

Deals versus Rules: Policy Implementation Uncertainty and Why Firms Hate It

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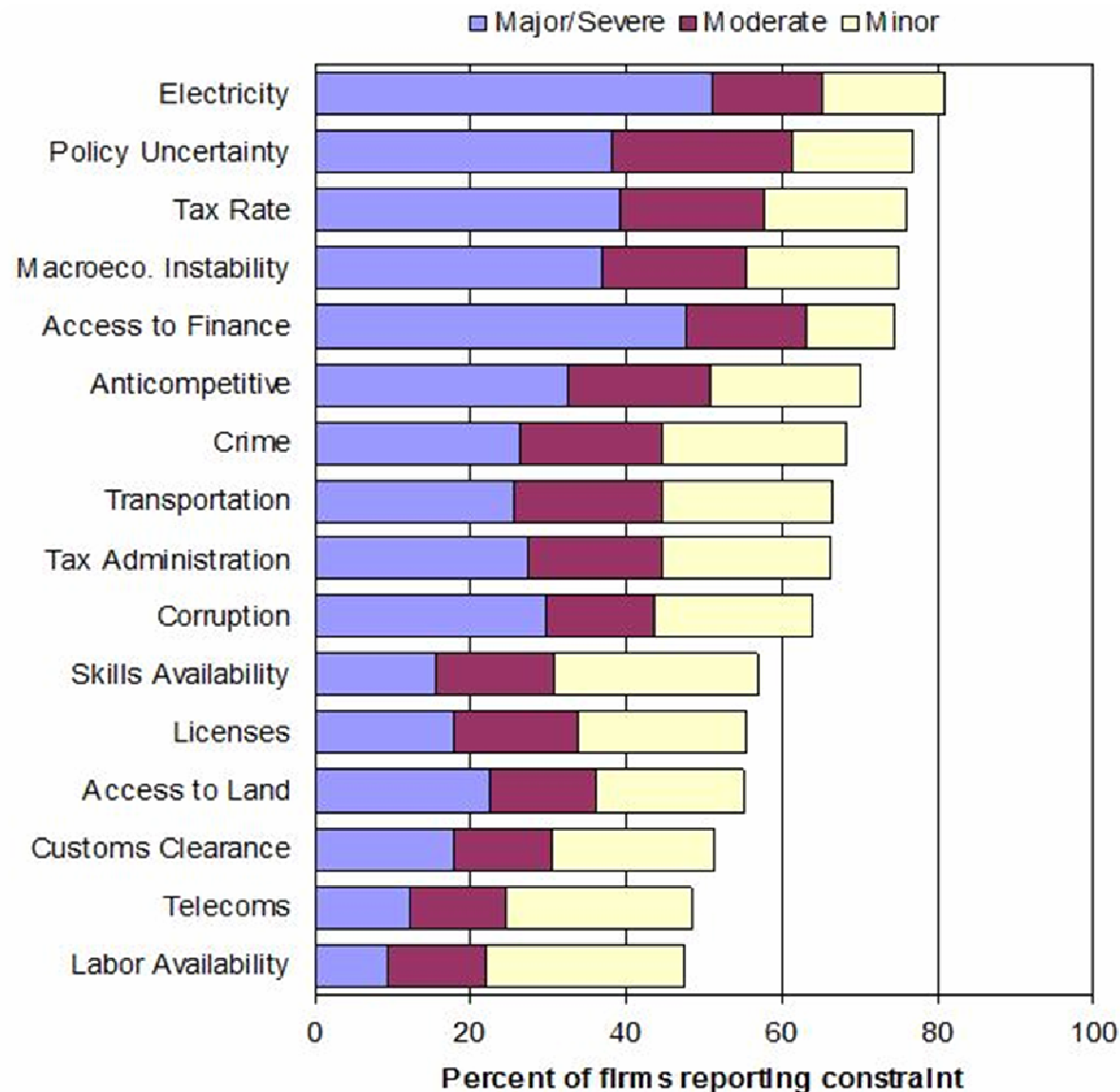
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Motivation: Policy Uncertainty ranks high as a severe or major constraint



Outline

- Motivation: “Policy Uncertainty”
- Conceptual: Inter-temporal versus Implementation Uncertainty
- Empirical: Evidence that implementation uncertainty matters and affects firm behavior
- Speculative: Areas for future research

Motivation: “Policy Uncertainty” is claimed as a negative by firms

Table 1: The degree to which firms in Africa regard “economic and regulatory policy uncertainty” as an obstacle to business

Country	Year of Survey	Percent report “no” or a “minor” obstacle	Percent report “major” or “very severe” obstacle	number of firms
Benin	2004	10.2%	64.7%	187
Ethiopia	2002	23.8%	56.8%	206
Kenya	2003	24.8%	51.5%	266
Lesotho	2003	25.6%	41.5%	289
Madagascar	2005	27.6%	58.0%	181
Malawi	2005	41.1%	31.5%	270
Mali	2003	43.0%	31.3%	256
Mauritius	2005	43.7%	39.3%	412
Mozambique	2002	47.5%	24.3%	202
Senegal	2003	50.0%	32.9%	70
South Africa	2003	53.5%	27.6%	254
Tanzania	2003	58.2%	21.9%	146
Uganda	2003	59.0%	22.4%	156
Zambia	2002	62.0%	17.9%	603
Total		42.2%	35.6%	3,498

What is Policy Uncertainty?

- A) Intertemporal: whether the formal or *de jure* rules will change
- B) Implementation: whether/how the rules will be applied to me

What matters to firms are not ‘policies’ but policy actions – and in weak institutional environment, these actions may not be well predicted by formal policy rules

Deals aren't necessarily about violating rules
 – but also about changing administratively
 declared states of the world

<i>Notional Policy mapping</i>	<i>Determination phase, declaration of administratively relevant state of the world</i>	<i>Action phase</i>
Tax Collection		
<i>Import Duties:</i> Tariff code from types of goods to tariff rates	What type of good is it in the tariff code classification? Is it in an “exempt” category? What is the import value?	Apply the specified rate to the category from the tariff code and collect appropriate tax
Regulation		
<i>Driver's license</i> Personal qualifications to type of license	Does the applicant meet the specified criteria (e.g. age, residence, competence) for the type of license?	Issue driver's license

Rules vs. Deals

- “Rules” approach assumes policy actions are a function only of the state of the world and not affected by actions of the firm
- “Deals” approach recognizes firms will undertake actions to influence either the determination or action phase (or both).

(Possible deal is to allow the firm to do what is allowed under the rules and so avoid delays)

- Come in many flavors: Can involve collusion, bribes, favors; can be large or small
- Characteristics of the firm itself can alter the scope of deals available (e.g. Suharto’s son). Deals can be open or closed

Types of Policy Uncertainty: Ordered, Disordered; Open, Closed

Characterization of the Positive Model of Policy Implementation				
	Rules (policy actions depend on notional policy mapping)	Deals (Policy actions depend on characteristics or actions of the firm not specified in the notional policy mapping)		
		Ordered (small ex-post uncertainty about policy implementation—deals stay done)		Disordered (large ex-post uncertainty—deals cannot secure predictability)
		Open (deals are available to all firms)	Closed (deals are available only to favored firms)	
“Regulatory and Economic Policy Uncertainty”	(a) Inter-temporal changes in the Notional Policy Mapping	(a) <i>and</i> (b) uncertainty about the “influence function” <i>and</i> (c) uncertainty about the durability of deals	(a) <i>and</i> (b) <i>and</i> (c) <i>and</i> (d) uncertainty about which type of treatment a firm will depending on its characteristics	(a) <i>and</i> Larger Type b and type c uncertainties) <i>and</i> type d is larger as who are the “favored” firms may change dramatically

Empirical: Six Stories

Intertemporal or Implementation

- Firms say so
- ...differentially by type – when face same rules
- Huge across-firm variability within a country
- People undertake actions to secure deals

Ordered or Disordered

- People do not always know size of bribe
- Reliable corruption seems less of an obstacle

Then show how measures of “policy uncertainty”
affect firm performance

#1: Table 3 (selective): Fraction of firms who *disagree* (either “strongly” or “tend to”) with the statement “Government implementation of laws and regulations is consistent and predictable”

Country/Year	Percent disagree
Cameroon2006	75.0%
Angola2006	67.5%
Nigeria2007	59.7%
Benin2004	59.2%
DRC2006	38.6%
Niger2005	37.9%
Guinea-Conakry2006	37.3%
Madagascar2005	36.2%
Tanzania2006	35.2%
SouthAfrica2003	33.6%
Gambia2006	26.9%
Namibia2006	26.8%
Burundi2006	18.7%
Rwanda2006	9.9%
Total	40.3%

#2: Table 4: Fraction disagreeing that government implementation is consistent and predictable, by firm characteristics

Within group differences >10 percentage points are in red

	Nigeria	Uganda	Ghana
Small (Employees<6)	63.9%	43.4%	32.2%
Medium(6<employees<21)	60.2%	47.6%	34.1%
Large (Employees>21)	38.6%	41.5%	31.3%
Labor Intensive	59.5%	51.4%	39.0%
Capital Intensive	56.2%	40.1%	24.6%
Services	61.2%	41.7%	30.7%
Capital City	65.9%	46.2%	28.7%
Medium/large	57.5%		40.9%
Medium/small	53.4%	42.1%	34.1%
Small city	75.1%	35.5%	
Total	59.7%	44.4%	32.1%

#3: Huge within country variability

e.g. days to get operating license

Table 5 (selective): Variation across firms in the reported days to get an operating license					
	Average Days	Std Dev Days	Mean plus one std dev	Mean less std dev (truncated at zero)	Firms responding
Benin2004	39.6	88.8	128.4	0.0	75
Mozambique2007	36.8	49.3	86.1	0.0	84
Senegal2007	35.7	98.5	134.1	0.0	79
Senegal2003	30.5	49.4	80.0	0.0	59
Guinea2006	12.4	21.5	34.0	0.0	45
Nigeria2007	12.2	19.7	31.9	0.0	720
Kenya2003	11.2	31.6	42.8	0.0	230
Rwanda2006	6.8	12.2	19.0	0.0	79
SouthAfrica2003	5.0	17.0	22.0	0.0	155
Uganda2003	4.9	22.5	27.4	0.0	260
BurkinaFaso2006	4.6	5.9	10.5	0.0	5
Average	16.7	31.4	48	0.0	3744
Std. Dev. Across countries	9.8				

#4 Table 7 (Selective): Actions by firms to secure deals

	Percent of management time spent with government officials		Bribes		
	Average	Std Dev	Percent paying	Average (percent of sales)	Std Dev
BurkinaFaso2006	11.01	15.30	87.0%	7.15	8.59
DRC2006	7.79	11.50	84.9%	4.39	7.82
Guinea2006	3.34	6.46	84.5%	5.00	8.40
Mauritania2006	7.52	13.69	81.2%	4.42	7.04
Zambia2002	13.88	12.97	44.4%	1.52	3.89
Nigeria2007	6.63	9.43	41.2%	1.85	4.06
Ghana2007	4.05	6.57	33.0%	1.95	4.94
Botswana2006	6.09	9.81	26.0%	1.26	4.95
Senegal2007	3.96	7.19	24.2%	1.56	4.91
Rwanda2006	6.73	10.17	20.1%	2.77	9.10
Mozambique2007	4.05	6.46	14.0%	1.58	8.81
SouthAfrica2003	10.09	11.97	2.1%	0.29	4.09
Average	8.33	11.56		3.23	6.48

Dependent variable: Bribes paid to 'get things done'		
	(1)	(2)
		IV
Mngtime with officials	0.0272***	0.1075**
	(0.0033)	(0.0422)
(d_AFR==1)*mngtime	0.0445***	
	(0.0103)	
Age>10 years	-0.2544***	-0.2762***
	(0.0773)	(0.0799)
Other covariates (size, ownership, location) not shown		
Observations	46133	46133
R-squared	0.08	0.04
Robust standard errors in parentheses		
* significant at 10%; ** significant at 5%; *** significant at 1%		
Sector and country dummies included too.		

Dependent variable: “Pay bribes to get things done”		(3)
Use location-sector-size cluster values directly		
Cluster average management time spent meeting with government officials		-0.0526
		(0.0580)
Cluster standard deviation of management time		0.1035***
		(0.0350)
Cluster average “consistency of interpretation”		-0.2942
		(0.5241)
Cluster standard deviation of “consistency of interpretation”		0.3208***
		(0.09959)
Observations		7759
R-squared		0.05

5 How much uncertainty Ordered vs. Disordered

Even of those who say bribes are paid,
report uncertainty about magnitude

Nigeria, of those who say “it is common in
this line of business” to pay bribes

40 percent disagree that it is known in
advance how much these payments are

#6: Predictable bribes are less of an obstacle

Table 6: Does this represent an obstacle?			
	Mali	Mozambique	Zambia
No	32.31	32.31	42.5
Minor	22.31	22.31	23.33
Moderate	28.46	23.08	24.17
Major	12.31	18.46	10
Very Severe	4.62	3.85	0
Source: Authors' calculations.			

Musyoka needs to renew a small business license from a local government office each year. Bribes are welcomed. Musyoka usually includes an additional bribe with his applications. When Musyoka had not included bribes, his application was sometimes lost or there were long delays such that the firm had to re-file.

Impact of 'deals' on firm behavior

1. Look at impact of uncertainty measures on firm's employment decisions
2. Difference-in-difference estimation if the gap between favored and unfavored firms is greater in sectors with greater interactions with government and in locations with greater uncertainty about deals

Find that deals can help raise growth – but that more disorderly or closed environments for deals is hinders firms' opportunities

Deals and Firm Growth

- Look at firm employment growth over three year period
 - Look at the change over the average (Haltiwanger); bounds the rates between +/- 2 , reducing the impact of outliers
- Look at firm's own levels of deal related activities
 - Address endogeneity by using sector-location-size averages (Dollar et al., Aterido et al.)
 - Use as instrument
 - Have it enter directly as measure of environment firm faces; decision about whether to strike a deal can depend on the types of deals being struck by similar firms.
 - Use multiple measures (management time, share of firms paying bribes, size of bribes, reported consistency of regulations, and security of property rights)
 - Allow for interactions for the Africa region to see if pattern diverges from broader global patterns

Impact on growth

	(1)	(2)	(3)	(4)	(5)	(6)
		IV				
Mngtime	0.0002** (0.0001)	0.0094** (0.0043)		Freq_bribe 0.0086** (0.0041)		
Mngtime*AFR	0.0005 (0.0003)			Freq_bribe*AFR 0.0049 (0.0089)		
Mngtime_Avg			0.0048*** (0.0011)	Freq_bribe_avg 0.0002 (0.0442)	Bribe_avg 0.012*** (0.0039)	
Mngtime_Avg*AFR			0.0047* (0.0028)	Freq_bribe_avg*AFR 0.0455** (0.0220)	Bribe_avg*AFR -0.0114 (0.0071)	
Mngtime_sd			-0.0013 (0.0009)	Freq_bribe_sd -0.0410 (0.0405)	Bribe_sd -0.028 (0.0193)	
Mngtime_sd*AFR			-0.0046** (0.0023)	Freq_bribe_sd*AFR -0.0766 (0.0751)	Bribe_sd*AFR -0.0324 (0.0212)	
Country, sector dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	67592	12628	68177	57358	63254	62904
R-squared	0.108	0.042	0.103	0.112	0.103	0.103

Growth, con't

	(7)		(8)
Consistency_avg	0.0510*** (0.0119)	PropRights_avg	0.0288** (0.0136)
Consistency_avg*AFR	-0.0127*** (0.0024)	PropRight_avg*AFR	-0.0026 (0.0028)
Consistency_sd	-0.0263 (0.0240)	PropRights_sd	-0.0375* (0.0219)
Consistency_sd*AFR	-0.0070* (0.0043)	PropRight_sd*AFR	0.00532 (0.00398)
Country, sector dummies	Yes		Yes
Observations	61568		60613
R-squared	0.102		0.102

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Firm controls: average size, age, government ownership, foreign ownership

Difference in Difference

Gap in performance = $a + D_{\text{sector}} + D_{\text{location}} + (\text{Sector need for government interaction}_{\text{sector}}) * (\text{Policy Environment}_{\text{location}})$

- Performance gap: look at relative gap between firms more likely to be making (favorable) deals with those less likely to:
 - Size
 - Age
- Sector differences in interactions with the government
 - Use Germany as the benchmark; highest control of corruption and rule of law in the sample
 - Food processing, restaurants, pharmaceuticals have higher rates of interactions; garments has the lowest.
- Measure of uncertainty of deals
 - Look at variation in the sector-location of management time spent with officials and bribes paid

Gap in growth rates is relatively larger in sectors with more government interactions in locations with greater uncertainty

Dependent variable:	Gap in growth of large versus small firms		Gap in growth of old versus young firms (by sector, country)	
	(1)	(2)	(3)	(4)
Std_Bribes _c * Intensity of Govt Interactions _s)	0.0133** (0.0066)		0.0065 (.0074)	
Std Management Time _c * Intensity of Govt Interactions _s)		0.0053* (0.0029)		0.0047 (.0036)
Country dummies	Yes	Yes	Yes	Yes
Sector dummies	Yes	Yes	Yes	Yes
R ²	0.33	0.31	0.24	0.28
N	260	260	285	285

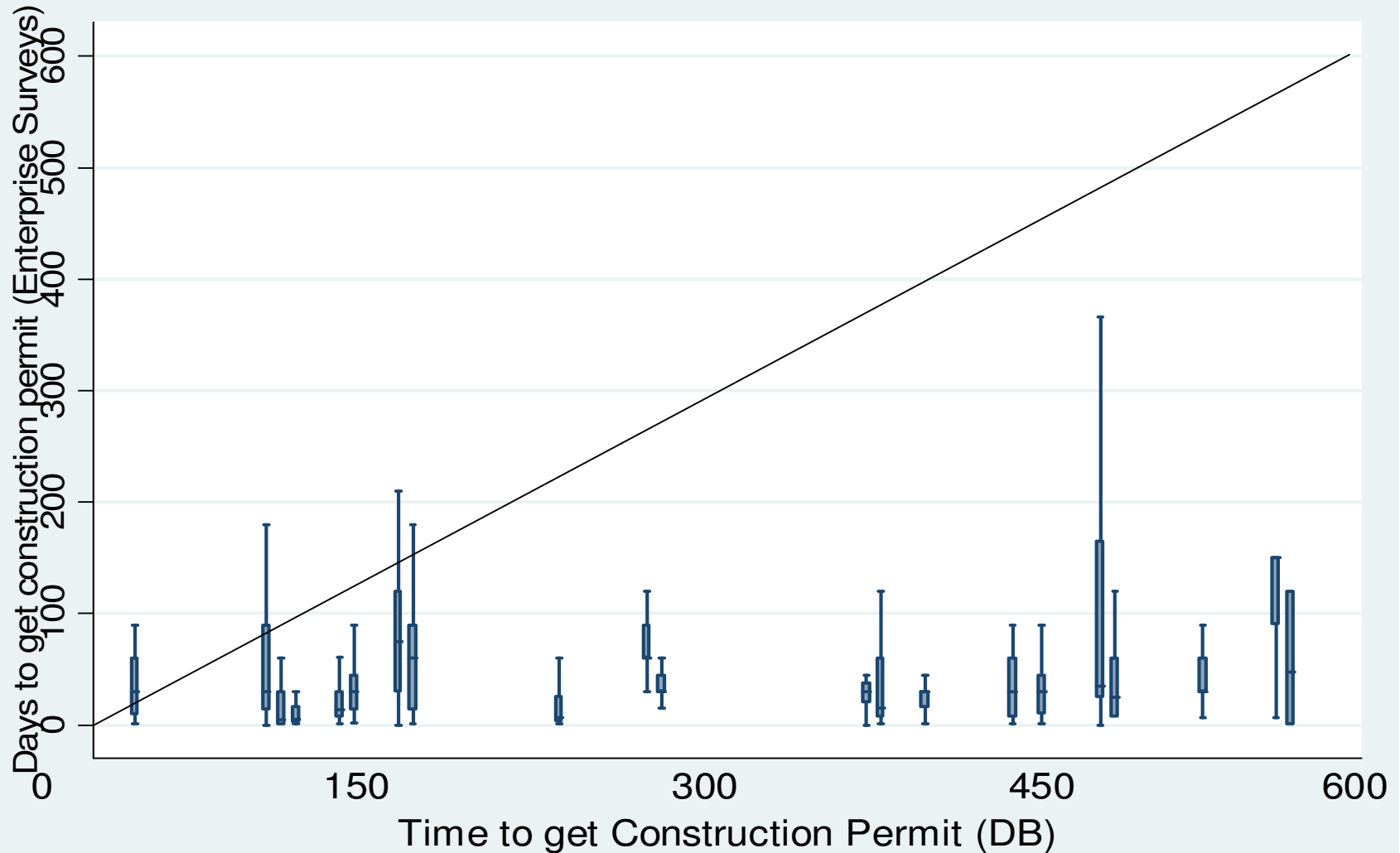
What to do?

Table 11: Responses to “policy uncertainty”

Nature of the Notional Policy Mapping	Characterization of the Positive Model of Policy Implementation			
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		Open (deals are available to all firms)	Closed (deals are available only to favored firms)	
Favorable (NPM conducive for firm growth)				
Unfavorable (NPM not conducive to firm growth)				

The diagram overlaid on the table consists of a light blue house-like shape. The roof is a triangle pointing upwards, with the text "NPM: Improve Rules" written vertically inside it. The main body of the shape is a large rectangle, with the text "What is actually Going on across Environments And Firms" written vertically inside it. The shape is positioned such that its roof overlaps the "Favorable" row and its main body overlaps the "Unfavorable" row.

De Jure (Doing Business) versus De Facto (Enterprise Survey): All firms are already submarines



excludes outside values

Attacking “corruption”

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What we hope is going on