

ECON 3510: Poverty and Economic Development

Lecture 16: Economic Policy Under Non-Democratic Institutions

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Fall 2025

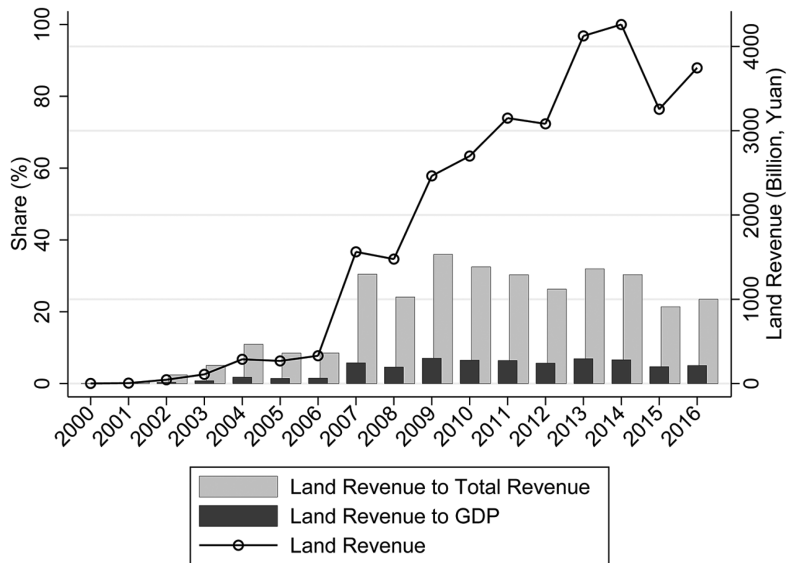
Democracy vs. Non-Democracy

- ▶ We have seen evidence that in democracies, electoral competition powerfully shapes economic policies.
 - Median Voter Theorem: policies respond to changes in voter preferences.
 - Term limits: incumbent politicians make policies that help with re-election.
- ▶ Incentives to win more votes matter!
- ▶ In non-democracies, where competitive elections do not exist, what determines economic policies?
- ▶ Autocratic leaders' will? Recall evidence from successful vs. failed assassinations. But it is about national leaders and thus omits the complex interactions between different levels of government.
- ▶ Chen and Kung (2019): In non-democracies, incentives for political advancements still matter! But now, politicians are accountable to ruling elites rather than the voters.
- ▶ They shed light on this issue by studying government-business relations in China's land markets.

Chinese Land Markets

- ▶ In China, all urban land is owned by the state.
- ▶ Local governments have discretion to allocate and sell the land to residential and industrial developers.
- ▶ Land sales have become a major source of revenue for local governments.

Land Revenue, 2000–2016



China's Political Elites

- The Politburo (political bureau) is China's ruling body.



FIGURE II

The Power Pyramid of the 18th National Congress of the Communist Party of China (2012–2017)

Political Connections

- ▶ Chen and Kung (2019) study the influence of connections to Politburo members and their family or extended family members (“princelings”).
 - This definition is broader than the traditional definition of princelings — children of high-ranking communist revolutionaries.
- ▶ They obtain information on princelings from extensive investigative journalism.
- ▶ The same sources allows them to identify firms connected to princelings, i.e., firms in which princelings are founders or shareholders (“princeling firms”).

TABLE I
CHARACTERISTICS OF PRINCELINGS

Total	134	
By relation to the Politburo and Politburo Standing Committee members		
Son/daughter and son-/daughter-in-law	78	58.21%
Wife and other in-laws	31	23.13%
Brother and sister	18	13.43%
Nephew and niece	7	5.22%
By occupation		
SOE high executives	39	29.10%
Private firm owners or investors	61	45.52%
Government officials	13	9.70%
Army officials	8	5.97%
Others	13	9.70%

SOE = state-owned enterprises.

TABLE II
SECTORAL CHARACTERISTICS OF PRINCELING FIRMS

	Princeling firms		Nonprinceling firms	
	Number of firms	% of firms	Number of firms	% of firms
Sector				
Real estate	1,294	36.67	116,829	26.69
Financial	660	18.70	4,985	1.14
Information technology and computer	391	11.08	11,067	2.53
Manufacturing	258	7.33	137,323	31.37
Electricity, gas, and water supply	222	6.31	19,061	4.35
Other	214	6.07	30,303	6.92
Leasing and business services	183	5.20	737	0.17
Environment and public facilities	105	2.99	371	0.08
Wholesale and retail trade	68	1.93	22,671	5.18
Transportation and storage	35	1.01	17,338	3.96
Accommodation and catering services	25	0.72	8,918	2.04
R&D	22	0.63	2,198	0.50
Agriculture	15	0.43	22,913	5.23
Service industry	13	0.39	37,696	8.61
Mining	8	0.24	1,758	0.40
News media and publisher	6	0.19	154	0.04
Education	1	0.05	1,069	0.24
Health and Social Services	1	0.05	2,385	0.54
Of which:				
State-owned firms	834	23.64	151,733	34.66
Large firms (annual revenue >0.3 billion <i>yuan</i>)	2,563	72.61	181,546	41.37
Headquartered in national/provincial capital	2,305	65.29	107,562	24.57
Total	3,530		437,776	

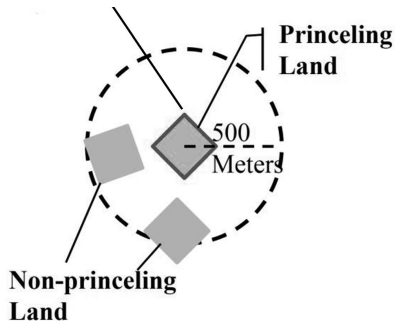
Political Influence in Land Price Setting

- ▶ How do connections to princelings affect land price setting?
- ▶ The authors obtain transaction-level data on land sales between 2004–2016.

$$\log(\text{Price}_{ickst}) = \beta_0 + \beta_1 \text{PrincelingPurchase}_{ikjt} + \gamma \mathbf{X}_{ik} + \mathbf{T}_{ckst} + \epsilon_{ickst}$$

- Price_{ickst} = price of land parcel i (*yuan* per $\text{km}^2 \approx 1/7$ USD), sold by city c to firm k for use k (residential or industrial) in month-year t .
 - $\text{PrincelingPurchase}_{ikjt}$ = dummy that equals one if parcel i is sold to firm k connected to princeling j in month-year t .
 - \mathbf{X}_{ik} = characteristics of parcel i and firm k , including size, quality, sales method, firm size, and firm ownership.
 - \mathbf{T}_{ckst} = high-dimensional FEs, including city \times year \times usage FEs, month FEs, and industry FEs.
- ▶ β_1 = price difference between land parcels sold to princeling firms and non-princeling firms, conditional on observable controls.
 - ▶ Can we attribute the difference (if any) to princelings' political influence, or corruption?
 - ▶ What about unobserved differences in land parcels? Maybe two kinds of firms operate in distinct locations, leading to price differences.

Spatial Matching



- ▶ To tease out unobserved factors, the authors match each princeling land to non-princeling land parcels that are close to it and sold in the same year.
- ▶ Exact matching!

TABLE III
SUMMARY STATISTICS OF LAND TRANSACTIONS

	All		$\leq 1,500$ meters		≤ 500 meters	
	Obs.	Mean	Obs.	Mean	Obs.	Mean
Log of land price	1,151,357	5.864	335,860	5.971	193,053	5.748
Princeling purchase	1,208,621	0.016	359,539	0.055	207,564	0.095
Land quality	1,208,621	12.969	359,539	13.876	207,564	13.448
Log of land area	1,184,522	4.813	349,929	4.691	201,515	4.690
Sales methods						
Bilateral agreement	226,910	0.188	82,733	0.230	44,905	0.216
English auction	99,854	0.083	29,096	0.081	14,655	0.071
Invited bidding	14,281	0.012	4,698	0.013	2,627	0.013
Listing auction	867,576	0.718	243,012	0.676	145,377	0.700

Purchases by Princeling and Non-Princeling Firms

TABLE IV
LAND PARCELS PURCHASED BY PRINCELING AND NONPRINCELING FIRMS, 2004–2016

	Number of transactions		Average price	
	Commercial and residential land	Industrial land	Commercial and residential land	Industrial land
All	586,974 (48.57%)	621,647 (51.43%)	1,383.99	280.28
Princelings' land	16,717 (84.38%)	3,095 (15.62%)	812.1	270.42
Nonprincelings' land in 500-meter radius	90,568 (48.24%)	97,184 (51.76%)	1,457.191	306.15
Difference			−645.09	−35.73

Princeling Firms Paid Lower Prices

TABLE V
PRINCELING PURCHASE AND LAND PRICE, 2004–2016

	Log of land price								
	All	≤ 1,500 meters	≤ 500 meters	All	≤ 1,500 meters	≤ 500 meters	All	≤ 1,500 meters	≤ 500 meters
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Princeling firms	−0.808*** (0.025)	−0.904*** (0.034)	−0.844*** (0.033)	−0.545*** (0.035)	−0.666*** (0.043)	−0.620*** (0.043)	−0.808*** (0.030)	−0.894*** (0.040)	−0.835*** (0.038)
Princeling firms * PSCM				−0.442*** (0.037)	−0.420*** (0.048)	−0.396*** (0.049)			
Princeling firms * Retired							−0.001 (0.056)	−0.051 (0.063)	−0.044 (0.058)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Two-way clustering by firm and province	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
City-year-usage FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	1,144,507	334,232	191,896	1,144,507	334,232	191,896	1,144,507	334,232	191,896
Adjusted <i>R</i> -squared	0.692	0.727	0.755	0.692	0.728	0.756	0.692	0.727	0.755

Notes. Control variables include land quality, land area, sales method dummies, firm size (classified as large, medium-sized, small, or micro if its revenue in *yuan* is 0.3 billion or more, 30 million or more but below 0.3 billion, 3 million or more but below 30 million, or under 3 million, respectively), and ownership type; robust standard errors in parentheses; ***, **, and * indicate significance at the 0.1%, 1% and 5% levels; constant terms are not reported.

- Nearly half is driven by connections to Politburo Standing Committee members (PSCM).

Princeling Firms Paid Lower Prices

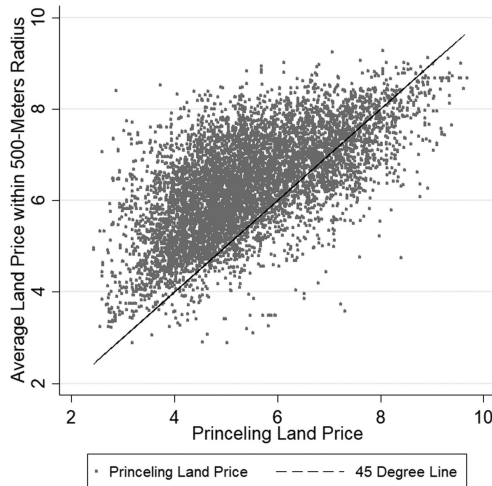


FIGURE IV

Land Prices within the 500-Meter Radius, Princeling and (Average)
Nonprinceling Prices Compared

TABLE VI
QUANTITY OF LAND PURCHASED BY PRINCELING FIRMS, 2004–2016

	Log of quantity of land purchased		
	(1)	(2)	(3)
Princeling firms	0.002*** (0.000)	0.001** (0.000)	0.002*** (0.000)
Princeling firms * PSCM		0.031*** (0.004)	
Princeling firms * Retired			– 0.001 (0.001)
Control variables	Yes	Yes	Yes
Clustering by firm	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Number of observations	5,690,984	5,690,984	5,690,984
Adjusted <i>R</i> -squared	0.015	0.016	0.015

Notes. Control variables include firm size (classified as large, medium-sized, small, or micro if its revenue in *yuan* is greater than or equal to 0.3 billion, greater than or equal to 30 million but less than 0.3 billion, greater than or equal to 3 million but less than 30 million, or less than 3 million, respectively), and ownership type; robust standard errors in parentheses; ***, **, and * indicate significance at the 0.1%, 1% and 5% levels; constant terms are not reported.

Why Giving Good Deals? Business Favor Helped Promotions.

Provincial Officials

TABLE VIII
PRINCELING PURCHASE AND PROVINCIAL LEADERS' PROMOTION, 2004–2016

	Political turnover of:									
	Provincial party secretaries					Provincial governors				
	Ordered probit		Binary	Ordered probit		Ordered probit		Binary	Ordered probit	
	(1)	(2)		(4)	(5)	(6)	(7)		(9)	(10)
Princeling purchase (= 1)	0.652*** (0.229)	0.742*** (0.262)	0.114*** (0.040)			0.018 (0.288)	− 0.016 (0.314)	0.070 (0.067)		
Princeling discounts				0.814*** (0.175)					0.181 (0.175)	
Area of land purchased					0.324*** (0.084)					− 0.068 (0.065)
Factional ties		0.232 (0.209)	0.011 (0.033)	0.118 (0.212)	0.302 (0.213)	− 0.034 (0.208)	− 0.003 (0.045)	− 0.031 (0.205)	− 0.052 (0.206)	
GDP growth		− 1.438 (2.484)	− 0.195 (0.381)	− 0.444 (2.554)	− 0.032 (2.530)	6.188*** (1.977)	1.250*** (0.443)	6.374*** (1.981)	6.061*** (1.983)	
Tax revenue growth		1.954 (1.230)	0.029 (0.195)	1.561 (1.241)	2.403* (1.262)	0.262 (1.070)	0.031 (0.229)	0.207 (1.058)	0.232 (1.059)	
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	399	380	380	382	382	399	388	388	390	390
Adjusted <i>R</i> -squared			0.272					0.100		

Notes. The ordinal measure of political turnover consists of four categories: termination = 0, retirement = 1, lateral transfer or staying in office = 2, and promotion = 3. The binary measure is a dummy variable that equals 1 if the official was promoted at year *t*, and otherwise equals 0. Control variables include tax revenue growth, log of GDP per capita, log of population size, years of education, age, and age squared. Robust standard errors are reported in parentheses; ***, **, and * indicate significance at the 0.1%, 1% and 5% levels; constant terms are not reported.

Why Giving Good Deals? Business Favor Helped Promotions.

Municipal Officials

TABLE IX
PRINCELING PURCHASES AND MUNICIPAL LEADERS’ PROMOTION, 2004–2016

	Political turnover of:									
	Municipal party secretaries					Municipal mayors				
	Ordered probit		Binary	Ordered probit		Ordered probit		Binary	Ordered probit	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Princeling purchase (= 1)	0.469*** (0.070)	0.432*** (0.077)	0.088*** (0.012)			0.079 (0.094)	0.093 (0.108)	−0.008 (0.011)		
Princeling discounts				0.100*** (0.006)					0.012 (0.008)	
Area of land purchased					0.927*** (0.066)					0.000 (0.047)
Factional ties		0.169** (0.073)	0.012 (0.011)	0.191** (0.080)	0.129 (0.082)	−0.027 (0.101)	−0.014 (0.010)	−0.021 (0.101)	−0.026 (0.101)	
GDP growth		−0.316 (0.559)	−0.099 (0.087)	−0.699 (0.616)	−0.686 (0.650)	2.798*** (0.761)	0.365*** (0.076)	2.726*** (0.761)	2.771*** (0.770)	
Tax revenue growth		−0.455 (0.398)	0.003 (0.061)	−0.588 (0.429)	−0.298 (0.444)	1.097** (0.523)	0.064 (0.052)	1.087** (0.523)	1.074** (0.524)	
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	3,237	2,756	2,756	2,755	2,756	3,048	2,569	2,569	2,568	2,568
Adjusted R-squared			0.049					0.374		

Notes. The ordinal measure of political turnover consists of four categories: termination = 0, retirement = 1, lateral transfer or staying in office = 2, and promotion = 3. The binary measure is a dummy variable that equals 1 if the official was promoted at year *t*, and otherwise equals 0. Control variables include tax revenue growth, log of GDP per capita, log of population size, years of education, age, and age squared. Robust standard errors are reported in parentheses; ***, **, and * indicate significance at the 0.1%, 1% and 5% levels; constant terms are not reported.

China's Anti-Corruption Campaign Since 2013

TABLE X
PRINCELING PURCHASES AND LAND PRICES AFTER XI TOOK OFFICE

	Log of land price									
	All	≤ 500 meters	All	≤ 500 meters	All	≤ 500 meters	All	≤ 500 meters	All	≤ 500 meters
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Princeling firms	−0.907*** (0.029)	−0.920*** (0.040)	−0.825*** (0.024)	−0.858*** (0.032)	−0.870*** (0.028)	−0.896*** (0.035)	−0.907*** (0.029)	−0.920*** (0.040)	−0.818*** (0.023)	−0.847*** (0.028)
Princeling firm *Transaction after 2012	0.318*** (0.047)	0.257*** (0.058)					0.140* (0.052)	0.093 (0.054)		
Princeling firm *Central inspection			0.819*** (0.124)	0.695*** (0.139)			0.504*** (0.079)	0.420*** (0.096)		
Princeling firm *Xi-appointed officials					0.614*** (0.055)	0.572*** (0.051)	0.449*** (0.064)	0.447*** (0.059)		
Princeling firms *Pre-2012 inspection									0.109 (0.074)	0.037 (0.070)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Two-way clustering by firm and province	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
City-year-usage FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	1,144,507	191,896	1,144,507	191,896	1,144,507	191,896	1,144,507	191,896	1,144,507	191,896
Adjusted <i>R</i> -squared	0.692	0.755	0.692	0.755	0.692	0.755	0.692	0.756	0.692	0.755

Notes. Control variables include: land quality, land area, sales method dummies, firm size (classified as large, medium-sized, small, or micro if its revenue in *yuan* is greater than or equal to 0.3 billion, greater than or equal to 30 million but less than 0.3 billion, greater than or equal to 3 million but less than 30 million, and less than 3 million, respectively), and ownership type and its interaction with transactions after 2012, central inspection, Xi-appointed officials, and pre-2012 inspection; robust standard errors in parentheses; ***, **, and * indicate significance at the 0.1%, 1% and 5% levels; constant terms are not reported.

Discounts for Princeling Firms Over Time

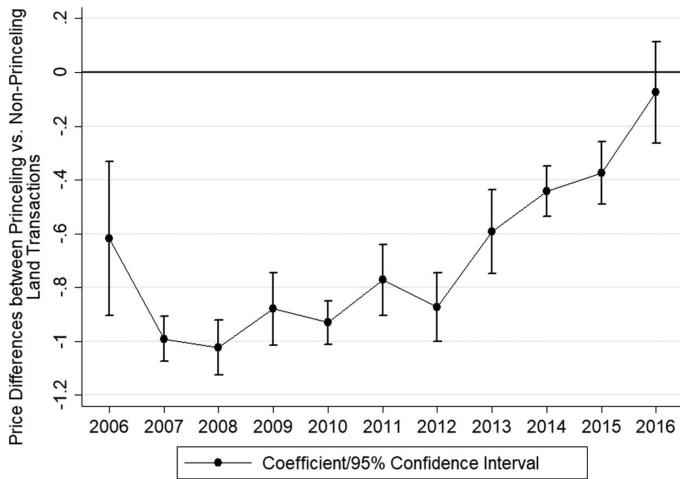


FIGURE V

Average Size of Princeling Discounts over Time

References I

Chen, Ting and James Kai-sing Kung (2019). “Busting the “Princelings”: The campaign against corruption in China’s primary land market”. *The Quarterly Journal of Economics* 134.1, pp. 185–226.