Who Reforms Regulations and How

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Agenda

Background and Data

Background and Motivation

- Every potential reform has losers. So when does reform happen?
    - **One view:** as a country develops, there are more systems in place to compensate these losers, making reform easier (Coase 1960, Acemoglu 2003)
    - **Alternative view:** as a country develops, there are more interest groups and veto points, so losers can more easily stop reforms (Olson 1982)
- Which effect dominates? Do rich countries reform more?

Regulation Indicators

We consider reforms in six regulation *domains*: enforcing contracts, labor regulation, resolving insolvency, paying taxes, minority shareholders, and business entry

- Measure the level of regulation with data from the World Bank (2005–2020), which we extend to 2022 with identical methodology
- 16 annual country-level indicators — between 2 and 4 per domain
  - For example, cost of contract enforcement, or number of tax payments per year

Reform Data

Our primary contribution is connecting this data to data on *regulatory reforms* that might impact regulation.

- 3,722 attempted regulatory reforms across the six domains in 189 countries (2005–2022)
- Reform initiated when it is announced; successful if it is passed/implemented by relevant body
- Reform initiator: executive, legislature, or judiciary
  - Also keep track of which branch of government stopped/vetoed a reform if it failed
- Further divide reforms into three *areas*: technological (tech changes in how reforms are implemented), administrative (changes in how institutions operate), and legal (changes in actual laws/regulations)

Facts About Regulation

Figure 1: Time (Days) of Enforcing Contracts over Time
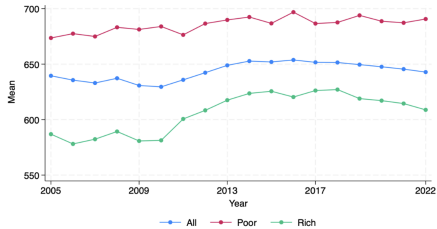
Figure 2: Cost (% of Contract) of Enforcing Contracts over Time

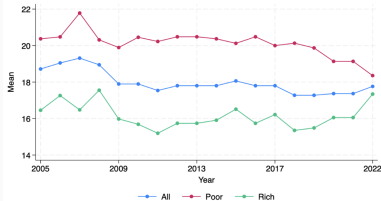Figure 3: Difficulty of Hiring Index over Time
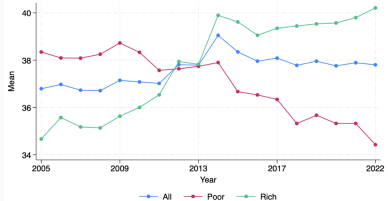

Figure 4: Rigidity of Hours Index over Time

Figure 5: Difficulty of Redundancy Index over Time
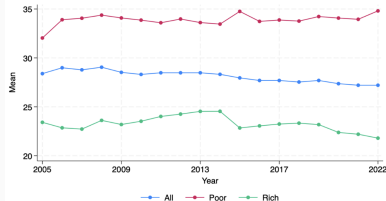
Disclosure and Director Liability Over Time By Income Level

Figure 6: Extend of Disclosure Index over Time
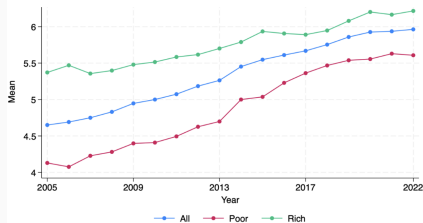
Figure 7: Extend of Director Liability Index over Time

Figure 8: Time (Years) of Resolving Insolvency over Time
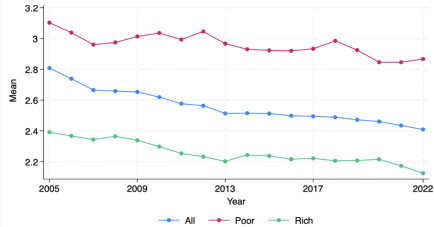
Figure 9: Cost (% of Estate) of Resolving Insolvency over Time

Figure 10: Tax Payments (Number per Year) over Time
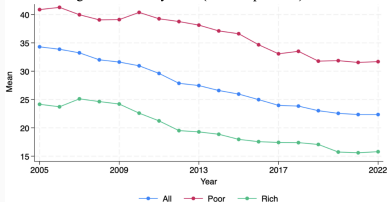
Figure 11: Time (Hours per Year) of Paying Taxes over Time
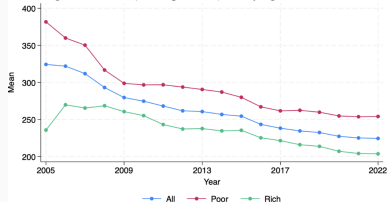
Figure 12: Total Tax and Contribution Rate (% of Profit) over Time

Figure 13: Procedures (Number) of Starting a Business over Time
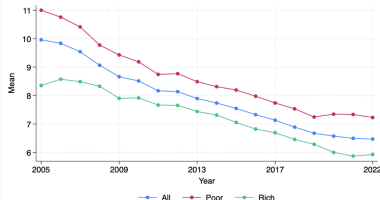
Figure 14: Time (Days) of Starting a Business over Time
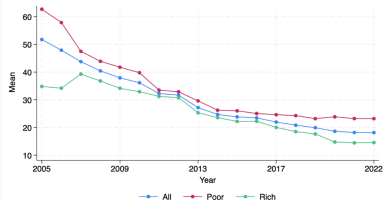
Figure 15: Cost (% of Income per Capita) of Starting a Business over Time
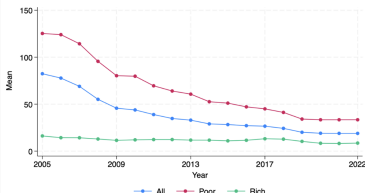
Figure 16: Paid-in Minimum Capital (% of Income per Capita) over Time
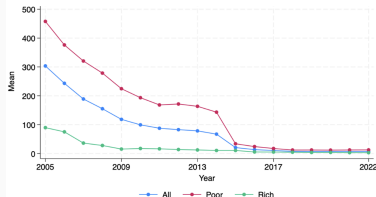
Model: A Theory of Reform

Model Setup

- Potential reform has socieal benefit 1; political leader/initiator can choose to initiate reform at some fixed cost i
- Population 1, of whom L lose from the reform, each experiencing cost c
- **Compensation**:
    - (1) A fraction φ of losers are among the initiator's supporters and so can be compensated with no inefficiency; pay them each c
    - (2) Initiator chooses to compensate some number qL "external" losers — but there is inefficiency, so to compensate each it costs $(1 + \theta)c$ for some $\theta > 0$
    - θ captures the inefficiency of Coasean bargaining — for example, θ is lower when cash transfers are easier
    - Total of $(q + \varphi)L$ losers are compensated, so share of population that loses from reform has gone from L to $(1 - q - \varphi)L$
- **Reform passage:** Total N veto points; each is an uncompensated loser with probability $(1 - q - \varphi)L$, so reform passes with probability $(1 - (1 - q - \varphi)L)^N$

Possible Reforms

So reform costs $((1 + \theta)q + \varphi)cL$ and returns benefit 1 with probability $(1 - (1 - q - \varphi)L)^N$.

- Trade-off between higher success probability and lower net returns due to costly compensation
- Initiator picks q to make this trade-off; varying q gives us the frontier of possible reforms:
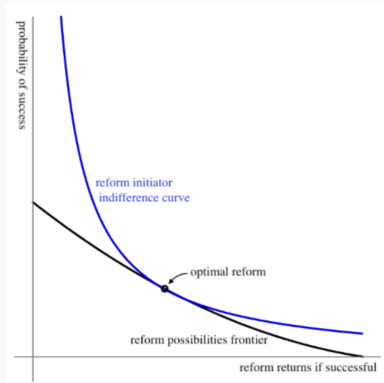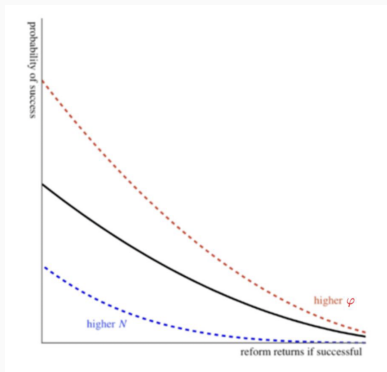
Some Model Results

- If compensation is sufficiently efficient, everyone is compensated; if it is sufficiently inefficient, then only insiders are compensated.

- The expected return equals the success probability times the return if successful.

- More losers makes each veto point more likely to veto; more veto points makes reform success less likely

- More "internal" losers φ relative to external losers makes compensation cheaper and reform more likely

- If not all losers are being compensated, more inefficiency θ or more costly compensation c makes reform success less likely

Determinants of Reform

Reform Success By Domain

- Four reform domains have a roughly 80% success rate; reforms mostly succeed
- Labor reforms have a lower success rate (74%), likely because they have more losers
- Business entry reforms have a much higher success rate (93%)

Initiation vs. Stop of Reforms

Initiation	Total	Total (Successful)	Total (Failed)	Stop		
				Executive	Judicial	Legislative
Enforcing contracts						
Executive	231	153 (66%)	78 (34%)	3 (1%)	64 (28%)	11 (5%)
Judicial	248	234 (94%)	14 (6%)	9 (4%)	2 (1%)	3 (1%)
Legislative	55	37 (67%)	18 (33%)	8 (15%)	6 (11%)	4 (7%)
Total	534	424 (79%)	110 (21%)	20 (4%)	72 (14%)	18 (3%)
Labor regulation						
Executive	388	282 (73%)	106 (27%)	1 (0%)	1 (0%)	104 (27%)
Judicial	4	2 (50%)	2 (50%)	0 (0%)	0 (0%)	2 (50%)
Legislative	122	95 (78%)	27 (22%)	8 (7%)	3 (2%)	16 (13%)
Total	514	379 (74%)	135 (26%)	9 (2%)	4 (1%)	122 (24%)
Paying taxes						
Executive	781	644 (82%)	137 (18%)	28 (4%)	1 (0%)	108 (14%)
Legislative	134	85 (63%)	49 (37%)	47 (35%)	0 (0%)	2 (1%)
Total	915	729 (80%)	186 (20%)	75 (8%)	1 (0%)	110 (12%)

Initiation vs. Stop of Reforms

Initiation	Total	Total (Successful)	Total (Failed)		Stop		
					Executive	Judicial	Legislative
Minority investors							
Executive	217	153 (71%)	64 (30%)		4 (2%)	17 (8%)	43 (20%)
Judicial	45	41 (91%)	4 (9%)		3 (7%)	0 (0%)	1 (2%)
Legislative	171	162 (95%)	9 (5%)		2 (1%)	7 (4%)	0 (0%)
Total	433	356 (82%)	77 (18%)		9 (2%)	24 (6%)	44 (10%)
Resolving insolvency							
Executive	263	214 (81%)	49 (19%)		4 (2%)	28 (11%)	17 (6%)
Judicial	28	14 (50%)	14 (50%)		7 (25%)	0 (0%)	7 (25%)
Legislative	94	83 (88%)	11 (12%)		6 (6%)	2 (2%)	3 (3%)
Total	385	311 (81%)	74 (19%)		17 (4%)	30 (8%)	27 (7%)
Starting a business							
Executive	860	798 (93%)	62 (7%)		17 (2%)	8 (1%)	37 (4%)
Judicial	11	11 (100%)	0 (0%)		0 (0%)	0 (0%)	0 (0%)
Legislative	70	66 (94%)	4 (6%)		4 (6%)	0 (0%)	0 (0%)
Total	941	875 (93%)	66 (7%)		21 (2%)	8 (1%)	37 (4%)
All reform areas							
Executive	2740	2244 (82%)	496 (18%)		57 (2%)	119 (4%)	320 (12%)
Judicial	336	302 (90%)	34 (10%)		19 (6%)	2 (1%)	13 (4%)
Legislative	646	528 (82%)	118 (18%)		75 (12%)	18 (3%)	25 (4%)
Total	3722	3074 (83%)	648 (17%)		151 (4%)	139 (4%)	358 (10%)

Stopper of Reforms

	Total	Total (Successful)	Total (Failed)	Stop		
				Executive	Judicial	Legislative
Enforcing contracts						
Administrative	230	194 (84%)	36 (16%)	7 (3%)	20 (9%)	9 (4%)
Legal	167	102 (61%)	65 (39%)	11 (7%)	45 (27%)	9 (5%)
Technological	137	128 (93%)	9 (7%)	2 (1%)	7 (5%)	0 (0%)
Total	534	424 (79%)	110 (21%)	20 (4%)	72 (13%)	18 (3%)
Labor regulation						
Administrative	5	2 (40%)	3 (60%)	3 (60%)	0 (0%)	0 (0%)
Legal	509	377 (74%)	132 (26%)	6 (1%)	4 (1%)	122 (24%)
Total	514	379 (74%)	135 (26%)	9 (2%)	4 (1%)	122 (24%)
Paying taxes						
Administrative	274	195 (71%)	79 (29%)	35 (13%)	0 (0%)	44 (16%)
Legal	390	309 (79%)	81 (21%)	18 (5%)	1 (0%)	62 (16%)
Technological	251	225 (90%)	26 (10%)	22 (9%)	0 (0%)	4 (2%)
Total	915	729 (80%)	186 (20%)	75 (8%)	1 (0%)	110 (12%)

Stopper of Reforms

	Total	Total (Successful)	Total (Failed)	Stop		
				Executive	Judicial	Legislative
Minority investors						
Administrative	3	0 (0%)	3 (100%)	2 (67%)	0 (0%)	1 (33%)
Legal	430	356 (83%)	74 (17%)	7 (2%)	24 (6%)	43 (10%)
Total	433	356 (82%)	77 (18%)	9 (2%)	24 (6%)	44 (10%)
Resolving insolvency						
Administrative	48	31 (65%)	17 (35%)	1 (2%)	14 (29%)	2 (4%)
Legal	336	279 (83%)	57 (17%)	16 (5%)	16 (5%)	25 (7%)
Technological	1	1 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Total	385	311 (81%)	74 (19%)	17 (4%)	30 (8%)	27 (7%)
Starting a business						
Administrative	534	508 (95%)	26 (5%)	11 (2%)	8 (2%)	7 (1%)
Legal	154	128 (83%)	26 (17%)	1 (1%)	0 (0%)	25 (16%)
Technological	253	239 (94%)	14 (6%)	9 (4%)	0 (0%)	5 (2%)
Total	941	875 (93%)	66 (7%)	21 (2%)	8 (1%)	37 (4%)
All reform areas						
Administrative	1094	930 (85%)	164 (15%)	59 (5%)	42 (4%)	63 (6%)
Legal	1986	1551 (78%)	435 (22%)	59 (3%)	90 (5%)	286 (14%)
Technological	642	593 (92%)	49 (8%)	33 (5%)	7 (1%)	9 (1%)
Total	3722	3074 (83%)	648 (17%)	151 (4%)	139 (4%)	358 (10%)

Reform Initiation by Domain

- Most reforms are initiated by the executive and stopped by the legislature
  - Model suggests the executive is more likely to propose reform because it is most effective at compensating losers due to direct role in the bureaucracy
  - Stoppage might be explained by coalition governments
- Reform is more prevalent in some domains than others: Paying taxes and starting a business together are almost half of initiated reforms and over half of successful reforms
  - These reforms are almost always initiated by the executive
  - Perhaps opposition to these reforms is weakest since there are no concentrated/organized losers
- Fewest attempted reforms in resolving insolvency and protecting minority investors
  - Powerful business interest groups could lose

Reform Success Regression

Our primary regression is reform success on reform initiator, reform area, and log GDP per capita; each observation is an attempted reform.

	Reform Domain						
	Enforcing Contracts	**Labor Regulation**	**Paying Taxes**	**Minority Investors**	**Resolving Insolvency**	**Starting a Business**	**All Domains**
Intercept	0.010	0.122	0.171*	0.268**	0.167	0.554****	0.267****
	(0.101)	(0.125)	(0.088)	(0.110)	(0.128)	(0.054)	(0.039)
Initiation - Judicial	0.207****	−0.279		0.217****	−0.285****	0.183**	0.039*
	(0.037)	(0.216)		(0.058)	(0.074)	(0.076)	(0.021)
Initiation - Legislative	0.034	0.038	−0.208****	0.197****	0.027	0.180****	0.018
	(0.055)	(0.045)	(0.037)	(0.037)	(0.045)	(0.039)	(0.017)
Area - Administrative	0.166****	−0.258	−0.037	−0.770****	−0.059	0.209****	0.108****
	(0.040)	(0.195)	(0.031)	(0.208)	(0.060)	(0.028)	(0.015)
Area - Technology	0.152**		0.089***		0.109	0.178****	0.132****
	(0.049)		(0.032)		(0.367)	(0.031)	(0.017)
Log GDP per capita	0.064****	0.067****	0.074****	0.052****	0.074****	0.023****	0.057****
	(0.011)	(0.014)	(0.010)	(0.013)	(0.014)	(0.006)	(0.004)
Number of observations	532	505	891	430	380	927	3,665
R^2	0.203	0.057	0.114	0.161	0.124	0.076	0.068

Note: Standard errors in parentheses. **** $p < 0.001$; *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$

Facts About Reform Success

- Richer countries reform more
- Each branch is good at reforms in "relevant" domains; for example;
    - The judiciary is good at enforcing contract reforms
    - The executive is better at paying taxes reform than the legislature
    - Executive is bad at business entry reforms compared to other branches
    - Interestingly, the judiciary is bad at insolvency reforms

Reform Initiation

We also look at reform initiation; our outcome variable is number of attempted reforms in each of $189 \times 3 \times 3 = 1,689$ country-initiator-area bucket.

	Reform Domain						
	Enforcing Contracts	Labor Regulation	Paying Taxes	Minority Investors	Resolving Insolvency	Starting a Business	All Domains
Intercept	−0.161	0.634****	1.238****	0.556****	0.437****	1.100****	3.806****
	(0.115)	(0.137)	(0.147)	(0.116)	(0.104)	(0.169)	(0.376)
Initiation - Judicial	0.027	−0.679****	−1.367****	−0.305****	−0.421****	−1.496****	−4.241****
	(0.043)	(0.052)	(0.055)	(0.044)	(0.039)	(0.064)	(0.142)
Initiation - Legislative	−0.314****	−0.472****	−1.134****	−0.084*	−0.301****	−1.392****	−3.697****
	(0.043)	(0.052)	(0.055)	(0.044)	(0.039)	(0.064)	(0.142)
Area - Administrative	0.112***	−0.889****	−0.193****	−0.756****	−0.512****	0.663****	−1.574****
	(0.043)	(0.052)	(0.055)	(0.044)	(0.039)	(0.064)	(0.142)
Area - Technology	−0.057	−0.898****	−0.239****	−0.761****	−0.595****	0.176***	−2.374****
	(0.043)	(0.052)	(0.055)	(0.044)	(0.039)	(0.064)	(0.142)
Log GDP per capita	0.065****	0.076****	0.032**	0.039***	0.047****	0.016	0.274****
	(0.013)	(0.015)	(0.016)	(0.013)	(0.011)	(0.019)	(0.041)
Number of observations	1,683	1,683	1,683	1,683	1,683	1,683	1,683
R^2	0.066	0.264	0.301	0.215	0.197	0.323	0.453

Note: Standard errors in parentheses. **** $p < 0.001$; *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$

Event Study: Successful Reforms Affect Indicators

	Indicator		
Enforcing contracts			
	Cost (% of contract)	**Time (days)**	
after_reform	−0.719 (3.16)	−0.0192 (0.336)	
Labor regulation			
	Difficulty of hiring index	**Rigidity of hours index**	**Difficulty of redundancy index**
after_reform	−1.05** (0.536)	0.208 (0.419)	−0.683 (0.420)
Paying taxes			
	Tax payments per year	**Tax paying time (hours per year)**	**Total tax and contribution rate**
after_reform	−1.48*** (0.544)	−11.3*** (4.00)	−0.941*** (0.351)

Event Study: Successful Reforms Affect Indicators

Minority investors

	Extent of disclosure index	Extent of director liability index
after_reform	0.133**	0.0707
	(0.0648)	(0.0621)

Resolving insolvency

	Time (years)	Cost (% of estate)
after_reform	−0.0449**	−0.0395
	(0.0226)	(0.0909)

Starting a business

	Procedures to start a business	Time (days)	Cost (% of income per capita)	Paid-in minimum capital
after_reform	−0.312****	−3.89**	−5.17**	−9.77
	(0.0763)	(1.59)	(2.26)	(17.2)