

Capture land value for building infrastructure: Comparing China and Japan

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The case of Japan

By Toshio Taguchi

1 . Obligation of community infrastructure by housing development

Capturing land value for building infrastructure is a highly contentious issue among the Japanese planning community. Both the central and local governments have sought a solution to this issue since the pre-war era, although they have not yet succeeded. However, the exception to this lack of success is the “Local Development Exaction” system that was initiated by the city of Yokohama and later adopted by many local governments in Japan.¹ This system was formulated solely on the initiative of local governments beyond the central government’s jurisdiction.

Generally, Japanese legislation regarding land use and development are part of a drive for modernization. The Japanese *Town Planning Act 1919* and its later equivalent, the *Town Planning Law 1968*, allowed for a form of “user pays” land use—in principle, a beneficiary of a public project may be required to pay an increased fee for the value of the land that they use. This provision has been applied on some projects in a limited way, although these projects could not recover the cost.²

Despite the availability of this special provision in the *Town Planning Act 1919*, land prices in Japan do not reflect the progress of local infrastructure. Housing development that lacks appropriate infrastructure in its vicinity can even be permitted according to the basic building code, with the construction of infrastructure expected to catch up. Because of a lack of public awareness towards environmental improvement, benefits produced by public projects have not been properly assessed.

Apart from the “user pays” rationale, the *Land Readjustment Scheme*, or *Kukakuseiri* in Japanese, legislation has been widely implemented since the Great Earthquake of 1923. This scheme requires that all property owners within the targeted area donate a parcel of land for constructing the minimum required roads and parks. Despite the decrease in the size of land ownership among property owners, the land value increases because of the new planned environment. However, this scheme could not cover other necessary community infrastructure, such as nurseries, schools, fire-stations, and refuse incinerators.

This research concerns Yokohama’s LDE system as a model case of an effective development control measure. The city of Yokohama has been dramatically affected by unplanned housing developments in the vicinity of the Tokyo metropolitan area following the Second World War. Accordingly, the city lacked community infrastructure and basic amenities. Ichio Asukata—the socialist mayor who had narrowly defeated the conservative candidate in the 1963 election—outlined a plan to resolve urban problems, although he did not receive any support from the central government because of his socialist background. Despite local autonomy and the decentralization of powers being critical concepts for the new Japan, society did not easily develop in accordance with these shifts. Asukata named this reformist approach “local initiatives without consent” [given from the central government], which represented a new approach to conducting local administration. To achieve this, he needed an able planner with professional integrity, and persuaded Akira Tamura,³ a renowned town planner, to join the Yokohama city planning administration for the implementation of citizen-centered town planning. Tamura finalized his LDE system for Yokohama in 1968.

As Yokohama was one of a few specially designated large cities, its government had the legal authority to

permit development applications according to the *Town Planning Law 1968*. Thus, when negotiating with developers in connection with their development applications, the city administration avoided giving the impression that development obligations would be sought as a legal precondition to making a formal application for development permission.⁴ Instead, the city made its rules known to developers as the local development exaction system (“LDE system”), which defined the exaction of land or fees donated by developers for constructing community infrastructure. Since the Yokohama city government adopted its LDE system in 1968 as a leading example, the system spread to many local governments throughout Japan. The LDE system, which operated for nearly forty years, achieved commendable results in the housing environment by developing the necessary infrastructure (Figure 1/4).⁵

Akira Tamura—who was in charge of formulating Yokohama’s LDE system in 1968 and managed its operation as the head of the city’s planning office for the next ten years in Yokohama—went on to publish his Ph.D. thesis on the LDE system at Tokyo University. I have conducted objective and evidence-based research on Yokohama’s LDE system that supplemented Tamura’s paper and added historical detail on the period after Tamura until the end of its LDE system in 2004. Regarding my previous work⁶ on with LDE system, there are two papers.⁷ My paper submitted to the State University of Georgia has been reviewed and rewritten based on these two.

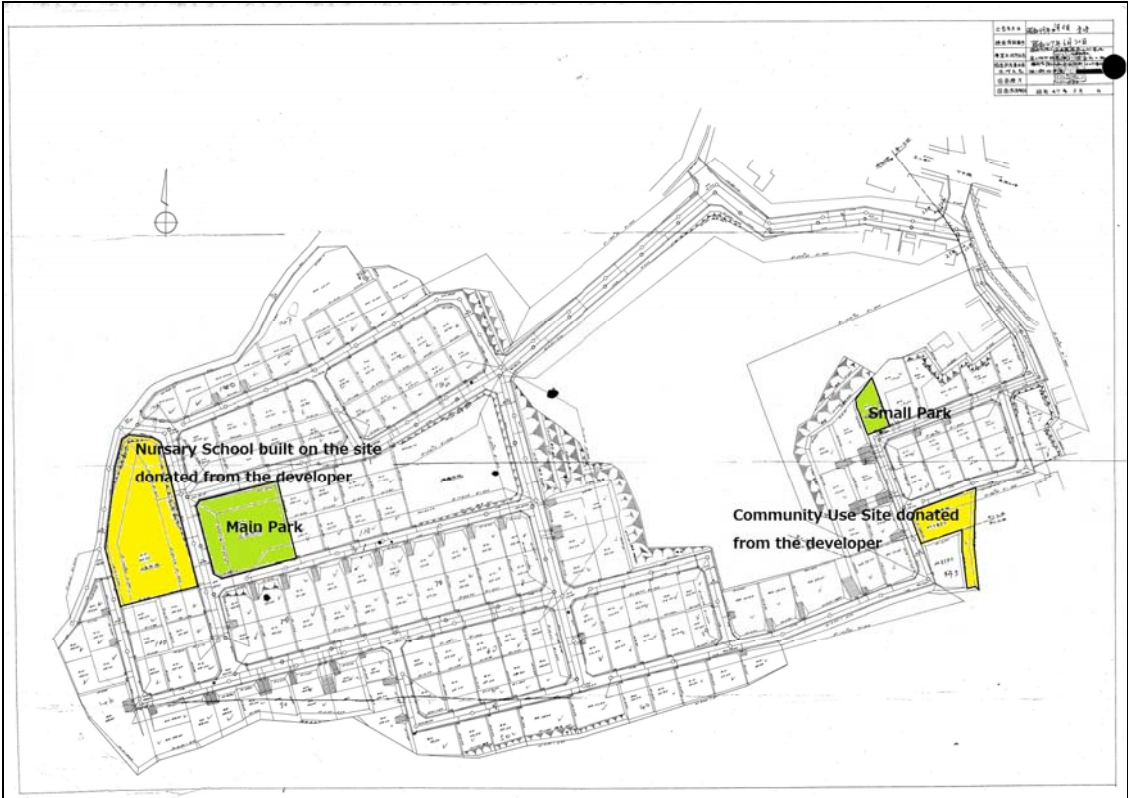


Figure 1: Sitemap of the new housing development at Sakaigi-cho (3.7 hectares of the site, planning permission obtained in 1971), Hodogaya Ward, Yokohama. There is a municipal nursery school on the left, situated on land obtained for community facilities from the developer through the LDE system. Source: public information disclosure from the Bureau of Building Control, City of Yokohama



Figure 2: A scene of detached houses at the Sakaigi-cho housing development



Figure 3: A nursery school on the right built on the site donated from the developer at Sakaigi



Figure 4: Sakaigi-cho housing development on the hill viewing commuter train lines on the left

2. Japanese community infrastructure for housing development

Community infrastructure: Who is responsible in Japan?

The availability of community infrastructure—being ready to be used or planned to be installed—is one of the key considerations in development. One of the most familiar types of community infrastructure is a road. To comply with the building code, any property has to face the road. All roads, no matter their ownership, can be used freely. Maintenance of roads is important since their pavement easily degrades over the years. Another community resource that must be available for public use is water as it is a basic need for human activities. Water supply pipes are constructed under roads and connected to housing lots. The water authority needs to be paid for its use, and used water needs to be disposed of. Sewerage (Figure.5) collects the water that is disposed from toilets and rainfall. People must pay sewerage bills according to the amount of water used by each household. All facilities for everyday life require electricity. This power travels through the power grid over the roads to each house. Communication networks, wired or wireless, are another necessity for modern life; the safety and stability of communications are very important. Piped gas is also built under roads in urbanized areas by gas companies, and, in rural areas, tanked gas is delivered to each household by a gas supplier.

We must acknowledge that housing developers build part of the community’s infrastructure. Water supply needs a large reservoir, water cleaning center, and distributing ponds covering an extensive network of pipes. The sewage system also needs a water disposal treatment center and a pumping station for the water to be voided into the river or sea. Electricity is generated in power plants, usually far from urban areas, and then delivered to local transformers for each household in a city. Such community infrastructure includes networks consisting of substantial plants: grids and developers are usually obliged to contribute to grids to receive or dispose of their contents.

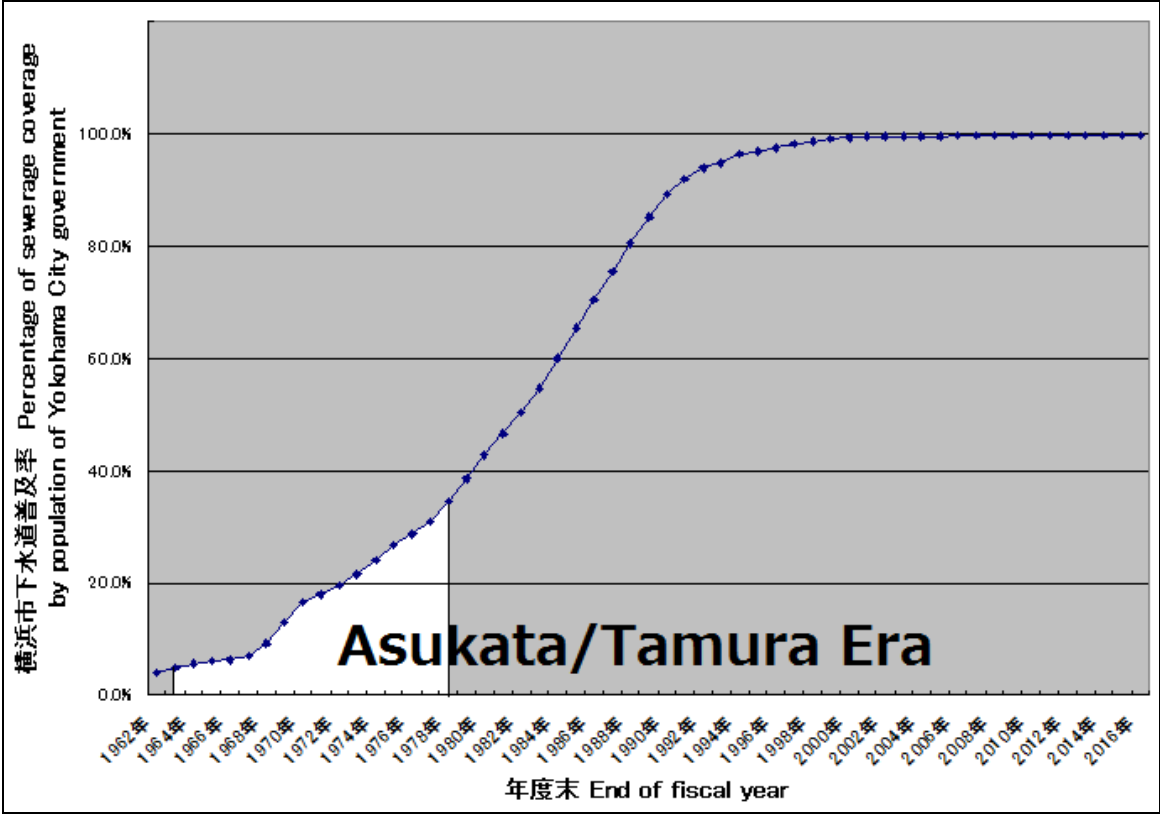


Figure 5: Chart of fluctuation of municipal sewerage coverage by population. Source: Department of Sewerage maintenance, Bureau of Environmental Creation, the City of Yokohama

The authorities in charge of the construction and maintenance of community infrastructure are mainly local governments and public bodies legally authorized by specific laws in Japan. Local governments control roads, water supply, and sewage. Public bodies control electricity, communication, and gas. During the early Meiji period, local governments took over enterprises of electricity and gas from private companies that had fallen into bankruptcy. According to legislation, local government and public bodies are required to supply consumer demand.

Construction of schools

Even if community infrastructure has been built, residents cannot immediately start living there. They require other amenities such as nurseries, schools, parks, fire and police stations, stores, and local municipal offices. Families with small children especially need public schools within walking distance from their homes, because Japanese society is not suited for the use of school buses or private cars for parents to take children to school. As school needs significant space and requires high construction costs; advanced school planning is expected to be made during housing development. Developers must become conscious of this problem, although they claim that this is the role of local government. Historically, local governments are key players as far as this issue is concerned.

During the feudal era of Edo, children of farmers or merchants—even those of samurai—were given opportunities to learn at private schools if they wished. Apart from the special elite schools for samurai children, local schools were established for low-class samurai and commoners' children. In urban cities such as Osaka and Edo, private schools run by monks or lordless samurai were places where children learned basic reading, writing, and arithmetic skills. Then, just after the Meiji Restoration of 1868, local schools were built mainly through donations from local rich people, because the Meiji government did not have the necessary funds. Therefore, a significant discrepancy in the educational environment between rich and poor communities existed. By the *Primary Education Order* issued in 1890, compulsory education⁸ for elementary school age pupils was established, and, accordingly, local authorities were designated by the central government as public authorities to build and manage schools.

The ministry of education currently subsidizes one half of all construction costs of new public schools according to the *National Compulsory Educational Facility Subsidiary Law 1958*. As cost evaluation is based on the national standards, local government has to meet any shortfall alone. The provision of Japanese compulsory education is established in the *Educational Principles Law 1947* that mandates free public education for all. The responsibility of maintaining public schools is vested in the local government, which must grapple with tough financial constraints when financing school sites alone.

3. Background of Japanese land ownership and land control measures before the genesis of the LDE system

Private land ownership in the early modern era of Japan

Under the feudal system of Edo during the samurai era, the land belonged to the Tokugawa Shogunate which allowed feudal lords to use the land for a designated period. Farmers and peasants were given tentative rights to cultivate the land and, in return, owed crops and corvée duties to their lords. Land ownership in urban areas constituted three categories: samurai estates, merchant shops, and temple or shrine precincts. Regarding the merchants' land, it was possible for them to own, sell, and rent their land freely. Property rights were formally recognized by the Meiji government in 1872 when the government issued the elimination order to ban transactions of real estate. The ministry of finance announced that the government would grant certificates of land ownership in lieu of the 1% property tax. The government started to review land ownership throughout Japan and the corresponding tax values to hasten the construction of the system. Finally, in 1889, the land tax code was enacted and the tax rate was fixed at 2.5%. This code evolved into the *Land Tax Law 1931*, which introduced rental values of land, instead of possession values, and the previous 4.5% tax decreased to 3.8%.

Imperial Constitution

The Imperial Constitution was promulgated in 1889, and Article 27 declared that Imperial Japanese nationals were not deprived of their right to possess property. Conversely, the right would be suspended for public use on a condition prescribed by related legislation. The global notion of “no restriction without compensation” did not yet clearly exist in the constitution.

First Town planning act and urban building code

The first town planning act of Imperial Japan was enacted in 1919, just ten years after the *Housing and Town Planning Act 1909* of England. According to the town planning act, practical procedures to designate zoning districts and its conditions were written in the Urban Building Code. The variety of zoning use districts was limited to four categories: commerce, industry, residential, and non-designated. As mixed uses were widely admitted, the objective of zoning control was not adequately met. The zoning ordinance of Tokyo followed existing uses, although other cities around Japan tried to achieve new industrial developments by using the new zoning ordinances. Among Japanese cities, the town planning act was applied in a limited way to six major cities and forty-six small ones. Consequently, the inadequate zoning

ordinance could not control the urban environment.

Democratic constitution after the war

After the war, Japan received instructions for the development of new ideologies from the occupying allied forces (directed by the United States) that the new constitution should embrace the fundamentals of democracy. Local autonomy and the decentralization of administrative power were key components of the emerging democracy of Japan. Prefecture governors and city mayors were directly elected by citizens, not appointed by the central government. Nonetheless, obstinate bureaucrats of the central government did not cooperate with this reform easily. They tried to maintain their power and mostly succeeded. Both central and local governments were reluctant to set a limitation on property rights for the public benefit. Due compensation for public benefit was written into the new constitution. The Japanese government and the occupation forces did not share the same ideas regarding the fundamental notion of land ownership; Americans believed that the supreme right of land belonged to the nation. The then-conservative Japanese government did not accept this.

Urban redevelopment plans for bombarded cities

Immediately after the war, the Japanese government decided to implement the reconstruction of the major cities that were severely bombarded by American forces using a land readjustment scheme. By December 1945, the reconstruction policy of war-damaged cities was adopted by the government, and 102 cities were eligible. It was decided that at least fifteen percent of all private land be donated without compensation for the execution of the land readjustment scheme. However, the government had no planning power to control building within blocks reshaped by the scheme. Besides Tokyo, more than 60 percent of projects were accomplished in local cities. Although Tokyo had ambitious planning concepts that intended to build residential areas surrounded by a green belt, several train station plazas were executed in exceptional cases. Then, the occupation forces introduced a constrictive fiscal policy in 1949, which terminated all projects.

New urban building code after the war

The urban building code that was halted during the war was reviewed and implemented as the new *Urban Building Act* in 1950. The new *Act* only adopted minimum standards of site, structure, and material of buildings since the government had to tackle housing shortages after the war. Compared with the old urban building code, the new *Act* mainly regulated standards for single building provisions. Because of the inadequacy of these provisions, the new *Act* could not evolve into an effective tool of control.

Metropolitan redevelopment law

Except for the south-west area of Tokyo along the old Tokaido route, which had been highly urbanized, all suburban or rural areas around Tokyo suffered severely from the pressure of housing developments. In 1956, an ambitious planning tool called the *National Capital Development Law* appeared on Japan's reconstruction scene. To prevent the unplanned expansion of metropolitan Tokyo, the concept of the green belt was envisaged in suburban peripheries within fifteen and twenty-five kilometers from the central part of Tokyo. Outside the green belt, new satellite cities were planned to absorb new housing developments. By this law, property ownership could be controlled for the public benefit. Nevertheless, this law ended as a conceptual drawing only.

Start of economic expansion in the early 1960s

The high economic expansion of Japan with more than a ten percent growth rate began in December 1954 and continued for nearly 20 years until November 1973. After the war, this population increase brought Japan to the second largest economic power in the world. This expansion prompted massive housing demands, especially in the wide Tokyo region. In this region, Kanagawa Prefecture in south-west Tokyo and Chiba Prefecture in east Tokyo were targeted by housing developers. Since the early 1960s, local

governments of these areas had to respond to housing developments from private or public corporations. These developments needed an unimaginable scale of public expenditure by local governments for community infrastructure. Although some housing developments were well-organized and planned by large companies, local developers executed unplanned developments in a sprawling manner. Then, the LDE system of Yokohama was adopted in 1968 during the latter half of the high economic expansion period. High economic growth ended in the early 1970s, though housing developments continued under restrictive economic situations afterward. There is a skeptical notion held by developers towards development exaction that high economic growth had yielded enough benefits for them to donate either land or fees to the local government. Even if the benefits derived from developments have shrunk, developers must pay what they need for their developments.

4. Housing development by Tokyu Railway Company and its development exaction agreement

A huge housing development proposal by Tokyu Railway Company (“TRC”)⁹ in suburban Yokohama prompted a move to consider development exactions by local municipalities. Keita Goto, president of TRC, had returned to his old company after a short period of public exile from his official position that had been terminated in 1951.¹⁰ Goto made a new proposal for a housing development in the southwest of the Tokyo region,¹¹ which covered a large suburban area of Yokohama.

Goto’s proposal was to construct a large-scale housing development along the newly extended railway line connecting Tokyu’s existing line with a station on the Odakyu railway line in the middle of Kanagawa prefecture, which ran through Yokohama. Then the Capital Metropolitan Redevelopment Law was enacted in 1956 by the central government. A new planning control measure to designate the suburban area as a green belt encircling the built-up areas was conceived in order to restrict unplanned expansion of Tokyo.

Beyond the green belt, satellite cities with new housing developments were also allowed. It soon became clear that Goto’s proposal fell entirely within the restricted green belt area running between 15 kilometres and 25 kilometres in radius from central Tokyo. In response, Goto prepared a counter-proposal to build a new town on the southwest along the Tama River, which divides Tokyo and Kanagawa. He also proposed a toll motorway plan¹² along which a new housing development was envisaged in parallel with the new railway line (Figure 6). As a result, Goto’s challenge finally succeeded, in that the central government allowed an exception for development within the green belt area, which was a planned housing development within a one kilometre in radius from the nearest train station. In 1960, Goto received official permission to construct his new railway line from Mizonoguchi to Chuorinkan that he had originally applied for. Goto and his company began construction of the new town for a planned 300,000 residents on 2,000 hectares of land, mostly within the city area of Yokohama.

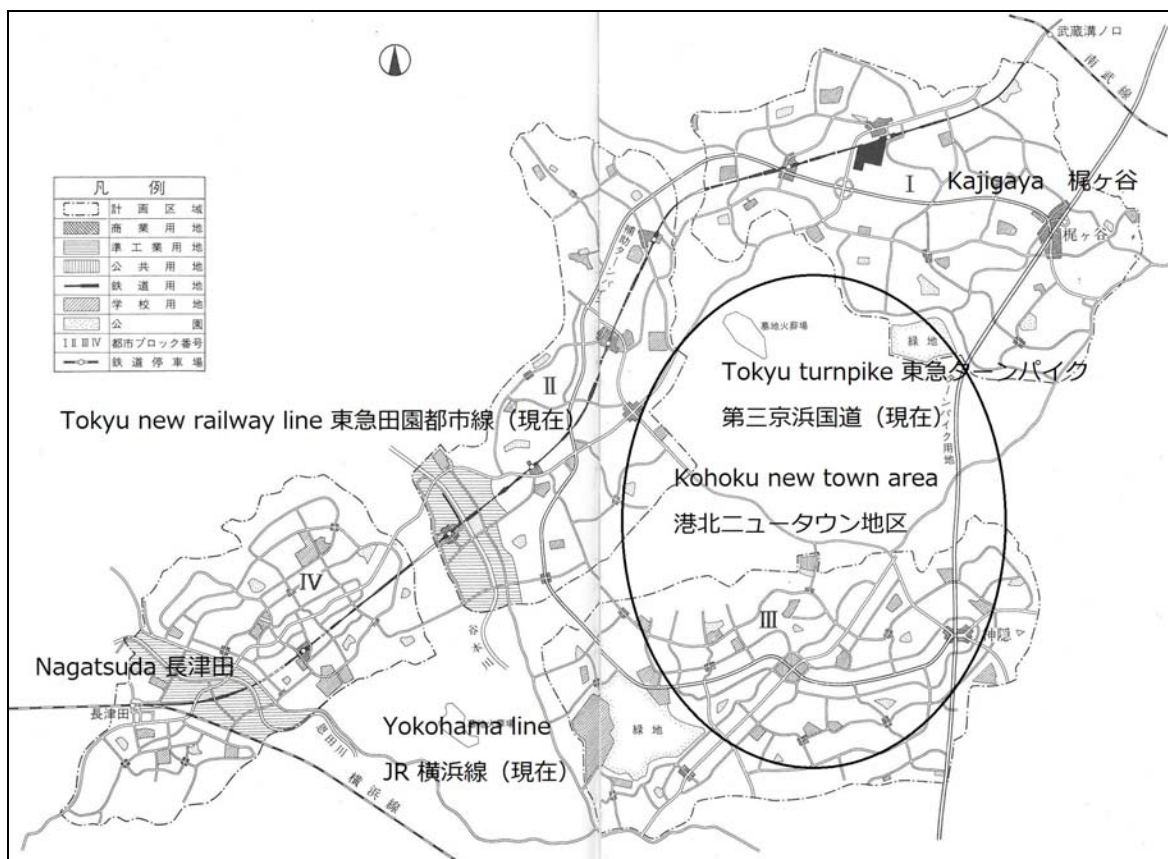


Figure 6: Proposal of new housing development in the region west-south of Tama river by Tokyu railway corporation. Source: Tokyu railways corporation. *Tama country and town development, its 35 years history*, 1988

One of the most significant community issues arising from the TRC development was the provision of schools, since they would be necessary facilities for the new residents. According to the Basic Act on Education, all municipalities are responsible for providing opportunities for all residents' pupils to attend compulsory education at primary and secondary schools. Asukata, the mayor of Yokohama, expressed strong reservations at the negotiations with TRC about telling new residents that the city would not accept new enrolments for existing schools, which had no room to accept new pupils.^{1 3} At the 1968 meeting between Asukata and Noboru Goto, son of Keita Goto and the new president of TRC, an agreement was reached to provide the land for nine schools. Asukata wanted to utilise TRC's model of development exactions to apply all over Yokohama.

5. Genesis of Local Development Exaction system as an independent planning tool by local government

5-1. Fight on five issues by Asukata and Tamura

Despite a rapid population increase accommodated by new housing developments, the new tax revenue accompanying it did not match the costs required to respond by installing new community facilities and infrastructure. During the period from the late 1960s until the mid-1970s, the population of Yokohama was increasing by one hundred thousand annually. From 1968 until 1973 the increase in the number of pupils was similarly enormous in number: seventy thousand primary students and twenty thousand junior high students annually, which required an additional 47 primary schools and 15 junior high schools to be constructed. As the annual municipal budget of 1974 was 253.4 billion yen with 45.6 billion yen allocated for educational expenses, seventy percent of educational expenditure was used purely to construct educational facilities. In 1972 Asukata and Tamura^{1 4} pledged to fight on "five issues caused by the rapid population increase": environmental pollution, refuse dumping, traffic management, water resource, and

exaction of public land. As such, the city had to respond by constructing basic amenities.^{1 5}

An overall trend of housing development in Yokohama from 1968 until 2014 can be identified in the data regarding housing plots increase on municipal real-estate tax index (Figure 7). The housing plots within Yokohama city greatly increased from 10,705 hectares of 1968 when LDE system introduced until 15,397 hectares of 1978 when Asukata left the mayor's office. Throughout Michikazu Saigo's time, mayor after Asukata, the rate of housing plots increase gradually levelled out until Saigo died in 1990, Hidenobu Takahide succeeded the mayor's office. Since the latter half of Takahide's term until Hiroshi Nakata decided to abolish the LDE system, the housing development was stable in trend. Since 1984, the data of residential development permitted each year has been available (Figure 8).

It may be useful to consider the trends in annual budgets, population figures of Yokohama city and the national economic yearly growth rates: 33 billion yen budget and 1.59 million population when Asukata first elected in 1963, 365 billion yen budget and 2.69 million population when he left the city in 1978, 994 billion yen budget and 3.19 million population in the last year of Mayor Saigo's term in 1989, and 1 trillion and 377 billion yen and 3.46 million population in the last year of Mayor Takahide. Finally, Yokohama had a 1 trillion 345 billion yen budget serving a population of 3.65 million population in the last year of Mayor Nakata's term in 2008. The economic growth annual rate was 9.1% from 1956 to 1973, 4.2% from 1974 to 1990, 0.9% from 1991 to 2012 (Figure 9).

Land areas of Yokohama city by categories of estate tax Source: Yokohama yearly statistics 2014

Period	Fiscal years	Population (thousand)	Housing estate (hectares)	Increase of housing estate during each period (ha)	Average rate of increase of housing estate on a yearly basis (ha)
Mayor Asukata	1963	1,590			
	1968	2,047	10,705		
	1972	2,433	13,489	2,784	557
Mayor Asukata	1973	2,494	13,937		
	1978	2,729	15,397	1,460	243
Mayor Saigo, Mayor Takahide	1979	2,763	15,435		
	1997	3,339	18,789	3,354	177
Mayor Takahide, Mayor Nakata	1998	3,368	18,880		
	2014	3,555	19,475	596	85

Figure 7: Land used for housing according to categories of estate tax Source: Yokohama city's yearly statistics 2014

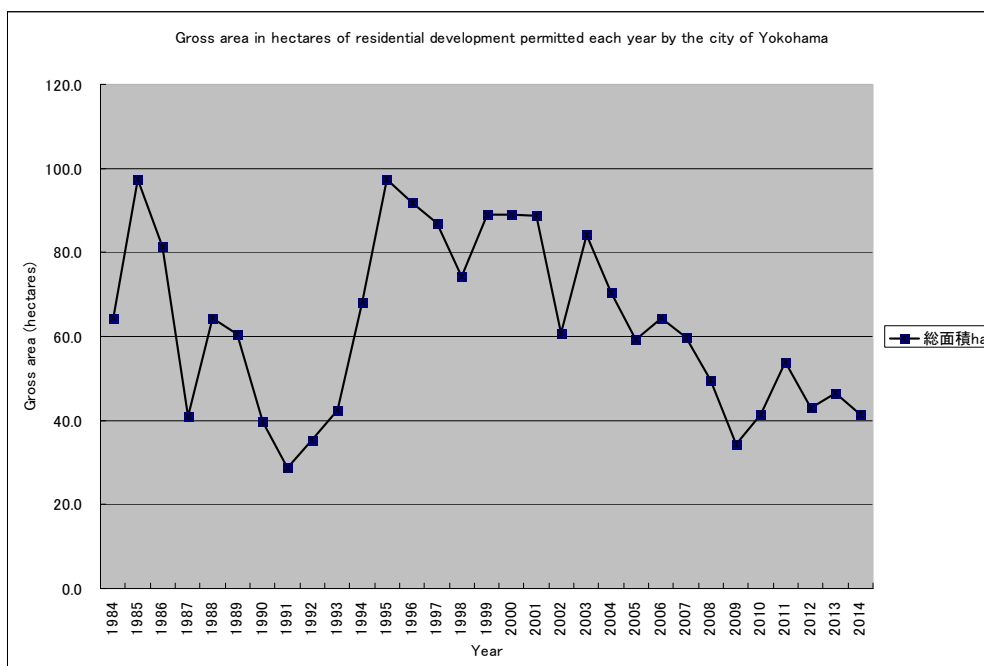


Figure 8: Chart of fluctuation of residential developments since 1984 by total development permitted area. Gross area in hectares of residential development permitted each year by the city of Yokohama. Source: Data from Yokohama’s municipal architectural department, which was in charge of development permission, began being properly recorded and preserved after 1984 to a standard usable for detailed research work.

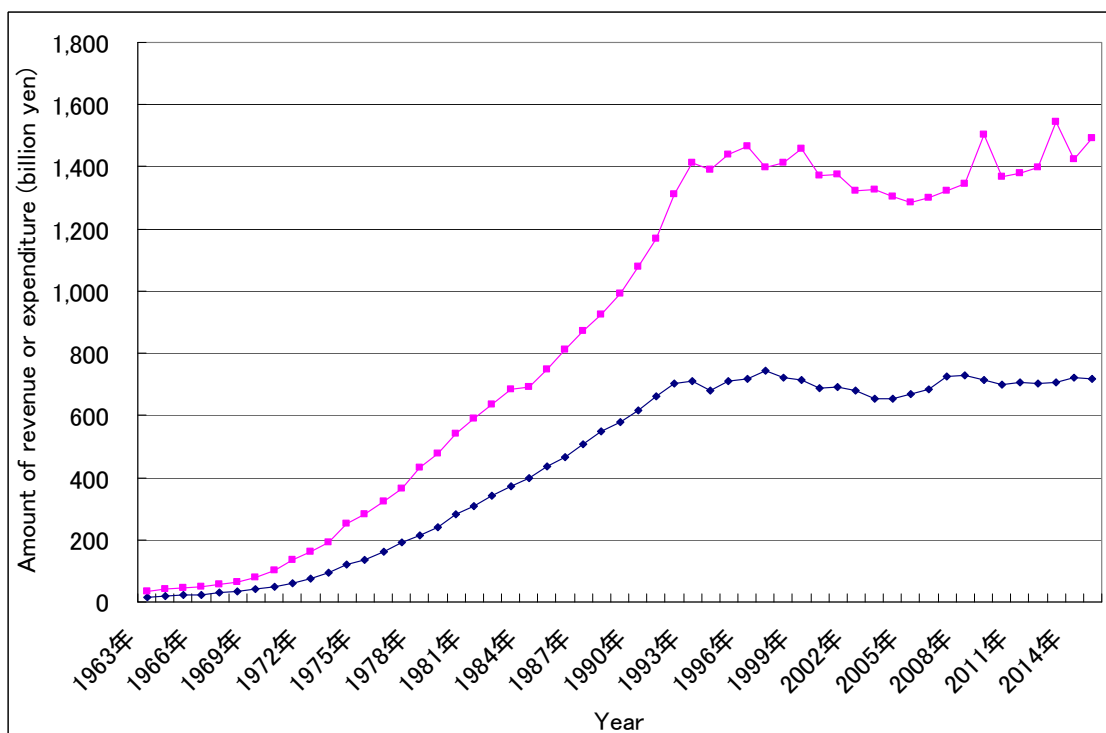


Figure 9: Increase of city tax revenue (bottom line) and its annual budget expenditure (above line) Source: Financial bureau of Yokohama city government

5-2. Designation of urbanised and non-urbanised areas by the newly revised Town Planning Law

According to the Town Planning Act 1968, town planning districts¹⁶ are divided into two categories: urbanised areas, in which development is promoted, and non-urbanised areas, in which development is halted for more than a decade. If and when an applicant wants to develop land, he/she has to apply

concerned local administration for permission to start development activities. Within urbanised areas, any development of more than 0.1 hectares in size is controlled. Although development in non-urbanised areas is generally prohibited, there is an exemption whereby well-planned housing developments that are larger than 20 hectares can be allowed.

The policy towards the use of the urbanised area designation, according to the advisory report to the Yokohama city planning committee in 1970 supervised by Tamura, reads: “Local administration is required to assume a large burden of political and administrative responsibility when making plans for urban facilities and infrastructure. Therefore, it would not be appropriate to expand urbanised areas too much without any possibility of accomplishing the necessary infrastructure within ten years. An area that is capable of being urbanised in the future should be preserved as a non-urbanised area for a while and then gradually be urbanised with planned development”. Within non-urbanised areas, development is as a general rule not permitted for a period and is only possible subject to onerous controls, the report noting: “The notion of having non-urbanised areas has not only the restrictive goal to limit sprawl developments but also the positive goal of preserving these areas for future planned large-scale developments”. Even areas affected by unplanned developments should be designated and preserved as non-urbanised areas until specific measures such as land readjustment schemes could be implemented in the future. The final proposal by the Yokohama city planning committee concluded that there would be 12,640 hectares designated non-urbanised area in size, accounting for 30.3% of the whole city area, which, through final negotiations with concerned bodies, was reduced to 10,673 hectares, being 25.6% of whole city area.¹⁷ This ensured that, when granting planning permission to change these zones to urbanised areas for the initiation of development in the future, the city could demand greater public contributions from developers, such as the preservation of extra open space for the use of public in addition to the normal requirements under the LDE system.¹⁸

6. Process of adoption and abolition of LDE system in Yokohama

6-1. Adoption in 1968 and abolition in 2004

According to the LDE system as adopted in 1968, development is defined as any kind of modification over its land in terms of shape and/or topography for the purpose of construction, and all development, irrespective of its size, is required to follow the LDE system. Exaction of land for public uses is the main theme of the LDE system and falls into two categories: exactions to fulfil a “park obligation” and a “community obligation”. Roads, sewerage, drainage, and flood ponds constructed by the developer are transferred to the municipality. Public developers are required to donate land for parks equivalent to more than 4% of its development area, and private developers more than 3%, not less than 150 square meters in size. Land provided to house community facilities must be more than 5% of the whole development area, and the price paid to the developer, albeit only a nominal fee, is fixed at 3,000 yen per square meter for land within that 5%. If and when construction of public utilities outside the development area is necessary, additional construction should be done by the concerned developer. The procedure of the LDE system application is shown on figure 10.

After a 1972 revision, “development” subject to the LDE system was classified as anything exceeding 0.1 hectares. Density controls were introduced: assuming there would be 4.0 residents per freestanding house, and 3.5 residents per apartment unit. The park obligation was strengthened to require an allocation of at least 3 square meters per planned resident (applicable when this would deliver more than the existing 3% -- 4% exaction), and the community obligation was enlarged to require an additional exaction of .5% of the development area for every 30 residents per hectare (5% of the development area up to 150 residents per hectare).”

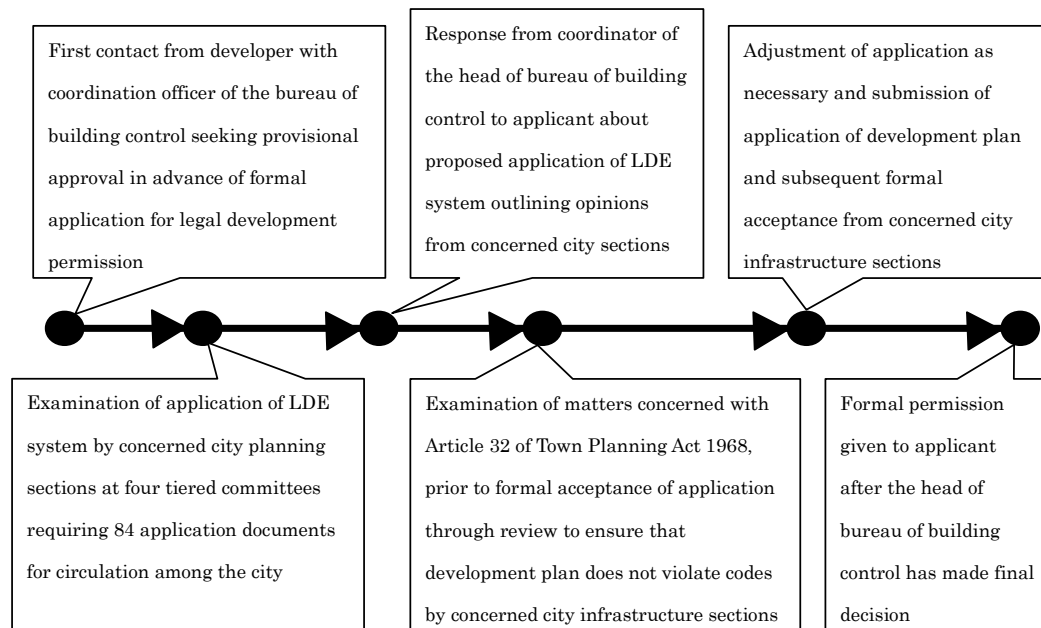


Figure 10: Flow of LDE system application and subsequent formal planning permission

After Asukata's departure in 1978, ten years after the LDE system's introduction, a new mayor, Michikazu Saigo, assumed office. He had started his career at the old Ministry of Interior before the war and became the Administrative Deputy Minister of Ministry of Home Affairs after the war. Some provisions of the LDE system were changed in 1980: developments of less than 0.3 hectares, if and when they could not provide a full-sized park of 150 square meters in size, could instead donate the land exacted to fulfil the park obligation to its land for community facilities. Moreover, the community obligation was changed so that, if and when a developer did not have available land for community use on its development site, the developer could instead purchase part of the land owned by a municipally affiliated land corporation which was legally authorized to buy land in advance for future municipal unspecified uses by a fund borrowing from the banks on normal market interest rates, not from municipal tax revenue, and then sell the land to the city at a nominal fee. Although this method was practical financially, the nexus between development sites and the land targeted by exaction obligations became unclear. In 1984, Saigo made a further fundamental modification to the structure of the LDE system. Any development of less than 0.3 hectares in size and with fewer than a hundred planned residents was allowed to donate 34,000 yen per resident to the Yokohama Municipal Green Foundation¹⁹ in lieu of park land. This change caused a further weakening of the nexus between exaction and development sites, because expenses contributed by developers would be used for forest preservation at a different site.

Saigo died in 1990 during his term as mayor. Hidenobu Takahide, his successor, was born in Hokkaido and had become the Administrative Deputy Minister of Ministry of Construction after a career as a technocrat in the civil engineering field. However, the Ministry of Construction was a vanguard against the LDE system. In 1995, Takahide set up a special committee to review the LDE system. The committee determined that the objective of providing school sites by exaction would be terminated despite praising the impact of the LDE system on the city budget. Regarding the park obligation, it was relaxed to require donation of less than 6% of the whole development area, whereas it had previously been calculated as more than 3% of whole area or 3 square meters per planned resident (whichever was larger).

The original vision of the LDE system was fatally undermined and it was tailored to follow the minimum standards of the national town planning law. Land donations for community facilities were reduced to require land donations only for housing developments more than one hectare in size, and equivalent only to 3% of its whole site. Takahide effectively began the process of dismantling the LDE system. At the

same time, the central government decided on a new deregulation policy in 1995, the Ministry of Construction issuing a notification commenting that it was the sole responsibility of local governments to provide community facilities on any developments less than 20 hectares in size.

Hiroshi Nakata, a relatively young and liberal politician having been educated at the Matsushita Institute of Government and Management, and who had resigned as a member of the Diet, defeated Takahide at mayoral election in 2002. Although Japan was facing economic stagnation, Nakata made an irrational decision to abolish the LDE system. The chronological list of amendments of LDE system is shown on figure 10. A new development control by-law strictly based on the national Town Planning Act was introduced in 2004, which effectively replaced Yokohama's LDE system. The development control by-law enacted by the municipal assembly merely set standards as to the technological aspects of construction, and did not contain provision for exaction.

LDE system of Yokohama	1968	1972	1980	1984	1995	2004
	Adoption	First revision	Second revision	Third revision	Fourth revision	Final revision/abolition
	Mayor Ichio Asukata	Mayor Ichio Asukata	Mayor Michikazu Saigo	Mayor Michikazu Saigo	Mayor Hidenobu Takahide	Mayor Hiroshi Nakata
Developments affected by LDE system (by size)	All residential and non-residential developments	Larger than 0.1 hectares and planned population density of more than 150 people per hectare	Larger than 0.1 hectares and planned population density of more than 150 people per hectare	Larger than 0.1 hectares and planned population density of more than 150 people per hectare	Larger than 0.3 hectares, no planned density metric	LDE system abolished, new city by-law restricting only technical matters without land exaction obligations
Required land contribution for parks ("park obligation") applicable to urbanised and non-urbanised areas	More than 4% of development area for public developers or 3% for private developers, minimum contribution of 150m ² (if calculation would otherwise amount to less)	Revised to add density restriction: more than 3m ² per person and more than 3% for private developer (4% for public developer) of development area, minimum contribution of 150m ² (if calculation would otherwise amount to less)	Any development less than 0.3 hectares can combine its community obligation land into a park lot of 150m ² or planting space in lieu	In the case of a development area less than 0.3 hectares, where there are more than 100 planned residents it triggers the park obligation, where there are less than 100 residents a donation to the city forest fund of 34,000 yen per planned resident can be made. If the park obligation amounts to less than 300m ² of a development area less than 0.3 hectares, payment to city forest fund should be made in lieu of land contribution	Only applied to housing developments, where the maximum contribution would be less than 6% of development area, donation to city forest fund not required. If park obligation area less than 150m ² , developer may contribute planted space or plaza in lieu of park	Within requirements of the Town Planning Act 1968, where a park would amount to more than 150m ² on a development area from 0.3 to 5 hectares. A development of less than 0.3ha requires planted space which is owned by the private owner, and is not a public park
Required land contribution for community facilities ("community obligation") applicable to urbanised and non-urbanised areas	More than 5% of development area, minimum contribution of 150m ² (if calculation would otherwise amount to less)	Housing development up to 150 residents per hectare provides 5% of development area, if planned density exceeds 30 residents per hectare, add 0.5%. Non-residential developments required to contribute 2% of development area. If this would amount to less than 150m ² , supplement to contribute a minimum of 150m ²	If community obligation less than 150m ² , land for community facilities can be used for park land	Non-residential developments contributing to progress of entrepreneurship can be exempted. Maximum land for community uses such as garbage depots or bicycle stands: 300m ² for less than 0.3ha of development area, 250m ² for 0.3-0.4ha, 200m ² for 0.4-0.5ha, 150m ² for more than 0.5ha. Within non-urbanised areas enterprise and/or educational-cultural developments can be exempted from park and community obligations	Community obligation to be applied to developments of more than 1 hectare, 3% of development area for residential developments only. Community obligation land not to be used for other substitute uses originated from outside development area	Community obligation to be applied to developments of more than 3 hectares and/or 500 unit apartment housing developments, and to be negotiated with city treasury bureau by a standard of 3% of development area and a land price of 25,000yen per m ²
Other infrastructure installation obligations	Roads, sewerage, flood water ponds within the development site and beyond the site if necessary are built by the developer	As shown on the left	As shown on the left	As shown on the left	As shown on the left	As shown on the left

Figure 11: Chronological list of amendments of local development exaction system

6-2. Integrated planning and coordination method

In 1968, the city of Yokohama established a Supreme Coordination Committee of Urban Issues, whose chairman was mayor Asukata, and which was supported and administered by Tamura of the Planning and Coordination Bureau ("PACB").²⁰ At the committee many subjects concerned with city administration were discussed: the acquisition of public-use land on a large scale, and the policy regarding large-scale developments. The PACB directed by Tamura²¹ was a special piece of administrative machinery to coordinate sections of city administration horizontally in order to consolidate them into a unified local administration.²²

The effectiveness of the LDE system is attributable to Tamura implementing other control measures in tandem with the LDE system and using them in an integrated way. Designation of urbanised and non-urbanised areas as a tool of development control was strategically carried out. In 1973, the school planning section of the municipal educational committee formulated a "Guideline for apartment housing

development” which was used to prevent new housing developments being initiated in areas with a limited capacity of public schools (Figure 12). They designated areas of high primary school enrolment which postponed new housing developments for a period and introduced a prerequisite to obtain permission from the school planning section.

Another innovative control measure introduced by Tamura was a “Special zoning code restricting volume of residential use”, a tactic used to set a limit residential use as a ratio of commercial and/or business districts.^{2 3} The Japanese zoning code at a national level defines possible uses in each zone, but an owner of land can use the whole of its property for residential use even in the middle of a commercial and/or business district. After Tamura left office, his restrictive zoning code was immediately abolished and consequently high-rise residential towers started to appear in the middle of Yokohama’s central business district.

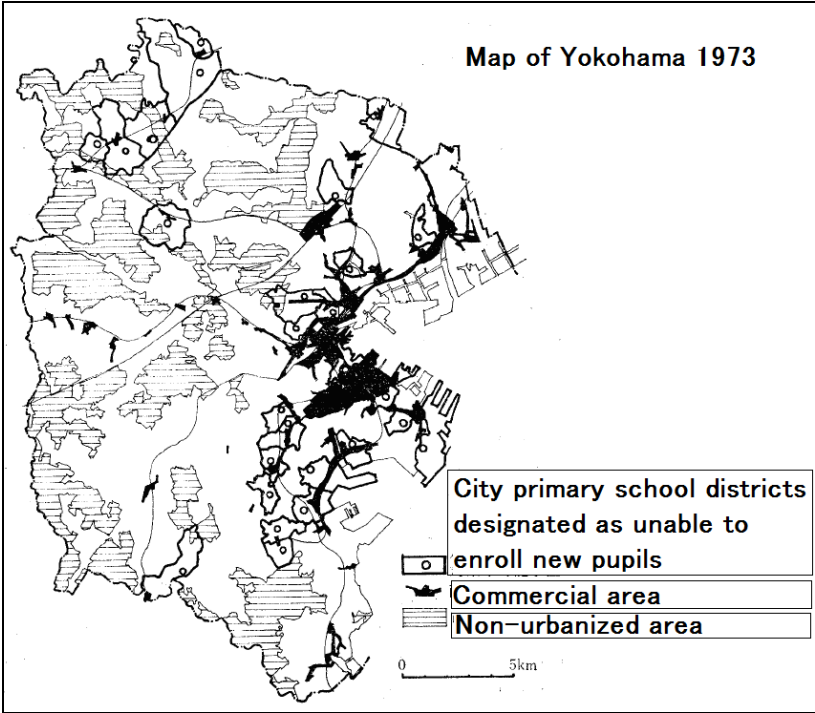


Figure 12: City primary school districts designated as unable to enroll new pupils and non-urbanised areas in the city of Yokohama as of February 1973. Source: Atsushi Naito, *Activity volume v. Facility volume-Challenge to special zoning restricting volume of residential use*, Bibliography 7)

6-3. Mounting pressure for relaxation and abolition from the central government

Among lawsuits regarding LDE systems are two widely known cases between local applicants and the Musashino city government: the first law suit^{2 4} demanded that Musashino city refund the exaction fees negotiated for an educational facility from an owner/developer of apartment housing, and the second lawsuit^{2 5} demanded that Musashino city supply tap water to apartment housing built by a local developer. Musashino city lost both cases because the court characterised the actions of the municipality as a forced donation, and that its threat to stop the supply of water was not usual exaction by agreement, and moreover an excessive use of administrative force. These verdicts in turn meant that local governments became overly timid in their use of LDE systems.

Pressure from the central government to relax or abolish the LDE system gradually increased. Orders issued from both the ministries of construction and home affairs demanded that local governments using LDE mechanisms for exaction be more transparent with developers and citizens alike. It took several decades until the final abolition of the LDE system, since the central government could not prepare other effective measures to control developments in lieu of the LDE system. Finally, in 2003 the Ministry of

Internal Affairs²⁶ and the Ministry of Construction and Transport²⁷ issued an ultimatum to local governments to review LDE system as soon as possible, which reflected that developers' tolerance for exaction had been declining due to a sharp decline in land prices. This order brought about the end of LDE systems all over Japan, including in Yokohama.

6-4. Evaluation of the LDE system

By the end of the 1993 fiscal year, the total amount of land exacted for community facilities was 307 hectares since the inception of the LDE system in 1968, of which 210 hectares had been used for municipal primary and secondary schools.²⁸ It had provided the sites for 150 schools, which accounted for 60% of the 258 total municipal schools opened in Yokohama since 1968. This shows how important the LDE system was to the provision of educational facilities in Yokohama city (Figure 13).

A further 65 hectares of exacted land was used for other community facilities: nursery schools, local fire stations, and citizen-use facilities, which complied with the original objectives set by the LDE system. However, the remaining 30 hectares was used for resettlement caused by public infrastructure projects which had nothing to do with the original development and its exaction, which posed a problem from a viewpoint of having no direct nexus between the development exaction and the eventual use the land was put to. The value of land acquired to build community facilities from the inception of the LDE system had amounted to 384.6 billion yen by the end of 1993.²⁹

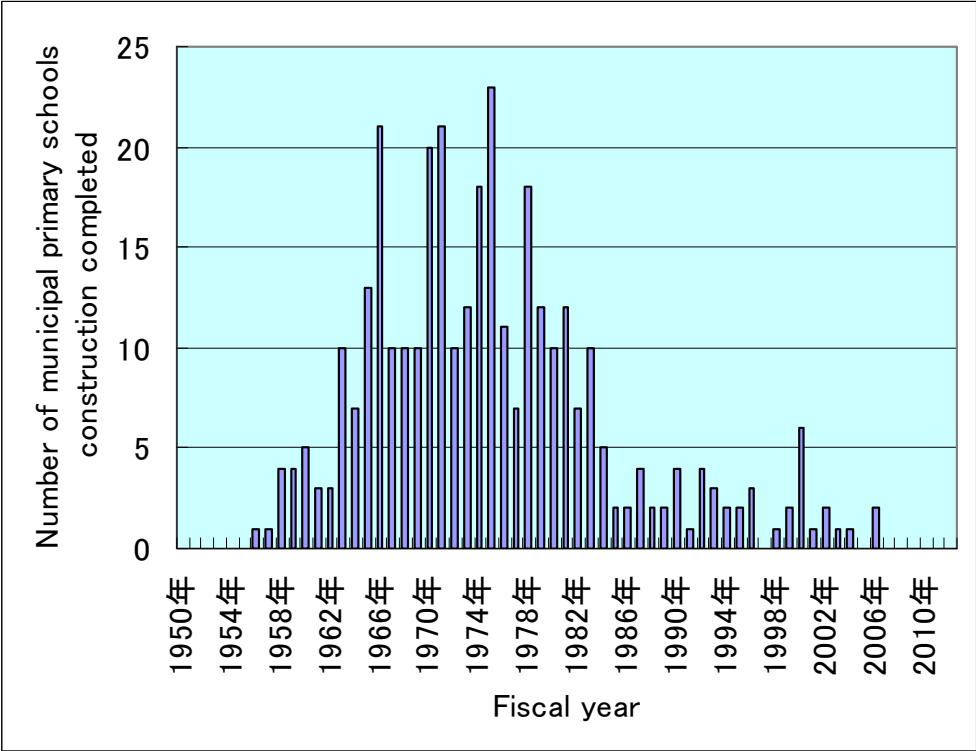


Figure 13: Chart of number of municipal primary schools construction completed annually (fiscal year basis). Source: White paper of management of public buildings by the City of Yokohama 2013

7. Conclusion

Although the majority of Japanese local governments lost confidence in local initiatives using the LDE system, some other countries³⁰ still retain similar systems; even Japan has one exception still operating in downtown Tokyo. Many high-rise residential towers began to appear in the water-front area of Tokyo's Koto Ward, where the construction of business and commercial developments accelerated, making it a sub-center of the Tokyo Metropolis. A shortage of school facilities emerged in high-rise towers. Koto Ward is a high-density area that lacks suitable school sites. In 2002, the Ward government enacted a by-law that

requires housing developers to attend negotiations and, simultaneously, made an LDE system that requires developers to pay 1.25 million yen per residential unit as an impact fee for community facilities. Until now, no objection has been raised by the central government.

Disproportionate population demographics exists in Yokohama^{3 1} between districts neighboring Tokyo and those further away. Municipal expenses were allocated when it became necessary to build a new primary school in the Kohoku district (one of Yokohama's outlying areas) in 2016.^{3 2} This budget consisted mainly of municipal tax revenue, with was not derived from local exaction fees.^{3 3}

Asukata and Tamura framed the LDE system as a new planning tool correlating to environmental impact fees. To this day, there is no national regulation on development exactions. Even if local administration needs to receive funds from the central government for infrastructure-related development, there are no reliable channels to obtain such support. It can be said that there are two kinds of responses to this situation: one is to react independently to local issues, and the other is to wait patiently for help. The happiness of citizens is greatly dependent upon these reactions. Therefore, it is significant that Asukata and Tamura independently formulated a local response that lasted for almost 40 years, despite incessant demands for reform from the central government. Throughout the course of implementing the LDE system, Tamura had two visions; fair obligation by all parties concerned and consistency from committed local government planners. It seems that these two visions have upheld by young planners of the Yokohama city government for decades after Tamura left office. Their achievement is worthy of significant praise from citizens and governing officials alike.

Since 2005, the year after the LDE system of Yokohama ended, the population of Japan began to decrease and Yokohama's population is predicted to begin declining in 2019. This decrease in population inevitably requires a reorganization of community infrastructure networks and service areas. As far as public schools in an area of population decrease are concerned, smaller schools with fewer pupils are to be combined into new, larger schools. Several examples have appeared within Yokohama, such as the city using public sites obtained through community obligation by the LDE system for reorganization, reserving areas for future use. Aside from the problem of schools, a severe decline of local budgets that maintain and renew community infrastructure such as roads and water systems has emerged. Like the early 1960s, it may be necessary for us to reconsider how to re-invest limited finances for our community because it seems impossible to maintain a universal quality of the environment for all areas within the municipal district.

Bibliography

- 1) Asukata, Ichio. *An overview of city management, Series of study of modern city policy XI*, Iwanami bookshop, 1973.
- 2) Saito, Sakae. *Reconciliation results of housing development issues by the council of Tama suburb development*, Research periodical of the Yokohama city, No. 19, 1968.
- 3) Seki, Hideo.: *An analysis of city institutions, Posthumous articles by Seki Hajime*, 1936.
- 4) Shibamura, Atsuki. *Seki Hajime as a pioneer of urban rationale*, Shouraisha publisher, 1989.
- 5) Tamura, Akira. *Making Yokohama city planning work with Tamura*, Gakugei publisher, 2006.
- 6) Tamura, Akira. *Urban development control by local development exaction system*, Ph.D. thesis at Tokyo University, 1981.
- 7) Naito, Atushi. *Volume of urban activities and related facilities, a challenge toward the residential volume restriction*, Journal of Architecture and building science Vol.88 No.1066, AIJ, 1973.
- 8) Tokyu railways corporation. *Tama country and town development, its 35 years history*, 1988.
- 9) Brad K. Schwartz. *Development Agreements: Contracting for Vested Rights*, 28 B.C. Env'tl. Aff. L. Rev.719 (2001), <http://lawdigitalcommons.bc.edu/ealr/vol28/iss4/13>
- 10) Tao, Ryousuke. *Negotiation, agreement, and collaboration-a study of American development agreement*, Administrative Law No. 2, pp.66-112, 2013.
- 11) Ohnishi, Hiroshi. *Political parties and bureaucrats of modern cities as part of Yokohama city research*, Yurindo publisher, 2004.
- 12) Nishio, Masaru. *Politics and administration under depopulation and congestion situation*, Year book

- of politics academy, Japan politics academy, 1977.
- 13) The city of Yokohama, *Municipal policy formulation paper of revision of the LDE system signed by the mayor Saigo*, 1980, <https://www.machi-initiative.com/research-materials/> (Accessed March 10, 2018)
 - 14) The city of Yokohama, *Municipal policy formulation paper of community obligation off-site allocation of the LDE system signed by the mayor Saigo*, 1981, <https://www.machi-initiative.com/research-materials/> (Accessed March 10, 2018)
 - 15) The city of Yokohama, *Municipal policy formulation paper of revision of the LDE system signed by the mayor Saigo*, 1984, <https://www.machi-initiative.com/research-materials/> (Accessed March 10, 2018)
 - 16) The city of Yokohama, *Municipal policy formulation paper of establishment of land coordination taskforce of the LDE system signed by the mayor Takahide*, 1991, <https://www.machi-initiative.com/research-materials/> (Accessed March 10, 2018)
 - 17) The city of Yokohama, *Municipal policy formulation paper of revision of the LDE system signed by the mayor Nakata*, 2004, <https://www.machi-initiative.com/research-materials/> (Accessed March 10, 2018)
 - 18) The city of Yokohama, *Overview and Statistics of municipal revenue transition by the Treasury Bureau*, specially prepared on request by the author, 2017, <https://www.machi-initiative.com/research-materials/> (Accessed March 10, 2018)
 - 19) The city of Yokohama, *A handbook of development control procedures for city planning officers*, 1979, <https://www.machi-initiative.com/research-materials/> (Accessed March 10, 2018)
 - 20) The city of Yokohama, *Municipal policy formulation paper of community obligation land transaction signed by the section chief of the treasury bureau*, 1979, <https://www.machi-initiative.com/research-materials/> (Accessed March 10, 2018)

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Disclosure Statement

No potential conflict of interest was reported by the author.

Notes on contributor

Toshio Taguchi (b. 1952) is an independent scholar working with his research peers in order to aggregate historical data about the modern town planning of Yokohama and provide young scholars and citizens access to archival information. He studied Urban Design in England and met Akira Tamura, an eminent urban planner who remodeled Yokohama. During his early career as a municipal urban designer, he co-organized a voluntary study group of young city government workers. He believes a progressive and inquisitive approach by workers is a necessity when creating independent local initiatives in the course of town-making.

Endnotes

¹ Before Yokohama, both Kawasaki in Kanagawa Prefecture and Kawanishi in Hyogo Prefecture had LDE systems. By 1975, they had expanded to 796 municipalities; when they reached their zenith of popularity in 1997, 1,598 municipalities had implemented LDE systems, accounting for 50% of all municipalities in Japan. Source: The Ministry of Construction, *Yearly statistics of 1997*. Yokohama was the first large city that had its power of development control delegated from the prefecture government according to the *Town Planning Law 1968*. Kawasaki and Kawanishi were regular cities that did not have the planning power of Yokohama; therefore, they required developers to negotiate with them before beginning procedures to apply for planning permission from the prefecture government. Among local governments and the central government, it was considered influential that Yokohama began the implementation of its own LDE system.

² The UK's *Housing and Town Planning Act*, a world first, was enacted in 1909, which indicates the public consciousness of town planning issues at that time. The Japanese *Town Planning Act 1919* shared the same rationale with its British counterpart in the *Housing and Town Planning Act 1909*. Masao Kanbe, a professor of Kyoto Imperial University, proposed new land tax legislation in early 1912 based on the British "Betterment" system. However, Kanbe could not attain approval for reform from members of the imperial assembly. Instead of that legislation, a form of "user pays" was introduced into the Japanese *Town Planning Act 1919*. To

this day, Article 75 of the *Town Planning Law 1968* allows for a form of “user pays” land use: “if a person receives a substantial benefit from a public town planning project, central government, prefecture governments and municipalities are vested with the power to require the beneficiary to meet a part of the project costs according to scale of the benefit it receives”. This provision can be used to require property owners in the vicinity of an infrastructure construction site who expect to realize a great benefit from the construction of infrastructure to pay an appropriate portion of its cost. An equivalent provision existed in Article 6 of the *Town Planning Act 1919*. Japan had applied this provision to a local project in the Osaka construction of the Midotsuji Boulevard and underground train system in the 1920s by Mayor Hajime Seki. The city of Osaka charged landowners along the boulevard for the improvement; however, it took decades to recover the costs and left a shortfall in its revenue.

³ Tamura was born in 1926 and passed away in 2010. He perfectly understood the structure of national ministries and their motivations and, also, their limitations, because he had worked for a ministry after his graduation from university. He then moved to the real estate section of the Nihon Life Insurance corporation which gave him a clear perspective on real estate business and developers’ logic. Another remarkable aspect of Tamura’s career was that, in 1963, he joined the first private planning consultancy in Japan that had been established by Takashi Asada, producer of the Metabolism Group and manager of the globally renowned architect Kenzo Tange. His well-known consultancy experiences included contributing to several large-scale projects across Japan that were commissioned by national agencies and local governments. His approach to planning displayed a strong desire for a wider perspective on society and was never parochial or limited exclusively to the needs of just a local area instead combined ideas from other countries. When thinking locally, Tamura also acted globally. In 2000, the Architectural Institute of Japan (AIJ) awarded Tamura the Grand Prize for “the establishment of a theory or technique and its implementation in city planning” (AIJ 2000), which was done in connection with Yokohama. Tamura is the only practical planner in the field of city planning issues to have won the AIJ’s Grand Prize while other recipients have all been academics or architects, such as Kenzo Tange.

⁴ Rather than demanding exactions as part of legal procedures, the city negotiated with developers to reach development agreements—in other words, seeking “exactions by agreement.” As a precedent to this new form of development agreement, the city signed a unique contract to protect the environment with the energy and power plant companies in Isogo Ward of Yokohama which had sought the city a permission to transfer land originally bought from the city to its affiliated power plant company in accordance with a basic agreement signed by both parties. The city then demanded to exercise their right under the basic agreement and reached an agreement that required energy and power plant companies to accept a measure to reduce pollutants generated from their new and old power plants.

⁵ However, the central government demanded that local governments end the operation of the LDE system, since the locally adopted enforcement system was considered to be illegal according to the national legislative framework. Finally, after several relaxation measures, the LDE system of Yokohama was abolished in 2004 and a new development control by-law was enacted to set standards for the technological aspects of construction. The new by-law did not contain provision for exaction.

⁶ I used official documents of the city government for this research. Whenever the city government wishes to establish an important policy, it typically had to formulate a policy-decision paper called a “Municipal policy formulation paper.” The draft is prepared by a junior officer and must later be signed by the senior officials concerned and, finally, the mayor. These policy papers are preserved in perpetuity by the Public Documents Preservation By-law and municipal policy formulation papers are available to the public through the *Municipal Information Disclosure By-law*. Supplementary documents are frequently appended to these papers, explaining the detailed background and reasons surrounding the issue discussed. I have also conducted interviews with the retired senior officials of Yokohama city government to locate appropriate official documents by using their comments as guidelines for a document search.

⁷ The first one is a thesis addressed to the International Planning History Society Yokohama 2018 conference held in July 2018 to be published on internet next year, and the second one is a research paper recently published by the Architecture Institute of Japan, *J. Archit. Plann.*, AIJ, Vol. 83 No. 753, 2173-2183, Nov. 2018

⁸ Japan had two reasons to implement compulsory education: the first was to strengthen the military with educated recruits from commoners and the second was to increase the quality of national intelligence for accelerating industrial revolution to compete with great international powers.

⁹ The mother company of TRC was “the Garden City Company” established in 1918 by Eiichi Shibusawa, an eminent Japanese economist. The Garden City Company intended to build the a residential area in Tokyo’s hinterlands modelled after Letchworth in Hertfordshire, and in 1923 started development in the current Denenchofu area, which has become one of Japan’s most luxurious housing estates.

¹⁰ Local politics and administration went largely unchanged and did not adapt quickly to the American model of democracy. An embargo order (that had been issued in 1946 and 1947 by the Japanese government on the advice of the Allied occupation forces) on hiring persons who had been at the top tier of political and economic communities in the public services, who were regarded as having taken part in the war, ended several years earlier than anticipated. This was because either a shortage of able leaders or the start of Korean War necessitated their return to public service.

¹¹ Once the restriction on immigration to the Tokyo area after the war was lifted in 1949, the greater Tokyo region started to expand.

¹² The toll motorway project had relatively low construction and maintenance costs compared to the railway system, and was later directly implemented by the central government as the current “Daisan Keihin motorway.”

¹³ TRC initially responded with the view that given that the municipality provided public educational facilities, it would have its residents’ pupils go to private schools owned by TRC.

¹⁴ A unique aspect of Asukata’s approach to resource management was to extensively utilise the concept of private-public partnerships. Tamura explained that public expenditure should mainly be limited to being used for basic community necessities and that other major investment should be managed largely by private financial power with support from the city. As such, the LDE system should be viewed as a kind of private-public partnership activity. The dire financial position of the municipality was remedied by revenue raised through local development exactions. Although Asukata was a leading figure in the Japan Socialist Party, his use of public-private partnerships went far beyond their strict socialist doctrine.

¹⁵ In 1973, Tamura as chief planner proposed the concept of municipal general hospitals based on private-public partnership: the city bought sites for planned general hospitals and subsidised part of the construction fees for private medical institutions that ran hospitals for public use.

¹⁶ According to the Town Planning Act 1968, town planning districts are designated as the areas which have to be planned, developed, and preserved as a unified entity.

¹⁷ It was widely said among the central government and business community, who did not share a desire to preserve the natural environment for citizens, that the whole of Yokohama should have been designated as an urbanised area due to its proximity to Tokyo and its high market value as a residential area.

¹⁸ A good example of housing development in a non-urbanised area can be observed in one done by the Keihinkyuko railway company: Kamariya housing development in Kanazawa ward of Yokohama, only 26% of the whole area of 275 hectares, was changed into urbanised area, being developed for housing of 20,000 planned residents, and the rest of which remained as a

non-urbanised area, and was used for public facilities and parks. Its planning permission was initially obtained in 1973 then suspended because of company's economic difficulties until 1978 when it was again permitted by the city.

Source <http://www.keikyu.co.jp/information/history/chronology/06.html>

^{1 9} This foundation was set up in 1984 as an affiliated organization of the city with the objectives of community planting, forest preservation, and promotion of greenery awareness by citizens. As of 2001, it had received a total amount of 1.3 billion yen donated by developers.

^{2 0} By the first review of the LDE system of 1972, the development control standing committee ("DCSC") administered by the Planning and Coordination Bureau, directed by Tamura, and development control executive committee ("DCEC") administered by development control section of Architectural Bureau had been established. The DCSC was in charge of large-scale and important development application which needed an executive decision from wider perspective of city administration, and the DCEC as concerned with regular applications.

^{2 1} The Planning and Coordination Section had initially been set up by mayor Asukata when Tamura entered the city administration. Although Tamura was the right person to become the head of the Bureau, Asukata placed a well-trained bureaucrat as its head and Tamura as the deputy head. Three years later, when the Planning and Coordination Section was expanded into the Bureau, Tamura became its head.

^{2 2} Tamura named this style of management "independent integration."

^{2 3} Although Yokohama has a long history as a trading port opened in 1859, Tokyo has always been the centre of Japan in terms of commercial and/or business activities. Yokohama is mainly used as a residential satellite to Tokyo, even if it has industrial and business districts of a limited size.

^{2 4} In 1978 an owner of apartment housing sued the city of Musashino demanding the return of an educational impact fee already paid amounting to 15 million yen. The owner was concerned over the payment of the impact fee since the city abolished the system of impact fee immediately after he/she had paid it. The Supreme Court decided in 1993 that impact fees were not illegal so long as they were paid by agreement, however an impact fee being required as a prerequisite for administrative process of concerned development was deemed an illegal administrative act. Then the Supreme Court returned the case to the Tokyo District Court and two parties, the city of Musashino and the owner of apartment housing, settled the case by paying 23 million yen from the city to the owner. Source: The city of Musashino, *Hundred years' history of Musashino city*, pp. 1029-1038, 2011

^{2 5} In 1978 Yamaki Construction Company, headquartered in Musashino city, sued the city of Musashino which had refused to supply municipal tap water to the apartment building which Yamaki had constructed and owned, because Yamaki had progressed the construction without gaining approval from its surrounding residents, which was a prerequisite of Musashino city's LDE system. The Supreme Court determined in 1989 that the refusal to supply municipal tap water was a last resort for the municipality as a measure to compel a concerned developer to obey the rule of LDE system, though the tap water was a basic necessity for residents of apartment housing and therefore the municipality had a responsibility to supply the water to any developments when requested to do. The final verdict was that the mayor of the city forfeited a penalty payment. Source: The city of Musashino, *Hundred years' history of Musashino city*, pp. 1029-1038, 2011

^{2 6} The Ministry of Home Affairs was in charge of local government governance, having been allocated much of the responsibility of the enormously powerful pre-war Ministry of Interior.

^{2 7} In 2001 as part of reorganization of national ministries, the Ministry of Construction and the Ministry of Transport were consolidated into the Ministry of Construction and Transport.

^{2 8} According to the city of Yokohama, "the Municipal policy formulation paper signed by the mayor regarding the LDE system in 1995."

^{2 9} Although a monetary calculation did not appear in the policy paper in 1995, the amount of municipal benefit can be calculated by comparison with the 87.3 billion yen by the end of 1980 which was shown on the other municipal policy formulation paper in 1980 by the city of Yokohama. It is therefore assumed that through exactions, the city benefited by approximately 500 billion yen in total between 1968 and 2004 when the LDE system was finally abolished.

^{3 0} In the United States, lawsuits between local governments and private developers regarding development exactions have occurred frequently since the early 1980s. When giving permission to developers, local governments have required a wide range of exactions such as impact fees for the construction of infrastructure and appropriate layout of planned buildings, including the installation of footpaths or parks on the planned site. State governments gradually began to support local governments' independence efforts through passing *State Enabling Acts* for development agreements and impact fees. The fundamentals of these *Acts* derive from policing power vested in a state's inherent duty to guard the welfare and security of their people. In state lawsuits and/or federal supreme courts, a strong relationship between causes and results is always essential. It should be noted that, when the central government of Japan tightened pressure on local governments regarding LDE systems, they used rhetoric to justify relaxation of LDE systems by demanding the elimination of obstacles of non-tariff barriers from the U.S. federal government. However, both federal and state governments have supported local municipalities in housing development control. Regarding England, the Community Infrastructure Levy ("CIL") came into force on 6 April 2010 through the *Community Infrastructure Levy Regulations 2010*—a planning change introduced by the *Planning Act 2008* as a tool for the local authorities in England and Wales to help deliver infrastructure supporting the development of their area. New housing developments that created net additional floor space of 100 square meters or more, or created new dwellings, are potentially liable for the levy. This new levy was agreed on in parliament and finally introduced after a long history of trial and error on betterment recapture, following the Uthwatt committee of compensation and betterment in 1942. Britain had a well-developed rationale for its betterment concept even before Uthwatt, when the *Housing and Town Planning Act 1909* proclaimed that local authorities may claim one-half of the increase in value of any properties that have value which has been influenced by a town planning scheme. The local authorities in Britain could exercise discretionary planning power when bargaining with developers for community contributions, such as the construction of community facilities or infrastructure. This kind of procedure had long been criticized by developers and land owners; therefore, a new development planning regime was needed. The introduction of CIL has increased the certainty of development and was welcomed by developers, but the reduction of planning powers of local planning authorities concerns some.

^{3 1} It is estimated that Yokohama city's population will continue to increase until 2019.

^{3 2} A new municipal primary school, seeking to sub-divide the large enrollment of the existing Hiyoshidai primary school in Kohoku Ward, is now under construction and will be completed in 2020. This was caused by a large housing development of 5.6 hectares on site; the developer has sold the school site of 9,700 square meters to the city. The city spent 8.3 billion yen for the acquisition of the land, including a construction fee with the central government grant of only 760 million yen.

^{3 3} There will be no financial allowance left for the reconstruction of existing urban infrastructure because social security expenses, such as pensions, have continued to expand exponentially.