

Economics 270c
Development Economics

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Economics 270c
Graduate Development Economics

Lecture 5 – February 13, 2007

Lecture 1: Global patterns of economic growth and development (1/16)

The political economy of development

Lecture 2: Inequality and growth (1/23)

Lecture 3: Corruption (1/30) – Guest lecture by Ben Olken

Lecture 4: History and institutions (2/6)

★ Lecture 5: Democracy and development (2/13)

Lecture 6: Ethnic and social divisions (2/20)

Lecture 7: Economic Theories of Conflict (2/27)

Lecture 8: War and Economic Development (3/6)

Human resources

Lecture 9: Human capital and income growth (3/13)

Lecture 10: Increasing human capital (3/20)

Lecture 11: Health and nutrition (4/3)

Lecture 12: The Economics of HIV/AIDS (4/10)

Lecture 13: Labor markets and migration (4/17)

Lecture 14: Environment and development (4/24)

Lecture 15: Social Learning and Technology Adoption (5/1)

- Referee report #2 due today at the end of class

Lecture 5 outline

- (1) Overview of democracy and development
- (2) Besley and Burgess (2002)
- (3) Khwaja and Mian (2006)

(1) Democracy and development

- Massive literature in economics and political science
- Consider Sub-Saharan Africa's democratization wave since 1991 – will this help / hinder economic growth?

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- Consider Sub-Saharan Africa's democratization wave since 1991 – will this help / hinder economic growth?
- How do we define a “democracy”?
 - Holding elections is not enough
 - Freedom House measure: “Political rights are rights to participate meaningfully in the political process. In a democracy this means the right of all adults to vote and compete for public office, and for elected representatives to have a decisive vote on public policies”

(1) Democracy and development

- How do we quantify the extent of democracy? There is clearly a continuum from democracy to autocracy
 - E.g., the ruling party may manipulate the media, intimidate opposition supporters, interfere with the electoral commission's voter rolls, engage in ballot fraud.
- Russia today is more democratic than the Soviet Union, but not as democratic as Sweden

(1) Democracy and development

- How do we quantify the extent of democracy? There is clearly a continuum from democracy to autocracy
 - E.g., the ruling party may manipulate the media, intimidate opposition supporters, interfere with the electoral commission's voter rolls, engage in ballot fraud. Russia today is more democratic than the Soviet Union, but not as democratic as Sweden
- There are have been large aggregate movements in these measures. In the 1970s average levels of democracy fell sharply in Africa and Latin America, and increased again in the late 1980s / early 1990s there, as well as in Eastern Europe. Reversals are possible

(1) Democracy and development

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but what impact on economic development?

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- A trade-off between democracy and development?
 - Do democracies consume too much?
 - Redistribute too much? (Persson and Tabellini 1994)

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- Political rights/freedoms are critical for human welfare but what impact on economic development?
- A trade-off between democracy and development?
 - Do democracies consume too much?
 - Redistribute too much? (Persson and Tabellini 1994)
 - Is democracy too unstable in poor countries?
E.g. Iraq 2001 versus 2007. Huntington (1968):
“Political participation must be held down, at least temporarily, in order to promote economic development”
“The most important political distinction among countries concerns not their form of government, but their degree of government”

(1) Democracy and development

- There are few general answers here: dictatorships may promote the interests of different groups – left-wing versus right-wing governments

(1) The virtues of democracy

- Amartya Sen (1981) *Poverty and Famines: An Essay on Entitlement and Deprivation*
- Stylized fact: no full-blown famines in a democracy

(1) The virtues of democracy

- Amartya Sen (1981) *Poverty and Famines: An Essay on Entitlement and Deprivation*
- Stylized fact: no full-blown famines in a democracy
 - (1) Policy makers have better information / free press
 - (2) More accountability / elections

(1) The virtues of democracy

- Post-independence India: no famines
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“The vital problems of India are being treated by His Majesty’s Government with neglect, even sometimes with hostility and contempt.” -- Lord Wavell
- Communist China: massive famine in 1957-1962 during “The Great Leap Forward”, 10-30 million dead

(2) Besley and Burgess (2002, QJE)

- An empirical implementation of Sen's ideas across 16 Indian states 1958-1992
- Indian states with more active local media and more competitive local politics respond more effectively to natural disasters (drought, flood)

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- An empirical implementation of Sen's ideas across 16 Indian states 1958-1992
- Indian states with more active local media and more competitive local politics respond more effectively to natural disasters (drought, flood)
- A model of political agency: voters seek to restrain politicians' moral hazard problem
 - Strong media → information on politician actions
 - Close elections → higher cost of inaction for politicians

A. Method

Our basic method is to run panel data regressions for states i and years t of the following form:

$$(4) \quad g_{it} = \alpha_i + \beta_t + \delta s_{it} + \gamma(s_{it})(z_{it}) + \phi z_{it} + u_{it},$$

where α_i and β_t are state and year fixed effects and z_{it} is a vector of economic, political, and media variables that we might expect to affect government responsiveness (g_{it}). This specification allows the right-hand side variables z_{it} to enter both as level terms and interacted with variables that capture the need for state intervention (s_{it}).

In terms of the theory, we think of the variable s_{it} proxying for β —the fraction of the needy population. We will introduce the other variables that Proposition 1 suggests should affect responsiveness as elements of the vector z_{it} .

TABLE II
SHOCKS AND RESPONSES IN INDIA: 1958–1992

	(1)	(2)	(3)	(4)	(5)	(6)
	Food grain production	Public food distribution	Public food distribution	Flood damage	Calamity relief expenditure	Calamity relief expenditure
Drought	-24.72 (2.33)			-3.510 (3.43)		
Flood	4.475 (0.65)			6.207 (3.20)		
Food grain production		-0.027 (3.55)			0.009 (1.60)	
Flood damage			0.035 (0.79)			0.141 (4.82)
State effects	YES	YES	YES	YES	YES	YES
Year effects	YES	YES	YES	YES	YES	YES
Number of observations	460	512	524	480	507	523
Adjusted R^2	0.84	0.71	0.69	0.18	0.19	0.27

TABLE III
DETERMINANTS OF GOVERNMENT ACTIVISM

	Public food distribution			Calamity relief expenditure		
	(1)	(2)	(3)	(4)	(5)	(6)
Food grain production	-0.024 (2.51)	-0.026 (2.67)	-0.024 (2.43)			
Flood damage				0.149 (4.67)	0.146 (4.72)	0.144 (4.57)
Newspaper circulation		97.19 (3.37)	97.82 (3.60)		39.84 (2.34)	38.63 (2.25)
Turnout			-0.115 (1.612)			0.015 (0.52)
Political competition			5.671 (3.11)			0.753 (0.70)
Election dummy			2.497 (2.35)			-0.032 (0.07)
Log state income	3.617 (0.69)	5.678 (1.07)	2.705 (0.51)	-2.258 (0.72)	-1.724 (0.54)	-2.417 (0.78)
Ratio of urban to total population	130.47 (2.37)	71.82 (1.37)	62.14 (1.20)	-20.02 (0.97)	-45.54 (1.89)	-42.70 (1.77)
Population density	-18.42 (0.82)	-34.03 (1.76)	-36.04 (1.95)	-9.588 (1.56)	-17.85 (2.61)	-17.29 (2.59)
Log population	-43.96 (2.94)	-46.23 (2.96)	-49.59 (3.18)	-10.86 (1.16)	-9.249 (0.99)	-12.25 (1.30)
Revenue from center	0.079 (1.88)	0.044 (1.13)	0.053 (1.41)	0.019 (0.43)	0.006 (0.14)	0.009 (0.19)
State effects	YES	YES	YES	YES	YES	YES
Year effects	YES	YES	YES	YES	YES	YES
Number of observations	476	474	471	491	489	486
Adjusted R^2	0.75	0.76	0.77	0.27	0.28	0.28

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TABLE IV
NEWSPAPERS AND RESPONSIVENESS

	Public food distribution			Calamity relief expenditure			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Food grain production	0.019 (0.98)	-0.000 (0.00)	-0.021 (2.15)	0.011 (0.56)			
Flood damage					0.063 (2.58)	0.144 (4.46)	0.085 (3.05)
Newspaper circulation	146.84 (4.52)	152.34 (3.96)			19.41 (1.31)		
Newspaper circulation * food grain production	-0.444 (3.11)	-0.412 (2.53)					
Newspaper circulation * flood damage					1.677 (2.83)		
English newspaper circulation			54.64 (0.61)	91.63 (0.68)		42.97 (0.86)	47.76 (0.96)
Hindi newspaper circulation			-14.34 (0.29)	-157.43 (1.18)		3.515 (0.10)	-19.33 (0.52)
Other newspaper circulation			118.88 (3.45)	168.02 (3.88)		42.14 (2.30)	20.35 (1.35)
English newspaper circulation * food grain production				-0.229 (0.36)			
Hindi newspaper circulation * food grain production				0.542 (1.09)			
Other newspaper circulation * food grain production				-0.605 (2.84)			
English newspaper circulation * flood damage							-5.683 (1.70)
Hindi newspaper circulation * flood damage							2.410 (1.29)
Other newspaper circulation * flood damage							1.964 (3.16)

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TABLE V
NEWSPAPERS AND RESPONSIVENESS: INSTRUMENTING WITH OWNERSHIP DATA

	Public food distribution (1)	Public food distribution (2)	Newspaper circulation (3)	Calamity relief exp (4)	Calamity relief exp (5)	Newspaper circulation (6)
Food grain production	-0.023 (2.10)	0.055 (2.45)	0.000 (0.70)			
Flood damage				0.144 (4.40)	0.051 (1.23)	0.000 (0.62)
Newspaper circulation	321.26 (2.36)	408.04 (3.14)		109.21 (2.66)	75.03 (1.87)	
Newspaper circulation * food grain production		-0.683 (4.73)				
Newspaper circulation * flood damage					1.758 (1.89)	
Share of newspapers owned by individuals			0.023 (1.21)			0.011 (0.65)
Share of newspapers owned by public joint stock companies			-0.139 (1.09)			-0.127 (1.05)
Share of newspapers owned by private joint stock companies			-0.028 (0.37)			0.002 (0.03)
Share of newspapers owned by societies or associations			0.081 (2.39)			0.070 (2.32)
Share of newspapers owned by political parties			-0.927 (5.19)			-0.912 (5.39)

TABLE VI
POLITICS AND RESPONSIVENESS

	Public food distribution			Calamity relief expenditure		
	(1)	(2)	(3)	(4)	(5)	(6)
Food grain production	0.041 (0.90)	-0.082 (3.13)	-0.026 (3.01)			
Flood damage				-0.175 (1.63)	0.222 (3.39)	0.161 (3.50)
Newspaper circulation	98.73 (3.62)	93.55 (3.46)	99.49 (3.63)	84.97 (2.14)	36.07 (2.22)	37.95 (2.23)
Turnout	0.085 (0.54)	-0.107 (1.51)	-0.120 (1.67)	-0.018 (0.66)	0.012 (0.42)	0.015 (0.53)
Turnout * food grain production	-0.001 (1.56)					
Turnout * flood damage				0.005 (2.86)		
Political competition	5.899 (3.20)	12.00 (3.08)	5.883 (3.21)	0.753 (0.717)	-0.404 (0.32)	0.657 (0.60)
Political competition * food grain production		-0.027 (2.04)				
Political competition * flood damage					0.182 (1.69)	
Election dummy	2.535 (2.36)	2.420 (2.30)	0.061 (0.03)	-0.125 (0.29)	-0.003 (0.01)	0.197 (0.39)
Election dummy * food grain production			0.012 (1.25)			
Election dummy * flood damage						-0.037 (0.71)
Economic controls	YES	YES	YES	YES	YES	YES
State effects	YES	YES	YES	YES	YES	YES
Year effects	YES	YES	YES	YES	YES	YES
Number of observations	471	471	471	486	486	486
Adjusted R^2	0.77	0.77	0.77	0.29	0.29	0.28

(3) Khwaja and Mian (2006, QJE)

- What is the value of political connections?
- In particular do firms with “political ties” get more loans and / or less strict enforcement of loans in Pakistan during 1996-2002?
- How do political conditions, and in particular political accountability, affect these patterns?

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- A case study of the banking sector in Pakistan. Top government bank officials are political appointees, but not so for private banks

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- How do political conditions, and in particular political accountability, affect these patterns?
- A case study of the banking sector in Pakistan. Top government bank officials are political appointees, but not so for private banks
 - 1992: Government banks 92% of all lending
 - 1996-2002: 64% of all lending

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- As part of the banking reforms in the mid-1990s, a centralized credit information bureau was developed and this forms the basis for their dataset
- They have the universe of all bank loans in Pakistan (!), 93,316 firms, 112,685 loan pairs, over 25 quarters
- Data on 68 private banks, 23 government banks

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 - Likely attenuation bias towards zero: shared names, mismatches / typos, “connected” non-politicians missed

TABLE I
SUMMARY STATISTICS

Variable	Mean	S.D.	Obs.
Panel A: Loan-level variables			
<i>Loan Size</i> ('000s of 1995 Pak Rs.)	6,669	89,298	112,685
<i>Default Rate (%)</i> : Unweighted	16.85	30.22	112,685
<i>Default Rate (%)</i> : Loan size weighted	17.61	31.06	112,685
<i>Recovery Rate (%)</i> : (conditional on default)	8.55	24.50	24,562
<i>Rate of Return (%)</i>	93.46	35.70	89,223
<i>Interest Rate (%)</i>	14.05	2.90	89,223
<i>Loan Type</i>	<i>Fixed</i>	<i>Working Capital</i>	<i>Letter of Credit</i>
Percent of total lending	32%	49%	7%
Panel B: Borrower/firm attributes			
<i>Politically Connected</i>	<i>No</i>	<i>Yes</i>	
Percent of total firms	77%	23%	
Percent of total lending (of total loans)	63% (74%)	37% (26%)	
<i>Size (percentile)</i>	<i>0-50</i>	<i>50-75</i>	<i>75-95</i>
Percent of total lending (of total loans)	6% (42%)	3% (21%)	13% (23%)
<i>Location (City Size)</i>	<i>Small</i>	<i>Medium</i>	<i>Large</i>
Percent of total lending (of total loans)	8% (17%)	12% (15%)	74% (52%)
		<i>Unclassified</i>	6% (16%)
		<i>Guarantees</i>	7%
		<i>Other</i>	5%
		<i>95-99</i>	23% (9%)
		<i>99-100</i>	55% (5%)

The basic empirical specification employed to test for political preference uses the cross-sectionalized data. For firm i borrowing from bank j , we use OLS to estimate

$$(2) \quad Y_{ij} = \alpha_j + \beta_1 \cdot \text{Political}_i + \gamma_1 \cdot \mathbf{X}_i + \gamma_2 \cdot \mathbf{X}_{ij} + \varepsilon_{ij},$$

where Y_{ij} is one of the measures of preferential treatment mentioned above, and Political_i is an indicator variable for whether a firm is politically connected. \mathbf{X}_i are firm level controls such as firm location, industry, and size, \mathbf{X}_{ij} is a loan type (working capital, fixed investment) control, and α_j is a bank fixed effect. The controls \mathbf{X}_i , and \mathbf{X}_{ij} are introduced nonparametrically: we include fixed effects for firm size (5 categories), the number of creditors the firm has (8 categories from 1 to greater than 7), a firm's group size (3 categories), city (134 cities) and industry (21 categories), and the loan type (5 categories). This results in a total of 268 dummy variables (including the 91 bank dummies). β_1 in (2) is our coefficient of interest that captures the preferential treatment a politically connected firm receives, and henceforth will be referred to as the "political preference" effect.

We use the following specification to test whether the *same* firm receives (greater) preferential treatment if it is politically connected when it borrows from a government compared with a private bank:

$$(3) \quad Y_{ij} = \alpha_i + \alpha_j + \beta_1 \cdot \text{Political}_i * GOV_j \\ + \gamma_1 \cdot \mathbf{X}_{ij} + \gamma_2 \cdot \mathbf{X}_{ij} * GOV_j + \varepsilon_{ij}$$

where in addition to the variables in (2), α_i is a firm fixed effect and GOV_j is an indicator variable for whether the lender is a government bank or not. Our coefficient of interest, β_1 , is the “differences-in-differences” estimate of political preference. β_1 captures the extent to which a politically connected firm receives preferential lending from a government bank as compared with a

TABLE III
ARE POLITICALLY CONNECTED FIRMS GIVEN PREFERENTIAL TREATMENT?

Dependent variable	Log loan size (1)	Rate of return (2)	Default rate (3)	Recovery rate (4)	Interest rate (5)
Politically connected	0.37 (0.08) YES	-6.08 (2.46) YES	6.22 (1.98) YES	-1.09 (1.14) YES	0.09 (0.05) YES
Controls	0.26	0.28	0.29	0.24	0.43
No. of Obs.	112,685	89,223	112,685	24,562	89,223

TABLE IV
ARE POLITICALLY CONNECTED FIRMS FAVORED BY GOVERNMENT BANKS ONLY?
DEFAULT RATE

	Default rate (%)					
	(1)	(2)	(3)	(4)	(5)	(6)
		Government banks only	Private banks only	All banks		Firms borrowing from both government and private banks
Politically connected	10.92 (4.12)	9.13 (1.92)	-0.02 (0.27)	-0.78 (0.26)	-0.78 (0.26)	—
Politically connected * government bank					9.91 (1.90)	1.4 (1.04)
Constant	19.87 (2.60)	—	6.05 (2.03)	—	—	—
Controls	NO	YES	NO	YES	YES ^a	Firm fixed effects ^b
R^2	0.02	0.3	0.004	0.15	0.33	0.78
No. of Obs.	61,897	61,897	50,788	50,788	112,685	18,819

TABLE V
ARE POLITICAL FIRMS FAVORED BY GOVERNMENT BANKS ONLY?
ACCESS TO CREDIT

Dependent variable	Log loan size		
	(1)	(2)	(3)
	Data restricted to firms that borrow from both government and private banks		
Government bank	0.07 (0.03)	-1.19 (0.14)	-0.2 (0.03)
Politically connected * government bank	0.29 (0.05)	-0.21 (0.22)	0.13 (0.05)
Government bank * log firm size		0.14 (0.02)	
Politically connected * government bank * log firm size		0.041 (0.03)	
Government bank * firm default rate			1.9 (0.11)
Politically connected * government bank * firm default rate			0.56 (0.17)
Firm fixed effect	YES	YES	YES
R^2	0.81	0.81	0.83
No. of obs.	10,880	10,880	10,880

TABLE VI
TESTING FOR POLITICAL STRENGTH AND PARTICIPATION

Dependent variable	Log loan size				
	(1)	(2)	(3)	(4)	(5)
	Data restricted to firms that borrow from both government and private banks				
Government bank	0.07 (0.03)	0.07 (0.03)	0.07 (0.03)	0.07 (0.03)	0.07 (0.03)
Politically connected * government bank	0.25 (0.06)	0.26 (0.05)	0.25 (0.05)	0.23 (0.05)	0.67 (0.20)
Politically connected * government bank * percentage votes	0.69 (0.47)				
Politically connected * government bank * win		0.63 (0.32)			
Politically connected * government bank * victory margin			0.53 (0.29)		
Politically connected * government bank * winparty				0.29 (0.13)	
Politically connected * government bank * electoral participation					-1.04 (0.53)
Firm fixed effect	YES	YES	YES	YES	YES
R^2	0.81	0.81	0.81	0.81	0.81
No. of Obs.	10,880	10,880	10,880	10,880	10,880

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TESTING FOR POLITICAL STRENGTH AND PARTICIPATION

Dependent variable	Log loan size				
	(1)	(2)	(3)	(4)	(5)
	Data restricted to firms that borrow from both government and private banks				
Government bank	0.07 (0.03)	0.07 (0.03)	0.07 (0.03)	0.07 (0.03)	0.07 (0.03)
Politically connected * government bank	0.25 (0.06)	0.26 (0.05)	0.25 (0.05)	0.23 (0.05)	0.67 (0.20)
Politically connected * government bank * percentage votes	0.69 (0.47)				
Politically connected * government bank * win		0.63 (0.32)			
Politically connected * government bank * victory margin			0.53 (0.29)		
Politically connected * government bank * winparty				0.29 (0.13)	
Politically connected * government bank * electoral participation					-1.04 (0.53)
Firm fixed effect	YES	YES	YES	YES	YES
R^2	0.81	0.81	0.81	0.81	0.81
No. of Obs.	10,880	10,880	10,880	10,880	10,880

TABLE VII
TIME SERIES TEST OF POLITICAL STRENGTH

Dependent variable	Log loan size			
	(1)	(2)	(3)	(4)
Data restricted to politically connected firms that experience change in political status				
In power?	-0.120 (0.027)		-0.106 (0.028)	-0.105 (0.027)
In power * government bank	0.186 (0.032)		0.170 (0.032)	0.168 (0.033)
Party in power?		-0.132 (0.028)	-0.120 (0.028)	-0.120 (0.028)
Party in power * government bank		0.170 (0.033)	0.153 (0.033)	0.150 (0.036)
In power * party in power * government bank				0.008 (0.040)
Fixed effects	Firm * bank- type, quarter	Firm * bank- type, quarter	Firm * bank- type, quarter	Firm * bank- type, quarter
R^2	0.79	0.79	0.79	0.79
No. of Obs.	29,405	29,405	29,405	29,405

The costs of political influence / corruption

- Deadweight loss from tax revenue: 0.15-0.3% of GDP
- Productive use of the diverted funds (we can't rule out that they are being used productively): 1.9% of GDP
- Broader impacts on firm strategy, exit and entry decisions, mark-ups, rent-seeking “investments” of time and resources: could be much larger

Whiteboard #1

Whiteboard #2

Whiteboard #3

Whiteboard #4

Whiteboard #5

