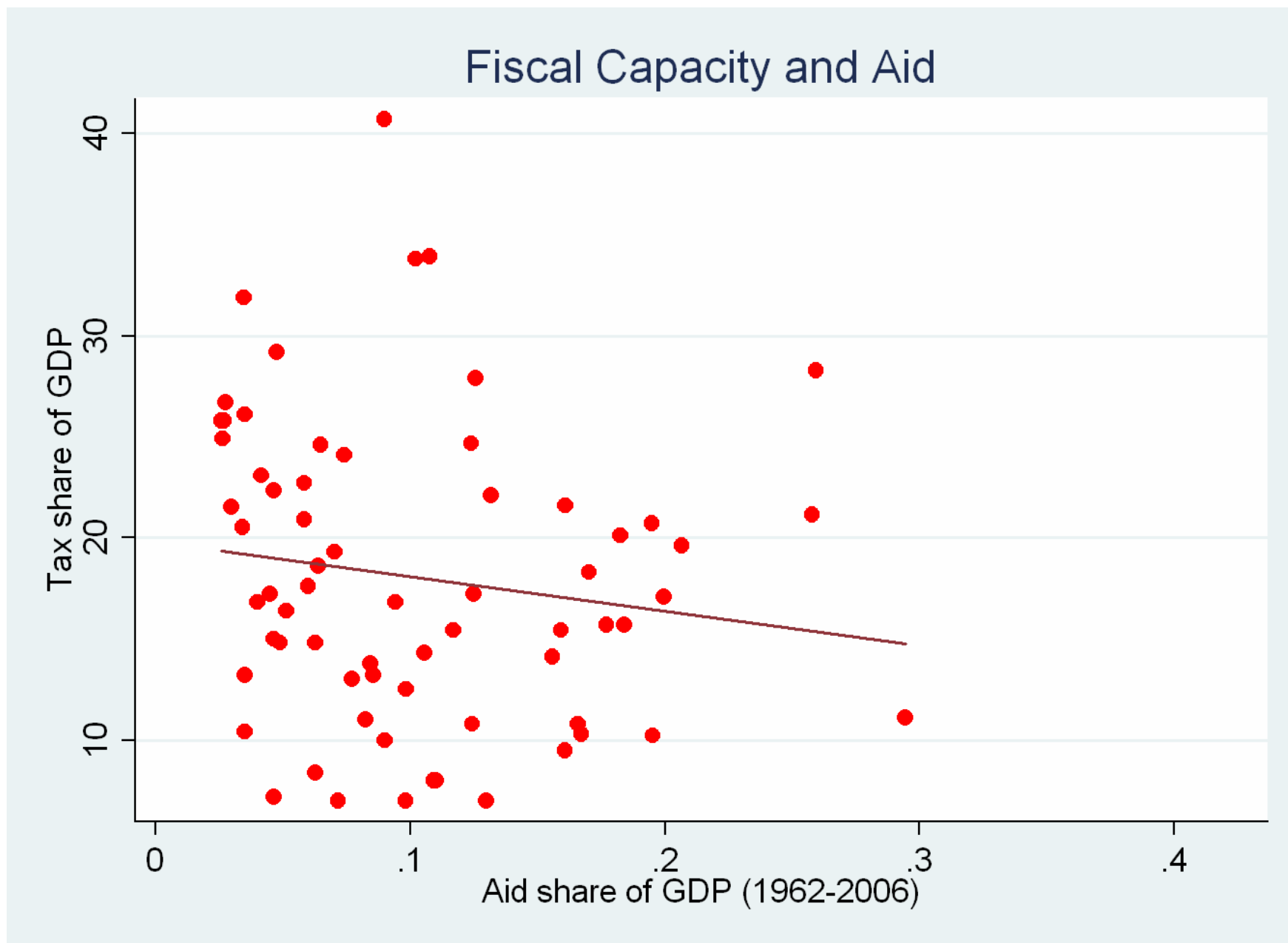


Figure 6.1 Tax share in GDP versus aid share in GDP

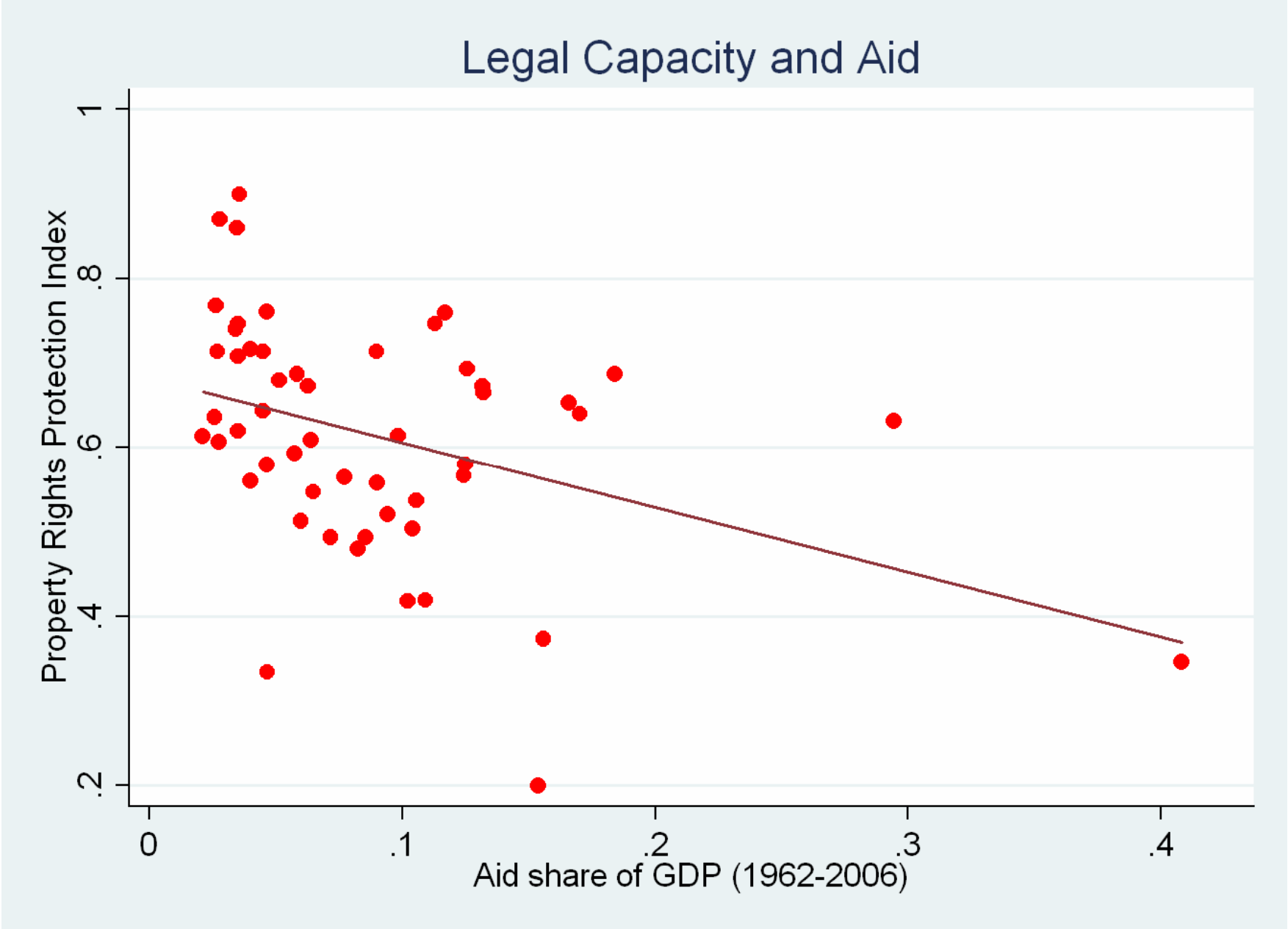


Figure 6.2 Property rights protection versus aid share in GDP

Different views on aid

Aid is controversial

unclear which forms of aid effective in which environments

Three stylized views of aid

- (i) optimistic (traditional) view (Chenery/Sachs) – "aid helps"
main problem is lack of resources and aid flows necessary
to build public institutions and accumulation of capital
- (ii) pessimistic view (Bauer/Easterly) – "aid harms"
pernicious effect on development and state building
- (iii) revisionist view (Collier/Rodrik) – "it all depends"
institutional environment decisive for effectiveness
and conditionality should be sought to reach it

2. Foreign Aid in Core Model

Our (cost-benefit) approach

Perspective

suppose a foreign government or multilateral organization makes a transfer of resources to a developing country – this money has shadow cost $\hat{\lambda} \geq 1$

how will the transfer affect the behavior of the receiving government and the welfare of the citizens?

look at equilibrium responses of

policy choices: g, r^I, r^O

state-capacity investments: π, τ

investments in violence: L^I, L^O

Cash aid in core model

Model as higher period-2 non-tax income

new timing is

1. Start out with state capacity $\{\tau_1, \pi_1\}$, incumbent group I_1 , nature determines α_1 , and R .
2. Development agency considers whether to offer ΔR in period 2
3. I_1 chooses first-period policies $\{(p_1^J), (r_1^J), t_1, g_1\}$, and investments in period-2 state capacities τ_2 and π_2 . Simultaneously, I_1 and O_1 invest in violence levels L^I and L^O
4. I_1 remains in power with probability $1 - \gamma(L^O, L^I, \xi)$, nature determines α_2
5. New incumbent I_2 chooses policy $\{(p_2^J), (r_2^J), t_2, g_2\}$

Aid effects in peaceful states

We have a benchmark result

Proposition 6.1 *In a common interest state with linear demand for public goods, cash aid is worthwhile if and only if*
$$\phi\alpha_H + (1 - \phi)\alpha_L > \hat{\lambda}$$

return to public goods needs to be high enough

If Cohesiveness fails

Proposition 6.2 *In a weak or redistributive state with linear demand for public goods, cash aid is worthwhile if and only if*
$$\phi\alpha_H + (1 - \phi) > \hat{\lambda}$$

i.e., the criterion for worthwhile aid is stronger in non common-interest states

The Bauer paradox

"A government unable to identify ... projects or collect taxes is unable to be able to use aid productively"

(Bauer, 1975, p 400)

"unable to identify projects"

this is like having low α_H and/or low ϕ

"unable to collect taxes"

having less cohesive political institutions (low θ) hampers ability to collect taxes (low endogenous fiscal capacity, τ)

these are the governments where Proposition 6.2 applies

Crowding out of state capacity?

Alternative preferences for public goods

suppose α_s non-stochastic but utility concave, and we have only investment in fiscal capacity (one of extensions in ch 2)

optimal fiscal-capacity investment in common-interest state is denoted by $\hat{\tau}_2$ and determined by:

$$\alpha V_g (R + \Delta R + \hat{\tau}_2 \omega) - 1 = \frac{\mathcal{F}_\tau (\hat{\tau}_2 - \tau_1)}{\omega}$$

now, fiscal capacity does depend on the extent of aid $\frac{\partial \hat{\tau}_2}{\partial \Delta R} < 0$

New form of Cohesiveness condition

$$\alpha V_g (R + \Delta R + \hat{\tau}_2 \omega) \geq 2(1 - \theta)$$

Crowding out of public goods?

Effect of aid on public-goods provision depends on type of state

we have $\frac{dg_2}{d\Delta R} \in [0, 1]$

Proposition 6.3 *Suppose we only have investments in fiscal capacity and curvature in the demand for public goods. Then*

- 1. In common-interest states, cash aid is worthwhile if and only if $\alpha V_g (R + \Delta R + \hat{\tau}_2 \omega) > \hat{\lambda}$.*
- 2. In redistributive or weak states, aid has no effect on public-goods or state-capacity investments, so cash aid is never worthwhile*

Aid effects in the presence of violence

Back to core model (linear demand for public goods)

consider θ low enough that Cohesiveness does not hold,
and ϕ low enough that state is prone to political violence

Proposition 6.4 *In a weak or redistributive state, prone to violence, higher cash aid is welfare improving if $\phi\alpha_H + (1 - \phi) - \omega(\pi_1) \frac{dL}{dZ} > \hat{\lambda}$ where*

$$\frac{dL}{dZ} = \begin{cases} \left[\lambda_1 \frac{dL^I}{dZ} + \nu \frac{dL^O}{dZ} \right] & \text{if } Z > Z^O(\theta; \nu, \xi) \\ \lambda_1 \frac{dL^I}{dZ} & \text{if } Z^O(\theta; \nu, \xi) \geq Z > Z^I(\theta, \lambda_1; \xi) \end{cases}$$

where $\frac{dL^I}{dZ}$ and $\frac{dL^O}{dZ}$ satisfy Proposition 5.1

Conditionality

Prospective gains exist

Propositions 6.2 and 6.3 highlight possibility that conditioning aid to be spent on public goods could be valuable.

Propositions 6.3 and 6.4 open the door for conditionality to influence the investment decisions

but how can such conditionality be made credible?

View conditionality as a contracting problem

to what extent can a donor specify an array of *verifiable* and *enforceable* decisions by recipient in exchange for ΔR ?

3. Other Forms of Development Assistance

Aid in other forms than budgetary support

technical assistance

assistance in building state capabilities

military aid

post-conflict assistance

How represent in core model

can be approximated via other parameters

Technical assistance

Examples

work by J-PAL (or various NGOs) to identify high-value public interventions, sometimes with Randomized Controlled Trials
can think about these in core model as attempts of raising α_2 or ϕ

Proposition 6.6 *Technical assistance that raises α_H or ϕ raises welfare and investment in state capacity. It may also reduce the likelihood of political violence*

interventions that help raise α_L may even help raise the probability of a common-interest state

But important challenges remain

scaling-up from small monitored trials to system-wide levels
issues of predation and corruption (extensions in chs 3 and 4)

Improving state capabilities

Examples

assistance with tax administration and law enforcement
can think about these in core model as lowering the costs
of state building $\mathcal{F}(\cdot)$ and $\mathcal{L}(\cdot)$

Proposition 6.7 *Technical assistance, cutting costs of investing $\mathcal{F}(\cdot)$ and $\mathcal{L}(\cdot)$, increases welfare and investment in state capacity, but raises the likelihood of political violence all else equal*

the violence effect arises as the redistributive pie grows
and hence the value of holding office

Military assistance (to incumbent)

Examples

provision of weapons, training, or intelligence

can think about these in core model as an increase in the relative productivity of incumbent's investments ξ

Proposition 6.8 *Military assistance that raises ξ increases the parameter range with repression. This increases political stability and investment in fiscal and legal capacity*

higher stability may come at price of entrenched incumbent, with opposition frozen out of power, in redistributive "rentier" state

Post-conflict assistance

Examples

peace-keeping, disarming rebels – like raising ν

settlements between fighting parties – like raising θ

Proposition 6.9 *Post-conflict assistance that raises ν or θ leads to greater investments in state capacities and reduces the range of parameters for which there is violence*

but permanently changing θ requires durable reforms of political institutions, so we have to think about the incentive compatibility of such reform – indeed, this is topic of next part

F. Political Reform

1. Motivation

Broad theme of the modeling so far

cohesive institutions are vital for maintaining peace, as well as
for generating investments in state capacity

but then, why are such institutions not universally adopted?

Begin analyzing the choice of political institutions

when political reform is costless and enforceable,

but may be chosen strategically or under a veil of ignorance

start with case when there is no political violence

mention results with institutional inertia, or endogenous violence

A few basic facts – Figure 7.1, Table 7.1

Binary classification for cohesive institutions

top score (on 1 to 7 scale) for Polity IV "executive constraints" variable

Old states

of the 51 states that have continuous data, only about 30% had cohesive institutions in 1900, and 55% 100 years later

New states

of 112 states created in 1945-1995, only 22 had cohesive institutions at outset, only 4 clean streak over first 30 years

Prevalence of high executive constraints

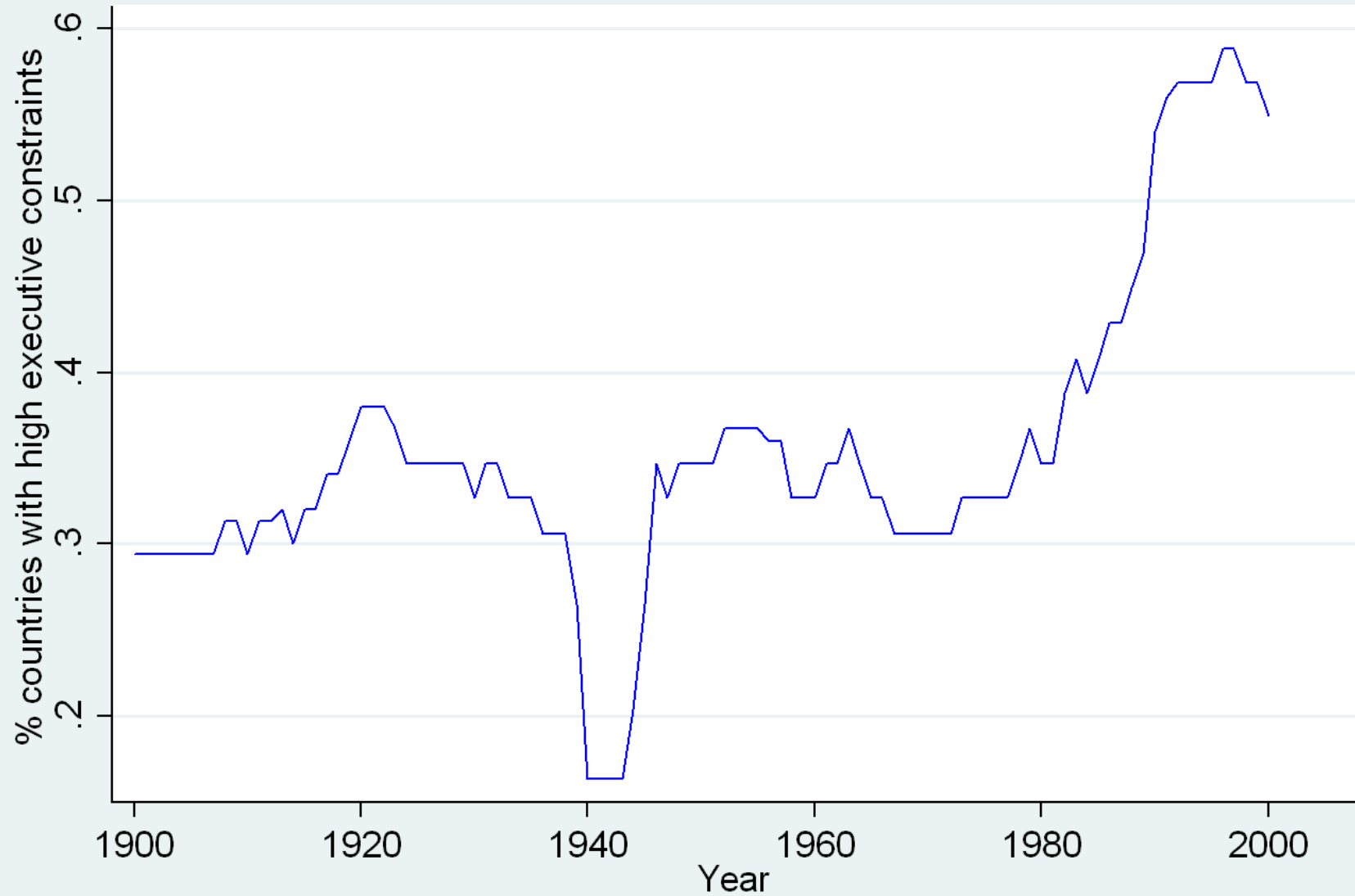


Figure 7.1 Prevalence of high executive constraints among 51 countries

Table 7.1 Persistence of high executive constraints

At independence	5 years after	10 years after	15 years after	20 years after	30 years after
Belarus (1991) *	Botswana (1966)	Botswana	Botswana	Botswana	Botswana
Cyprus (1960)	Czech Republic	Fiji	<i>Cyprus</i>	Cyprus	Cyprus
Czech Republic (1993)	Estonia	India	Fiji *	India	India
Estonia (1991)	Fiji	Israel	India	Israel	Israel
Fiji (1970)	India (1947)	Jamaica	Israel	Jamaica	Jamaica
Guyana (1966) *	Israel	Myanmar *	Jamaica	Mauritius	<i>Lesotho</i>
Israel (1948)	Jamaica	Mauritius	Mauritius	<i>Nigeria</i>	Mauritius
Jamaica (1962)	Latvia	Malaysia *	Pap. New Guin.	Pap. New Guin.*	<i>Sudan</i>
Latvia (1991)	Lithuania	Pakistan (1947)*	Sri Lanka	Sri Lanka *	Trinidad&Tob.
Lesotho (1966)	Moldova (1991)	Pap. New Guin.	Trinidad&Tob.	Trinidad&Tob.	
Lithuania (1991)	Myanmar	Sri Lanka			
Myanmar (1948)	Mauritius	<i>Sudan</i>			
Mauritius (1968)	Malaysia	Syria			
Malaysia (1957)	Nigeria	Trinidad&Tob.			
Nigeria (1960)	Pap. New Guin.				
Papua New Guinea (1975)	Somalia *				
Sudan (1956)	Slovak Rep (1993)				
Somalia (1960)	Slovenia				
Slovenia (1991)	Sri Lanka				
Sri Lanka (1948)	Trinidad&Tob.				
Trinidad & Tobago (1962)					
Uganda (1962)*					

Notes: The table lists all countries coming into existence as independent states after 1945, if they score the highest value of 7 for the Polity score on executive constraints at one of the time horizons listed in the table. The independence year is given (in brackets) for the first entry in the table. Countries are marked with "|" in the last column they can appear, due to right censoring of the data (last entries in the Polity IV data in 2000). Countries are marked with "*" the last time they appear in the table (except in the last column). Countries are printed in *italics* if they re-enter the table after a period with less than the highest score on executive constraints. Countries are printed in **bold** in the last column of the table if they have a full 30-year history of high executive constraints.

2. Political Reform in Core Model

Reformulation of model

Reform of political institutions

happens *ex ante* under a veil of ignorance,
or *ex post* in a strategic manner
new timing

1. Begin with initial state capacity stocks $\{\tau_1, \pi_1\}$
2. Period-1 political institutions, θ_1 chosen
3. Nature determines I_1 , α_1 , and R
4. I_1 chooses policies $\left\{ t_1, g_1, r_1^I, r_1^O, p_1^I, p_1^O, \right\}$, state capacity $\{\tau_2, \pi_2\}$
and (if permitted) political institutions, θ_2
5. I_1 remains in power with probability $1 - \gamma$, nature determines α_2
6. I_2 chooses policy $\left\{ t_2, g_2, r_2^I, r_2^O, p_2^I, p_2^O \right\}$

Binding ex ante choice of cohesiveness

State-capacity decisions

always made by period-1 incumbent, and given by

$$\tau_2 = T(\tau_1, \pi_1; \theta, \alpha_1) \text{ and } \pi_2 = P(\tau_1, \pi_1; \theta, \alpha_1)$$

the same outcomes as in part **B** with given γ

Expected payoff in s , to any group, under veil of ignorance

$$\frac{U^I(\tau_s, \pi_s; \theta) + U^O(\tau_s, \pi_s; \theta)}{2} = (1 + \tau_s [E(\lambda_s; \theta) - 1]) y(\pi_s) - E[\lambda_s m_s]$$

where the expectation is taken over α_s , $\lambda_s = \max\{\alpha_s, 2(1 - \theta)\}$ and

$$E(\lambda_s; \theta) = \begin{cases} \phi \alpha_H + (1 - \phi) \alpha_L & \text{if } \alpha_L \geq 2(1 - \theta) \\ \phi \alpha_H + (1 - \phi) & \text{otherwise} \end{cases}$$

A (normative) benchmark result

Ex ante payoff is

$$\begin{aligned}\hat{U}(\theta; \tau_2, \pi_2) &= (1 + \tau_1 [E(\lambda_1; \theta) - 1]) y(\pi_1) - E[\lambda_1 m_1] \\ &\quad + (1 + \tau_2 [E(\lambda_2; \theta) - 1]) y(\pi_2) + E(\lambda_2; \theta) R\end{aligned}$$

Proposition 7.1 *Under a veil of ignorance citizens (unanimously) choose cohesive institutions θ such that $\alpha_L \geq 2(1 - \theta)$*

Intuition

ex ante, redistributive concerns wash out in the objective \hat{U} ,
we see that γ drops out of expressions above
a common-interest state implements efficient investments in
state capacity

Strategic ex post choice of cohesiveness

Expected period-2 payoff to period-1 incumbent

$$\begin{aligned} & (1 - \gamma) U^I (\tau_2, \pi_2; \theta) + \gamma U^O (\tau_2, \pi_2; \theta) \\ &= (1 + \tau_2 [E(\lambda_2) - 1]) y (\pi_2) + E(\lambda_2) R \end{aligned}$$

where, as in part **B**,

$$E(\lambda_2) = \phi \alpha_H + (1 - \phi) \lambda_2^L$$

is the *expected* value of period-2 public funds with

$$\lambda_2^L(\theta) = \begin{cases} \alpha_L & \text{if } \alpha_L \geq 2(1 - \theta) \\ 2[(1 - \theta)(1 - \gamma) + \gamma\theta] & \text{otherwise} \end{cases}$$

so now γ does play an important role

A (positive) predictive result

$$\frac{\partial \left[(1 - \gamma) U^I (\tau_2, \pi_2; \theta) + \gamma U^O (\tau_2, \pi_2; \theta) \right]}{\partial \theta} = \begin{cases} (1 - \phi) 2 [2\gamma - 1] [\tau_2 y (\pi_2) + R] & \text{if } 2(1 - \theta) > \alpha_L \\ 0 & \text{otherwise} \end{cases}$$

Proposition 7.2 *A period-1 incumbent prefers cohesive institutions with $\alpha_L \geq 2(1 - \theta)$ when prospect of replacement is high ($\gamma \geq 1/2$) and non-cohesive institutions ($\theta = 0$) when it is low ($\gamma < 1/2$)*

Intuition

when perceived instability is high, redistribution appears fearsome and the incumbent buys insurance by cohesive institutions
an entrenched incumbent wishes to remove constraints on her own future redistribution when public goods not very valuable
reform motive up with τ_2, π_2, R down with ϕ

3. Political reform in practice

Anecdotal evidence

Can model shed light on historical waves of reform?

(i) Introduction of cohesive institutions – after high- γ shock reforms by center-right majorities threatened by labor movement in early 1900s Europe – cf. Rokkan hypothesis (current events in Arab world?)

(ii) Repeal of cohesive institutions – after low- γ shock reform from European-style institutions to presidential regimes without checks and balances by unchallenged independence movements in 1960s post-colonial Africa

Careful empirical work necessary

approach (i) and (ii) with theory-guided historical case studies, or turn to well-identified econometric analysis

Ongoing empirical work – approach

Use prediction from theory as in Section 2

fixed cost has to be smaller than benefits from reform
likelihood of observing reform towards cohesive institutions
should be higher after positive shock to expected turnover

Proxy positive turnover shocks with *random* leader transitions

use data on country leaders 1875-2004

like Jones-Olken (2005) look at exits from office due to death
from natural causes, illness, or accidents

timing of such transitions likely exogenous to political reforms,
unlike transition via elections, coups, civil wars, ...

Ongoing empirical work – results

Event study around random leader transitions

find that turnover indeed goes up in five years after leader deaths, but only under noncohesive institutions

thus plausible to interpret random leader transitions as positive shocks to expected turnover

Leader transitions and institutional reform

find that institutional reform towards cohesive institutions (measured by high executive constraints) indeed goes up in five years after a random leader transition

probability of reform about 8 percentage points higher after random leader transitions

moreover, estimated interaction effects in line with theory

4. Extensions

Endogenous entrenchment

if incumbents can also pick γ , preferred choice is $\theta = \gamma = 0$

Micropolitical foundations for θ and γ

can analyze how these parameters might reflect details in rules e.g., for elections and legislative decision-making

Inertia in political institutions

might be upheld by supermajority rules

Extensions (continued)

Reintroducing political violence

incumbents may now choose cohesive institutions to avoid the resource costs associated with violence

Trust

alternative enforcement of cohesive politics, can model trust as behavior (reputation) or trait (culture)

Predation and governance

entrenched and small elites are likely to raise higher hurdles for good-governance reforms

G. Lessons Learned?

1. Answers to the Three Main Questions

1. What forces shape the building of different state capacities, and why do these capacities vary together?
2. What factors drive political violence in its different forms?
3. What explains the clustering of state institutions, violence, and income?

State capacities

Complementarities key feature of theoretical framework

countries where incumbents have strong motives to invest, e.g.,
due to strong common interests or cohesive political institutions
will see a joint expansion of the two dimensions of the state

stagnant institutions where incumbents have feeble motives
to build the state

possibility of such common roots clearly come out in typology
with common-interest, redistributive, and weak states

Political violence

Roots of violence

some coincide with weak motives for investing in the state
resource rents or aid can trigger of violence when political
institutions are non-cohesive

predictions of these roots come clearly out in typology
with peace, repression and civil war

Development clusters

How is it that income, institutions and violence may cluster?

they have some determinants in common

recall the Anna Karenina matrix

a set of positive feedback loops between central outcomes

raise the possibility of virtuous and vicious circles

cf. Myrdal's conception of development

2. The Pillars of Prosperity Index

Earlier summary theoretical and abstract

alternative empirical and concrete approach

define index to highlight central *outcomes* in analysis

predict index to highlight central *determinants*

exercise is alternative to existing indexes of weak/fragile states

with their unclear distinctions between causes and symptoms

needs to be interpreted properly – a simple illustration, no more

Which outcomes?

our analysis has stressed

building extractive and productive parts of the state

(absence of) political violence

income

Measurement

Fiscal and legal capacity.

revenue share of income tax in 1999;

have (IMF) data for 129 countries – denote by τ_i

Doing Business rank of contract enforcement in 2006;

have (World Bank) data for 173 countries – π_i

Absence of government repression and civil war

share of years 1976 (independence, if later)-2006 in civil war

have (ACD) data for 170 countries – c_i

share of years with repression (purges) 1976-2005;

have (Banks) data for 195 countries – r_i

Income

(log of) GDP per capita (constant international prices) in 2006;

have (PWT) data for 186 countries – y_i

Weighting

Any weighting scheme arbitrary

use equal weights

$$\text{state capacity } s_i = \frac{\tau_i + \pi_i}{2}$$

if missing, set $s_i = \tau_i$ or $s_i = \pi_i$

$$\text{peacefulness } p_i = 1 - \frac{r_i}{2} - c_i$$

Pillars of prosperity index for country i

$$pop_i = \frac{s_i + p_i + y_i}{3}.$$

again, allow one item to be missing

The resulting index – Figure 8.1, Table 8.1

Availability

can be defined for 184 countries – show results for
150 countries where our predictive variables exist
(most excluded countries are small island states)

Display

ranking from bottom to top in table format
deciles in "heat map" format

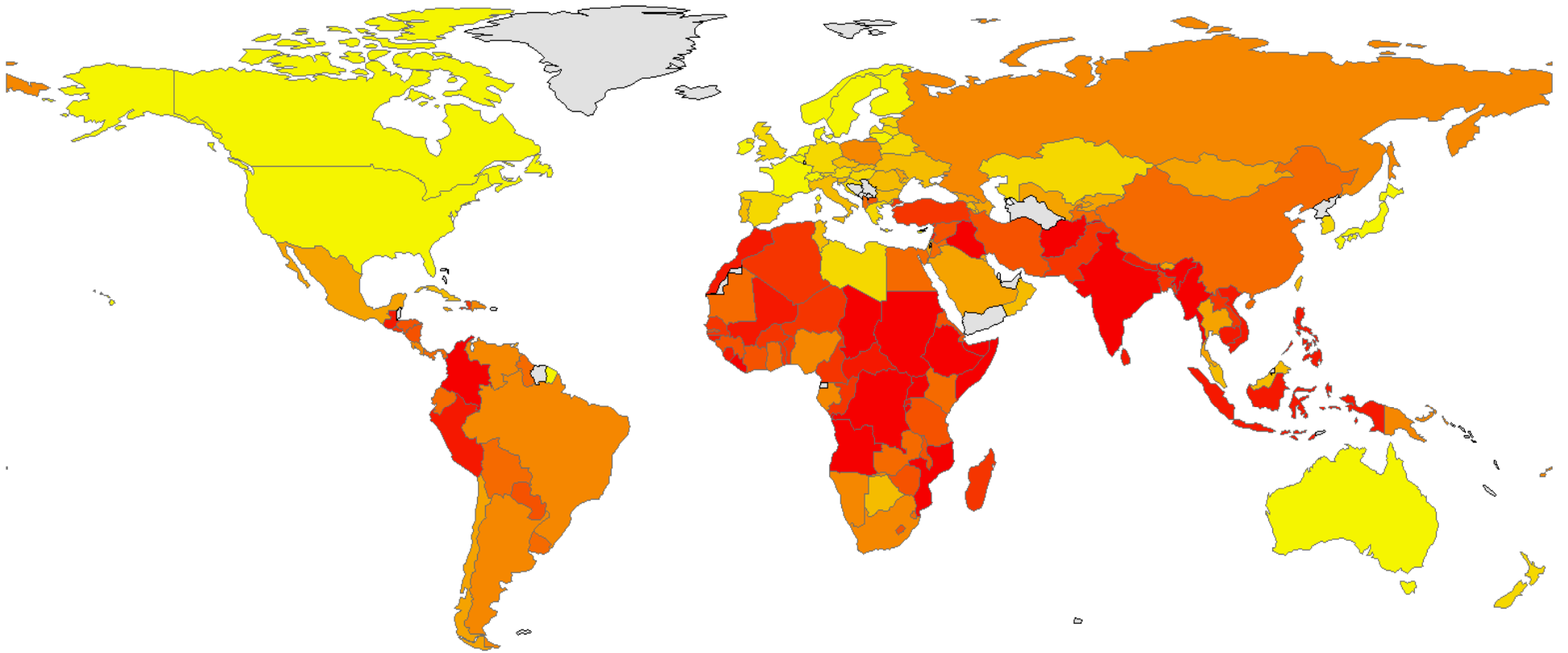


Figure 8.1 The Pillars of Prosperity Atlas

Table 8.1 Pillars of Prosperity Index and components

Country	Index value	Peacefulness	State Capacity	Income
Zaire	.011	N/A	.017	.004
Afghanistan	.084	.081	.052	.118
Sudan	.204	.194	.092	.326
India	.236	.065	.216	.426
Myanmar	.240	.032	.447	N/A
Uganda	.261	.145	.422	.216
Somalia	.263	.484	N/A	.042
Ethiopia	.267	.129	.479	.194
Angola	.275	.129	.237	.460
Burundi	.298	.516	.278	.100
Chad	.303	.323	.232	.354
Colombia	.304	0	.350	.563
Mozambique	.308	.484	.114	.326
Liberia	.315	.629	N/A	0
Iraq	.320	.226	.249	.485
Cambodia	.340	.323	.324	.372
Guatemala	.341	.339	.164	.520
Philippines	.356	0	.603	.464
Guinea-Bissau	.375	.919	.116	.089
Sri Lanka	.386	.290	.351	.516
Sierra Leone	.386	.677	.189	.293
Indonesia	.403	.226	.495	.490
Lebanon	.412	.516	.150	.569
Nepal	.427	.645	.327	.308
Peru	.428	.371	.389	.525
Central Afr. Republic	.440	.982	.182	.155
Rwanda	.441	.645	.470	.208
Vietnam	.441	0	.462	.420
Morocco	.450	.548	.299	.504
Mali	.465	.968	.192	.234
Turkey	.469	.242	.601	.564
Bangladesh	.472	.984	.094	.339
El Salvador	.476	.565	.361	.504
Benin	.480	1	.192	.248
Madagascar	.485	1	.295	.159

Laos	.487	.968	.162	.331
Niger	.495	1	.325	.159
Algeria	.496	.484	.473	.532
Togo	.496	1	.327	.162
Cameroon	.501	1	.137	.367
Burkina Faso	.502	1	.263	.242
Pakistan	.508	.903	.205	.416
Haiti	.510	.952	.314	.266
Congo	.511	.903	.205	.425
Senegal	.516	1	.243	.304
Lesotho	.530	.989	.269	.337
Djibouti	.537	1	.146	.465
Malawi	.541	.984	.408	.230
Syria	.543	.871	.369	.389
Guinea	.555	1	.236	.428
Paraguay	.556	.984	.209	.474
Tanzania	.557	1	.504	.166
Honduras	.562	.984	.279	.423
Eritrea	.563	.929	.671	.090
Nicaragua	.566	.645	.723	.329
Macedonia	.566	N/A	.590	.543
Iran	.566	.532	.549	.617
Zimbabwe	.582	.855	.574	.318
Ivory Coast	.584	1	.416	.337
Gambia	.587	1	.516	.246
Tajikistan	.590	.625	.780	.366
Bolivia	.592	1	.345	.432
Guyana	.595	1	.408	.377
Ghana	.595	.968	.550	.269
Mauritania	.600	1	.457	.344
Egypt	.603	1	.308	.503
China	.607	.823	.435	.563
Kenya	.612	.984	.531	.321
Albania	.623	.968	.434	.467
Swaziland	.623	1	.309	.560
Zambia	.626	.984	.587	.307
Jordan	.628	1	.396	.486
Panama	.628	1	.296	.589
Ecuador	.629	.952	.417	.519
Uruguay	.635	.984	.266	.654

Dominican Republic	.638	1	.315	.598
Brazil	.639	1	.312	.605
Nigeria	.640	.968	.620	.333
South Africa	.646	.581	.738	.618
Venezuela	.650	1	.304	.646
Papua New Guinea	.657	1	.642	.330
Fiji	.663	1	.461	.527
Costa Rica	.665	1	.353	.643
Poland	.667	.968	.358	.675
Bahrain	.667	1	.201	.800
Mauritius	.672	1	.276	.739
Russia	.673	.498	.861	.659
Argentina	.682	.935	.422	.688
Namibia	.691	1	.541	.530
Gabon	.691	1	.502	.571
Chile	.700	.952	.424	.725
Azerbaijan	.702	.717	.809	.581
Moldova	.703	1	.688	.421
Mongolia	.704	.984	.769	.359
Mexico	.713	1	.503	.636
Uzbekistan	.715	1	.832	.311
Israel	.715	1	.370	.776
Bhutan	.715	1	.682	.464
Trinidad & Tobago	.721	1	.378	.784
Thailand	.724	.984	.588	.600
Jamaica	.728	.984	.616	.584
Georgia	.729	.813	.821	.554
Saudi Arabia	.732	1	.445	.752
Kyrgyzstan	.736	1	.786	.423
Kuwait	.738	1	.327	.888
Tunisia	.755	1	.654	.611
Bulgaria	.758	.968	.705	.602
Italy	.762	1	.472	.815
Romania	.764	.952	.746	.595
Slovenia	.769	1	.520	.785
Malaysia	.777	1	.612	.720
Botswana	.785	1	.759	.595
Slovak Republic	.790	1	.665	.706
Oman	.803	1	.631	.777
Cuba	.804	.984	N/A	.624

Czech Republic	.810	1	.676	.755
Taiwan	.814	1	.647	.795
Ukraine	.819	1	.855	.603
Portugal	.831	1	.747	.746
Armenia	.832	1	.902	.593
Croatia	.838	1	.844	.670
Germany	.844	N/A	.859	.828
Kazakhstan	.845	1	.850	.684
Greece	.845	1	.732	.803
Belarus	.849	1	.798	.750
Libya	.859	.984	N/A	.734
Spain	.870	1	.782	.827
Estonia	.870	1	.890	.721
Latvia	.873	1	.942	.675
South Korea	.873	.935	.908	.775
New Zealand	.873	1	.829	.789
Hungary	.874	.968	.936	.717
Singapore	.874	1	.738	.884
United Kingdom	.877	1	.798	.832
Austria	.878	N/A	.904	.852
Lithuania	.886	1	.983	.674
France	.889	1	.844	.820
Ireland	.889	1	.787	.881
Netherlands	.891	1	.829	.845
Cyprus	.892	1	N/A	.784
United States	.893	.839	.950	.891
Belgium	.905	.984	.890	.842
Finland	.907	1	.888	.831
Canada	.908	1	.869	.856
Denmark	.917	1	.906	.846
Japan	.918	1	.926	.828
Australia	.918	1	.901	.854
Norway	.929	1	.878	.908
Switzerland	.932	1	.934	.862
Sweden	.936	1	.972	.837

Predicting the index – Figure 8.2, Table 8.3

Use same predictors as in part **B**

independent variables that appear in Tables 2.2 and 3.2

proxies for past parameters ϕ , θ , $(1 - \iota)$, γ and legal origins

predict about 50% of variation in actual index

worst prediction of peacefulness part

map display suggests that these determinants predict

much of variation in the data

Outliers

some stark underperformers and overperformers

India, China – catch up with "institution possibility frontier"

but also signs of incomplete theory: use selected case studies to look for prospective improvements – e.g., a role for leader quality

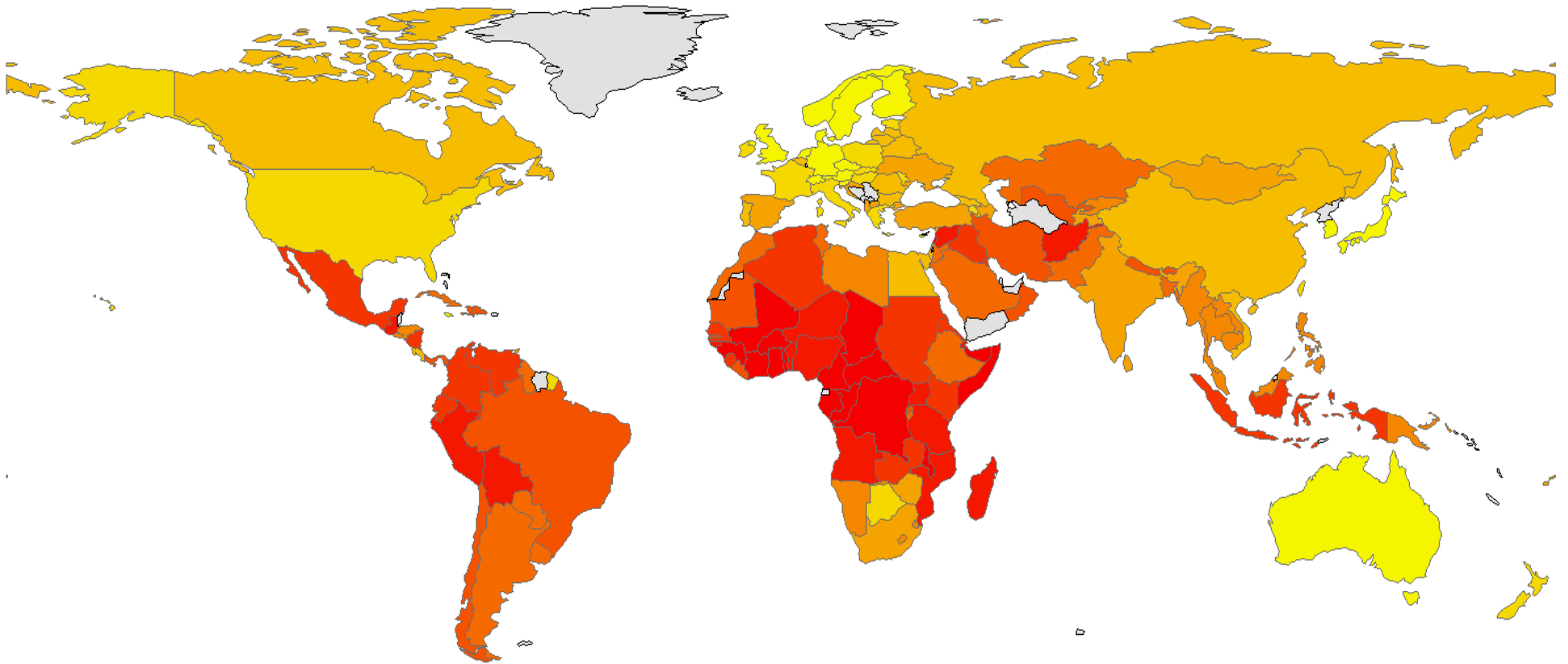


Figure 8.2 The Predicted Pillars of Prosperity Index Atlas

Table 8.3 Prediction Errors on Prosperity Index

Country	Actual rank	Predicted rank	Actual minus predicted index value
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Panel A – Largest underperformers (more than 50 steps off in ranking)

India	4	93	- 0.35
Myanmar	5	81	- 0.31
Ethiopia	8	62	- 0.32
Burundi	10	64	- 0.28
Cambodia	16	88	- 0.31
Philippines	18	87	- 0.29
Sri Lanka	20	105	- 0.31
Vietnam	28	115	- 0.28
Turkey	31	96	- 0.21
China	67	120	- 0.13

Panel B – Largest overperformers (more than 50 steps off in ranking)

Ivory Coast	59	6	0.17
Ghana	64	13	0.15
Nigeria	78	18	0.17
Gabon	90	4	0.29
Mexico	95	37	0.19
Kuwait	105	45	0.20
Oman	114	56	0.26
Kazakhstan	123	65	0.26
Singapore	133	74	0.27

3. Where Next?

Model more carefully

- simple models, but important to check theoretical robustness
- merge with traditional theories of growth and development

Consider human capital

- straightforward to introduce accumulation as physical capital
- more interesting to study consequences for politics and violence

Disaggregate more

- microeconomic and micropolitical foundations for economic and political reduced forms; microfoundations for violent behavior?

Bridge micro and macro

- to understand big picture in the data and come up with ideas for reform, have to view micro and macro approaches as complements

Where next (continued) ?

Understand state legitimacy

norms of compliance and trust in the state important;
how do they interact with tangible institutions?

Bring in social capital and identity

complementarity between state institutions and private networks;
can national identities which feed common interests be fostered?

Deal with multiple countries

threats of war come from other similar interacting societies;
structural determinants of democratic peace?

Distinguish centralized and decentralized states

models here of unitary states; can decentralization improve state
performance? – raises questions about local state capacities

Where next (continued) ?

Bridge theory and empirical work

more careful studies of state capacity building and political reform;
use theory as a guide, as in part C

Use theory and data to design case studies

well-specified theoretical models to search for exogenous variables;
departures from statistical patterns to search for new mechanisms

Understand the persistence of weak and violent states

how can one escape the lower left part of the Anna Karenina matrix?
can foreign assistance in any form be helpful?
probably, most important questions of all