

# The Lure of Technocracy?

Chinese Aid and Local Preferences for Development  
Leadership in Africa

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A fundamental question regarding development in contemporary world  $\Rightarrow$  who should lead economic development for a country?

- more commonly: state vs. market (Soviet economy vs. city economies such as Hong Kong and Singapore);
- Ostrom on communities as a way to solve the tragedy of commons;
- experts?

# Motivations

How do we learn and how do we decide?

- own experience: e.g., Great Depression  $\Rightarrow$  market needs to be embedded in social institutions (“embedded liberalism”);
- others’ experience: e.g., planned economy did not work in USSR, so probably not going to work in the future and other countries?

Experts and students of economics study cases and history; what about the general public? (Whether) How do they learn?

- probably not going to study history and economic data;
- does direct contact with foreign economic activities – in the case of this paper, foreign aid projects – affect micro-level preferences of economic development models?

## Research Question

In September 2018, 51 African leaders came to Beijing during the Forum on China-Africa Cooperation while only about half of them (27) visited New York for the UN general assembly:

- What drove the disparities in attendance between the two parities?
- Beijing was more charming than New York to these African leaders?
- What exactly the impact of China's presence on African development?

⇒ we examine whether Chinese aid in Africa affects local preferences for economic development models?

The Determinants of aid:

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- birthplace of leaders (Dreher et al. 2019);
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- our study  $\Rightarrow$  local preferences for economic models.

## Technocracy As A Model of Chinese Aid?

If there is a model of Chinese aid, it might be associated with the Chinese economic model. What make Chinese aid unique?

- Chinese aid to Africa prioritize technology and relying on experts.
- Cases: transfer of technology to Africa by building China's Agricultural Technology Demonstration Centers in Africa (Xu et al. 2016; Lu et al. 2016).

Technocracy is an institutional expression of China's foreign aid to Africa.

# The Technocracy Hypothesis

Technocracy: to run the economy by experts. Thus we expect:

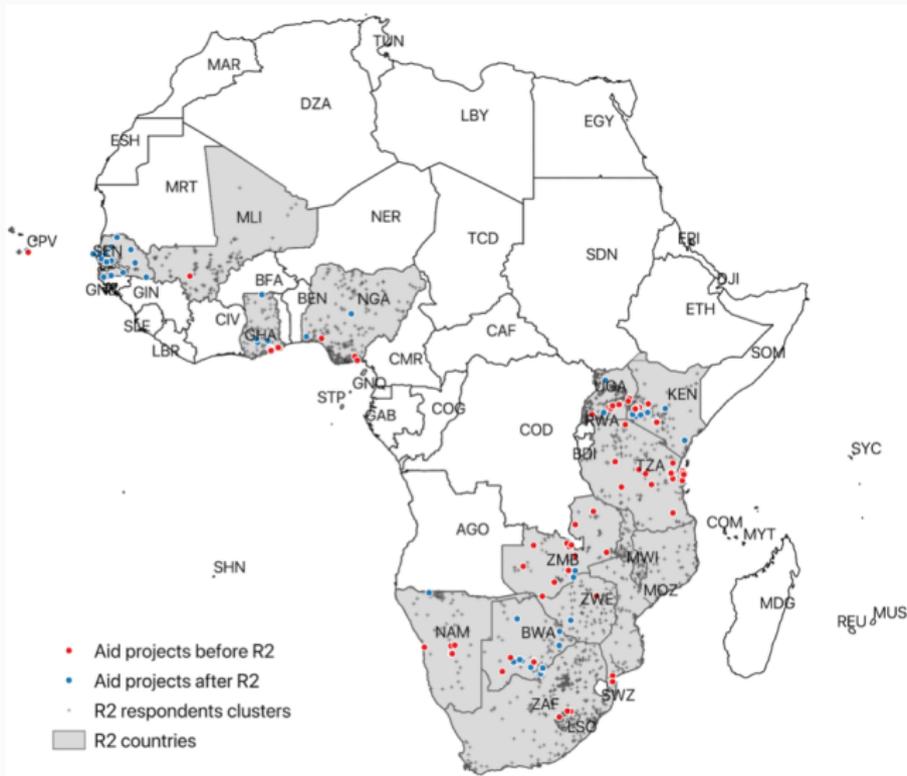
- Local residents living around Chinese aid projects favor experts to manage the economy.

We match the Chinese aid data, over the period of 2000-2005, to the second round of the Afro-barometer survey data in 16 African countries.

- The preferences of economic leadership from Afro-barometer Data (R2) in 16 countries.
  - Five possible leaderships: the government, the market, the experts, the wealthy, and the community.
  - Respondents included in our analysis is 13,129.
- Chinese aid projects from 2000-2005
  - The total number of Chinese aid projects between 2000 and 2005 included in the analysis is 197.

# Data

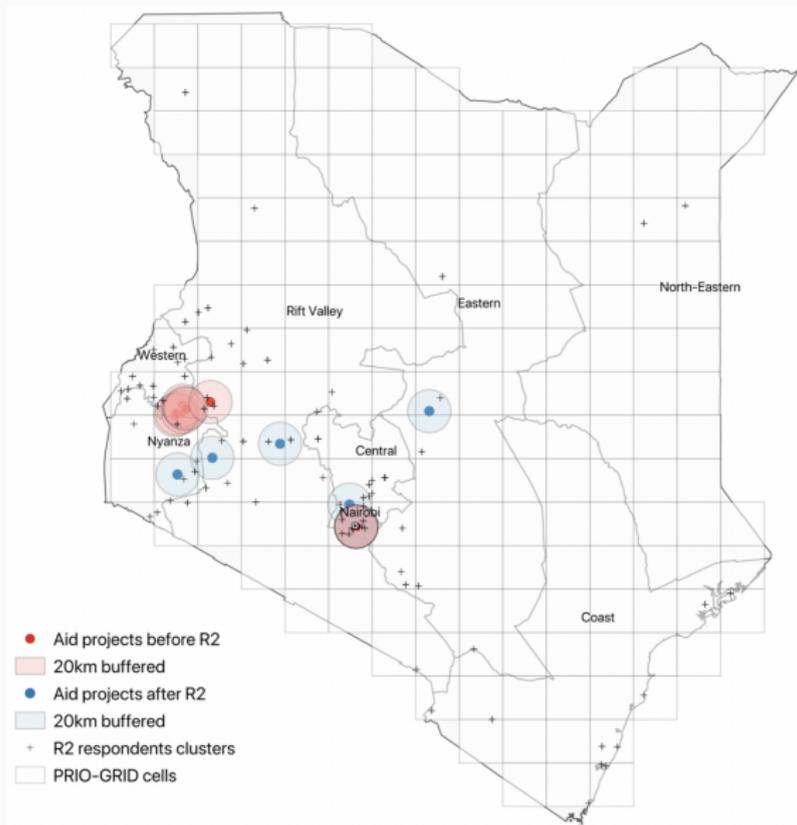
Chinese aid projects and Afro-barometer surveys respondents, 2000-2005.



Comparing the economic PREFERENCES between:

- Respondents who live near a active Chinese aid project
- Respondents near a inactive aid project.

# A Waiting List Logic



# Model Estimation

The key assumption here is that the areas being “treated” by Chinese aid projects are very similar to those areas that are soon to be “treated.”

$$Y_{ivt} = \beta_1 active_{it} + \beta_2 inactive_{it} + \alpha_s + \delta_t + \gamma X_{it} + \varepsilon_{ivt}$$

We calculate the difference in coefficients of active aid ( $\beta_1$ ) and inactive aid ( $\beta_2$ ).

- Individual controls: include age, gender, urban, and education;
- Local controls: distance to border, distance to capital, excluded groups, satellite night lights, oil, diamond, and gold.

# Effects of Chinese aid projects

**Table 4: main results.**

Dependent variable:	(1)	(2)	(3)	(4)	(5)
<i>Economic preferences</i>	Government	Market	Experts	The wealthy	Community
<b>Panel A: ordered logit regressions</b>					
active20	-0.00443 (0.135)	0.0714 (0.133)	0.0129 (0.122)	-0.189 (0.149)	-0.172 (0.118)
inactive20	-0.111 (0.129)	0.115 (0.113)	-0.339*** (0.110)	0.0681 (0.138)	-0.455*** (0.142)
difference in difference	0.106	-0.043	0.351	-0.257	0.283
F test (difference =0)	0.44	0.07	5.39	2.19	2.86
<i>p</i> -value	0.506	0.785	0.020**	0.138	0.091*
Observations	11,550	11,811	11,039	11,550	11,754
<b>Panel B: logistic regressions</b>					
active: 20km	0.0440 (0.149)	0.120 (0.156)	-0.00512 (0.131)	-0.248* (0.147)	-0.330** (0.138)
inactive: 20km	-0.164 (0.145)	0.199 (0.128)	-0.496*** (0.124)	0.0706 (0.134)	-0.468*** (0.148)
difference in difference	0.208	-0.079	0.490	-0.318	0.138
F test (difference =0)	1.27	0.17	8.42	3.25	0.53
<i>p</i> -value	0.26	0.68	0.003***	0.071*	0.468
Observations	11,512	11,774	11,018	11,501	11,678

# China Aid v.s. World Bank Aid

We do not find an equivalent pattern around World Bank projects.

**Table 8: World Bank Aid Results, 20km.**

Dependent variable:	(1)	(2)	(3)	(4)	(5)
<i>Economic preferences</i>	Government	Market	Experts	The wealthy	Community
<b>Panel A: ordered logit regressions</b>					
active20	-0.0479 (0.0850)	0.0734 (0.0742)	-0.0819 (0.0682)	-0.181** (0.0863)	-0.120 (0.0752)
inactive20	-0.161 (0.132)	0.0297 (0.110)	-0.0402 (0.110)	0.000932 (0.144)	0.0425 (0.120)
difference in difference	0.113	0.043	-0.041	-0.181	-0.162
F test (difference =0)	0.64	0.13	0.12	1.32	1.56
p-value	0.424	0.720	0.727	0.250	0.211
Observations	12,355	12,641	11,826	12,361	12,577
<b>Panel B: logistic regressions</b>					
active20	-0.157 (0.0969)	0.0283 (0.0855)	-0.0862 (0.0757)	-0.208** (0.0935)	-0.205** (0.0858)
inactive20	-0.421*** (0.146)	0.0164 (0.134)	-0.0357 (0.122)	-0.0256 (0.145)	-0.0508 (0.135)
difference in difference	0.264	0.011	-0.050	-0.182	-0.154
F test (difference =0)	2.88	0.01	0.15	1.30	1.15
p-value	0.089*	0.934	0.701	0.253	0.284
Observations	12,317	12,588	11,805	12,312	12,501

# Robustness Checks

Several robustness checks:

- Removing aid projects that started the same year as survey was conducted
- Using countries with aid projects both before and after R2 survey only
- More robustness checks...

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- More robustness checks...
- Using other cut-off distances (30km, 40km, and 50km): Chinese aid's effect disappears somewhere between 30km and 40km.

Future and ongoing research:

- More evidence on the technocratic nature of China's aid
- Disaggregate aid effects by sector(s) ?

Policy implications:

- Foreign aid can affect development through shaping economic preferences?
- Developing like China?

**A2: logistic regression results after excluding Malawi and South Africa.**

Dependent variable:	(1)	(2)	(3)	(4)	(5)
<i>Economic preferences</i>	Government	Market	Experts	The wealthy	Community
active20	0.134 (0.160)	0.0725 (0.158)	0.00906 (0.136)	-0.259* (0.154)	-0.259* (0.135)
inactive20	-0.0907 (0.146)	0.168 (0.130)	-0.487*** (0.127)	0.0780 (0.140)	-0.409*** (0.154)
difference in difference	0.224	-0.095	0.496	-0.337	0.150
F test (difference =0)	1.51	0.24	8.62	3.53	0.64
p-value	0.219	0.622	0.003***	0.060*	0.421
Observations	9,059	9,254	8,680	9,121	9,177

**A3: logistic regression results using data from 2000-2006.**

Dependent variable:	(1)	(2)	(3)	(4)	(5)
<i>Economic preferences</i>	Government	Market	Experts	The wealthy	Community
active20	0.0652 (0.134)	0.204 (0.140)	-0.00576 (0.120)	-0.165 (0.134)	-0.505*** (0.126)
inactive20	-0.214** (0.106)	-0.00908 (0.0924)	-0.310*** (0.111)	-0.447*** (0.106)	-0.360*** (0.106)
difference in difference	0.2792	0.21308	0.30424	0.282	-0.145
F test (difference =0)	3.24	1.36	3.49	1.24	0.62
p-value	0.071*	0.243	0.061*	0.265	0.432
Observations	9,059	9,254	8,680	9,121	9,177

**A4: determinants of within-country allocation of aid projects, 2000-2005.**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2000-2005	2000	2001	2002	2003	2004	2005
distance to border	-0.0109** (0.00434)	-0.0220*** (0.000456)	-0.0104** (0.00527)	-0.0345*** (0.00899)	-0.00557 (0.00572)	0.00581 (0.00468)	-0.00666 (0.00654)
distance to capital	-0.0102*** (0.00183)	-0.0208*** (0.00131)	-0.00603* (0.00345)	-0.0332*** (0.00651)	-0.00886*** (0.00299)	-0.00101 (0.00108)	-0.0105*** (0.00217)
excluded	-1.018 (0.683)	-13.57 (8.462)	-2.338** (1.022)	-1.384 (1.339)	-0.431 (0.857)	-1.372 (0.860)	-0.170 (0.653)
night lights	-5.121 (8.251)	199.6* (119.0)	0.184 (14.65)	-13.78 (8.776)	-9.731* (5.613)	81.12*** (20.91)	-13.75** (6.867)
urban index	0.994*** (0.171)	-1.023 (1.342)	1.107*** (0.428)	1.929*** (0.287)	1.125*** (0.266)	1.384** (0.557)	1.640*** (0.382)
gold	1.432 (0.935)		1.460 (2.156)		0.141 (1.916)	4.243*** (1.269)	2.734*** (0.948)
diamond	3.438*** (1.315)		4.167 (2.810)	6.700*** (1.096)	4.063*** (1.247)		6.471*** (1.675)
Observations	16,101	1,046	1,413	2,327	1,996	1,308	1,741

**Table 5: logistic regression results after removing aid projects that started the same year as survey was conducted.**

Dependent variable:	(1)	(2)	(3)	(4)	(5)
<i>Economic preferences</i>	Government	Market	Experts	The wealthy	Community
active20	-0.00996 (0.211)	0.0451 (0.216)	-0.0815 (0.196)	-0.270 (0.191)	-0.389** (0.187)
inactive20	-0.362** (0.179)	0.0855 (0.173)	-0.535*** (0.167)	-0.290* (0.151)	-0.197 (0.211)
difference in difference	0.352	-0.04	0.453	0.02	-0.192
F test (difference =0)	2.47	0.03	4.03	0.01	0.61
p-value	0.116	0.873	0.044**	0.915	0.433
individual controls	yes	yes	yes	yes	yes
local controls	yes	yes	yes	yes	yes
region fixed effects	yes	yes	yes	yes	yes
year fixed effects	yes	yes	yes	yes	yes
Observations	5,256	5,306	4,959	5,199	5,254

**Table 6: logistic regression results only using countries with aid projects both before and after R2 survey.**

Dependent variable:	(1)	(2)	(3)	(4)	(5)
<i>Economic preferences</i>	Government	Market	Experts	The wealthy	Community
active20	0.0889 (0.166)	-0.0204 (0.157)	-0.0387 (0.141)	-0.376** (0.156)	-0.244* (0.140)
inactive20	-0.232 (0.153)	0.00735 (0.136)	-0.548*** (0.144)	-0.224* (0.118)	-0.238 (0.176)
difference in difference	0.352	-0.04	0.453	0.02	-0.192
F test (difference =0)	2.94	0.02	7.94	0.85	0
<i>p</i> -value	0.086*	0.887	0.004***	0.355	0.975
individual controls	yes	yes	yes	yes	yes
local controls	yes	yes	yes	yes	yes
region fixed effects	yes	yes	yes	yes	yes
year fixed effects	yes	yes	yes	yes	yes
Observations	7,189	7,320	6,826	7,203	7,215

**Table 7: logistic regression results using other cut-off distances.**

Dependent variable:	(1)	(2)	(3)	(4)	(5)
<i>Economic preferences</i>	Government	Market	Experts	The wealthy	Community
<b>Panel A: 30 km buffered</b>					
active30	-0.100 (0.146)	0.135 (0.147)	-0.0435 (0.128)	-0.279* (0.147)	-0.377*** (0.132)
inactive30	-0.0215 (0.137)	0.0427 (0.118)	-0.333*** (0.125)	-0.0472 (0.130)	-0.561*** (0.144)
difference in difference	-0.078	0.092	0.289	-0.231	0.184
F test (difference =0)	0.19	0.27	3.04	1.73	1.01
p-value	0.661	0.602	0.081*	0.188	0.313
Observations	11,512	11,774	11,018	11,501	11,678
<b>Panel B: 40 km buffered</b>					
active40	-0.192 (0.144)	0.260* (0.145)	-0.0970 (0.125)	-0.169 (0.134)	-0.279** (0.124)
inactive40	0.115 (0.138)	0.0873 (0.120)	-0.343*** (0.111)	-0.187* (0.104)	-0.252* (0.130)
difference in difference	-0.307	0.172	0.246	0.018	-0.027
F test (difference =0)	2.87	1.11	2.48	0.02	0.03
p-value	0.090*	0.291	0.115	0.898	0.868
Observations	11,512	11,774	11,018	11,501	11,678
<b>Panel C: 50 km buffered</b>					
active50	-0.261* (0.135)	0.261* (0.143)	-0.115 (0.128)	-0.237* (0.134)	-0.256** (0.124)
inactive50	0.102 (0.139)	0.155 (0.127)	-0.212* (0.115)	-0.120 (0.107)	-0.188 (0.124)
difference in difference	-0.363	0.106	0.097	-0.117	-0.068
F test (difference =0)	4.50	0.42	0.43	0.66	0.20
p-value	0.033	0.515	0.509	0.415	0.657
Observations	11,512	11,774	11,018	11,501	11,678