

The geography of development within countries

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CONFERENCE**

**Urbanization and Development: Delving Deeper into the
Nexus**

Overview: urbanization

- Spatial transformation with development:
 - Urbanization: massive move out of agriculture
- Urban Hierarchy
 - Specialization and functions of cities
 - Changing role of big cities
 - Historically versus today in developed countries
 - Role of transport infrastructure investments

Overview: Social, economic & political issues

- “Urban bias”, as a growth strategy
 - Manufacturing export led growth
 - TOT (trade policies & subsidies), capital markets
- Favoritism of big cities
 - Policies and local resistance to rural in-migration
- Democratization and political decentralization

I. Why Urbanization?

- Traditional view: transition from traditional agriculture to modern industry and services
- Industry and modern services in cities
 - Cities as engines of growth
 - Alfred Marshall (1890): Local information exchange & labor markets. Efficient in dense urban environments
 - Jane Jacobs (1969): Knowledge accumulation and spillovers
- But, agricultural growth helps urban growth

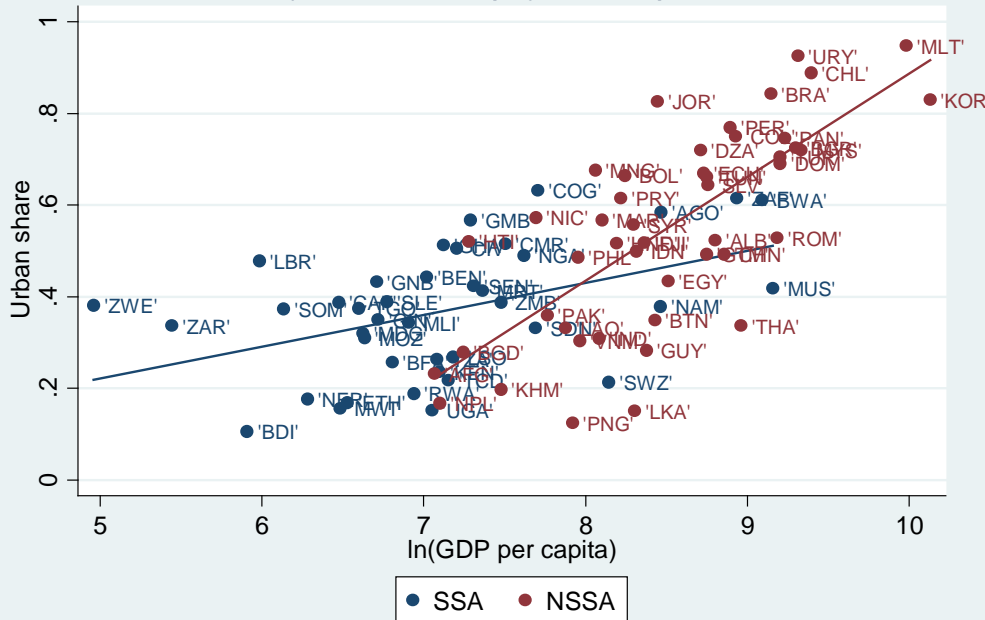
Urbanization and development: Developing world. 2010 level & 1970-2010 long difference

Sample: < mean income in 1970

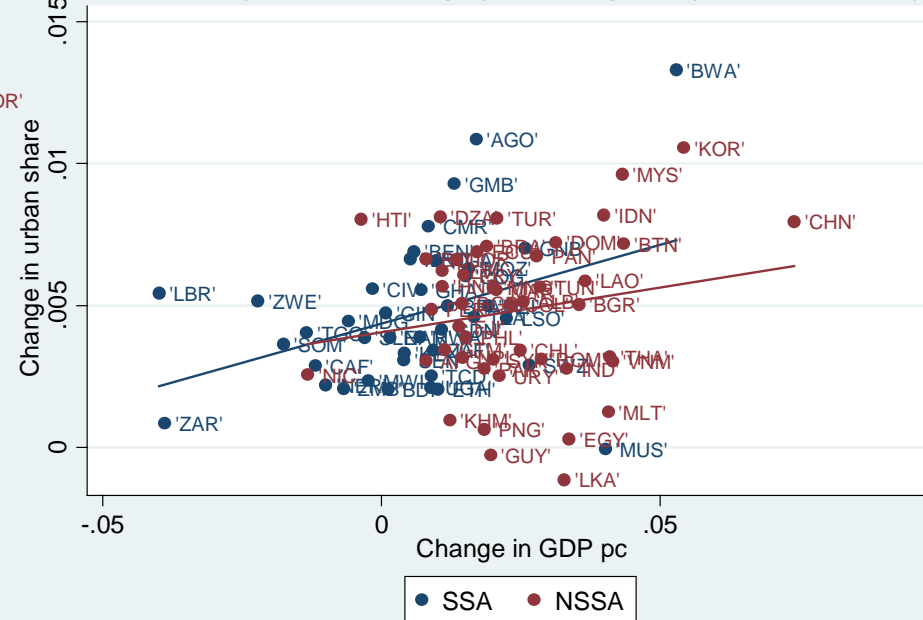
Sub-Saharan Africa vs.
Rest of developing world
2010

2010-1970
Long difference

< Mean(Global GDP pc) - GDP pc = PWT7.0

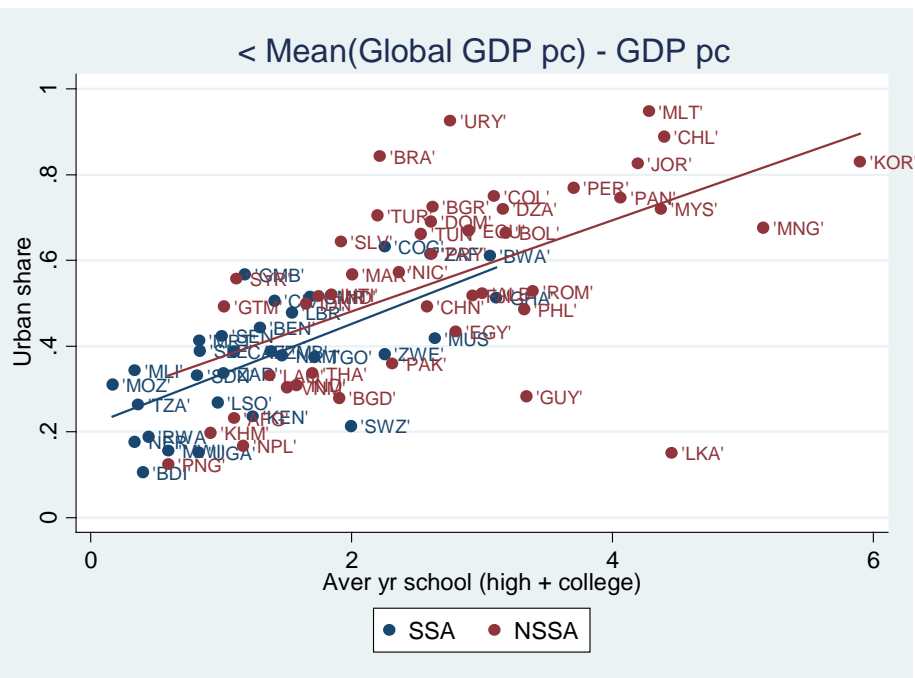


< Mean(Global GDP pc) - GDP pc = (PPP, PWT7.0)

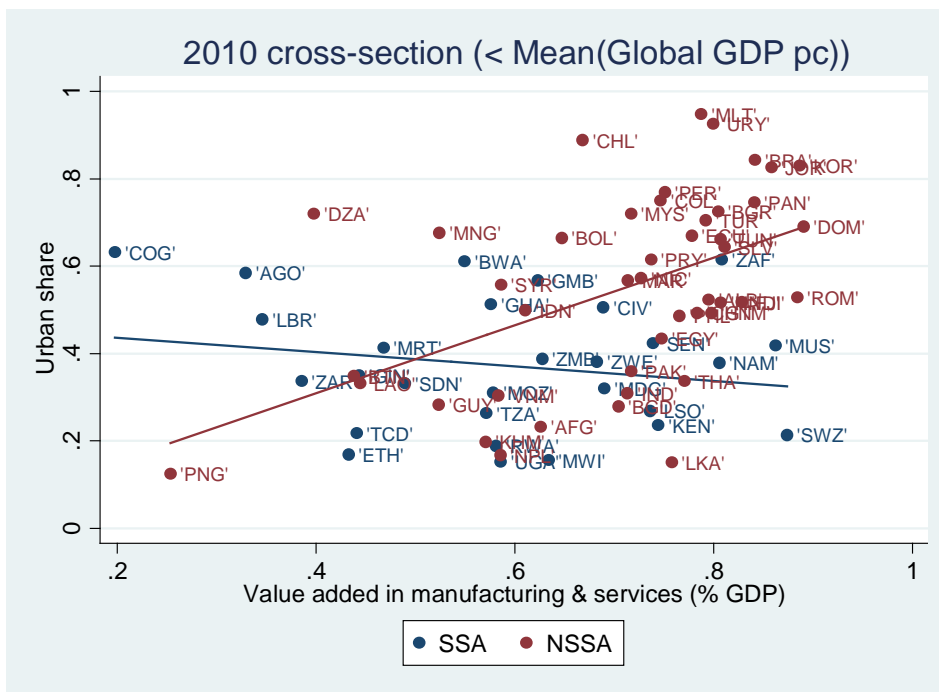


Is Sub-Saharan Africa different?

Urbanization vs. Education, 2010



Urbanization vs. Structure, 2010



II. Urban Hierarchy:

Big versus small cities

- In a developed country, bigger versus smaller cities perform very different functions
 - Land and labor costs **vs.** what industries benefit most from rich information environment
- Big market center cities (> 5m): high profile services and some high tech manufacturing
- Smaller specialized cities
 - Standardized manufacturing (China: button city, bra strap city... textiles, electronics, autos.....)
 - **USA, cluster analysis to type 275 PMSA's into about 50 clusters: similarity of employment patterns**

City Types and Sizes (Black and Henderson, 2003)

Cluster group	No. of clusters	Average no. cities per cluster	Median cluster (highest)		
			Average PMSA pop. (1000's)	Average share college/adult pop (%)	Average share dominant industry/local employ. (%)
Electronics, computers, instruments	5	4	232 (712)	26.4 (29.7)	10.1 (24.5)
Machinery, primary metals, trans equip	8	6	234 (965)	14.3 (24.5)	7.7 (28.4)
Oil and chemicals	5	3.8	171 (246)	18.0 (18.3)	10.6 (17.9)
Health, food, hotels and recreation	9	6	255 (530)	21.4 (29.8)	17.2 (27.8)
Market centers	4	6.3	1938 (8547)	25.2 (27.5)	n. a.

Others: textiles, apparel, food processing, wood products ,furniture, insurance, wholesale, business services

What a “global (mega-) city” does

- Little manufacturing: experimental
 - e.g. high tech
- Focus: Finance, business services, information services
- Known for special items
 - performing arts, stock market, advertising, design
 - But **tiny** national demand for these
- Few mega-size cities needed in a country
 - USA: NY, LA
 - Vs. McKinsey report on China

New York specifically

New York (Manhattan)	All	Head- Quarters	Financial HQ's	Financial services	Security brokers	Business services	Advert -ising
Share (%) of nation's private employment	1.8	3.0	11.7	12	25	7.5	15

Historically different role for mega cites (whether global or not)

Manufacturing versus Business Services in USA Urban Hierarchy

Source: Kolko (1999)

Current (1995)			Historical (1910)		
Metro area population	Share: manu./local employ.	Share: business services/employ	Metro area employment	Share: manu. / local employ	Share: business services
Over 2.5m.	.14	.21	4 largest	.35	.062
Under .25m	.19	.13	Under .1m	.31	.046
Non-metro	.27	.09	Non-metro	.25	.044
Nation	.17	.18	Nation	.30	.050

New York in 1910: sugar, textiles & garments, publishing

Are developing countries like developed countries 100 years ago?

- **Biggest cities: initially** sites of rapid industrialization under globalization (Shanghai, early 1990's back to 1920's)
 - Focal point for importation of technology & local learning: FDI related
 - Limited infrastructure and institutional capacity of hinterland
 - Favored by national government

Changing role of biggest cities in developing countries

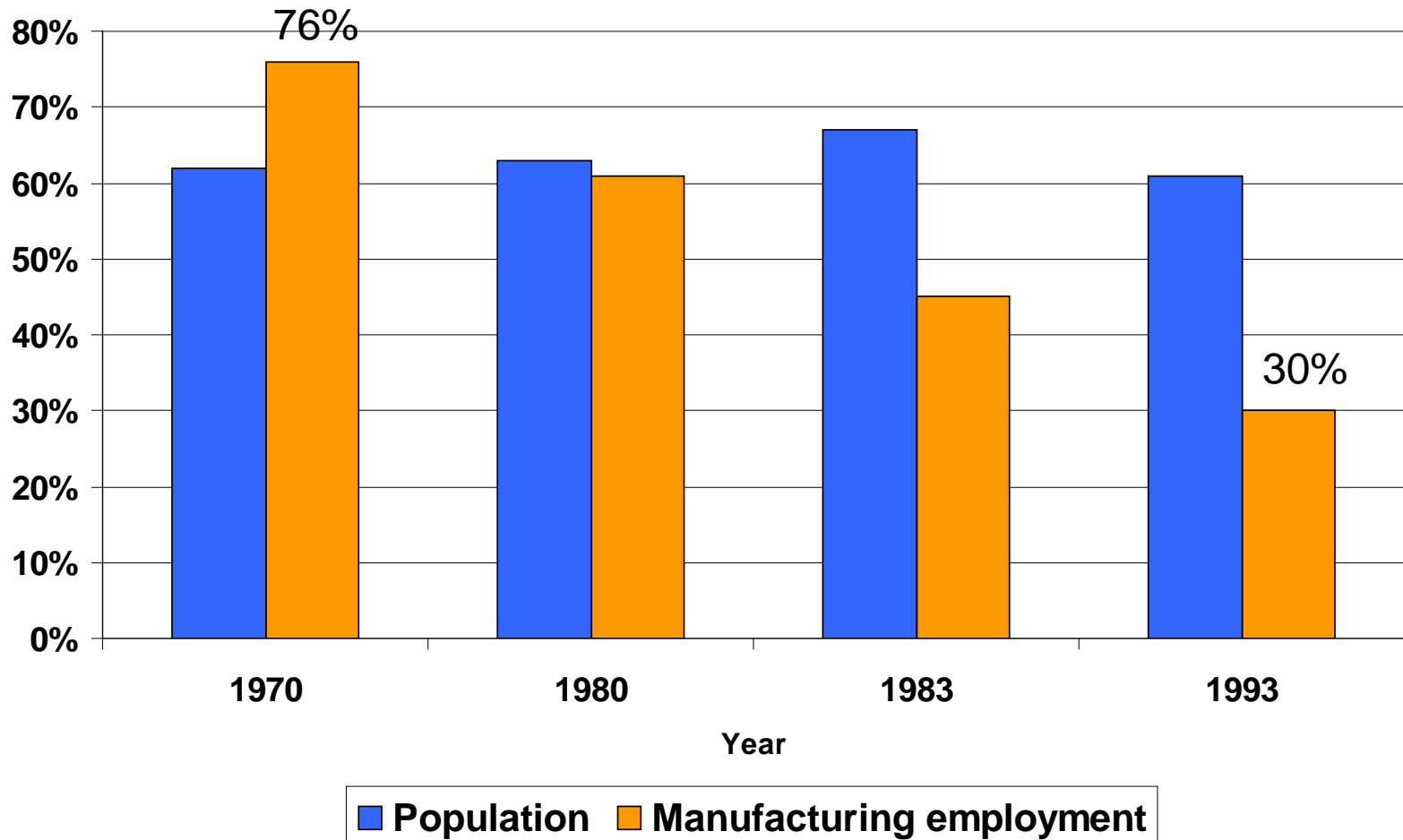
- Decentralization of industry
 - » As historically in USA: New York City

Two stages

- 1) within metro region: ex/peri-urban (“suburbs”)
 - 2) from larger metro regions to smaller *specialized* cities and rural areas
- Why decentralization?
 - Primate metro areas: congested and expensive
 - Go where cheaper land and wages
 - Some technologies standardize
 - Less need for learning
 - Examples: Korea, China (not shown here), India

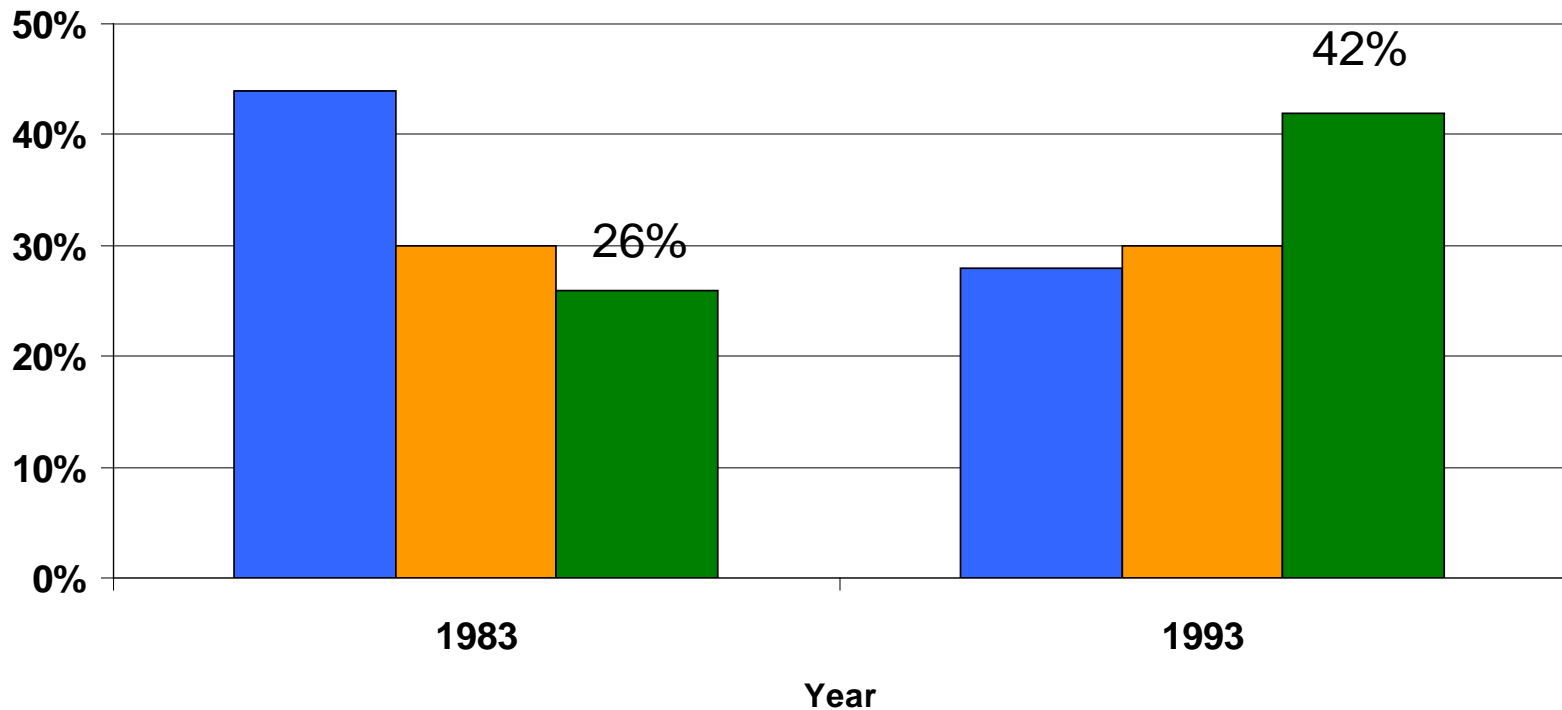
Manufacturing decentralization in Korea

Stage I. Share of Seoul in Kyonggi Province



Manufacturing decentralization in Korea

Stage II. Share of National Manufacturing Employment



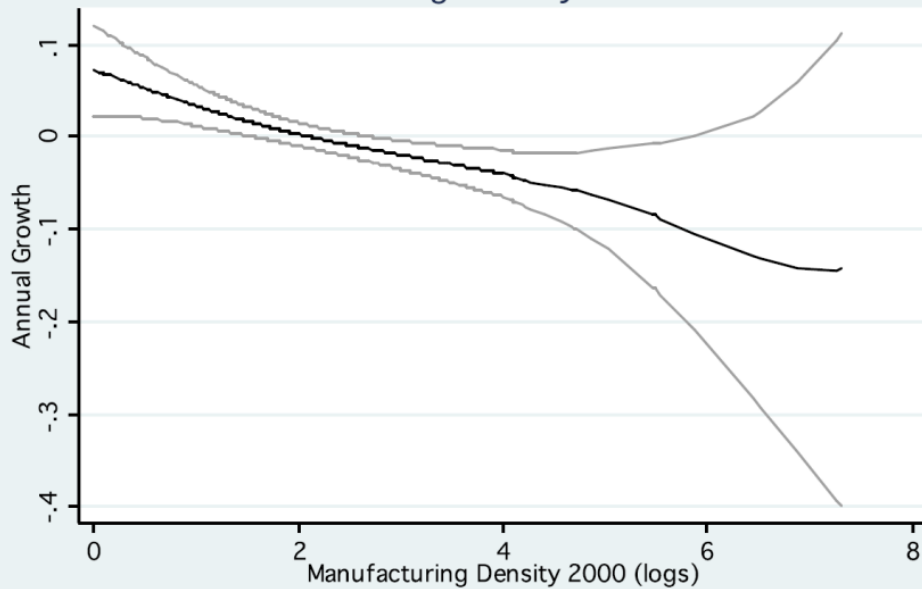
- Seoul, Pusan, & Taegu metro areas
- Satellite areas of Seoul, Pusan, and Taegu
- Other cities, rural areas

India: Spatial decentralization

Dispersion of manufacturing versus concentration of services at high end (districts)

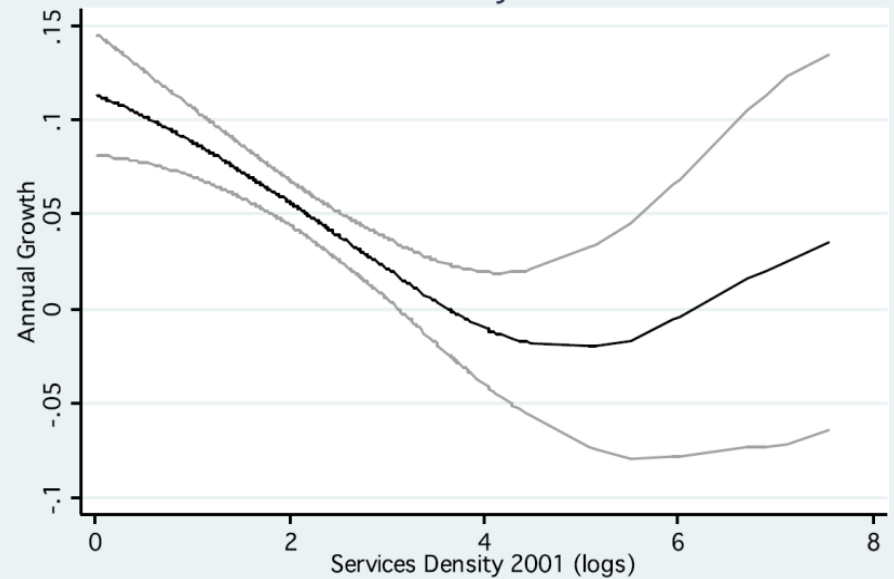
(Desmet et al WB WP 2011)

Manufacturing Density 2000-2005



Source: NSS and ASI

Services Density 2001-2006



Source: NSS

India: Spatial decentralization

Ruralization of formal sector manufacturing (urban places) (Ghani et al NBER WP 2012)

Fig. 1a: India's urban shares, 1989-2005

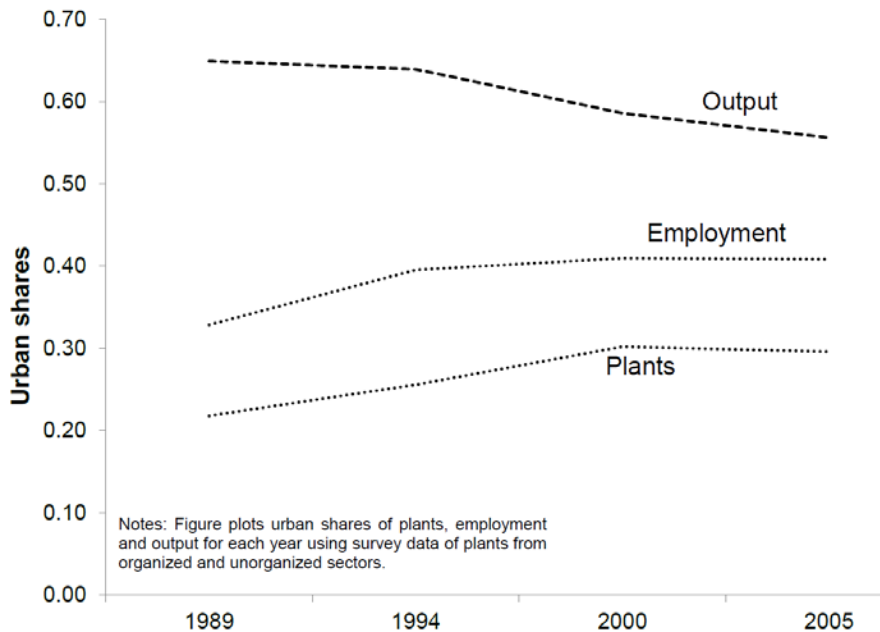
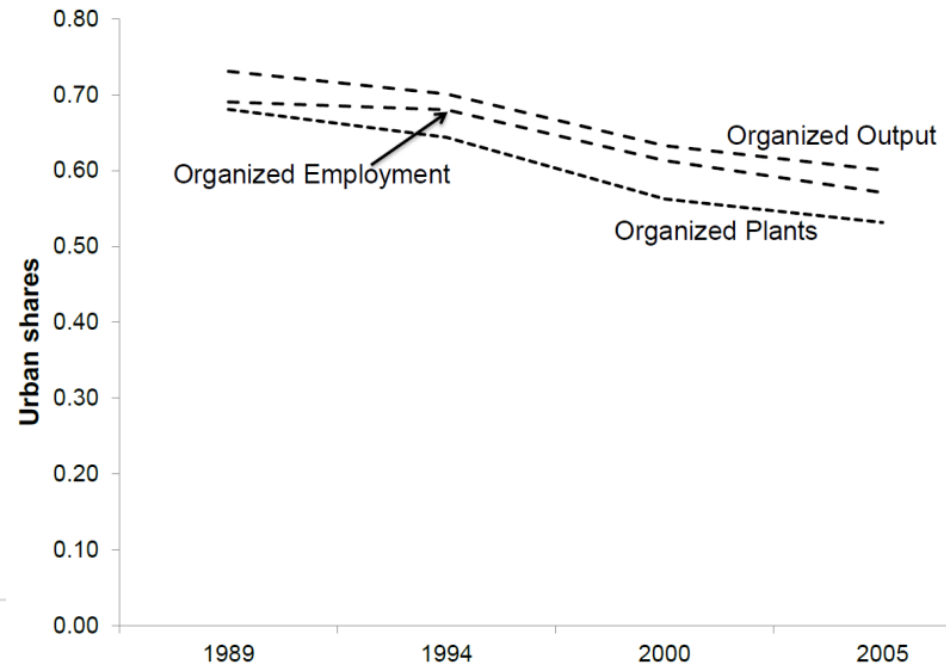


Fig. 1b: Urban shares in organized sector



Decentralization:

Transport infrastructure investments

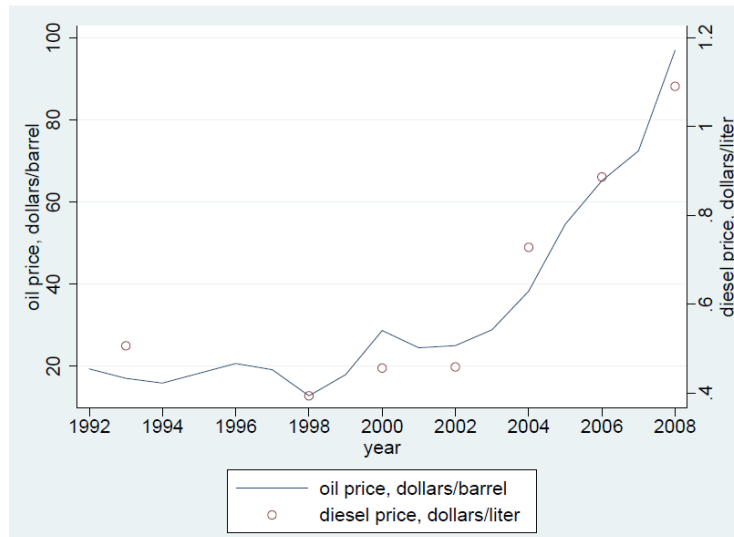
- **Within city** (classic urban model of location):
 - For China (1990 vs 2005):
 - **Highway rays:** each additional ray displaces 4% of center city population (to suburbs) (Brandt et al. 2012);
 - same as USA magnitude in Baum-Snow, 2007
 - **Rail rays:** each additional ray displaces 26% of center city industrial GDP,
 - **Ring roads:** Huge displacement of both people and industry
- **Cross – cities** (hard to identify causal effects): China
 - Elasticity of GDP pc with respect to distance to potential infrastructure connecting historical centers ands new treaty ports is $-.07$ (Banerjee et al. 2012)
 - For industrial GDP pc it is $-.10$

Cost of transport and urban income: Access to the primate coastal city (14 sub-Saharan African coastal nations)

Log (Night lights per city), 1992-2008 (Storeygard, 2012)

Distance to primate * oil price	-.683***	-.520***
	Tobit; year & city FE's, linear city time trend	OLS; year & city FE's, city splines
N	263	263

INTERPRETATION: for change in oil price (\$25→\$97) 1 SD increase in distance reduces city lights by 23% (≈ GDP by 6%).



- For hinterland cities primarily (and endogenously) served by paved roads, access to coastal primate is key.
- For cities on less paved roads, access to hinterland large city is critical.

III. Urban bias: Favoritism of biggest (political) cities

- Capital cities and others with political influence **favored** in many countries
 - China, Indonesia, Brazil, Thailand, Mexico
 - **How?** Favoritism in capital markets & fiscal arrangements
 - Capital market (evidence: excessive investment; low returns; N.P.L.)
 - Public infrastructure investments (Beijing and Shanghai)
 - **Why?** Beliefs and politics (show case cities)
 - rent seeking, corruption

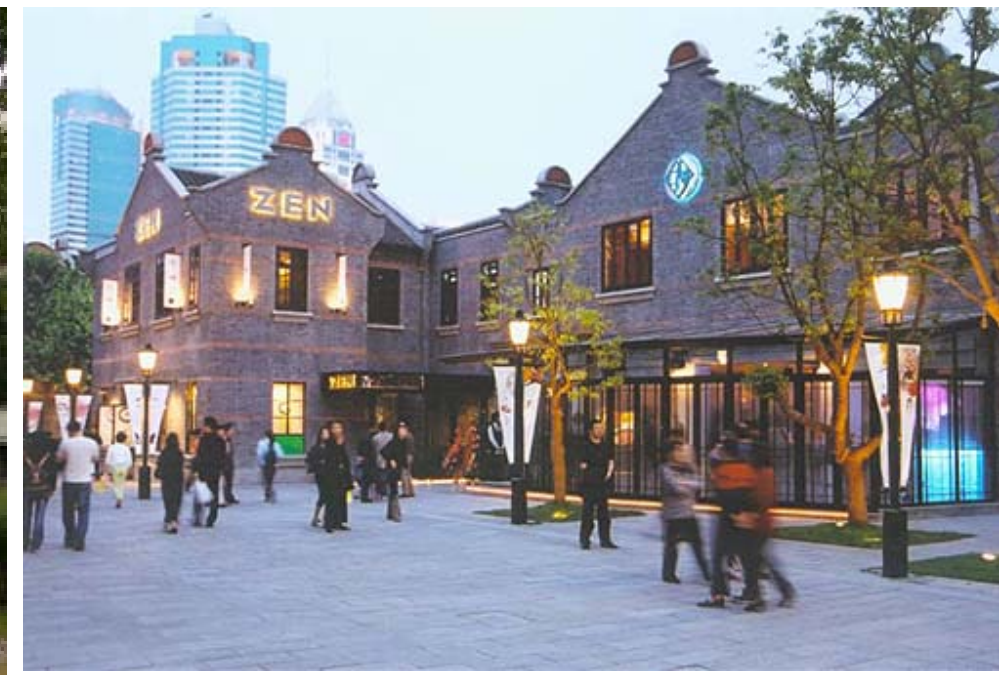
So What?

Effects of favoritism

- Spurs **in-migration**: seeking jobs created by favoritism
- So What?
 - Over-population of biggest cities, with **national growth losses**
 - Econometric studies: wasted resources (Henderson, 2003)
 - 1 SD increase in primacy above best value for typical country leads to loss of 1.4 growth % points per year
 - Enhanced inequality
 - China with legal migration restrictions, initially

Comparative Urban to Rural Per Capita Consumption Ratios					
China 1978	China 1995	China 2003	Taiwan 1995	South Korea 1994	Thailand 1990
2.2	2.8	3.10	1.43	1.03	2.66





Locals try to limit migration: China

- Legal restrictions (removed around 2000)
- Make living conditions bad
 - No access to formal sector housing
 - Dorms, urban villages (“slums”)
 - Limited/no access to state schools
 - Health care & social security not portable

Locals try to limit migration: Brazil

- Brazil in 1970's and 1980's (Feler and Henderson, 2011)
 - Zone to make formal sector expensive
 - Informal (“quasi” or illegal sector)
 - Not required to service with water (& sewerage)
 - 1 SD decline in fraction small houses served leads to 15 percent points decline in growth of number of households in city per decade (avg. growth: 40 points) [lower income]

Political structure and spatial concentration (& favoritism)

Spatial Gini for cities in each country (also “primacy”).

OLS regressions	2000 Gini, 1970 covariates	Change in Gini 1970-2000
Federal structure	-0.0792** (0.6 s.d. of Gini)	
Polity democracy index	-0.00387** (1 s.d. of index → 0.03 s.d. of Gini)	
Change in democracy index		-0.00414**
Controls for population, GDPpc, planned economy		
N	63	46
Rsq	0.56	0.06

Summary

- Urbanization & growth go hand-in-hand
- Biggest cities transform from manufacturing to specialized service cities
 - Global cities: finance, arts, design and advertizing, legal
- Limited need for mega-cities
- In urbanization process, biggest cities favored
 - Resist in-migration: slums, denial of services
 - Enhanced inequality