Place Stratification in Tokyo and New York

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Introduction

Place stratification has long preoccupied American urbanists. Control over territory is a basic means of reproducing class privilege in the United States. Class segregation carries enormous implications for the life chances of American urban residents, including their educational and occupational opportunities, the vitality of their neighborhoods, and the attractiveness of their central cities. [1]

Place inequalities have received less attention among urbanists outside of the United States. But with globalization, neoliberalization and "Americanization," concerns about place stratification in Asian and European cities have grown. The editors of a recent collection on "globalizing cities" in North America, Europe and Asia found that class is becoming more ingrained in the spatial order of all of cities they surveyed. Variations among the cities notwithstanding, social contact across class lines is contracting, the spatial boundaries separating classes are more visible, and the segregation of classes within those bounded spaces has increased.[2] The ambitious URBEX research program on social exclusion and spatial segregation in six European cities, while still in progress, also indicates neighborhood inequalities are becoming more pronounced.[3] Little research attention has gone to place inequalities in Japanese cities but in Japan, too, political decentralization and public concerns about rising social inequality have made the relationship between space and class a potentially more significant topic.[4]

We know very little about variations in urban class segregation among nations and even less about differences among cities in different regions of the world. Our aim in this paper is to help narrow that gap in our knowledge through a comparative study of place stratification in Tokyo and New York over the past three decades. Specifically, we examine levels, trends and patterns in the distribution of per capita income among Tokyo's 23 central wards and 26 suburban cities compared to New York City's five boroughs and 59 community districts.

Place Stratification in Tokyo & New York

New York City

The municipality of New York City is made up of five individual counties. Each county is coterminous with a borough: Manhattan (New York County), Queens (Queens County), Brooklyn (Kings County), Bronx (Bronx County) and Staten Island (Richmond County). New York City reorganized into its present form in 1898, consolidating all existing town and county governments into the five boroughs overseen by a unified and centralized municipal government. The population of New York City was 8.0 million in 2003, with Manhattan containing 1.57 million residents, Bronx 1.36 million, Queens 2.23 million, Brooklyn 2.47 million and Staten Island 0.46 million (See Table 1).

(Table 1: Population, New York City & Tokyo, 1980-2003, About Here)

New York City is governed by an elected Mayor and City Council. City Council members represent geographically bounded city districts. Each of the 5 boroughs also has an elected Borough President with limited powers and a

Borough Board composed of the President and the New York City Council members from that borough. The city is further divided into 59 community districts, each represented by a community board appointed by the Borough President.[5] (See Map 1). New York City's community districts were established by law in 1975 and range in size from less than 900 acres to nearly 1500 and in population from fewer than 35,000 residents to more than 240,000. Community boards review applications for zoning changes, make recommendations for budget priorities and serve as advocates for New York City residents and communities but their effectiveness is limited by weak means of communication and meager budgets.

(Map 1: New York City, 5 Boroughs and 59 Community Districts, About Here)

Until boundary standards were changed in 2003, the New York region consisted of two hierarchical levels: the New York City Primary Metropolitan Statistical Area (PMSA) comprising New York City's five boroughs plus Westchester, Putnam and Rockland counties in New York State and the New York-Northern New Jersey-Long Island Consolidated Metropolitan Statistical Area (CMSA) consisting of 15 PMSAs, including the New York City PMSA (See Map 2). We use the New York City PMSA, which had a population of 9.5 million in 2000, in the metropolitan component of the analysis that follows. [6]

(Map 2: The New York City PMSA and the NY-NJ-PA MSA, about Here)

The U.S. Census Bureau uses boroughs as the major geographic entity in presenting data on New York City. A New York City borough is the equivalent of a county. Counties are legal entities whose boundaries are defined by state law. Community districts are geographically defined political entities unique to New

York City. The New York Department of City Planning publishes a wide array of data on community districts derived from the U.S. census tracts located in each district.[7]

Our study of place stratification in New York City is based upon data for boroughs published in decennial censuses by the U.S. Census Bureau and upon data on community districts published by New York City's Department of City Planning. In this study, place stratification in New York refers to stratification among New York's 5 boroughs and among the city's 59 community districts. We measure income inequality among places by the coefficient of variation (CoV). The CoV indicates the degree to which an array of numbers is dispersed around the average of the array. The greater the dispersion, the greater the inequality. The CoV is calculated by dividing the standard deviation in a distribution of numbers by the mean of the distribution.

Place stratification among boroughs

Per capita income inequality among New York City's five boroughs *doubled* between 1970 and 2000. The trend is linear. Inequality grows larger decade by decade. The CoV among the five boroughs increased from .222 in 1970, to .261 in 1980, to .362 in 1990 to .442 in 2000 (See Table 2).

(Table 2: Per Capita Income & Income Inequality among New York City Boroughs, 1970-2000, about Here)

In 1970 the wealthiest borough (Manhattan) had 1.79 times the per capita income of the poorest (Bronx). By 2000, that ratio had ballooned to 3.07. New York's richest borough is also growing apart from the city's middle income boroughs. Manhattan's income gap with Queens rose from 1.30 in 1970 to 2.23

in 2000, with Brooklyn from 1.71 to 2.56, and with Staten Island from 1.49 to 1.80. By contrast, Queen's income ratio with the Bronx held steady at 1.37 while Brooklyn and the Bronx grow only slightly more apart (from 1.05 to 1.20) (See Table 3). So, rising income inequality among boroughs in New York City is essentially Manhattan pulling away from all of the rest.

(Table 3: Income Ratios among NYC Boroughs, 1970-2000, about here)

Place stratification among community districts.

We have decennial census data for New York City's 59 community districts only for 1990 and 2000. As with the five boroughs, the CoV among New York's community districts increases between 1990 and 2000 from .645 to .736 (see Table 4). Sub-dividing the boroughs into smaller scale community districts nearly doubles the degree of measured inequality: .645 in 1990 for the 59 community districts as compared to .362 among the 5 boroughs, and .736 among community districts in 2000 in contrast to .422 among the boroughs.

(Table 4: Per capita income inequality, NYC Community Districts, 1990-2000, about here)

Breaking the city into community districts sharpens the spatial picture. The highest income districts in 1990 and 2000 were all located in the southern half of Manhattan. But northern Manhattan and the Lower East Side also contain some of the lowest income areas in the city. The very poorest districts are in the South Bronx and along the northern perimeter of Brooklyn (Map 3). So, it is a handful of districts in the lower half of Manhattan, not the borough as a whole, that is pulling away from the rest of New York City.[8]

(Map 3: New York City Poverty Areas, about here)

While Manhattan is New York's wealthiest borough, and is distancing itself from the other four, Manhattan also has the most internal spatial inequality of the 5 boroughs (See Table 5). The CoV among Manhattan's community districts was .601 in 2000 as compared to .397 in the Bronx, .217 in Queens, .396 in Brooklyn and .125 in Staten Island. Queens and Staten Island are the least stratified. Place inequality declined somewhat in Manhattan and in the Bronx between 1990 and 2000, from .625 to .601 in Manhattan and from .461 to .397 in the Bronx, suggesting that Manhattan may be becoming more homogeneously wealthy and the Bronx more homogeneously low income. Place stratification increased slightly in the other 3 boroughs.

(Table 5: Per Capita Income Inequality among Community Districts By Boroughs, NYC, 1990-2000, about here)

Place stratification between central city and suburbs

Spatial inequality is also increasing between New York's suburbs and the central city. New York City has less than two-thirds the per capita income of its surrounding suburbs and the gap has been widening over the past 3 decades. The New York PMSA includes the 5 boroughs of New York City (the "central city"), and cities, towns and villages in three adjacent New York counties: Westchester, Rockland, and Putnam.[9] The ratio between central city and suburban per capita income fell in the New York PMSA from 72.5 percent in 1980 to 65.2 percent in 2000 (see Table 9, Tokyo Section).

Westchester County adjoins New York City on its northern border. Westchester County's per capita income in 2000 was $36,726 as compared to $22,402 for New York City, a county vs. central city income gap of over $14,000

per person. Per capita income among Westchester's 43 cities, towns and villages averaged $45,895 as compared to $22,780 for New York City's 59 community districts. Twenty of Westchester's 43 suburbs had higher per capita incomes than the borough of Manhattan in 2000. The highest income Westchester communities (Bronxville $89,483, Scarsdale, $89,907) had per capita incomes above New York City's wealthiest district, the Upper East Side of Manhattan ($82,500). The lowest income Westchester community (Mount Vernon $20,827) had a higher per capita income than the Bronx, Queens or Brooklyn and higher than all but 17 of New York City's community districts.

Suburban communities in Westchester County are stratified amongst themselves but considerably less so than community districts in New York City. The highest income Westchester community (Scarsdale $89,907) had 4.3 times the income of the lowest (Mount Vernon $20,827). But that is less than half the 9.3 ratio that exists between New York City's wealthiest (Upper East Side $82,500) and poorest (Mott Haven, Bronx $8,876) community districts (see Table 6). The CoV in per capita income for Westchester suburbs was .395 in 2000 as compared to .727 among community districts in New York City. What most distinguishes Westchester suburbs from New York City districts is the *absence of poor communities* in Westchester County.

(Table 6: Per capita income inequality, NYC Community Districts & Westchester County Suburbs, 2000, about here)

In summary, income inequality among New York City boroughs doubles between 1970- and 2000. The trend is incremental and linear. Each decade brings greater inequality than the last. The rise in spatial inequality is largely due

to the wealthiest borough, Manhattan, pulling away from the other four boroughs. The gap between middle income Queens and Brooklyn and low income Bronx changes little over the 30 year period. It is a handful of districts in the lower half of Manhattan, not the borough as a whole, that is pulling away from the rest of New York City, thereby making Manhattan the most internally divided of the 5 boroughs. New York's suburbs are also pulling away from the central city. New York City has less than two-thirds the per capita income of its surrounding suburbs and the gap has been widening over the past 3 decades.

Place Stratification in Tokyo & New York

Tokyo

Tokyo has a special status in Japan's intergovernmental structure. Tokyo functions as a prefecture, of which Japan has 47, rather than as a typical city. Tokyo has a metropolitan government headed by an elected Governor and Assembly.[10] Tokyo metropolitan government ("to") includes 23 special wards ("ku"), 26 cities ("shi), 5 towns ("machi"), and 8 villages ("mura"). (See Map 4).

Map 4: Tokyo's 23 Special Wards and 26 Cities, about here)

The area encompassed by the 23 special wards constituted the city of Tokyo until 1943 and can be thought of as the central city. The special wards are now separate, self-governing municipalities, each with an elected Mayor and Assembly, but they differ from the ordinary Japanese city in that some government functions are handled by the Tokyo Metropolitan Government. (See

Map 5). The suburban cities, towns and villages also have local governments with elected Mayors and Councils.

(Map 5: Tokyo's 23 Special Wards, about Here)

Tokyo had 12.4 million inhabitants in 2003: 8.3 million lived in the central, 23 ward area, 4.1 million in the suburban cities, towns and villages (See NYC section, Table 1). Tokyo Metropolitan Government combines with the adjoining prefectures of Chiba, Kanagawa and Saitama to form the Greater Tokyo area. With over 35 million inhabitants, Greater Tokyo is usually considered to be the most populous metropolitan region in the world.

In this study Tokyo's "central city" refers to the 23 ward area, and Tokyo's "suburbs" to the remaining 26 cities encompassed by the Tokyo metropolitan government.[11] Place stratification refers to stratification among Tokyo's wards, cities, towns and villages and between Tokyo's central city and suburbs. Per capita income data for Tokyo's wards and suburban communities comes from tax records compiled by Japan's Ministry of Internal Affairs and Communications and contained in publications by the Japan Real Estate Institute, the Japan Marketing Education Center, and JPS. Additional data are derived from population censuses performed every five years by the central government's Bureau of Statistics and from periodic surveys conducted by the Tokyo Metropolitan Government and various agencies of the central government.

Place stratification in the central city.

Spatial inequality increased in Tokyo between 1971 and 2000, as in New York City but Tokyo's increase was small by comparison to New York. Income inequality among New York City boroughs doubled (99.1%) between 1970 and

2000 whereas inequality among Tokyo's wards grew by 16 percent. (Tokyo's increase rises to 46 percent if 1970 is compared to 2004 instead of 2000). (See Tables 7 & 8)

(Table 7: Per Capita Income & Income Inequality, Tokyo's Central City wards and Suburban cities, 1971-2004, about here)

(Table 8: Per Capita Income Inequality, Tokyo & New York, 1970-2000 about Here)

Tokyo's pattern of change also differs from New York's. New York's trend is linear: income stratification among boroughs increases decade by decade in a straight line. Tokyo's trend is cyclical: inequality among wards falls in the 1970s, rises in the1980s, falls in the 1990s, and rises again between 2000 and 2005 in a wave like pattern (See Chart 1).

(Chart 1: Per Capita Income, Tokyo & New York, 1970-2000, about here)

Income inequality among places in New York City is two to three times greater than in Tokyo. The gap between high and low income communities is much narrower in Tokyo than in New York and so is the distance between middle and low income areas.

The CoV among New York City boroughs was .442 in 2000 and .736 among community districts. The CoV among Tokyo's central city wards was .263. Ranked by income, the wealthiest 10 percent of New York's community districts had 7.27 times the per capita income of the poorest tenth in 2000, an increase from 6.86 in 1990. The top tenth of Tokyo's wards had 2.07 times the per capita income of the bottom tenth, a decline from 2.58 in 1990 (the ratio increased to 2.55 in 2004). New York's poorest ten percent of community districts averaged 55 percent of the median district income in 2000. Tokyo's lowest income wards averaged 78% of the median ward income.

The spatial configuration of inequality in New York and Tokyo is similar at the central city level in that a small number of wealthy central districts in both cities establish the income stratification pattern for the central city as a whole. *In New York a half dozen districts in southern Manhattan are pulling further and further away from the rest of the city. In Tokyo, the fluctuating fortunes of four central wards (Chiyoda, Chuo, Minato, Shibuya) largely determine the rise and fall of spatial inequality in the city.* When Tokyo's four central wards pull away from the others, place inequality increases. When the four central wards are "pulled back" to the fold, place inequality declines. Dropping the 4 central wards from the analysis nearly eliminates the increase in inequality among wards between 1971 and 2000: the rise in CoV drops from 16 percent to 3 percent. (The CoV increase between 1971 and 2004 diminishes from 46 percent to 17 percent). (Chart 2).

(Chart 2: Tokyo's per capita income inequality with and without the four central wards (Chiyoda, Chuo, Minato and Shibuya), 1971-2004, about here)

Place stratification in the metropolitan area

However, the pattern of spatial inequality at the metropolitan level is quite different in the two cities. Tokyo's high income districts are all in-or-proximate to the central functions core of the city. Income differences among wards and suburban communities outside of the central core are quite modest and remarkably stable over the three decade period (See Table 7). New York's high income districts are in-or-proximate to the central functions core *and* in surrounding suburban counties. The poorest districts are in outlying areas of the central city.

New York's suburbs are wealthier than the central city and the gap is growing. Tokyo's central city is wealthier than the suburbs and there are no signs of the central city's dominant position in the metropolitan area weakening, just the reverse. New York's central city to suburban income ratio fell from 73 percent in 1980 to 65 percent in 2000. Tokyo's central city to suburban income ratio increased during the same two decades from 114% to 122% in 2000 (See Table 9).

(Table 9: Central City Per Capita Income as a Percent of Suburban Per Capita Income, New York PMSA* and Tokyo-to, 1980-2000, about here)**

The size of the income gap between central city and suburbs is less in Tokyo (22 percent) than is the gap between New York's suburbs and central city City (35%). Tokyo's suburbs are also much less stratified amongst themselves than are suburbs in New York's Westchester County. Tokyo's suburban CoV was .108 in 2000 compared to .395 in Westchester County. Tokyo's wealthiest suburb had 1.56 times the per capita income of the poorest. The top to bottom suburban income ratio in Westchester County was 4.3.

Summary. There are two broad similarities in spatial inequality in New York and Tokyo. First, spatial inequality increases in both cities between 1970 and 2000. Second, the fortunes of a few central districts (South Manhattan in New York, and Tokyo's four central wards) basically establish the income stratification pattern for the entire *central city*. There the similarities end and the differences begin.

Differences in Degree. Income inequality among places in New York City is two to three times greater than in Tokyo.

Differences in Trends. Income inequality among New York City boroughs doubled between 1970 and 2000 while growing 16 percent among wards in Tokyo. New York's inequality trend is linear; Tokyo's is cyclical.

Differences in Patterns. New York's high income districts are located in or adjacent to the central functions core in southern Manhattan *and* in outlying suburban areas, like Westchester County. Low income districts are located inside the central city but outside the wealthy urban core. Tokyo's high income districts are all located in and adjacent to the central functions urban core. There is relatively little income stratification among central city wards and suburban communities outside the urban core.

New York's suburbs are wealthier than the central city and the gap is growing. Tokyo's central city is wealthier than the suburbs and the gap expands and contracts from decade to decade. The size of the income gap between central city and suburbs is greater in New York than in Tokyo.

Tokyo-New York Comparison

Social Class

Professional & managerial. A higher percentage of New York City residents work in professional and managerial occupations than in Tokyo and New York professionals and managers are more segregated from other occupational groups in New York than in Tokyo.

Thirty-seven percent of resident New Yorkers occupy professional and managerial positions as compared to twenty percent of Tokyoites (See Table 10).

The CoV in percent professional and managerial among New York's community districts is .438 compared to .217 among Tokyo's wards and cities (See Table 11). The distribution of professional and managers among New York community districts ranges from nearly 70 percent in some Manhattan districts to 16 percent in sections of Bronx and Brooklyn (See Chart 3). Tokyo's distribution is more compressed, ranging from over 28 percent in the central Shibuya ward to under 13 percent in the eastern ward of Adachi.

(Tables 10: Percentages in selected socio-economic variables, Tokyo and New York City, 2000, about here)

(Table 11: Coefficient of Variation in selected socio-economic variables, New York City community districts, Tokyo 23 wards and Tokyo wards & suburban cities, 2000, about here)

(Chart 3: Percent professional and managerial among places, Tokyo and New York City, 2000, about here)

Production workers. By contrast, the percentage of Tokyo residents working in production jobs (20.9%) is twice as high as in New York City (10.9%). The distribution of production workers in Tokyo ranges from a low of 9.3 percent in central Chiyoda ward to above 30 percent in some eastern wards and suburban communities (See Chart 4). The comparable range in New York City is from less than 2 percent in the Upper East Side of Manhattan to 23% in Brooklyn's Bushwick district. As with professionals and managers, production workers are less segregated in Tokyo (CoV=.319) than in New York City (CoV=.421).

(Chart 4: Percent production workers among places, Tokyo and New York City, 2000, about here)

So, one reason why income is more unequally distributed among places in New York City than in Tokyo is the much greater degree of social class

segregation in New York. Percent professional and managerial is the single best predictor of per capita income among New York City's community districts, with a correlation of .920 (See Table 12 &Chart 5). The inverse correlation between percent production workers and per capita income is almost as large (r= -.801). Tokyo's correlations are in the same direction (r=.674,r= -.629) but are not as strong as in New York City.

(Table 12: Pearson product moment correlations between per capita income and selected variables, Tokyo and New York City, 2000, about here)

(Chart 5: Percent professional & managerial and per capita income among places, New York community districts, 2000, about here)

Economic Base

Finance, insurance & real estate (FIRE). Finance capital plays a larger role in New York City than in Tokyo and finance is a volatile industry with stark internal divisions in payout and reward. FIRE constitutes 11.4 percent of New York City's resident labor force as compared to 7.5 percent in Tokyo (See Chart 6). People who work in the FIRE sector are most likely to live in the high income, central core of both cities. However, only about a tenth of the residents in Tokyo's four central wards work in FIRE compared to a fifth in some Manhattan districts. Tokyo residents working in FIRE are also more dispersed throughout wards (CoV=.296) than in New York City counterparts (CoV=.331). The correlation between percent FIRE and per capita income is strong in both cities but higher in New York (r=.888) than in Tokyo (r=.674) (See Chart 7).

(Chart 6: Percent FIRE among places, Tokyo and New York City, 2000, about here)

(Chart 7: Percent FIRE and per capita income, New York community districts, 2000, about here)

So, a second reason why Tokyo has less income inequality among places than New York City is that finance is less central to the workings of Tokyo's economy and Tokyoites working in the FIRE sector are less residentially concentrated in the city's central wards than one finds in New York's Manhattan core.

Manufacturing. By contrast, Tokyo possesses a more sizable and dynamic manufacturing sector than New York City (See Chart 8). 11.4 percent of Tokyo residents work in manufacturing compared to 6.6 percent in New York City. Tokyo residents working in manufacturing reaches a high of 24 percent in eastern Sumida ward and surpasses 30 percent in some suburban cities compared to a high of 14 percent in the Flat Bush district of Brooklyn. Manufacturing is more evenly distributed among Tokyo's wards and cities (CoV=.315) than among New York City's districts (CoV=.412).

The greater concentration of manufacturing in Tokyo and the greater residential diffusion of manufacturing workers among Tokyo wards and cities is a third reason why Tokyo has a more even distribution of income among places than New York City. Tokyo has experienced less de-industrialization than New York and manufacturing tends to provide middle income jobs.

(Chart 8: Percent manufacturing among places, Tokyo and New York City, 2000, about here)

In summary, Tokyo has a more diversified economic base and a more balanced occupational structure than New York City. The spatial diversity of Tokyo's economy, in this case, the more balanced spatial mix between FIRE and manufacturing, reduces inequality in Tokyo as does the more balanced spatial

mix among professional, managerial and production workers. Spatial integration by industry and occupational groups condenses Tokyo's place stratification, while spatial segregation by industry and occupational groups expands New York City's place stratification.

(Chart 9: Per capita income among places, Tokyo and New York City, 2000, about here)

Immigration.

Foreign born. New York is a city of immigrants. Thirty-six of New York residents are foreign born. This compares to less than 4 percent of Tokyo's residents.[12] Many districts in New York City have half or more of the population foreign born. The highest is Elmhurst in Queens with 68 percent foreign born in 2000. In Tokyo, the central Minato ward, an embassy district, has the highest percentage of registered foreigners, with 10.8 percent (See Chart 9). The foreign born are more concentrated in selected wards in Tokyo (CoV=.751) than in New York City (CoV=.371) and a much smaller percentage of Tokyo's registered foreigners are immigrants. Districts with higher percent of foreign born tend to have lower per capita incomes in New York City, although the correlation is not very high (r= -.303). Just the reverse is the case in Tokyo (r=.543) where registered foreigners are more likely to live in high income than in low income wards.

Differences in the size and spatial distribution of the foreign born population in Tokyo and New York City do not seem to explain differences in income stratification among places in the two cities.

(Chart 10: Percent foreign born among places, Tokyo and New York City, 2000, about here).

Tokyo-New York Comparisons: Trends

Tokyo's cyclical trend in place inequality is rooted in the city's real estate cycle. The correlation between land price per square meter and per capita income among places in Tokyo is very high (r=.866) (See Chart 11). Stock and property values ballooned in the 1980s, burst and collapsed in the early 1990s, and turned upward again in the past few years. The rise and fall in land values and per capita income is disproportionately concentrated in Tokyo's central four wards as are the dwelling places of the owners, brokers, builders, bankers and ancillary services providers most involved in playing the real estate game.

(Chart 11: Land price per square meter & per capita income among Tokyo wards and cities, 2000, about here)

New York also experienced a speculative stock and property market boom in the 1980s. But the collapse of New York's bubble in the late 1980s did not diminish income stratification among places, as it did in Tokyo. Instead place inequality continued to rise. New York has undergone a transformation in economic base, class structure and labor market in the past three decades that has no real parallel in Tokyo. Financial institutions and related business services have come to dominate New York's economy. The city's FIRE based economy is increasingly polarized between high and low paying service occupations. De-industrialization has further diminished New York's middle income jobs as have cutbacks in government employment. Federal tax cuts on capital gains and dividends have channeled even more income into the hands of New York's financial elite and into the high rent districts in which they live.

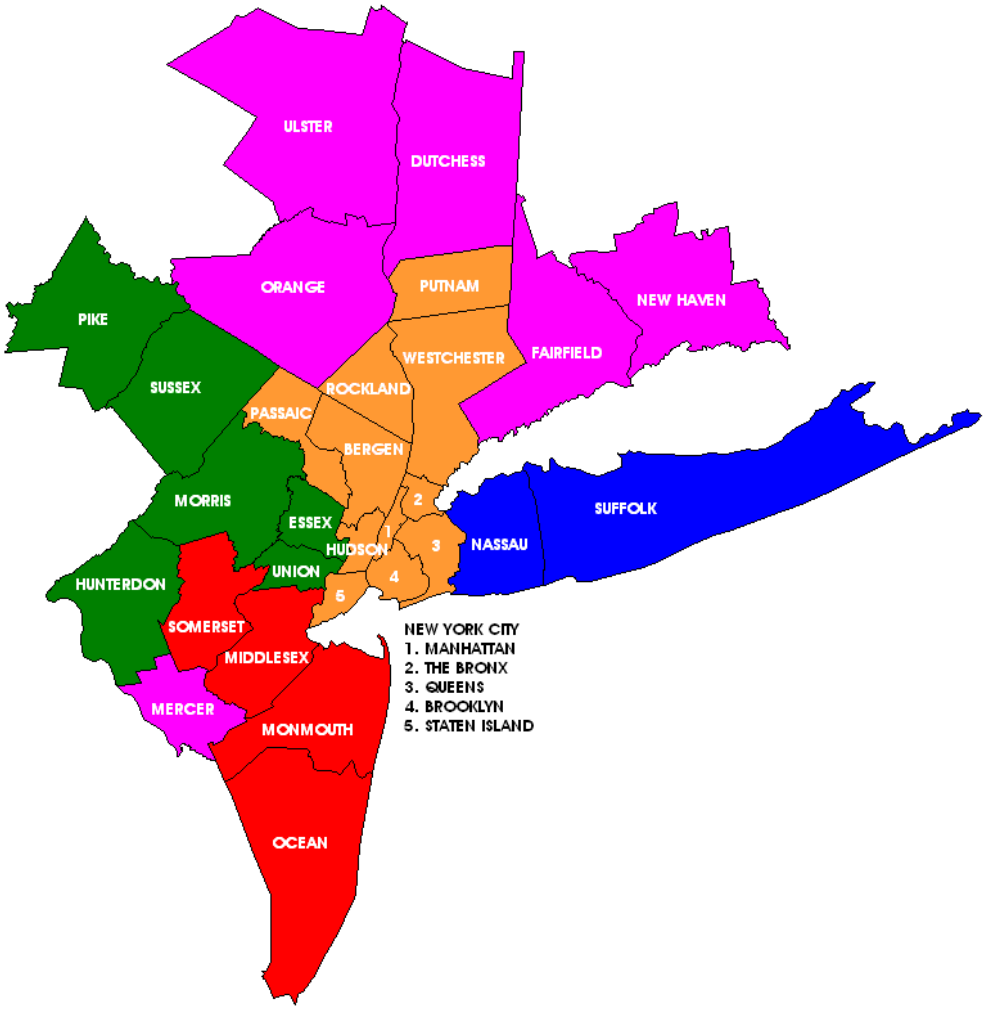
Tokyo's rentier class has also grown and so has inequality between the central wards and the rest of Tokyo. But place stratification in Tokyo is several levels of magnitude less than in New York City and fluctuates up and down with the real estate cycle. By comparison to New York, Tokyo has a diversified economy, a broadly middle class social structure and a spatially integrated mix of occupational groups. In fact, Tokyo looks more like New York City did in the 1970s before the neo-liberal makeover that made the "big Apple" a prototype for the Washington Consensus, U.S. foreign economic policy, and the new global city.

Maps, Tables and Charts

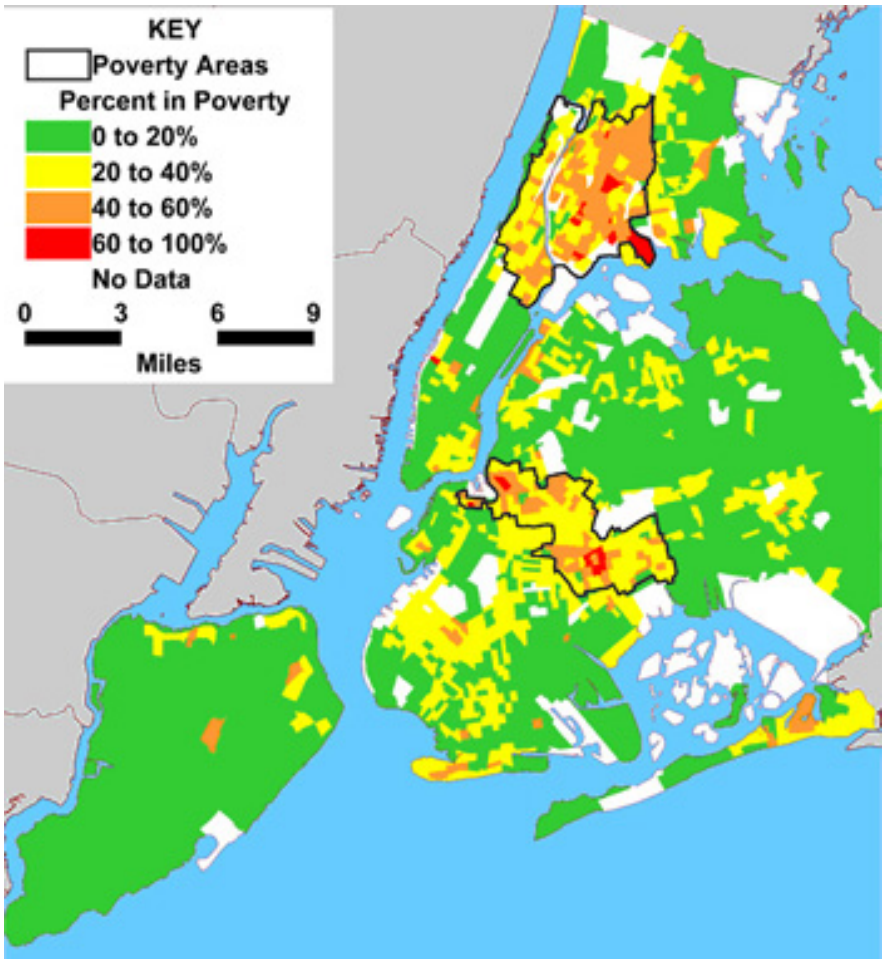
Map 1: New York City, 5 Boroughs and 59 Community Districts

Source: New York City Department of Planning
http://www.nyc.gov/html/dcp/html/neighbor/neigh.shtml

Map 2: The New York City PSMA and the NY-NJ-PA MSA

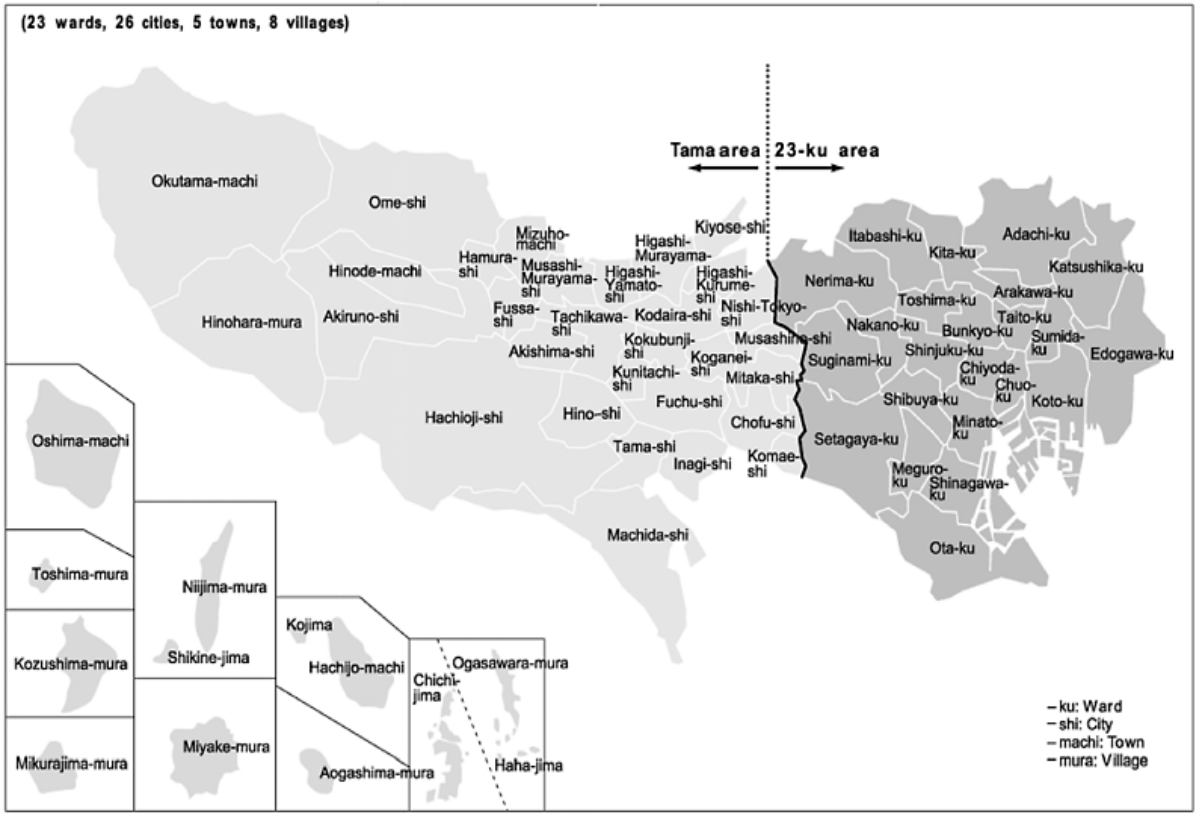


Map 3: New York City Poverty areas



Source: Beveridge, Andrew (2003) "The Poor in New York City, 15 April. http://www.gothamgazette.com/print/348

Map 4: Tokyo's 23 Special Wards, 26 Cities, 5 Towns and 8 Villages



Map 5: Tokyo's Central City, 23 Wards

Table 1: Population, New York City & Tokyo, 1980-2003 (in 1,000)

	1980	1990	2000	2003
New York City	7,072	7,323	8,008	8,085
Boroughs				
Manhattan	1,428	1,486	1,537	1,565
Bronx	1,169	1,204	1,333	1,363
Queens	1,891	1,952	2,229	2,225
Brooklyn	2,231	2,301	2,465	2,473
Staten Island	352	379	444	460
Tokyo	11,618	11,856	12,064	12,369
23 wards	8,352	8,164	8,135	8,340
Suburbs	3,266	3,692	3,929	4,029

Sources:

New York City, Department of City Planning,
Community District Profiles.
http://www.nyc.gov/html/dcp/html/lucds/cdstart.shtml

Tokyo Metropolitan Government, *Tokyo's Population*.

Table 2: Per capita Income & Income Inequality. New York City Boroughs, 1970-2000

	1970	1980	1990	2000
New York City		$7,131	$16,281	$22,402
Boroughs				
Bronx	$2,908	$5,343	$10,535	$13,959
Brooklyn	$3,043	$5,754	$12,388	$16,775
Manhattan	$5,212	$10,776	$27,862	$42,922
Queens	$3,996	$7,549	$15,348	$19,222
Staten Island	$3,500	$7,576	$17,507	$23,905
Mean	$3,732	$7,400	$16,728	$23,357
Standard Deviation	$832	$1,928	$6,061	$10,313
SD/Mean (Coefficient of Variation)	0.222	0.261	0.362	0.442
Highest as percent of Mean	1.39	1.46	1.67	1.84
Highest as percent of lowest	1.79	2.01	2.64	3.07

Source: 1969-1989 per capita personal income is from US Census Bureau 1998 USA Counties (Income, Money Census), http://censtats.census.gov/cgi-bin/usac/usasel.pl
1999 per capita personal income is from US Census Bureau New York QuickFacts.
http://quickfacts.census.gov/qfd/states/36/36047.html

Table 3: Income ratios among New York City Boroughs, 1970-2000

Per Capita Income	1970	1980	1990	2000
Manhattan's ratio to:				
Bronx	1.79	2.02	2.65	3.07
Queens	1.30	1.43	1.82	2.23
Brooklyn	1.71	1.87	2.25	2.56
Staten Island	1.49	1.42	1.59	1.80
Queens ratio to Bronx	1.37	1.41	1.46	1.38
Brooklyn ratio to Bronx	1.05	1.08	1.18	1.20
Staten Island ratio to Bronx	1.20	1.42	1.66	1.71

Source: calculated from per capita personal income data provided in *U.S. Census Bureau 1998 Counties* (for 1970-1990) and *U.S. Census Bureau New York QuickFacts* (for 2000). http://censtats.census.gov/cgi-bin/usac/usasei.pl http://quckfacts.census.gov/qfd/states/36/36047.html

Table 4: Per capita income inequality, New York City Community Districts, 1990-2000

	1990	2000
Mean	$20, 822	$22,780
Standard Deviation	13,417	16,760
Coefficient of Variation (SD ÷ M)	0.645	0.736
Highest 10th as % of lowest 10*	6.86	7.27
Number of Districts	59	59

Calculated from data provided in New York City, Department of City Planning, *Community District Profiles.* http://www.nyc.gov/html/dcp/html/ucds/cdstart.shtml

Table 5: Per Capita Income Inequality among Community Districts by Boroughs, New York City, 1990-2000

	1990	2000
Manhattan		
Mean	$35,760	$44,073
Standard Deviation	22,342	26,520
SD/M (CoV)	.625	.601
Number of districts	12	12
Bronx		
Mean	$13,041	$13,522
Standard Deviation	6,018	5,372
SD/M (CoV)	.461	.397
Number of districts	12	12
Queens		
Mean	$20,175	$19,476
Standard Deviation	4,119	4,222
SD/M (CoV)	.204	.217
Number of districts	14	14
Brooklyn		
Mean	$16,202	$17,111
Standard Deviation	5,510	6,781
SD/M (CoV)	.341	.396
Number of districts	18	18
Staten Island		
Mean	$22,936	$24,068
Standard Deviation	1,879	3,002
SD/M (CoV)	.082	.125
Number of districts	3	3
New York City		
Mean	$20,822	$22,780
Standard Deviation	13,417	16,760
SD/M	.645	.727
Number of districts	59	59

Calculated from data provided in New York City, Department of City Planning, *Community District Profiles.* http://www.nyc.gov/html/dcp/html/ucds/cdstart.shtml

Table 6: Per capita income inequality, New York City Community Districts and Westchester County suburbs, 2000.

	New York City Districts	Westchester County Suburbs
Mean	$22,780	$45,895
Standard Deviation	16,760	18,119
Coefficient of Variation	0.736	.395
Highest as % of lowest	9.3	4.3
Number	59	43

Calculated from data provided in New York City, Department of City Planning, *Community District Profiles.* http://www.nyc.gov/html/dcp/html/ucds/cdstart.shtml and by the Westchester County Department of Planning, *County Data Book 2000.* http://www.westchestergov.com.

Table 7: Per Capita Income & Income Inequality, Tokyo's Central City Wards and Suburban Cities, 1971-2004 (10,000 yen)

	Per Capita Income and Income Inequality				
	1971	1980	1990	2000	2005
Central City					
Mean	40	114	228	228	240
Standard deviation	9	25	79	60	92
S.D./M	0.226	0.220	0.349	0.264	0.383
Suburbs					
Mean	34	100	178	186	1758
Standard deviation	4	11	22	20	24
S.D./M	0.118	0.110	0.124	0.108	0.133
Tokyo (central city and suburban cities)					
Mean	37	107	202	205	207
Standard Deviation	8	20	62	48	72
S.D./M	0.206	0.187	0.308	0.234	0.348

*Per capita income is total taxable individual income divided by population. Taxable individual income includes the sum of salaries, bonuses, income from individual businesses, pensions, interest on savings, dividends, rents, and real estate sales, after some work related expenses are deducted.

Registered foreigners are not included.

Sources: Japan Real Estate Institute (Nihon Fudosan Kenkyujyo) Statistics *on Real Estate (Fudosan Tokei)* for 1980-1990; Japan Marketing Education Center, *Individual Income Indicators (Kojin Shotoku Shihyuo)* for 1971 and 2000; JPS, *Individual Income Indicators*, for 2004.

Table 8: Per capita income inequality, Tokyo & New York, 1970-2000

	Coefficient of Variation					% Change	
	1970*	1980	1990	2000	2005	'71-'00	'71-'04
Tokyo (23 wards)	.226	.221	.349	.264	.383	16.4%	69.4%
Tokyo (23 wards & 26 suburbs)	.206	.187	.308	.234	.348	12.0%	68.8%
New York (5 Boroughs)	.222	.261	.362	.442		99.1%	
New York (59 Community Districts)			.645	.736			

*1971 for Tokyo

Sources: Tokyo data: Japan Real Estate Institute (Nihon Fudosan Kenkyujyo) *Statistics on Real Estate (Fudosan Tokei)* for 1980-1990; Japan Marketing Education Center, *Individual Income Indicators (Kojin Shotoku Shihyuo)* for 1971 and 2000; JPS, *Individual Income Indicators*, for 2004.

New York Data: New York City, Department of City Planning, Population Division, *NYC 2000 Results from the 2000 Census* (for the boroughs). http://www.nyc.gov/html/dcp/pdf/census/sociopp.pdf
New York City, Department of City Planning, *Community District Profiles* (for community districts). http://www.nyc.gov/html/dcp/html/ucds/cdstart.shtml

Table 9: Central City per capita income as a Percent of Suburban per capita income New York PMSA* and Tokyo-to, 1980, 1990, 2000**

	Central City and Suburban Per Capita Income Ratio	
	New York PMSA	Tokyo-to
Year		
1980	72.5%	114%
1990	67.6%	128%
2000	65.2%	122%

Sources: New York data: Swanstrom, Todd, Casey Colleen, Flack, Robert And Dreier, Peter (2004) *Pulling Apart: Economic Segregation Among Suburbs and Central Cities in Major Metropolitan Areas.* Washington, D.C.: The Brookings Institution Living Census Series, Appendix A.
Tokyo data: Japan Real Estate Institute (Nihon Fudosan Kenkyujyo) *Statistics on Real Estate (Fudosan Tokei)* for 1980-1990; Japan Marketing Education Center, *Individual Income Indicators (Kojin Shotoku Shihyuo)* for 2000.

*The New York PMSA includes the five boroughs of New York City (the "central city") and the cities and communities in Westchester, Rockland and Putnam Counties (the "suburbs").

Table 10: Percentages in selected socio-economic variables, Tokyo and New York City, 2000

Percent of Resident Labor Force	New York City	Tokyo 23 Wards	Tokyo wards & suburban cities
% Professional & Managerial	36.8%	19.8%	20.3%
% Production Workers*	10.9%	20.1%	20.9%
% FIRE (finance, Insurance & Real Estate	11.4%	7.8%	7.5%
% Manufacturing	6.6%	10.6%	11.4%
% Foreign Born	35.9%	3.6%	2.9%

*In the U.S. census this category encompasses “production, transportation and materials handling.”

Table 11: Coefficient of Variation in selected socio-economic variables, New York City community districts, Tokyo 23 wards and Tokyo wards & suburban cities, 2000

	New York community districts	Tokyo 23 Wards	Tokyo wards & suburban cities
Percent Resident Labor Force			
Per Capita Income	.736	.264	.234
% Professional & Managerial	.438	.269	.217
% Production Workers*	.421	.342	.319
% FIRE (finance, Insurance & Real Estate	.331	.269	.296
% Manufacturing	.412	.314	.315
% Foreign Born	.371	.556	.751

*In the U.S. census this category encompasses “production, transportation and materials handling.”

Table 12: Pearson product moment correlations between per capita income and selected variables, Tokyo and New York City, 2000

	New York Community Districts	Tokyo 23 Wards	Tokyo wards & suburban cities
Correlation between Per capita income and			
% Professional & Managerial	.920	.742	.674
% Production Workers*	-.801	-.695	-.629
% FIRE (finance, Insurance & Real Estate	.888	.819	.674
% Manufacturing	-.448	-.601	-.457
% Foreign Born	-.303	.457	.543

*In the U.S. census this category encompasses “production, transportation and materials handling.”

Chart 1:

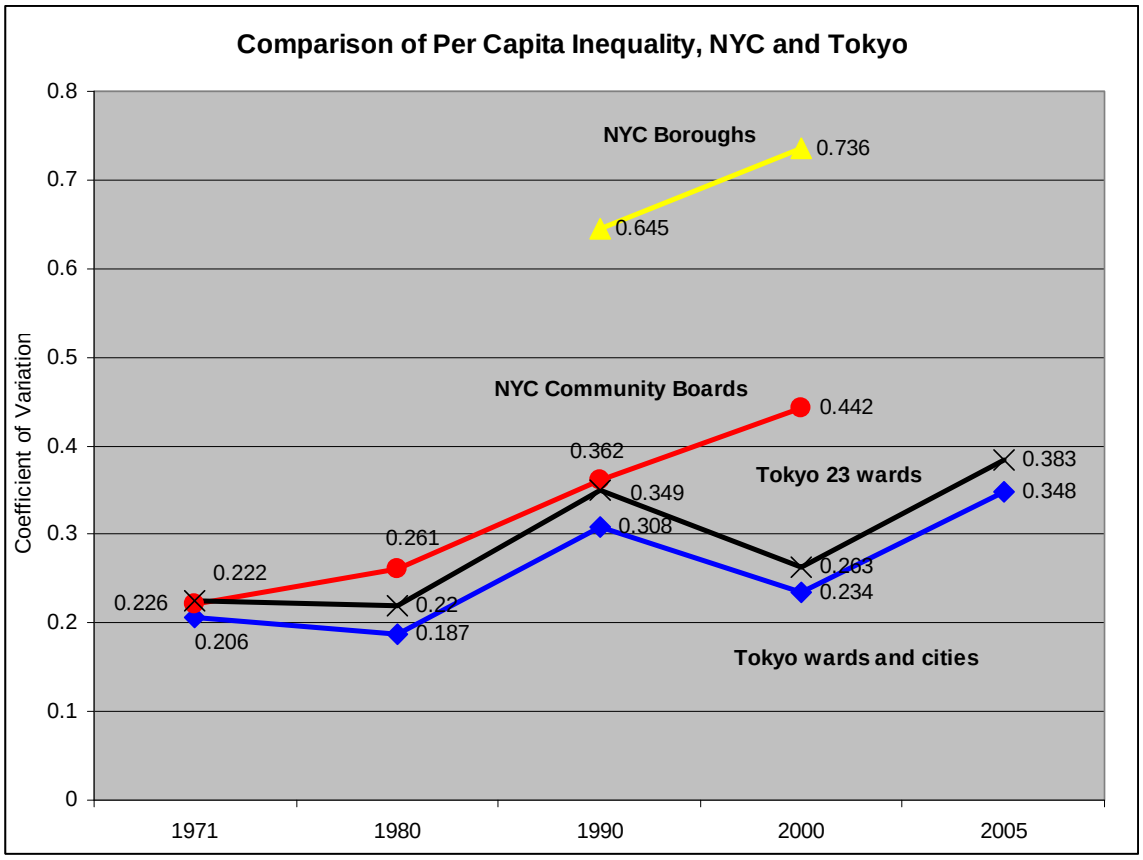

Comparison of Per Capita Inequality, NYC and Tokyo
Coefficient of Variation
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1971
1980
1990
2000
2005
NYC Boroughs
0.736
0.645
NYC Community Boards
0.442
0.362
0.261
0.222
0.226
0.206
Tokyo 23 wards
0.383
0.349
0.308
0.263
0.22
Tokyo wards and cities
0.348
0.234
0.187

Chart 2:

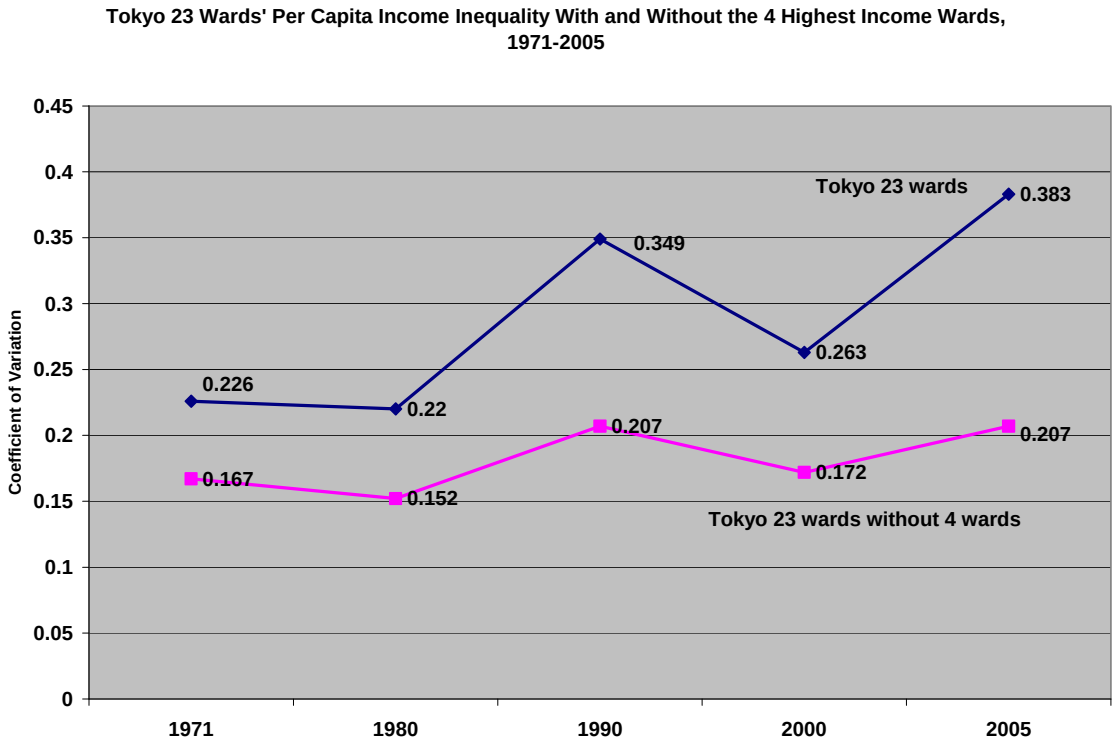

Tokyo 23 Wards' Per Capita Income Inequality With and Without the 4 Highest Income Wards, 1971-2005
Coefficient of Variation
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
1971
1980
1990
2000
2005
Tokyo 23 wards
0.226
0.22
0.349
0.263
0.383
Tokyo 23 wards without 4 wards
0.167
0.152
0.207
0.172
0.207

Chart 3:

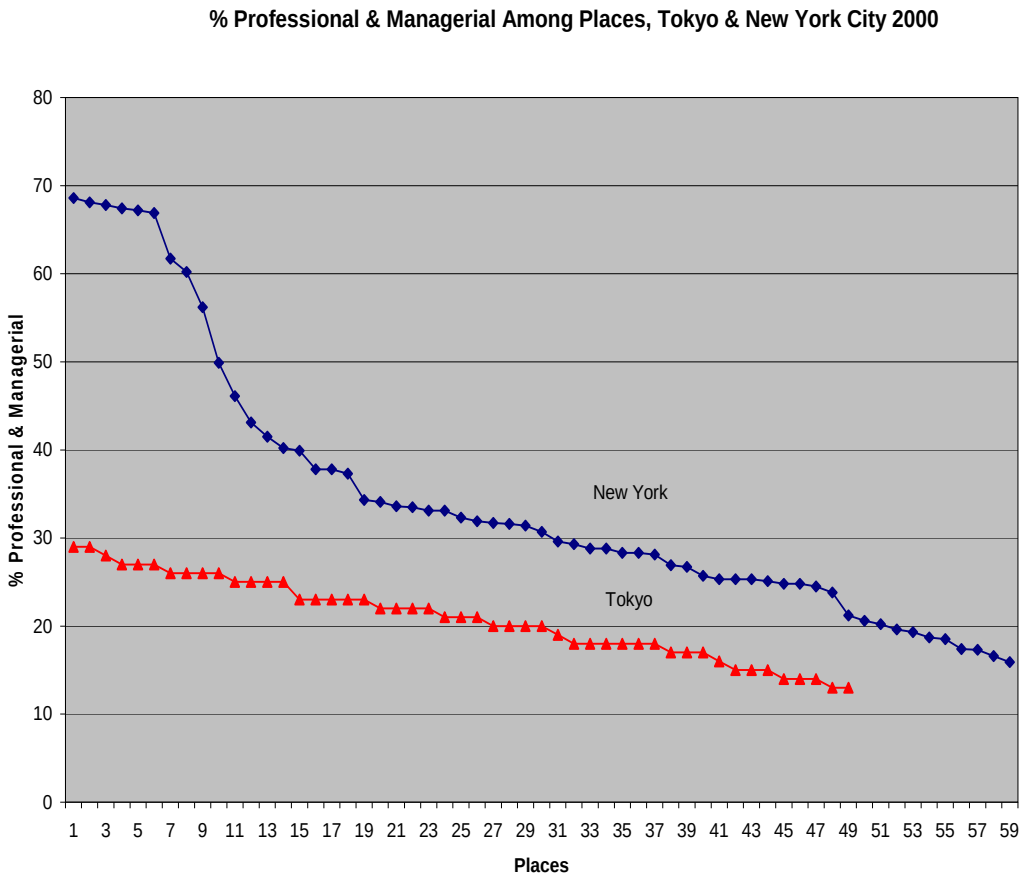

% Professional & Managerial Among Places, Tokyo & New York City 2000
% Professional & Managerial
Places
New York
Tokyo
0
10
20
30
40
50
60
70
80
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59

Chart 4:

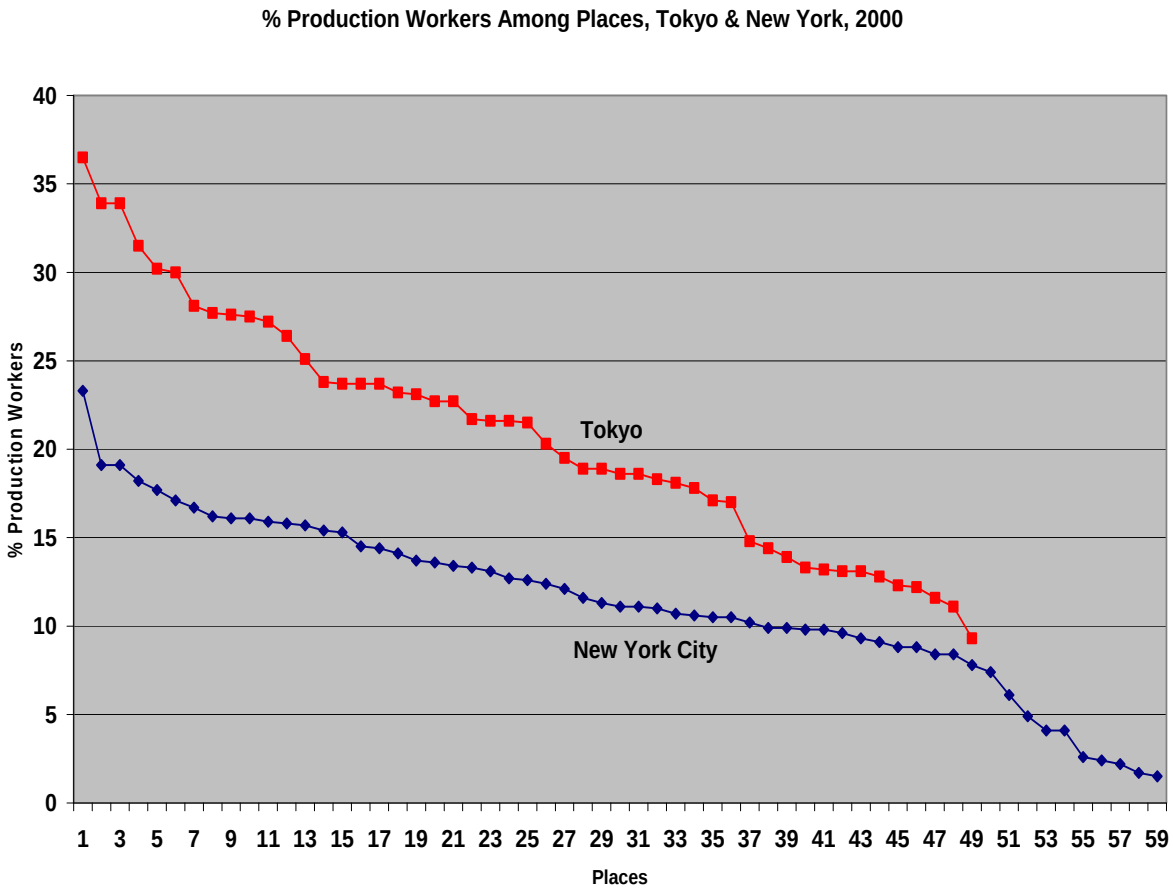

% Production Workers Among Places, Tokyo & New York, 2000
% Production Workers
Places
Tokyo
New York City
0
5
10
15
20
25
30
35
40
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59

Chart 5:

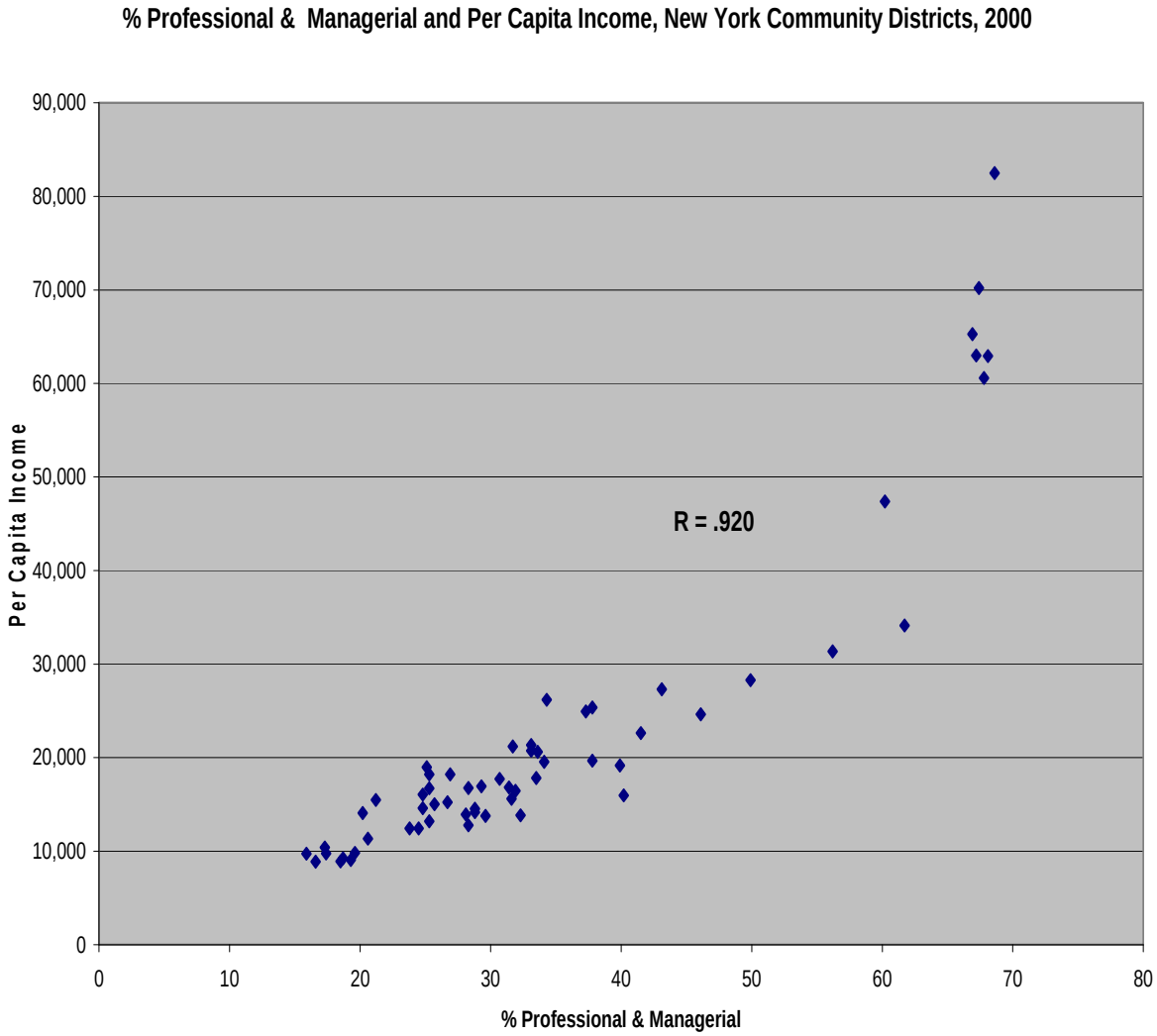

% Professional & Managerial and Per Capita Income, New York Community Districts, 2000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Per Capita Income
R = .920
0
10
20
30
40
50
60
70
80
% Professional & Managerial

Chart 6:

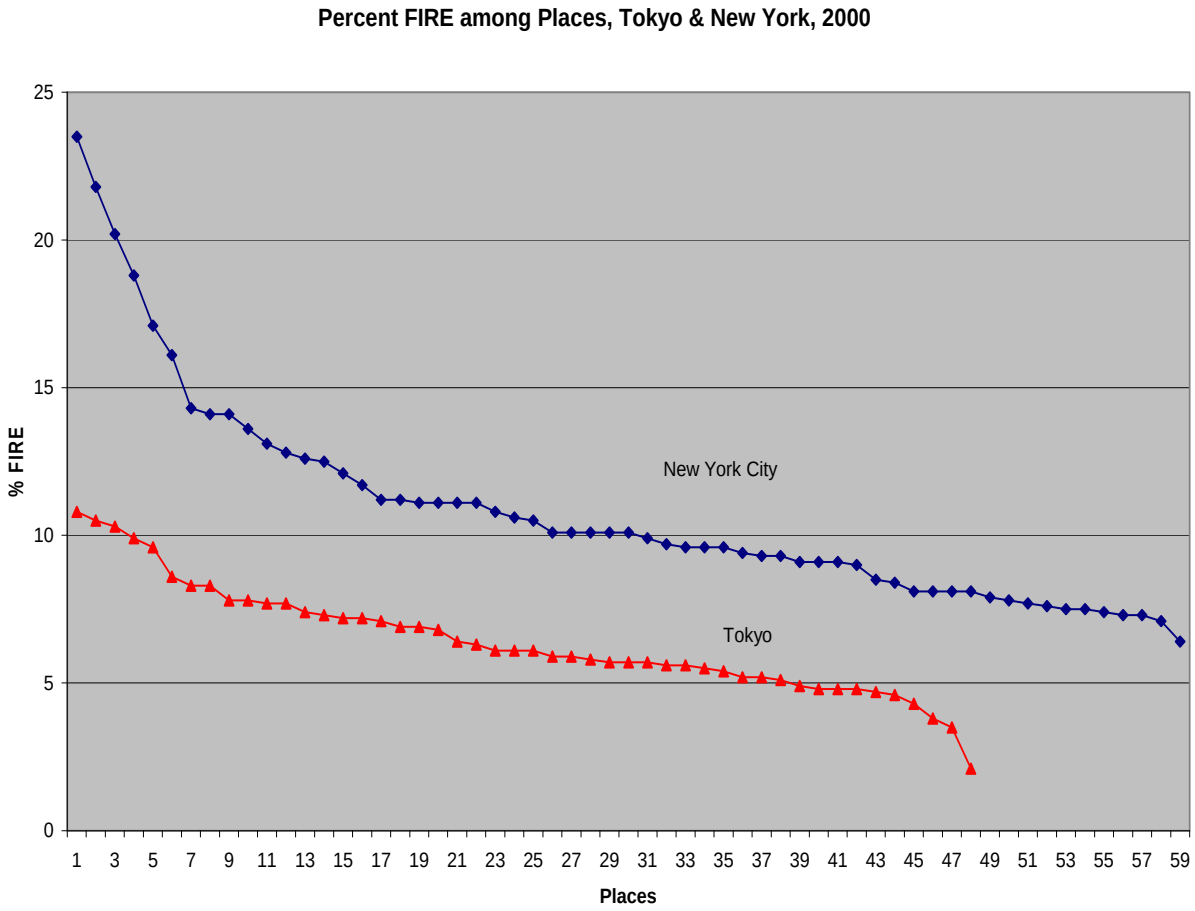

Percent FIRE among Places, Tokyo & New York, 2000
% FIRE
25
20
15
10
5
0
New York City
Tokyo
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59
Places

Chart 7:

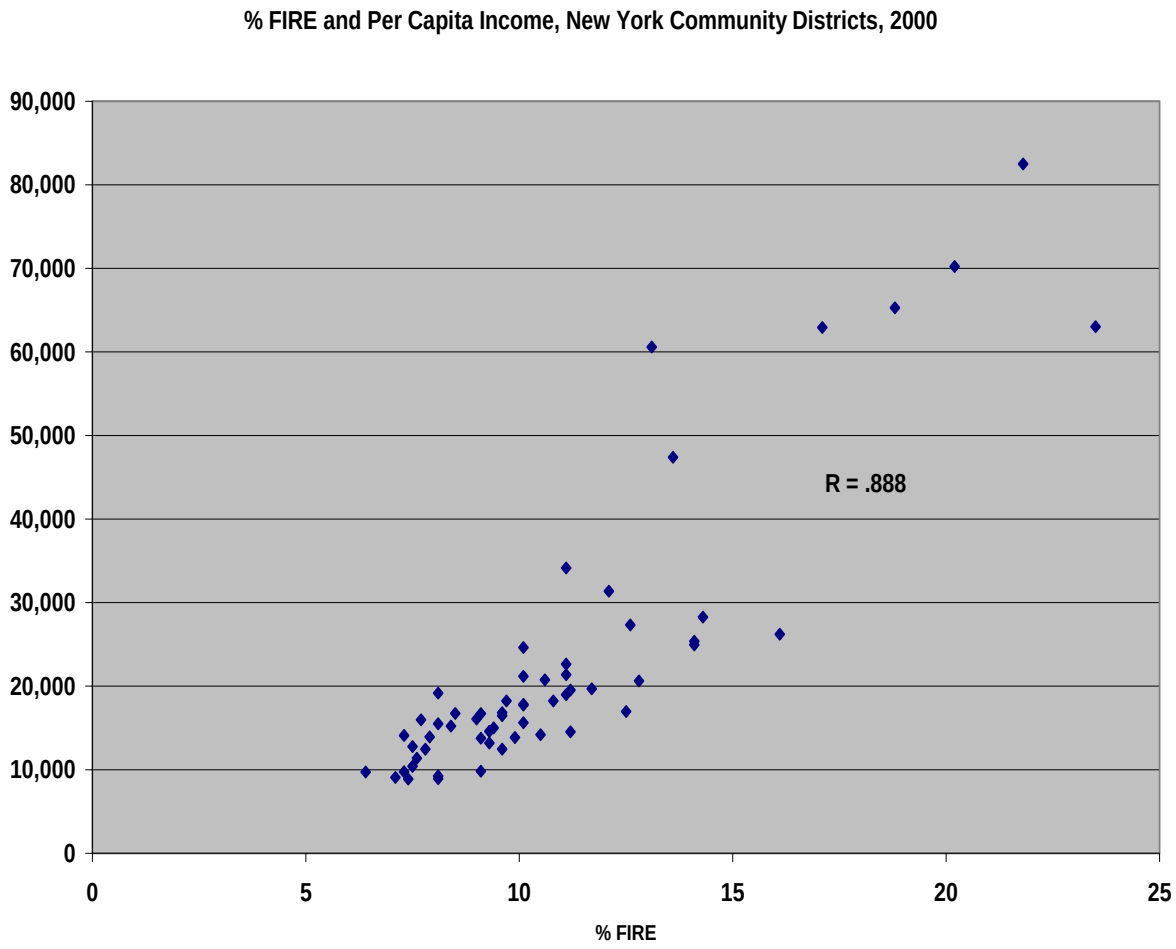


Chart 8:

Percent Manufacturing among Places, Tokyo & New York 2000

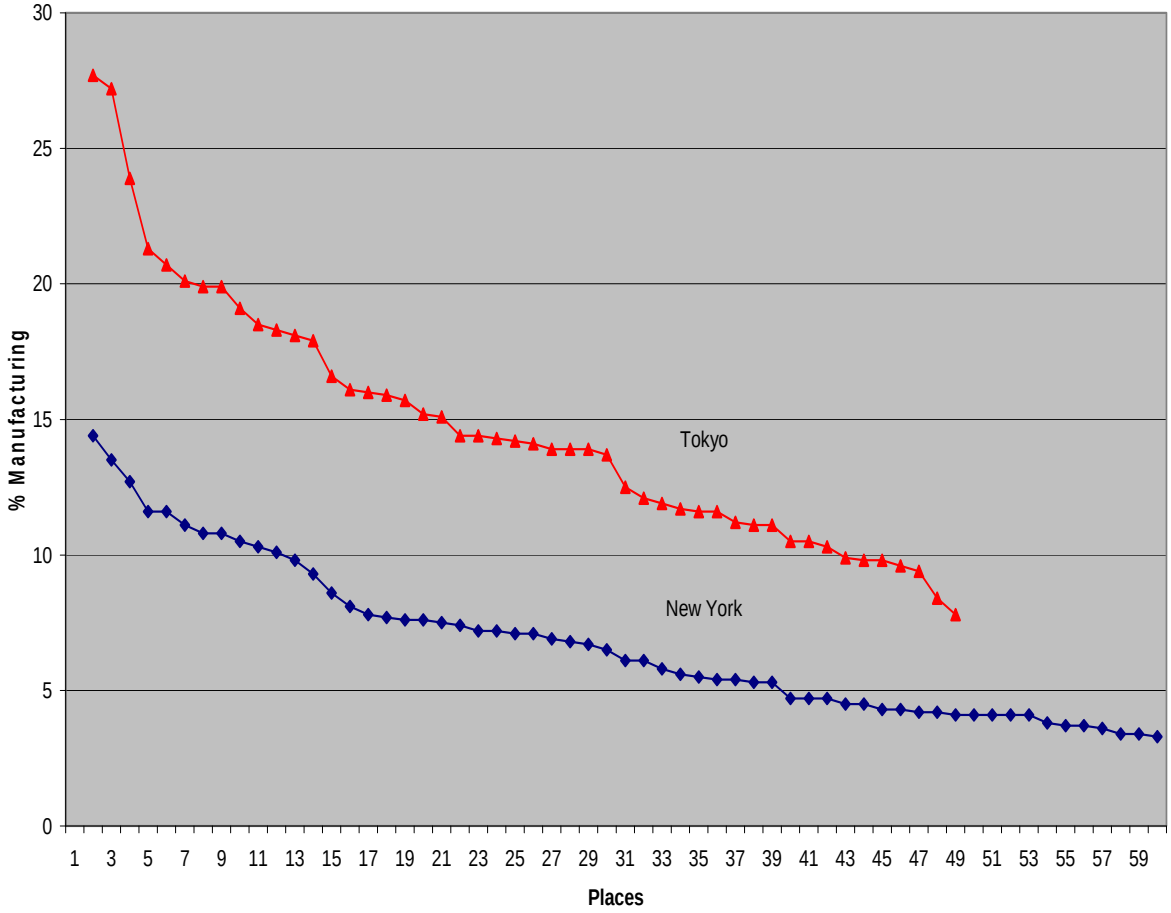


Chart 9:

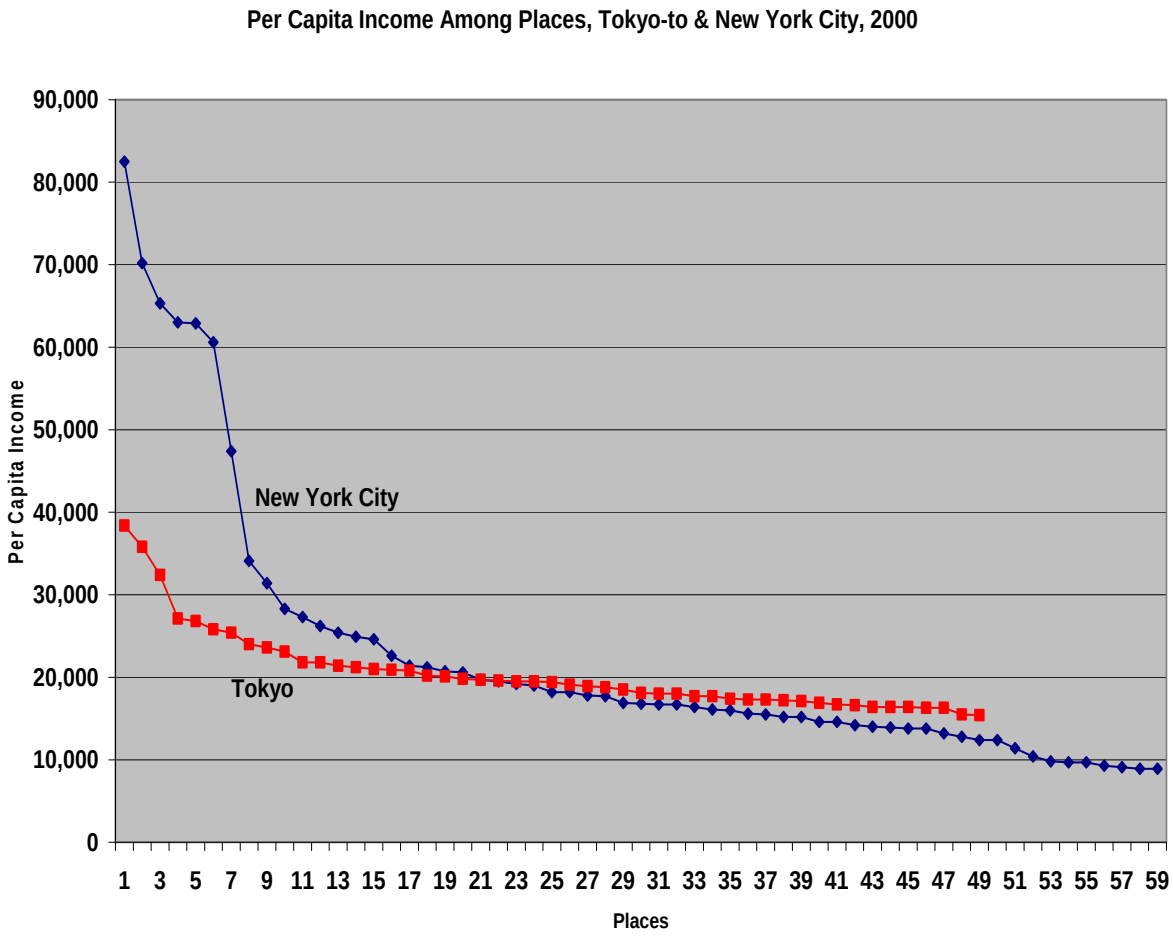

Per Capita Income Among Places, Tokyo-to & New York City, 2000
Per Capita Income
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
New York City
Tokyo
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59
Places

Chart 10:

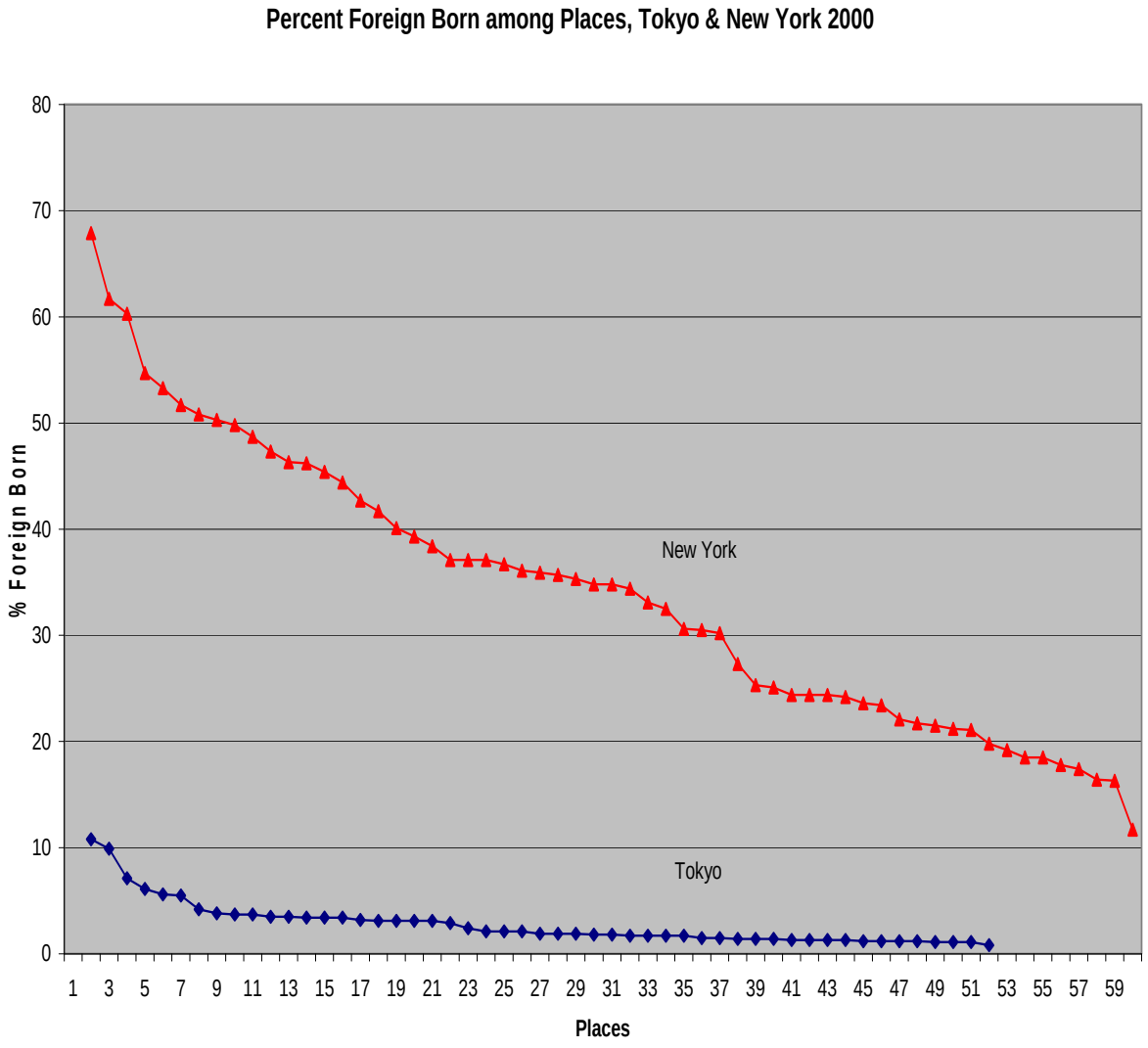
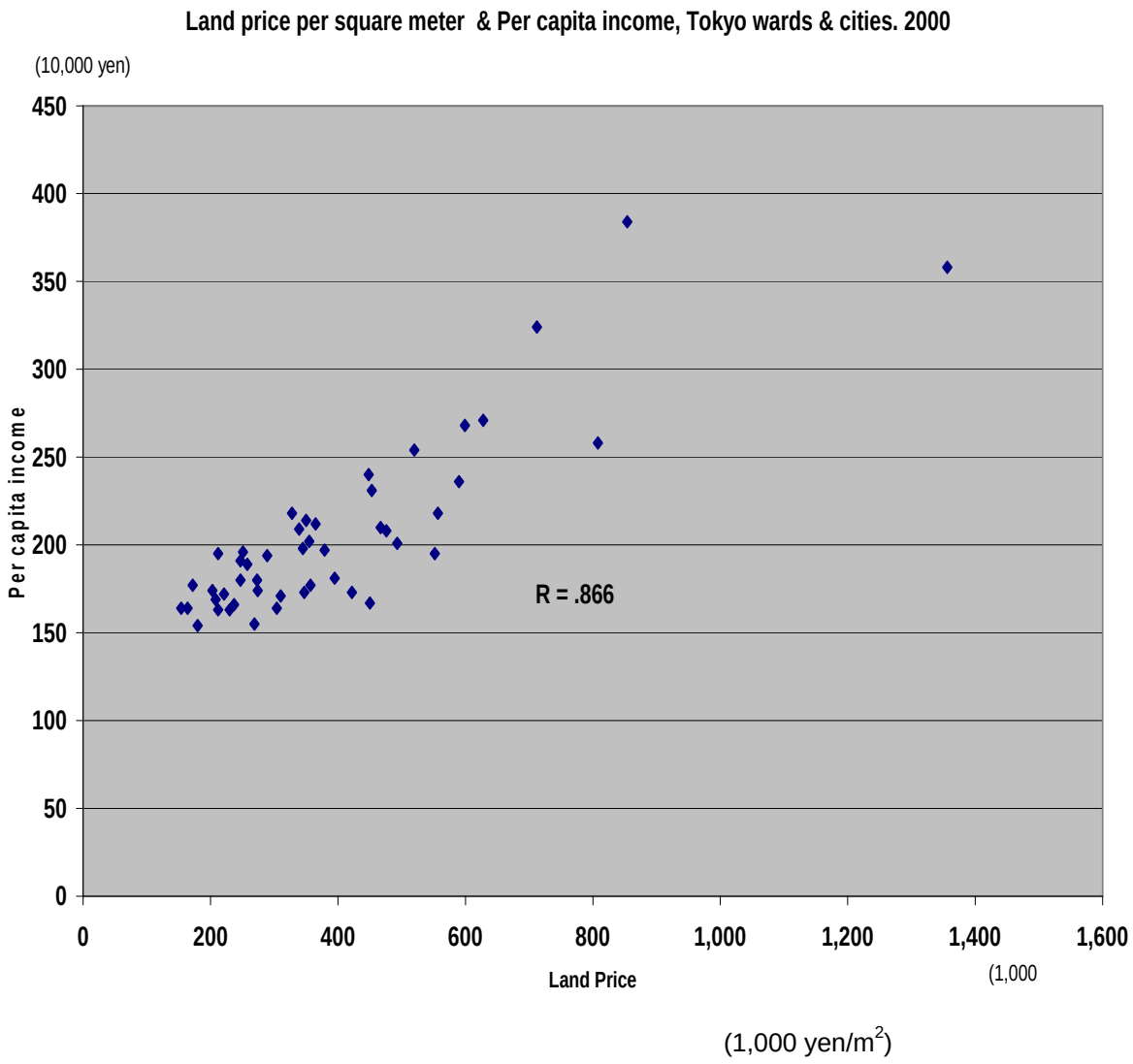

Percent Foreign Born among Places, Tokyo & New York 2000
% Foreign Born
80
70
60
50
40
30
20
10
0
New York
Tokyo
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59
Places

Chart 11:


Land price per square meter & Per capita income, Tokyo wards & cities. 2000
(10,000 yen)
450
400
350
300
250
200
150
100
50
0
Per capita income
R = .866
0
200
400
600
800
1,000
1,200
1,400
1,600
Land Price
(1,000
(1,000 yen/m2)

Endnotes

[1] See, for example, Swanstrom, Todd, Coleen Casey, Robert Flack and Peter Dreier (2004) *Pulling Apart: Economic Segregation Among Suburbs and Central Cities in Major Metropolitan Areas.* **Living Cities Census Series.** The Brookings Institution. October.

[2] Marcuse, Peter and Ronald van Kempen (Eds) (2000) *Globalizing Cities: A New Spatial Order?* (London: Blackwell), pp. 250-251.

[3] URBEX refers to "The Spatial Dimensions of Urban Social Exclusion and Integration: A European Comparison) and is part of the 4th Framework programme of the European Union labeled "Targeted Socio-Economic Research (TSER). The project has been coordinated by Professor Sako Musterd, Department of Geography and Planning, University of Amsterdam and brings together researchers in Amsterdam, Antwerp, Berlin, Birmingham, Brussels, Hamburg, London, Milan, Naples, Paris and Rotterdam. The URBEX research was carried out in twenty-two neighborhoods in eleven cities in six EU member states. See Musterd, Sako and Alan Murie (editors) *The Spatial Dimensions of Urban Social Exclusion and Integration*. URBEX Series, No. 22, Final Report. The URBEX project homepage can be found at http://www2.fmg.uva.nl/urbex/.

[4] There are exceptions. For a study of place stratification in Osaka see Fujita, Kuniko and Richard Child Hill (1997) "Together and Equal: Place Stratification in Osaka," Pp. 106-133 in Paul Karan and Karen Stapelton (eds) *The Japanese City* (Lexington Kentucky: University of Kentucky Press). On divisions between the Shitamachi and Yamanote areas in Tokyo, see Waley, Paul (2002), "Moving the Margins of Tokyo," *Urban Studies*, volume 30, number 9, pp. 1533-1550. For a comparison of the distribution of income among municipal governments in Nagoya and Detroit, see Andrew Jacobs (2003) "Embedded Autonomy and Uneven Development: A comparison of the Detroit and Nagoya Regions," *Urban Studies*, volume 40, pp. 335-360. And for a comparison of spatial segregation of classes in Kyoto and Edinborough, see Fielding, Anthony J. (2004) "Class and Space: Social Segregation in Japanese Cities," *Transactions of the Institute of British Geographers,* volume 29, number 1, March, pp. 64-84.

[5] Each board has up to 50 members appointed by the Borough President in which the district is located. City Council members whose electoral districts over lap with a community district are *ex officio* board members, they may participate in all community board activities, and the chair community boards although they may not vote on board issues.

[6] After the new boundary standards released in 2003, the New York region can be viewed at three hierarchical levels. Instead of one CMSA made up of fifteen PMSAs, the new Consolidated Statistical Area (New York-Newark-Bridgeport, NY-NJ-CT-PA-CSA) includes six Metropolitan Statistical Areas, (New York is contained in the New York-Northern New Jersey-Long Island, NY-NJ-PA Metro SA) which are further subdivided in four Metropolitan Divisions and one MicroSA (New York is contained in the New York-Wayne-White Plains, NY-NJ Metro Division). See The Brookings Institution (2004), *The Living Census Series*, November, pp. 12-13.

[7] The Census Bureau divides counties into census tracts of between 2500 and 8000 residents as a basis for tabulating and presenting decennial census data. New York City had 2,217 census tracts in the 2000 Decennial Census.

[8] There are a few exceptions, such as Brooklyn Heights and Park Slope in Brooklyn.

[9] Census definitions for metropolitan regions changed in 2003. The 5 boroughs and 3 counties in the New York PSMA now form a Metro Division in the NY-NJ-PA Metropolitan Statistical Area.

[10] Assembly members are elected from 127 electoral districts. The electoral districts do not coincide with ward, city, town or village boundaries.

[11] Tokyo Metropolitan Prefecture includes 5 towns and 8 villages. These towns and villages are not included in this analysis.

[12] The data on foreign born in Tokyo refers to “registered foreigners”.