The Economic Consequences of Political Hierarchy: Evidence from Regime Changes in China, 1000–2000 C.E.

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CODEBOOK

Software: Stata/MP 16.0

THREE FOLDERS

Data	Datasets (Software: Stata/MP 16.0)
Program	Program (Dofiles using Software: Stata/MP 16.0)
Results	Folder for tables and figures in the main text (and online appendix)

1: Data and Codes for Replication

Folders			Tables and Figures Main text and online appendix	
Data	**Program**	**Results**		
Cap_On_Pop_PrefX11Periods.dta	Table_1.do	Table_1.xlsx	Table 1	Summary Statistics
Cap_On_Pop_PrefX11Periods.dta	Table_2.do	Table_2.doc	Table 2	Economic Consequences – The Impact of Capital Status on Population Density
Cap_On_Urban.dta	Table_3.do	Table_3.doc	Table 3	The Impact of Capital Status on Urbanization
Cap_On_Pop_PrefX11Periods.dta	Table_4.do	Table_4.doc	Table 4	Gaining vs. Losing Status
Cap_On_PublicOffice.dta	Table_5.do	Table_5.doc	Table 5	Provincial Capital Status and Public Offices
Cap_On_TransCentrality.dta	Table_6.do	Table_6.doc	Table 6	Provincial Capital Status and Spatial Centrality
Cap_On_Pop_PrefX11Periods.dta	Table_7.do	Table_7.doc	Table 7	Heterogeneity and Spatial Spillover
CapLocation.dta	Figure_3.do	Figure_3_A.png Figure_3_B.png	Figure 3	Rank in Hierarchical Distance and the Probability of Being a Provincial Capital
Pop_vs_Light.dta PoolingAllChanges.dta	Figure_4.do	Figure_4_A.png Figure_4_B.DataSource.xlsx Figure_4_B.png	Figure 4	Descriptive Patterns
Cap_On_Pop_PrefX11Periods.dta	Figure_5.do	Figure_5.xlsx	Figure 5	The Impact of Capital Status on Population Density: Period by Period
Cap_On_Pop_PrefX11Periods.dta	AppendixTable_D1.do	AppendixTable_D1.doc	Table D1	Conley Spatial Standard Errors
Cap_On_Pop_PrefX11Periods.dta	AppendixTable_D3.do	AppendixTable_D3.doc	Table D3	IV Results from Fixed Lambda
Cap_On_Pop_PrefX11Periods.dta	AppendixTable_D4.do	AppendixTable_D4.doc	Table D4	Dealing with Provincial Boundary Changes
Cap_On_Pop_PrefX11Periods.dta	AppendixTable_D5.do	AppendixTable_D5.doc	Table D5	Dividing Provinces by How Strategic Their Boundary Is
Cap_On_Migration.dta	AppendixTable_D6.do	AppendixTable_D6.doc	Table D6	Population Change by Surnames
Cap_On_Pop_PrefX11Periods.dta	AppendixTable_D7.do	AppendixTable_D7.doc	Table D7	The Impact of Capital Status on Population Density, Ever-Capital Prefectures
Cap_On_Pop_PrefX11Periods.dta	AppendixTable_D8.do	AppendixTable_D8.doc	Table D8	Period-by-Period Estimates
Cap_On_Pop_PrefX15Periods.dta	AppendixTable_D9.do	AppendixTable_D9.doc	Table D9	Reducing Uneven Gaps and Using Different Subperiods
Cap_On_Pop_Grid1X1.dta Cap_On_Pop_Grid2X2.dta	AppendixTable_D10.do	AppendixTable_D10.doc	Table D10	The Impact of Capital Status on Population Density: Grid-level Analysis

Cap_On_Pop_PrefX11Periods.dta	AppendixTable_D11.do	AppendixTable_D11_A.doc AppendixTable_D11_B.doc	Table D11	Validity Checks of the Instrument
Cap_On_Pop_PrefX11Periods.dta	AppendixTable_D12.do	AppendixTable_D12.doc	Table D12	Exclusion Restriction? Alternative Specification of the Instrument
Cap_On_Pop_PrefX11Periods.dta	AppendixTable_D13.do	AppendixTable_D13.doc	Table D13	Considering Placebo Hierarchical Distance
Cap_On_Pop_PrefX11Periods.dta	AppendixTable_D14.do	AppendixTable_D14.doc	Table D14	Considering Distance to Major Market Centers
Cap_On_TransCentrality.dta	AppendixTable_E2.do	AppendixTable_E2.doc	Table E2	Pre-trends in Centrality and Market Access
ProvYear.dta	AppendixTable_E3.do	AppendixTable_E3.doc	Table E3	How the Location of Provincial Capitals Affects Provincial Aggregate Market Access
CapLocation.dta	AppendixFigure_C2.do	AppendixFigure_C2.png	Figure C2	ln Rank in Hierarchical Distance and the Probability of Being a Provincial Capital
CapLocation.dta	AppendixTable_C3.do	AppendixTable_C3_A.doc AppendixTable_C3_A_R2.doc AppendixTable_C3_B.doc	Table C3	Testing the Role of Hierarchical Distance

Notes:

(1) The do-files listed in the second column can use the data files in the first column to produce the files in the third column, based on which we can make the Tables and Figures in the main text and online appendix (the fourth column).

(2) **Program\All_in_One.do** can produce all tables and figures in the order in which they are cited in the text. The record of all outputs that appear in the Results window is stored in **Results\All_in_One.log**.

(3) All variables have been labeled in the data file.

2: Dataset and Variables Definition

2.1. CapLocation.dta

Variable	Definition
citygb	Prefecture code
year	Year
t	Period
provcap	Provincial capital
d_Riv_Grid	Whether a prefecture contains a major river
d_Flat_010_Grid	Whether a prefecture contains a plain
wheat	Wheat suitability
rice	Rice suitability
maize	Maize suitability
spotato	Sweet potato suitability
fmillet	Fox millet suitability
coast	Whether it is on the coast
slope	Slope
lnaltitude	ln Elevation
x_city	Longitude
y_city	Latitude
lnarea	ln Area
mr	Macro Regions
rank_ws10_cross	Rank in Hierarchical distance
lnrank_ws10_crosss	ln Rank in Hierarchical distance
misalign	Strategic boundary setting
lnrank_ws10cost20	ln Rank in Hierarchical distance: lambda=0.20

2.2. Cap_On_Pop_PrefX11Periods.dta

Variable	Definition
citygb	Prefecture code
t	Period
year	Year
lnpopden	ln Population density
provcap	Provincial capital
evercap	Ever capital
d_Riv_Grid	Whether a prefecture contains a major river
d_Flat_010_Grid	Whether a prefecture contains a plain
wheat	Wheat suitability
rice	Rice suitability
maize	Maize suitability
spotato	Sweet potato suitability
fmillet	Fox millet suitability
coast	Whether it is on the coast
slope	Slope
lnaltitude	ln Elevation
x_city	Longitude
y_city	Latitude
lnarea	ln Area
mr	Macro Regions
m_provcd1	Province code: Song
m_provcd3	Province code: Ming

m_provcd4	Province code: Qing
m_provcd5	Province code: PR China 1964
m_provcd7	Province code: PR China 2000
provsequence	Unique polygon ID according to all prov boundaries
misalign	Strategic boundary setting
rank_ws10_cross	Rank in Hierarchical distance
lnrank_ws10_cross	ln Rank in Hierarchical distance
rank_ws10cost19	Rank in Hierarchical distance: lambda=0.19
lnrank_ws10cost19	ln Rank in Hierarchical distance: lambda=0.19
rank_ws10cost20	Rank in Hierarchical distance: lambda=0.20
lnrank_ws10cost20	ln Rank in Hierarchical distance: lambda=0.20
rankXrank	ln Rank in distance to national capital*ln Rank in distance to centroid
lnrank_dist2NCap	ln Rank in distance to national capital
lnrank_ws10cost0	ln Rank in distance to centroid
NonCapXKF	ln Rank in Hierarchical distance to Kaifeng X Kaifeng is not capital
NonCapXNJ	ln Rank in Hierarchical distance to Nanjing X Nanjing is not capital
NonCapXBJ	ln Rank in Hierarchical distance to Beijing X Beijing is not capital
lnrank_ws10cost100_EC	ln Rank in Hierarchical distance to econ center
lnrank_ws10cost100_SH	ln Rank in Hierarchical distance to Shanghai
lnrank_ws10cost100_GZ	ln Rank in Hierarchical distance to Guangzhou
lnRank_Cen_NoWgt_R60_Delta1	ln Rank in transportation network centrality, theta=6
cap_nbr	Capital neighbor
cap_nbr_oth	Capital neighbor: others, except the one nearest to the capital
cap_nbr_nearest	Capital neighbor: nearest to the national capital
gainnbr_nearest	Gaining capital's neighbor: nearest to the national capital
losenbr_nearest	Losing capital's neighbor: nearest to the national capital
gainnbr_oth	Gaining capital's neighbor: others, except the one nearest to the capital
losenbr_oth	Losing capital's neighbor: others, except the one nearest to the capital
losepre_t3	Before losing status: >75 years
losepre_t2	Before losing status: 1-75 years
losepost_t1	After losing status: 1-75 years
losepost_t2	After losing status: 76-150 years
losepost_t3	After losing status: 151-300 years
losepost_t4	After losing status： >300 years
pre_t3	Before gaining status: >75 years
pre_t2	Before gaining status: 1-75 years
post_t1	After gaining status: 1-75 years
post_t2	After gaining status: 76-150 years
post_t3	After gaining status: 151-300 years
post_t4	After gaining status： >300 years
MultiChg	Multiple status change =1

2.3. Cap_On_Urban.dta

Variable	Definition
citygb	Prefecture code
t	Period
year	Year
lnpopden	ln Population density
urbanr	Urbanization ratio
lnurban	ln Urban population
lnrural	ln Rural population
provcap	Provincial capital

d_Riv_Grid	Whether a prefecture contains a major river
d_Flat_010_Grid	Whether a prefecture contains a plain
wheat	Wheat suitability
rice	Rice suitability
maize	Maize suitability
spotato	Sweet potato suitability
fmillet	Fox millet suitability
coast	Whether it is on the coast
slope	Slope
lnaltitude	ln Elevation
x_city	Longitude
y_city	Latitude
lnarea	ln Area
mr	Macro Regions
lnrank_ws10_cross	ln Rank in Hierarchical distance

2.4. Cap_On_Migration.dta

Variable	Definition
citygb	Prefecture code
t	Period
year	Year
pop	Population
migsize	Population with new surnames
provcap	Provincial capital
d_Riv_Grid	Whether a prefecture contains a major river
d_Flat_010_Grid	Whether a prefecture contains a plain
wheat	Wheat suitability
rice	Rice suitability
maize	Maize suitability
spotato	Sweet potato suitability
fmillet	Fox millet suitability
coast	Whether it is on the coast
slope	Slope
lnaltitude	ln Elevation
x_city	Longitude
y_city	Latitude
lnarea	ln Area
mr	Macro Regions
surname_sample	subsampel with surname information

2.5. Cap_On_Pop_PrefX15Periods.dta

Variable	Definition
citygb	Prefecture code
t	Period
year	Year
lnpopden	ln Population density
provcap	Provincial capital
evercap	Ever capital
d_Riv_Grid	Whether a prefecture contains a major river
d_Flat_010_Grid	Whether a prefecture contains a plain
wheat	Wheat suitability

rice	Rice suitability
maize	Maize suitability
spotato	Sweet potato suitability
fmillet	Fox millet suitability
coast	Whether it is on the coast
slope	Slope
lnaltitude	ln Elevation
x_city	Longitude
y_city	Latitude
lnarea	ln Area
mr	Macro Regions

2.6. Cap_On_Pop_Grid1X1.dta

Variable	Definition
year	Year
t	Period
lnpopden	ln Population density
provcap	Provincial capital
lnaltitude	ln Elevation
slope	Slope
d_Riv_Grid	Whether a prefecture contains a major river
d_Flat_010_Grid	Whether a prefecture contains a plain
coast	Whether it is on the coast
wheat	Wheat suitability
rice	Rice suitability
maize	Maize suitability
spotato	Sweet potato suitability
fmillet	Fox millet suitability
x_pts	Longitude
y_pts	Latitude
lnarea0	ln Area
mr2	Macro region 2
mr3	Macro region 3
mr4	Macro region 4
mr5	Macro region 5
mr6	Macro region 6
mr7	Macro region 7
mr8	Macro region 8
mr9	Macro region 9

2.7. Cap_On_Pop_Grid2X2.dta

Variable	Definition
Id2	2-degree X 2-degree Grid ID
year	Year
t	Period
lnpopden	ln Population density
provcap	Provincial capital
lnaltitude	ln Elevation
slope	Slope
d_Riv_Grid	Whether a prefecture contains a major river
d_Flat_010_Grid	Whether a prefecture contains a plain

coast	Whether it is on the coast
wheat	Wheat suitability
rice	Rice suitability
maize	Maize suitability
spotato	Sweet potato suitability
fmillet	Fox millet suitability
x_pts	Longitude
y_pts	Latitude
lnarea0	ln Area
mr2	Macro region 2
mr3	Macro region 3
mr4	Macro region 4
mr5	Macro region 5
mr6	Macro region 6
mr7	Macro region 7
mr8	Macro region 8
mr9	Macro region 9

2.8. Cap_On_PublicOffice.dta

Variable	Definition
citygb	Prefecture code
t	Period
year	Year
lnpop	ln Population
lncivil	Public employment
lnrank_civil	ln Rank in number Bureaucrats
provcap	Provincial capital
d_Riv_Grid	Whether a prefecture contains a major river
d_Flat_010_Grid	Whether a prefecture contains a plain
wheat	Wheat suitability
rice	Rice suitability
maize	Maize suitability
spotato	Sweet potato suitability
fmillet	Fox millet suitability
coast	Whether it is on the coast
slope	Slope
lnaltitude	ln Elevation
x_city	Longitude
y_city	Latitude
lnarea	ln Area
mr	Macro Regions
lnrank_ws10_cross	ln Rank in Hierarchical distance

2.9. Cap_On_TransCentrality.dta

Variable	Definition
citygb	Prefecture code
year	Year
t	Period
Cen_NoWgt_R60_Delta1	Centrality in the transportation networks
std_Cen_NoWgt_R60_Delta1	Standardized centrality in transportation networks, theta=6
lnCen_NoWgt_R60_Delta1	ln Transportation network centrality, theta=6

lnRank_Cen_NoWgt_R60_Delta1	ln Rank in transportation network centrality, theta=6
lnma_pop	ln Market access wgt by popualtion t
lnma_area	ln Market access wgt by area
lnma_pop_elevationn	ln Market access wgt by popualtion t with considering elevation
provcap	Provincial capital
d_Riv_Grid	Whether a prefecture contains a major river
d_Flat_010_Grid	Whether a prefecture contains a plain
wheat	Wheat suitability
rice	Rice suitability
maize	Maize suitability
spotato	Sweet potato suitability
fmillet	Fox millet suitability
coast	Whether it is on the coast
slope	Slope
lnaltitude	ln Elevation
x_city	Longitude
y_city	Latitude
lnarea	ln Area
mr	Macro Regions
pre2	Before gaining status: -2 period
post	After gaining status
losepre2	Before losing status: -2 period
losepost	After losing status
DMultiple	Multi status change
lnrank_ws10_cross	ln Rank in Hierarchical distance

2.10. Pop_vs_Light.dta

Variable	Definition
citygb	Prefecture code
t	Period
year	Year
provcap	Provincial capital
lnpopden	ln Population density
lnavlight2000	ln Average light in 2000

2.11. PoolingAllChanges.dta

Variable	Definition
citygb	Prefecture code
t	Period
year	Year
lnpopden	ln Population density
provcap	Provincial capital
d_Riv_Grid	Whether a prefecture contains a major river
d_Flat_010_Grid	Whether a prefecture contains a plain
wheat	Wheat suitability
rice	Rice suitability
maize	Maize suitability
spotato	Sweet potato suitability
fmillet	Fox millet suitability
coast	Whether it is on the coast

slope	Slope
lnaltitude	ln Elevation
x_city	Longitude
y_city	Latitude
lnarea	ln Area
mr	Macro Regions
lose_pre2	Yes-No: pre-2
lose_pre1	Yes-No: pre-1
lose_post1	Yes-No: post-1
lose_post2	Yes-No: post-2
gain_pre2	No-Yes: pre-2
gain_pre1	No-Yes: pre-1
gain_post1	No-Yes: post-1
gain_post2	No-Yes: post-2
both_pre2	Yes-Yes: pre-2
both_pre1	Yes-Yes: pre-1
both_post1	Yes-Yes: post-1
both_post2	Yes-Yes: post-2
neither_pre2	No-No: pre-2
neither_pre1	No-No: pre-1
neither_post1	No-No: post-1
neither_post2	No-No: post-2

2.12. ProvYear.dta

Variable	**Definition**
year	Year
provcd	Prov Id
cap2provcen	Distance to prov. centroid
cap2Ncap	Distance to national capital
d_Flat_010_Grid	Plain dummy: prov average
d_Riv_Grid	Major river dummy: prov average
coast	Coast dummy: prov average
slope	Slope: prov average
lnaltitude	ln Elevation: prov average
lnarea	ln Area: prov average
lnCen_PopWgt_R60_Delta1	ln Market access wgt pop. t
lnCen_Pop0Wgt_R60_Delta1	ln Market access wgt initial pop.