

## Postwar Tokyo and Urban Economic History

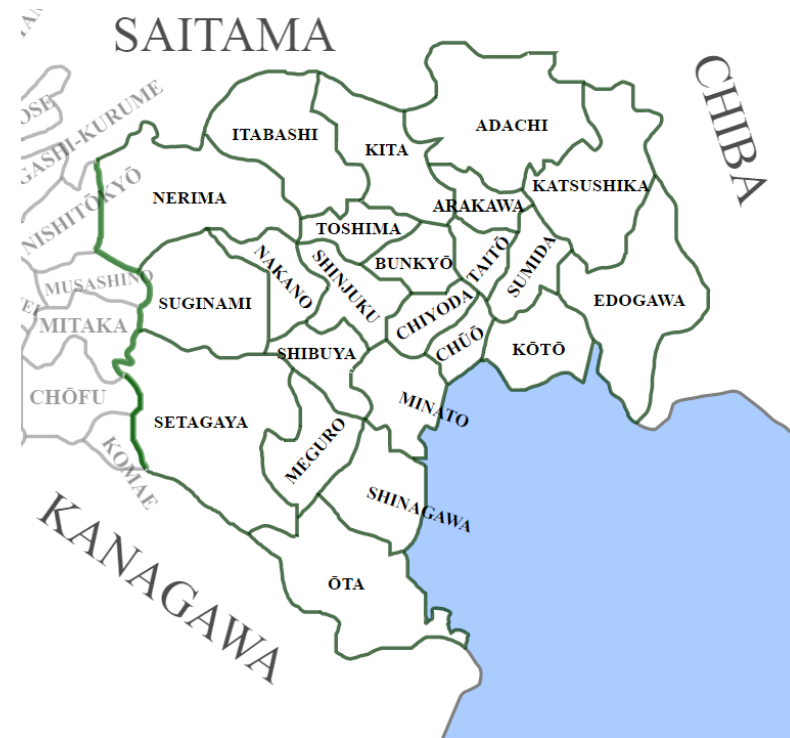
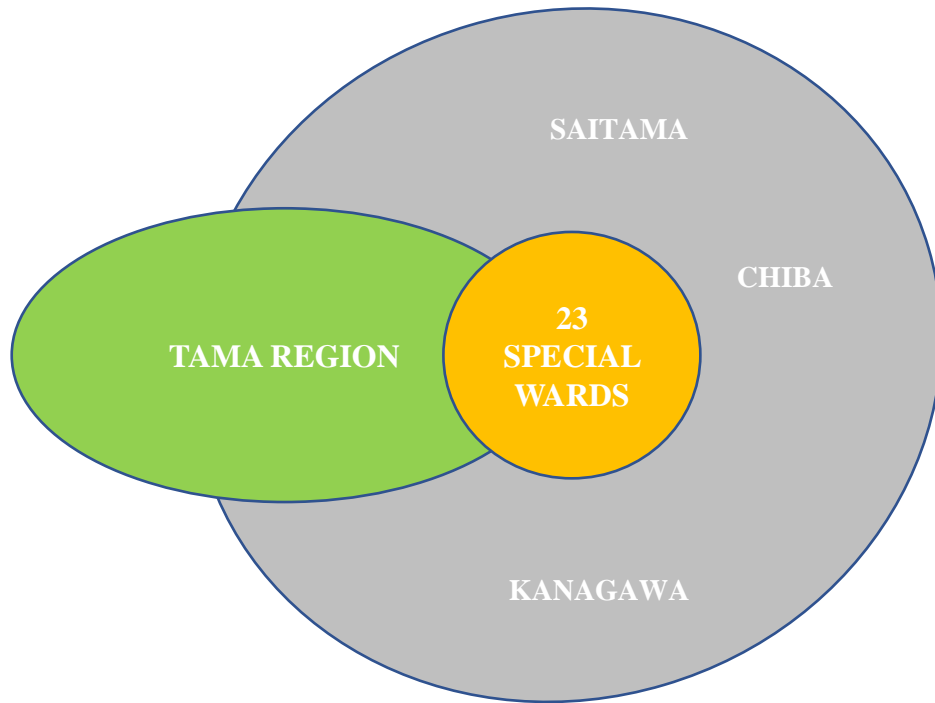
Asia's First Megacity and its Extraordinary Urban Space

Deutsche Gesellschaft für Natur- und Völkerkunde Ostasiens

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23 June 2021

## Definitions and spatial context





## Growth visualizations

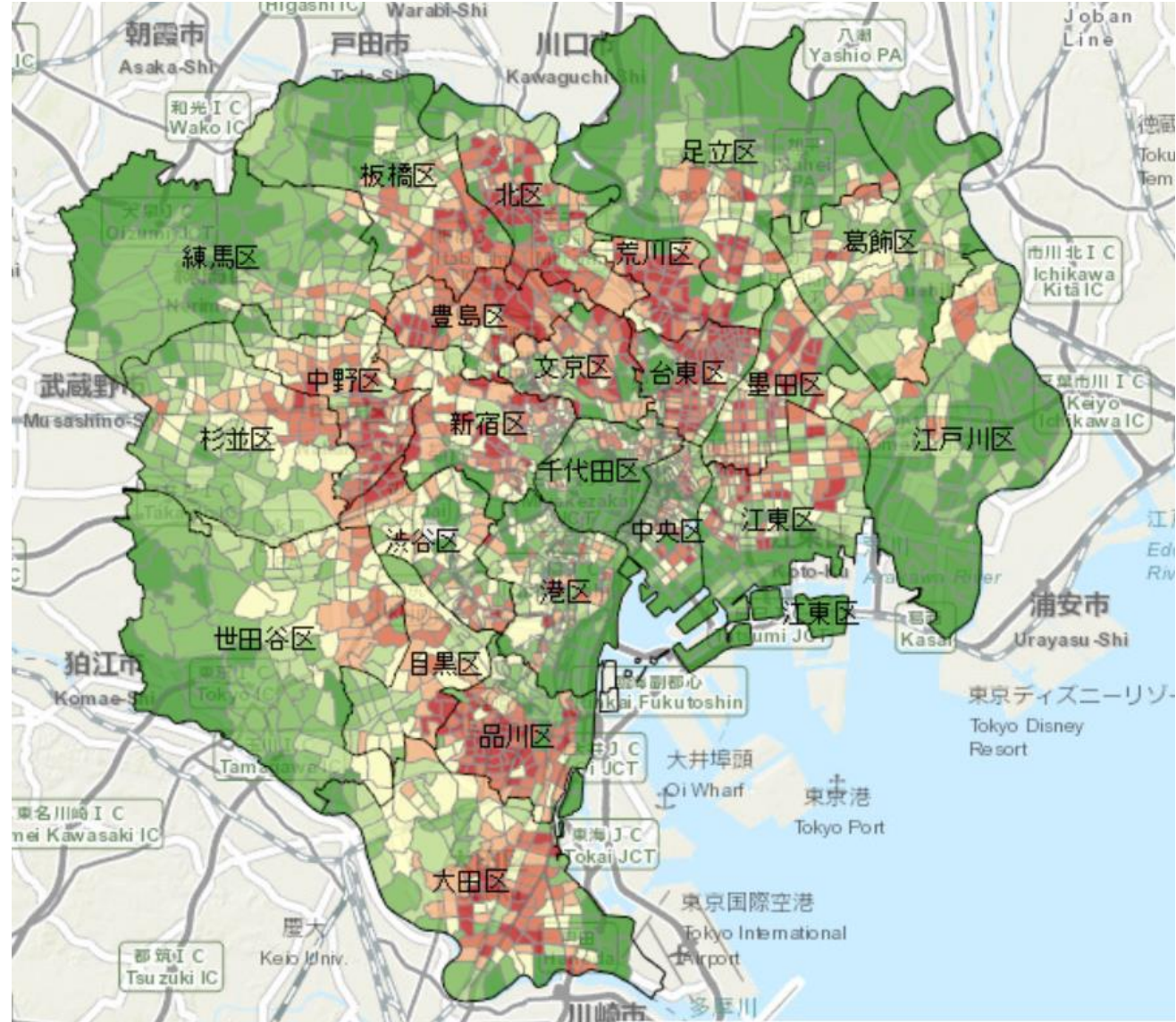
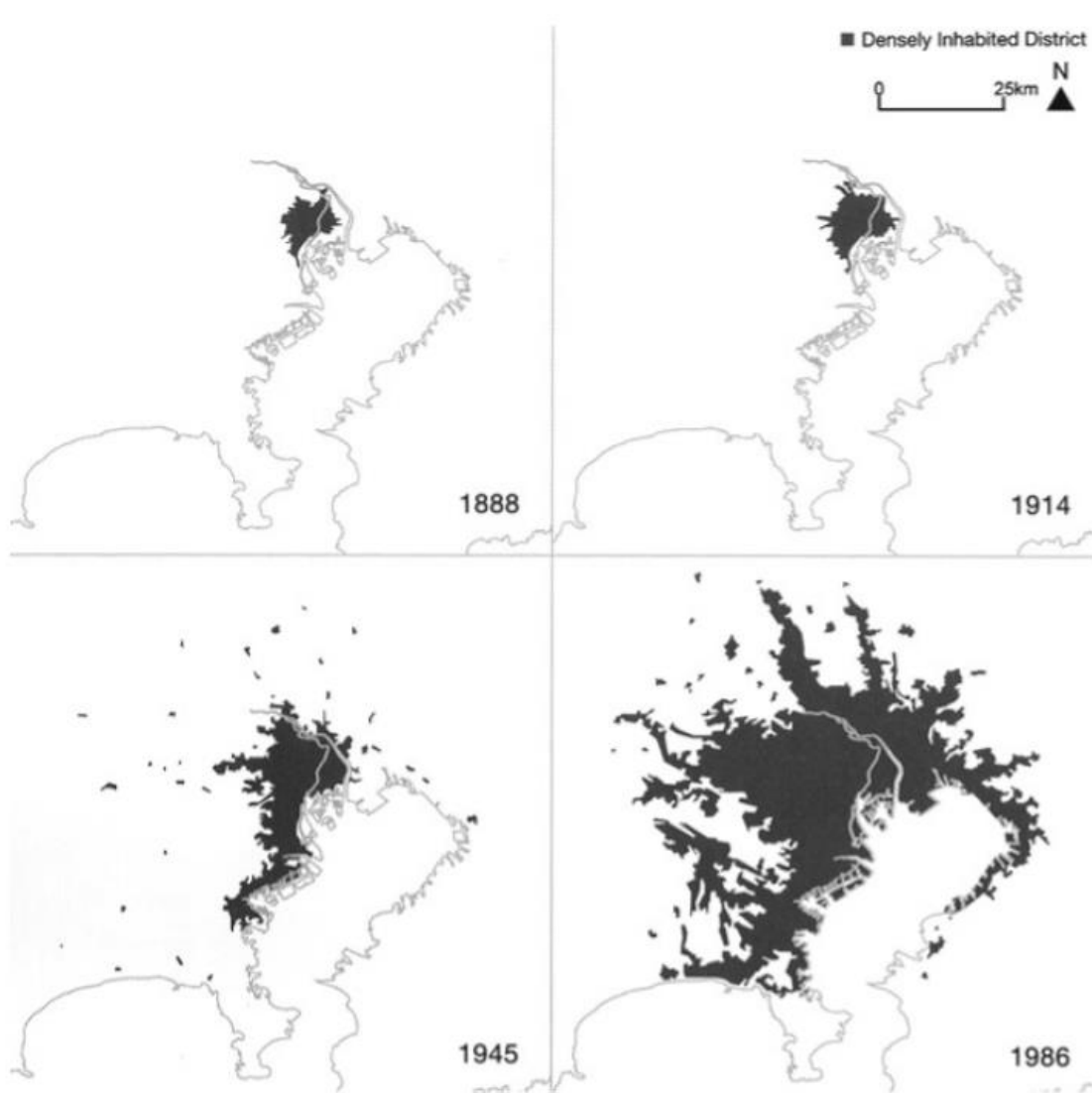
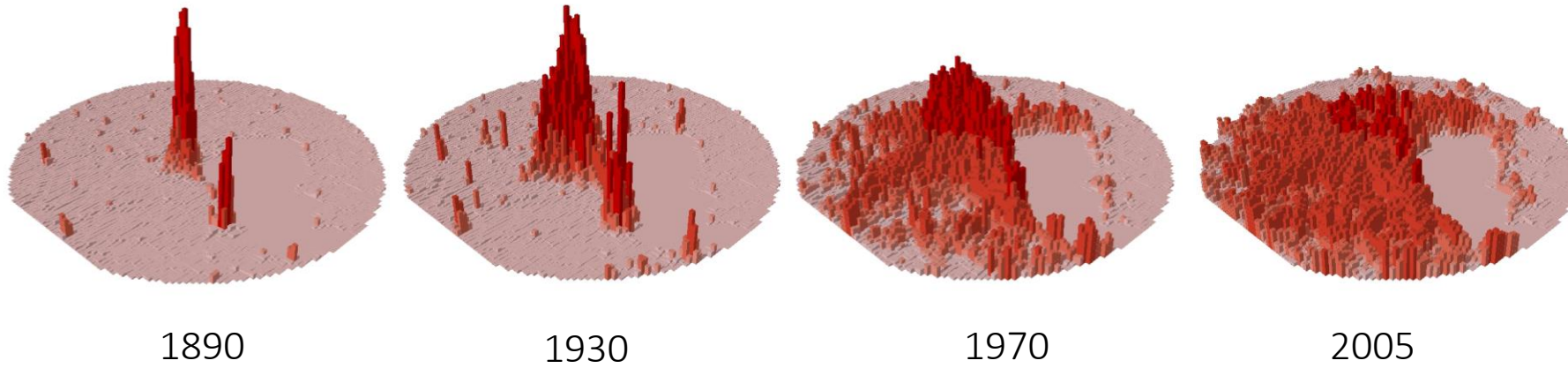


Fig. 2-2. Expansion of densely inhabited district (Okata et al. 2005)

## Growth visualizations



出典: 関東地方における明治期・昭和初期推定メッシュ人口データ(小池司朗ら作成、東京大学空間情報科学センター所蔵、  
<https://joras.csis.u-tokyo.ac.jp/dataset/show/id/18001000000>)より内山愉太作成

# Megacities and Asian Urbanization

Number of Asian cities in “top 30” largest cities worldwide, rank Tokyo

	1500	1700	1825	1850	1875	1900	1950	2010	2030
Number Asian cities	17	17	15	13	7	6	7	17	20
Rank Tokyo	-	2	5	6	11	7	2	1	1

Sources: UN Population Division (2014), Jedwab and Vollrath (2016)

## “Tokyo Moment” or “Tokyo Momentum”?

Large cities (>4.0 mln inhabitants) that double their population within 20 years

Time span	Cities
1950-1970	Tokyo, Osaka
1955-1975	Mexico City
1960-1980	Mexico City, Sao Paulo
1965-1985	Mexico City, Sao Paulo, Mumbai
1970-1990	n/a
1975-1995	New Delhi
1980-2000	New Delhi, Dhaka, Shanghai
1985-2005	New Delhi, Dhaka, Shanghai, Beijing
1990-2010	New Delhi, Dhaka, Shanghai, Beijing, Chongqing, Tianjin, Lagos, Guangzhou, Shenzhen
1995-2015	New Delhi, Shanghai, Dhaka, Beijing, Bangalore, Chongqing, Tianjin, Lagos, Kinshasa, Guangzhou, Shenzhen, Lahore
2000-2020	Dhaka, Chongqing, Kinshasa, Bangalore, Lahore
2005-2025	Luanda, Kinshasa, Bangalore, Lahore
2010-2030	Luanda, Kinshasa, Lahore, Dar es Salaam
2015-2035	Luanda, Kinshasa, Dar es Salaam

## My research

- “Tokyo Model” of hitherto unparalleled urban growth (1955-1975):
  - Economy – Japanese Economic Miracle
  - City – Tokyo Momentum
  - In this combination no precedent in global history
- Better understanding of Tokyo’s postwar history helps:
  - To “historicize” megacities
  - Address Tokyo’s contemporary problems
  - Megacities in developing countries in meeting their growth challenges

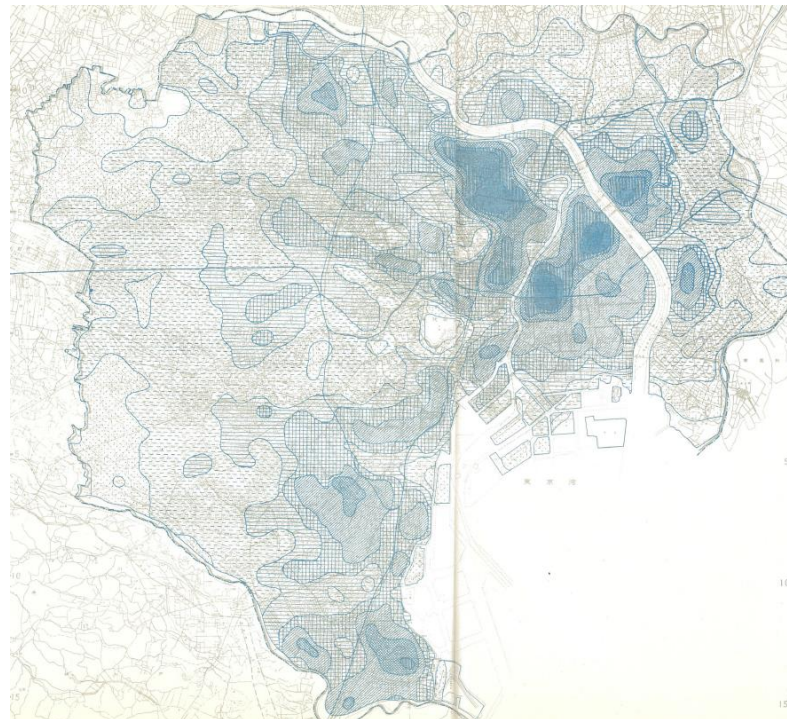
## Three topics of today's talk

- Labor-intensive industrialization
  - Tokyo as a site of production
- Egalitarian growth
  - Tokyo as domicile
- What is the “Tokyo Model”?
  - On the oft-described “neighborhood”



## Labor-intensive industrialization

- Urban “micro factory” at the hear of Japan’s economic miracle?
- Ota, Sumida



## Empirical work

- Economies of scale: growing economy puts large firms at an advantage, also given Tokyo's large internal market (supply and demand considerations)
- However: between 1955-1975 small and labor-intensive factories in Tokyo's 23 special wards are more “successful” than small factories in Japan in general; they can also close the performance gap to large, capital-intensive factories in Tokyo
- Not only in so-called clusters, but also spread over the territory of the 23 wards



## Empirical work

**Table 2.** Labor Productivity: Value-Added per Worker Ratios and Coefficients of Variation (CoVs), Tokyo Prefecture Versus Japan, 1957–1975

	1957	1960	1965	1970	1975
Total Tokyo/Japan	1.10	1.08	1.15	1.13	1.10
Tokyo <30 workers/Japan <30 workers	1.26	1.31	1.40	1.32	1.17
Tokyo <30/Tokyo 300+	0.34	0.44	0.55	0.49	0.46
Japan <30/Japan 300+	0.31	0.33	0.41	0.40	0.44
CoV firm size Tokyo	51.9%	38.5%	26.9%	27.0%	32.0%
CoV firm size Japan	57.1%	53.3%	39.4%	39.9%	35.2%

Source: METI, Census of Manufactures, various years.

## Reasons

- Continuities with the past
  - Production processes distributed across various smaller firms (coordinated via *ton'ya*)
  - Lack of geographical space, historically high population density
- Small factories use Tokyo's urban space efficiently
  - Narrow road network – two-wheelers and small delivery trucks
  - Mezzanine floors for office space
  - Mixed-use of buildings (“tool house“, live-and-work)
- Egalitarian urban space puts small factories at an advantage





## Egalitarian growth

- Megacity growth often leads to spatial segregation with regards to wealth and income, e.g. via poverty traps, unequal distribution of job opportunities and infrastructure
- Tokyo: Rapid economic growth and initially population growth within 23 special wards takes place without stratification, i.e. differences between the 23 wards become smaller
- Can be seen as the spatial equivalent to small income inequalities in postwar Japan, but also an independent variable explaining the “middle mass”



Table 1. Tatami per capita, 23 wards, 1955–1975.

	1955	1960	1965	1970	1975
23 wards	2.9	3.3	4.0	5.0	6.1
Central business wards	3.0	3.7	4.7	5.8	7.1
Old industrial central wards	2.6	3.1	3.8	4.8	5.9
Southern industrial	2.9	3.3	4.1	5.0	6.1
Northern/eastern industrial	2.5	2.8	3.5	4.4	5.4
Western wards	3.2	3.7	4.5	5.5	6.6
CoV23	13.4%	13.4%	13.3%	11.8%	10.8%
Theil23	0.0142	0.0092	0.0086	0.0066	0.0053

Source: Population Census

Table 3. Intra-ward variability in per capita living space, 1970–1975.

	Nakano		Arakawa		Bunkyo		Ota	
	1970	1975	1970	1975	1970	1975	1970	1975
Average tatami p.p.	5.3	6.4	4.2	5.3	5.5	6.7	4.9	6.0
Ordinary household members	352,906	351,688	232,476	208,707	207,580	199,431	677,793	653,901
Number of chōme	85	85	52	51	68	68	198	195
Average inhabitants per chōme	4,152	4,138	4,471	4,092	3,053	2,933	3,423	3,371
CoV chōme	10.2%	8.7%	9.7%	7.4%	14.1%	12.4%	21.4%	20.4%
Theil chōme	0.0042	0.0030	0.0023	0.0013	0.0071	0.0098	0.0183	0.0151

Source: Population Census

## Empirical work

- Per capita living space “homogenizes” across cityscape, between wards and within
- Sanitary infrastructure improves especially in the underserved periphery of the 23 wards
- Precarious living conditions (<3 tatami p.p.) decrease disproportionately in poorer areas of the city
- Public space improves and provision more equal across the city (kindergartens, elementary schools, park space, library books, infant mortality, crime, fire)

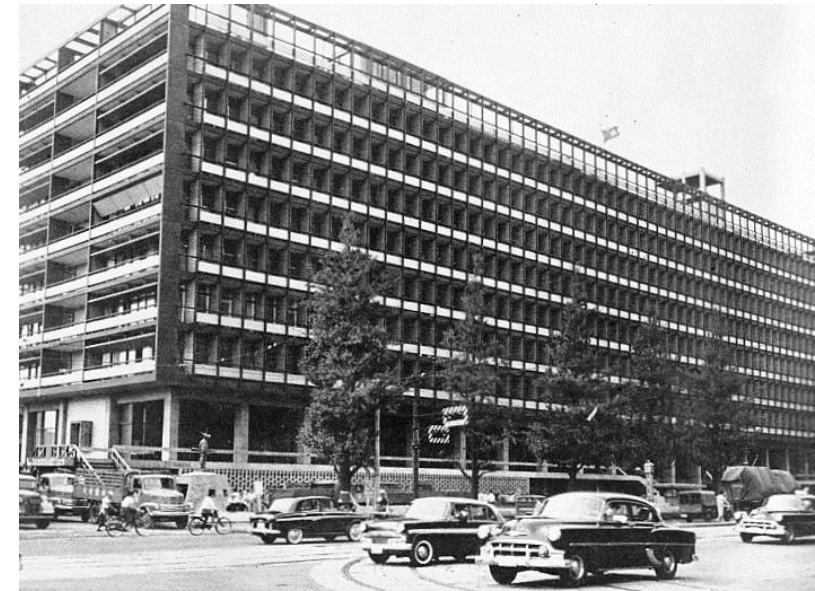
## Reasons

- The neighborhood (more later)
  - Homogenous urban form
  - Homogenous economic structure (commercial infrastructure, but also role of the manufacturing sector, e.g. via local employment)
- Urban institutions
  - Tokyo Metropolitan Government
  - Fiscal redistribution between poor and rich wards
  - No master plans realized



## Tokyo Metropolitan Government (TMG)

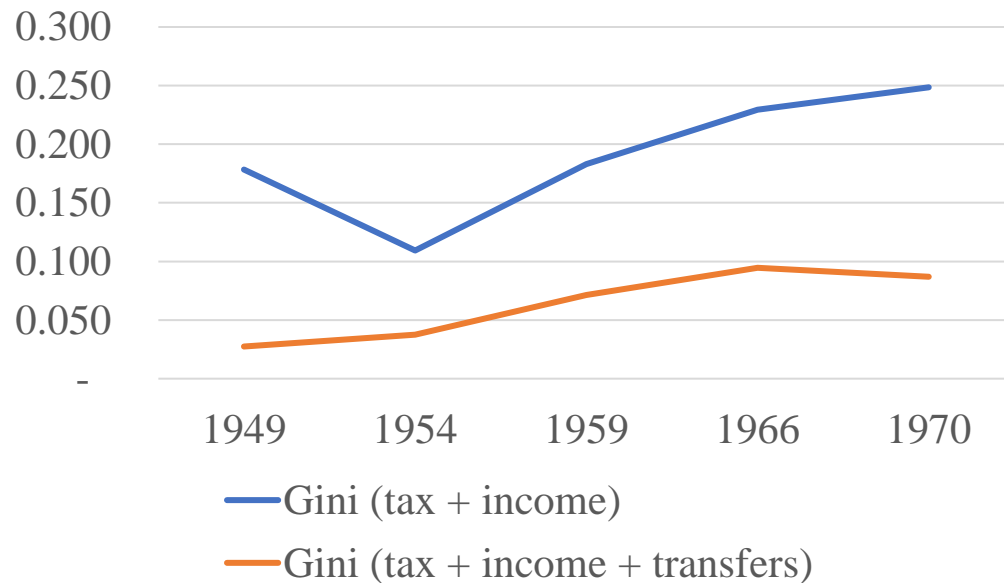
- Tokyo Prefecture (23 special wards, Tama region)
- Occupation: reconfiguration, adjustment of centre-periphery relations, not always without conflict
- Reflects contemporary conflicts regarding decentralization especially within development discourse
- 1950 tax reform, 1952 Local Autonomy Act, strengthen intermediate layer of governance TMG



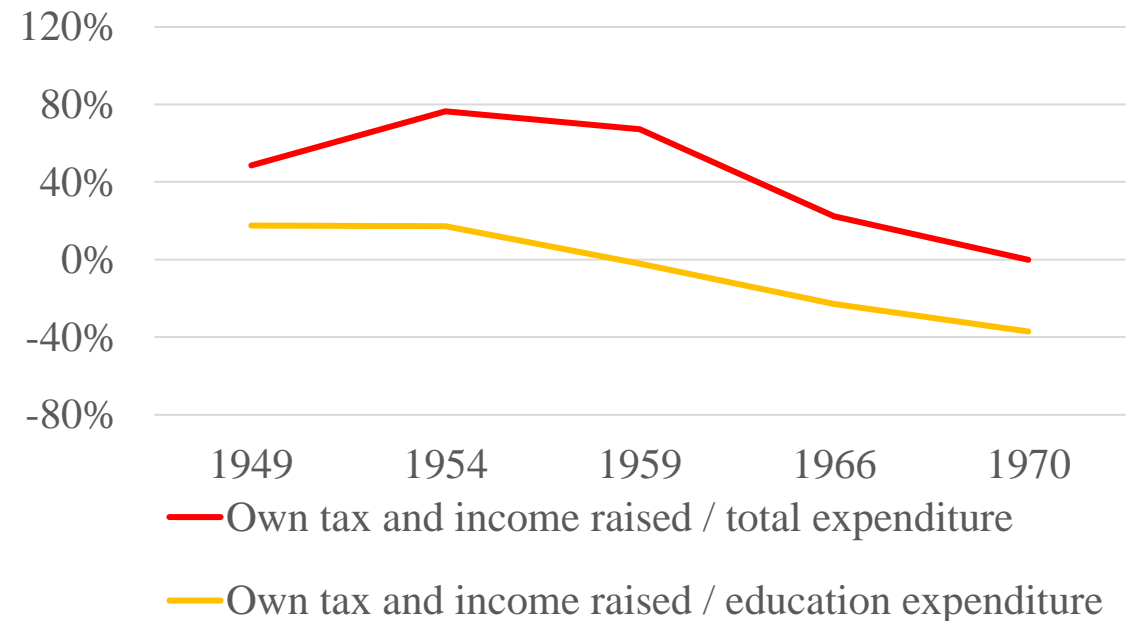
## Fiscal redistribution

- Poor wards receive transfer payments, rich wards pay into system
- Resources spent on education and other social areas

Inequality before and after transfers



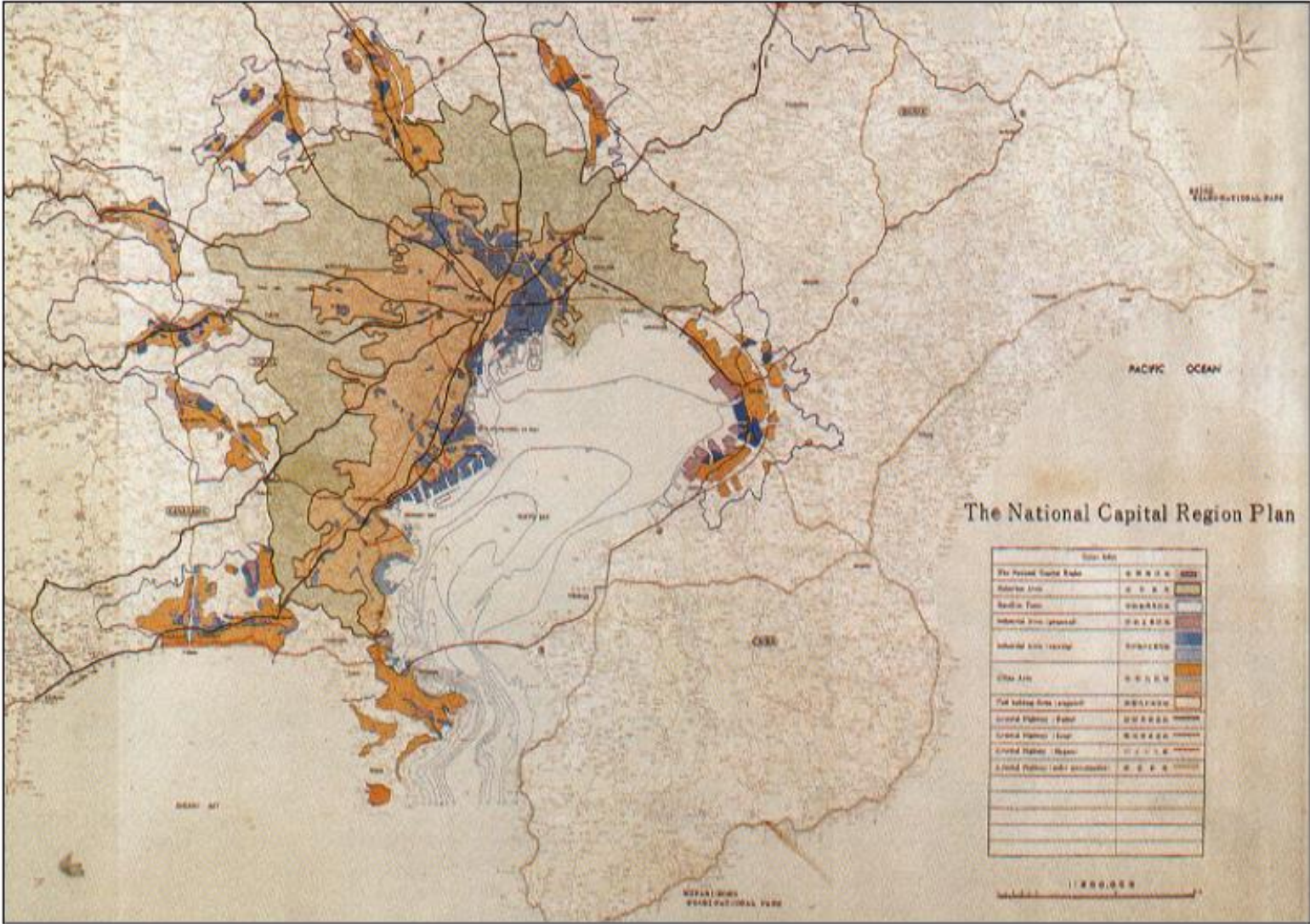
Correlation tax and expenditure



## Plans and reality

- Postwar period saw several reconstruction plans and transformative visions
  - Ishikawa Plan 1945 (inspired by Ebenezer Howard's Garden Cities)
  - National Capital Region Plan 1958
- Reality: city grew too fast, “uncontrollable”, “unplannable”
- Japanese Economic Miracle and its scarce resources concentrated elsewhere

# National Capital Region Plan (1958)





# Neighborhood

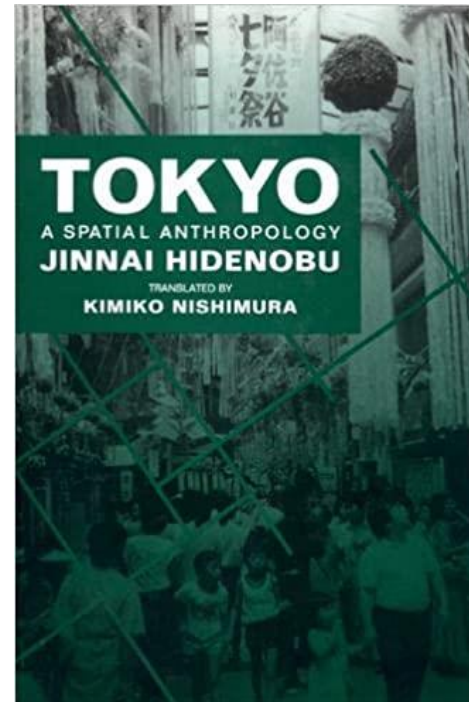
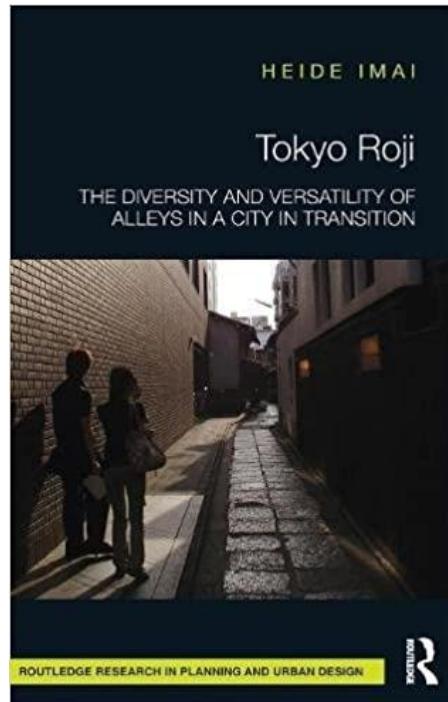
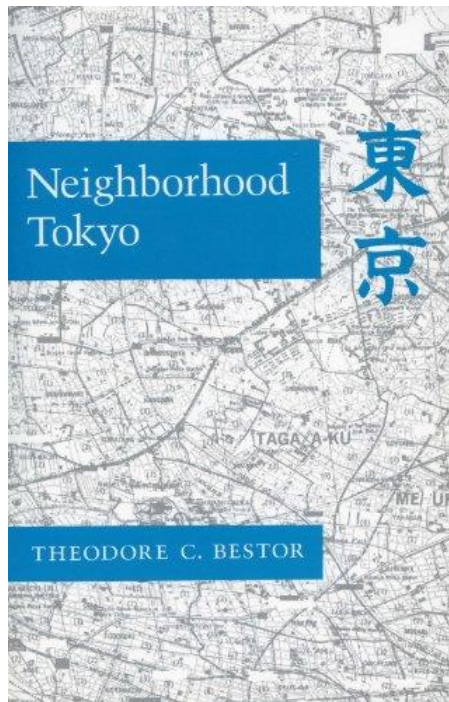
- Focus of urbanism research
  - Architecture
  - Sociology, anthropology
- Recurring theme of my research in economic history
  - Homogenous spatial parameters for small factories best understood at the micro level
  - Egalitarian space

## Neighborhood – micro view



## Neighborhood – micro view

- Amalgamation of villages? Popular but misleading analogy
- Instead, neighborhoods have mainly urban roots, social organization a primarily modern development





## Neighborhoods – macro view





## Neighborhoods – macro view

- Homogenous urban space is flexible and encourages the even distribution of manufacturing sector and commercial infrastructure (e.g. catchment area)
  - Population density
  - Building stock
  - Road network
- Homogenous socioeconomic structures help households economize space and offer local employment
  - *Sento* – outsourcing of hygienic function from dwelling
  - Small retail – Storage
  - Restaurants – Kitchen and dining area
  - Construction establishments – metabolic neighborhoods, “scrap and build”

## Empirical work (in progress)

	Unit	1960*	1965	1970	1975	1960-75	2015
Building starts, wooden	% of buildings	89.8%	80.5%	70.7%	71.0%	Decreasing	67.3%
	Theil23	0.0037	0.0127	0.0259	0.0344	Increasing	0.0248
	Theil20	0.0008	0.0033	0.0098	0.0202	Increasing	0.0116
Building starts, wooden cost per sqm (JPY ‘000)	JPY '000	10.7	20.6	32.4	83.5	Increasing	180.4
	CoV23	5.7%	10.6%	7.0%	10.2%	Stable	10.6%
Roads, narrow and improved	% of narrow roads	26.6%	41.2%	53.6%	55.6%	Increasing	76.5%
	Theil23	0.1709	0.2601	0.0852	0.1221	Decreasing	0.0544

## Empirical work (in progress)

	Unit	1955	1960	1965	1970	1975	1955-75	2015
<i>Sento</i>	/100,000	29	30	29	30	33	Stable	18
	Theil23	0.0257	0.0159	0.0225	0.0173	0.0356	U-shape	0.0567
Retail / wholesale	/100,000	2,554	2,176	2,159	2,609	3,090	Increasing	1,556
	Theil23	0.0575	0.1334	0.1869	0.1957	0.2287	Increasing	0.4039
	Theil20	0.0461	0.0439	0.0704	0.0722	0.0758	Slightly increasing	0.1449
Construction establishments	/100,000	215	183	222	293	383	Increasing	366
	Theil23	0.0992	0.1019	0.1342	0.0967	0.0806	Stable	0.0568

## Synthesis and discussion

- Population growth and economic growth go hand in hand with urbanization and industrialization; however not following a European model
  - Manufacturing sector significantly represented in small factories, producing complex products, embedded in urban space
- Egalitarian despite megacity growth
  - No spatial segregation and social stratification
- The neighborhood at the heart of the observation “Tokyo Model“

## Synthesis and discussion

- Today's Tokyo has changed
  - Less egalitarian, but older
  - Different neighborhood markers (e.g. fewer *senjo*)
  - Nevertheless “successful” and therefore study object of national and international experts
- My research provides context and new perspectives for macro city research





## Synthesis and discussion

- Postwar Tokyo offers lessons for developing cities
  - Urban form and development, e.g. via population density: usually analyzed with a Western prism and linear relations, Tokyo's experience shows there might be “sweet spots”
  - Flexible housing stock, building material, “scrap and build”, implications for research on slums and informal settlements
  - Road network, flexibility— *in situ* modernization without bulldozer and masterplans
  - Commercial infrastructure helps economize on limited urban space

## Synthesis and discussion

- „When Tokyo was a Slum“  
Matias Echanove, Rahul Srivastava

Shimokitazawa  
Mumbai/India



Thank you!

- Q&A
- Further reading
  - My Blog on many of these topics ([www.benbansal.me](http://www.benbansal.me))
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  - Bansal, B. (2021, February 25). *The Tokyo Moment: What Developing Cities Can Learn From The Postwar Japanese Capital*. Retrieved from The Metropole: <https://themetropole.blog/2021/02/25/the-tokyo-moment-what-developing-cities-can-learn-from-the-postwar-japanese-capital/>