

PROFILE OF AKIRA TAMURA----Yokohama City Planner

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This essay is a profile of Akira Tamura (1926-2010), and an attempt to locate him in the contemporary history of city planning in Japan. In the 1960s Yokohama faced various urban problems accompanying its rapid economic growth. Ichio Asukata, elected in 1963 as the new socialist mayor, tried to solve them through the local government in an era when the central government's power remained strong. Asukata then met Tamura, who was working for a local planning office, and asked for his assistance. Tamura proposed to Asukata a new concept for Yokohama as Japan's 'international management centre', and the implementation of the Six Spine Projects, including the Minato Mirai 21 development. Asukata decided to invite Tamura to join the city government. Tamura worked for Yokohama city for over a decade, and his planning vision was inherited by the city's officers. Moreover, his accomplishments have encouraged many planners and officers in other local governments. Tamura later lectured on urban policy at university, authored eleven books, and travelled to educate the public on city planning (or 'machi-zukuri'). In short, Tamura was a leader and pioneer in the field of city planning as an officer of local government.

Keywords: city planning, machi-zukuri, Yokohama

1. The Purpose of this Essay

This essay is to profile Akira Tamura (1926-2010), one of the great city planners of post-war Japan, and conduct a brief study of his accomplishments in Yokohama.

His influence on Yokohama's city planning remains powerful to this day. The 'Six Spine Projects', including '*Minato Mirai 21* (the redevelopment in the central portside area of Yokohama for the twenty-first century)', which he planned as a consultant in the mid-1960s and then worked on as a city officer from 1968 to 1981, have been central to Yokohama's development for the last half century since their inception. In 2000, the Architectural Institute of Japan (AIJ) awarded Tamura its 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, and other recipients have all been academics or architects, such as Kenzo Tange.

Since the middle of the nineteenth century, Japan had been undergoing rapid modernisation, but priority was usually placed on military and industrial development. The system of city planning was 'top-down' from the national government, and this was reflected by the City Planning Act 1919 remaining basically untouched until 1969 in Japan. Local planning originated from central bureaucrats and was approved by the Secretary of State without public participation. While such a centralised system might have been well-suited to immediate post-war physical reconstruction, it became clear that it did not assist in addressing questions of city planning which arose with the rapid economic growth from the 1960s onwards.

With the expansion of the Greater Tokyo Area (Tokyo and its three neighboring prefectures), the population of Yokohama grew rapidly (almost doubling in a decade), and its land use was disorganised. Environmental pollution and the lack of infrastructure reached a critical point. Ichio Asukata, elected in 1963 as the new socialist mayor, had to solve these issues. He devised a critizen-centric plan for Yokohama, then approached the planning offices at which Tamura was working for assistance.

Tamura proposed the 'Six Spine Projects', which were interconnected to develop and maintain the economy and citizens' lives in Yokohama, and advised the city to establish a new organisation called the "Planning and Coordination Section" (which later became the "Planning and Coordination Bureau"), because local organisations were divided by engineering field, which had resulted in sectionalism. Tamura was invited to Yokohama city in 1967, and quickly rose to become chief of the new section. However, even after Asukata and Tamura left Yokohama, the Six Spine Projects were continued by the successive mayors and the local officers, who understood that those projects were necessary for Yokohama.



Tamura went on to become a of Hosei University and lectured on urban policy at the Faculty of Law. He also travelled around Japan and contributed to educating the public on city planning issues until his death.

The purpose of this essay is to describe and evaluate Tamura's accomplishments in city planning. Although he is well-known by Japanese planners, there are few studies on his accomplishments as city planner at this stage. Perhaps it is too early to evaluate his contribution as only eight years has passed since his death, but in this IPHS Yokohama conference in 2018, we will try to review his work.



Figure 1: Photo of Akira Tamura sitting at the Dockyard garden of Landmark tower, MM21, Yokohama. Source: Photographer Hideo Mori, Producer Tadashi Machiguchi

2. Early Life

Akira Tamura was born on 25 July 1926 in Tokyo as the third eldest son in his family, both of his parents being Christians of the non-church movement (Tamura 2009, p. 5). This movement was led by Kanzo Uchimura, an influential thinker in modern Japan and a well-known pacifist of the Russo-Japanese war era.

The Tamura family was not particularly wealthy, but was a typically cultured middle-class Tokyo family before the war.

As a child, he attended a primary school attached to the Aoyama Normal School (now a primary school attached to the Tokyo Teacher's University) and proceeded to the Municipal First Junior High School (now Hibiya High School), both of which remain prestigious schools in Tokyo. Tamura went to school by train, and visited a great



number of places reflecting his broad interests. Such experiences contributed to him becoming an active boy who liked railways, tourism, and geography.

However, he did not advance to the First Higher School (the premier high school in Japan for the elite before the war) in Tokyo, but instead went to Shizuoka Higher School, which took a few hours by train from Tokyo in 1944. He later explained this as because he 'liked to live outside Tokyo to broaden his horizons' (Tamura 2009, p. 130).

The war ended the following year and Tamura entered Tokyo University. He selected the Department of Architecture in the Faculty of Engineering, because architecture might be regarded as a broad field, encompassing arts and social science, rather than other engineering departments.

His graduation thesis was titled 'A Study of the Change of Structure in a Big City'. He joined the office of young Associate Kenzo Tange, who went on to become a world-famous architect. However, as Tange wished to be a master designer like Le Corbusier, Tamura did not totally align with his teacher's vision, whereas Takashi Asada, a staff member in Tange's office at that time, had a greater influence on Tamura. Asada was seven years older than Tamura, and also aimed to be a city planner.

At the time of writing his graduation thesis, Tamura had the goal of becoming a city planner, and it was natural that he would become a bureaucrat in the central government in order to achieve this. He decided to take the examination to become an advanced level of central bureaucrat, and passed it, becoming an administrative official.

Tamura first entered the Ministry of Transportation in 1950. However, he left fifteen months later and was then transferred to other several other ministries, although he also quit each of them 'less than two weeks later' (Tamura 2009, p. 234) because 'I felt uneasy about the elitism and sectionalism of the central bureaucracy' (ibid.).

In addition, Tamura attended the Faculty of Law, Tokyo University, while working as a national bureaucrat. This was because he considered knowledge of law would be necessary to city planning, and he succeeded in attaining a Bachelor of Laws. Then, after giving up the idea of working as a central bureaucrat, he decided to work for a leading life insurance firm, which was headquartered in Osaka.

As real estate was regarded as a good investment when the Japanese economy was recovering in the 1950s, the life insurance firm needed a specialist for real estate development. From this perspective, Tamura seemed eminently qualified because he had majored in both law and architecture. Tamura enjoyed a stable life for nine years, and married his wife Makiko, who was from the same Christian non-church movement.

However, he was not satisfied with his life as a salaried worker. When he was engaged, Tamura told his fiancée that he would leave the firm if he were given the chance (Suzuki 2016, p. 9). He wondered whether there would be a vocation for him elsewhere. He believed his then work in estate development only benefitted his firm, and was not what he wanted to do with his life. He visited Tange, his former teacher, to consult about his future.

Tange advised Tamura to visit Takashi Asada, Tamura's former superior, because he had just opened a consultancy office on city planning (ibid. p. 11).

Tamura visited Asada's office, but could not immediately decide whether to join the consultancy. He began working as a part-time member of staff, coming to Tokyo every weekend (Tamura 2014,p. 4). In January, 1963, Akira Tamura finally decided to leave his life insurance firm, and came back Tokyo to enter 'the Environmental Development Center', Asada's planning office.

In those days the private profession of city planner did not exist in Japan. Although Asada had just opened a planning office, its financial prospects were quite dim. City planning was regarded as the work of central bureaucrats, or a utopian designer such as 'the planning of the Tokyo Bay 1960', which Tange had just released.

It was at that time that Ichio Asukata, elected in 1963 as the new socialist mayor of Yokohama, approached Asada's office to ask for assistance.

3. An Adviser to the Socialist Mayor



In the 1960s, the Japanese economy was enjoying high economic growth, which was mainly driven by the heavy/chemical industrialisation and its growth rate continuing to rise by more than 10% annually. In 1968, Japan's Gross National Product (GNP) had come to be ranked the second in the world (Cabinet Office, 2018).

However, that economic growth brought with it urban problems common to big cities. For example, Yokohama, one of the main central cities in the Greater Tokyo Area, faced serious issues: rapid population growth, public pollution and traffic issues.

The population of Yokohama grew from 951,187 in 1950 to 1,788,915 in 1965 (Yokohama city 2010, p. 4), and most new migrants settled in the inland countryside districts. The Japan Housing Corporation and private developers built many new towns, but this led to financial difficulties for the local governments as it was their role to supply the necessary infrastructure such as roads, parks, waterworks, drainage, and schools.

Yokohama also had other problems, such as public pollution. There was a coastal heavy industrial zone (the '*Keihin Industrial Zone*') running along the Tokyo Bay in Yokohama. Those industries discharged significant volumes of waste water and exhaust, causing complex environment problems, although the industries were the cornerstone of the local economy.

The original identity of Yokohama as a port had also been changing. As Yokohama was the biggest port in Japan before the war, it was an international exchange centre for trade and people. Moreover, as the distribution system changed after the war, Yokohama's superiority as an international port had been in decline, although the increasing container loading and unloading caused traffic jams in the city.

It was against this background that Ichio Asukata, a socialist politician from Yokohama well known as a pacifist advocating a "nonalignment policy" for Japan, won the mayoral election in 1963. Asukata's solution to the urban problems was that local government should have the power to devise citizen-centric city planning by itself. Asukata's interest in city planning differentiated him from other Japanese socialists of the era. This was why Asukata went on to win the mayoral election a further four times, and was supported by even conservatives in the city council (Endo, T. 2016, pp. 34-35).

Asukata consulted with Narumi, his young political adviser, and decided to approach Asada to help him with his vision for city planning. Asada agreed and nominated Tamura to be in charge, because Tamura was the premier planner in his office. Coincidentally, Tamura had recently moved into a state-owned residential building near Yamashita Park in Yokohama.

Tamura met Asukata for the first time on a ship sailing around the Yokohama Bay to study the port situation, and they were very much impressed by each other. "Mr. Asukata was a frank man and looked easy to talk to", Tamura recalled (Suzuki 2016, p. 12); and "Tamura pointed out the townscape of the port, and I agreed with his opinion" wrote the mayor later (Asukata 1987, p. 55).

Asukata, Asada, Narumi, and Tamura had several meetings, and decided upon the new concept of Yokohama as Japan's 'international management centre'. Tamura consolidated and evaluated their plans in 'the Report for the Basic Study for the Yokohama's Future Planning' (1964).

According to the report, Yokohama had three faces: a port city, an industrial city and a residential city. These were Yokohama's three identities, which presented key issues in city planning.

The Six Spine Projects were proposed in the report, because the practical forms of the projects had to be implemented as promises to the citizens. There were in fact originally seven projects, but these were reduced to six as two could be consolidated after a careful review within the city government. Thus the Six Spine Projects were proposed to the City Council in February 1965, namely: the redevelopment central habourside area (later named the '*Minato Mirai* Project'), Kanazawa reclaimed land, Kohoku New Town, highways, underground subway lines, and the Yokohama Bay Bridge across the Yokohama port.

Asukata also tasked Tamura with preparing a pamphlet to report to the citizens, because the mayor wanted to propose the Six Spine Projects to citizens directly, elicit their opinions carefully, and promise to implement the projects. "The pamphlet should be written in a manner that it can be understood by citizens quite easily", Asukata asked Tamura (Tamura 2006, p. 60). The pamphlet was written by Tamura and it took the title 'The City-Making of Yokohama' (1965).



Asukata thought that it was necessary to establish a new section in charge of the Six Spine Projects in the city government, because the projects would require coordination across several bureaus and sections. It was a task force, under the mayor directly, to plan a city and coordinate the various concerned bureaus to implement the projects. About thirty young staff from the various bureaus came to work in this section which was named the "Planning and Coordinating Section". Moreover, Asukata thought this section needed a new leader as a professional city planner, and invited Tamura to be a key figure in the section. Tamura accepted this position and later became section chief. Moreover, when the section was extended to become a bureau, he became its head in the 1970s.

Tamura's war as a city planner/officer in Yokohama for thirteen years had just begun.

4. 'Tamura's War'

Later Tamura wrote about his work in Yokohama in two books, 'Making Yokohama City'(1982) and 'Akira Tamura's War: towards a citizen's government' (2006). In both books, Tamura wrote that his first challenge in Yokohama city was the conflict with the national bureaucracy over the highway route in 1968.

It was planned that the metropolitan highways would be extended from Tokyo to Yokohama at the time, and an overhead route was planned to pass across the center of the city without public inquiry. It was clear that the associated interchange would damage the visual amenity of the port and reduce park area. As Asukata knew the situation, he asked Tamura to negotiate with the central government to change the plan. Tamura visited the Ministry of Construction to meet relevant bureaucrats, including the assistant secretary of the Ministry, and eventually succeeded in having the plan changed. The highway's structure was changed from an overhead highway to one that was half subterranean, and the new interchange was relocated.

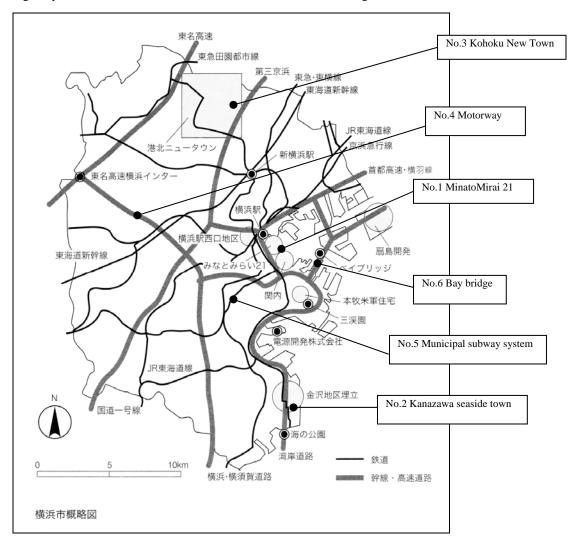




Figure 2: Map of Yokohama and the location of "Six Spine Projects" and the other projects. Base map source: Tamura, Akira. *Making Yokohama city planning work with Tamura*, Gakugei publisher, 2006, page 17

Tamura tackled another problem: the return of development profits from residential development to the local government. Although this was not facilitated by the City Planning Act as it then was, Tamura studied planning laws on betterment levies in advanced nations and even domestic examples. He began by negotiating with the Tokyu Railway Company, a large private developer in Japan, which was developing 'garden cities' (although they were mainly residential towns intended to envelop the new railway to the centre of Tokyo) in the north of Yokohama. Tamura successfully persuaded Tokyu to compensate the city for the costs of infrastructure, because good infrastructure was necessary to realise 'garden cities' envisioned.

After this success, Tamura extended this concept to an administrative guideline seeking legal agreements to make contributions of land or pay betterment levies prior to development permission being granted. Although some claimed it could be against the law as it then was and there were some lawsuits were filed, most verdicts were favourable towards local governments. The "Local Development Exaction System" continued to be used in Yokohama city until 2004, even under conservative mayors.

Throughout his work, Tamura kept in mind the education of young staff in the Planning and Coordination Section. For example, a large drawing board was put in the centre of the room to encourage staff to meet and stay abreast of what colleagues were doing. He also published a 'Quarterly Magazine' to share information about planning and implementation across all officers in the Yokohama city. Moreover, Tamura established the first 'urban design team' within a local government in Japan (Kuniyoshi 2015).

He regarded these things as his 'war' in his books, which was fought not only against opponents outside of government, but also against internal colleagues in the city government.

However, for Yokohama it goes without saying that his biggest task was the Six Spine Projects, and above all, the central portside urban redevelopment.

As the former central portside district of Yokohama was damaged by air-raid attacks during the war, and most facilities had been condemned by the American army until the early 1950s, its restoration appeared to be an impossible task.

On the other hand, the area around Yokohama station had been restored quickly as the new centre of Yokohama, because of its railway accessibility. As the old and new centres were quite akin to each other, it was hoped that a consolidated and continuous centre could be established, however the space was interrupted the dockyard owned by Mitsubishi Heavy Industries, Ltd.

Asukata and Tamura considered this the most important task among the Six Spine Projects for Yokohama. They visited Mitsubishi to ask for the removal of the dockyard, and showed them the new Kanazawa reclaimed land as a relocation site. Mitsubishi was interested in the city's proposal, and Mitsubishi Estate Company, the biggest developer in Japan that belonged to the same financial clique, shortly began negotiations with the city.

Yokohama city and Mitsubishi reached an agreement on the removal of the shipyard in 1978. Tamura left Yokohama a few years after this, but the Minato Mirai 21 project went on; the redeveloped area expanded to 186 hectares by combining the neighbouring railway yard, the port areas, and newly reclaimed land. Although the present landscape of the Minato Mirai 21 district is not necessarily the same as the original plan by Tamura, the basic concept has not been changed (Taguchi 2016).

The other five projects were also commenced, and they were almost all completed by the end of the twentieth century.

When Tamura proposed the Six Spine Projects, many people were worried that Yokohama city did not have sufficient funds to complete them. However, Tamura always responded frankly by saying that city government did not intend to build only by itself, but that it would invite other sectors, including the public sector such as Japan Housing Corporation, and the private sector, such as Mitsubishi Estate Co. or Tokyu Railway Company Co., to be involved. It was important that Yokohama city take leadership in these projects, Tamura said (Tamura 2006, p. 60).



Half a century has now passed since Tamura proposed the Six Spine Projects. They have mostly been completed, and some of them have evolved, such as the extension of the subway route. However, it is noteworthy that the Six Spine Projects were able to survive and be implemented by the four mayors following Asukata, none of them being socialists. Moreover, the basic structure of the Six Spine Projects remained unchanged.

This stands in contrast to developments by other local governments along the Tokyo Bay spanning the 'bubble' era of the 1980s. Some of them were totally abandoned due to debt, and others remain financial millstones around the necks of local governments. The difference between those projects and Yokohama are the planning policy behind them, and the experience of the officers implementing them.

5. Later Days and Conclusion

Asukata won a fourth term in the election in 1975, and the following year Yokohama city reached an agreement with Mitsubishi on the removal of the shipyard. Everything seemed to be going well, but when the Japanese Socialist Party was decisively defeated in the election in the House of Councillors in 1977, Asukata's city government was marked to come to a sudden end. The socialists asked Asukata to become the new chairman of the party, and he agreed to leave Yokohama city.

Michikazu Saigo, the successor to Asukata, won the mayoral election backed by both conservatives and socialists in 1978. However, his background was as a central bureaucrat of the 'Ministry of Internal Affairs' during the war, and he had an essentially conservative approach. He removed Tamura from his practical duties, and appointed him to a leisurely post.

Saigo also transferred responsibility for the Six Spine Projects from the Planning and Coordination Bureau to other related bureaus, such as the Urban Planning Bureau and the Port Authority. The power of the Planning and Coordination Bureau was reduced, and it was soon annexed by the Finance Bureau. It seems fair to speculate that Saigo accepted the importance of the Six Spine Projects, but thought that they should not belong to a particular individual, such as Tamura.

Instead of remaining idle, Tamura set out write his Ph. D thesis on the "Local Development Exaction System", and after obtaining his doctorate, he became a professor of the Faculty of Law of Hosei University. He lectured on urban policy, which he continued to do for fifteen years. His lectures were based on his practical experience in Yokohama, which made a strong impression on his students (Endo, H.).

Moreover, he launched a campaign to increase public awareness regarding city planning by writing books, including 'Town-Making in Concept' (1987) and 'Town-Making in Practice (1995)'. In total, he wrote eleven books during his fifteen years at Hosei University.

From this time, Tamura used the term 'Town-Making (*Machi-zukuri*)' instead of 'city planning', because the latter sounds somewhat 'top-down' from the national bureaucracy, whereas the former conveys the idea of 'grassroots' activity by citizens. He also explained that 'town' has a more human scale than 'city'. It was pointed out that Tamura was one of the first academics to begin using the term '*Machi-zukuri*' before it became widespread (Watanabe 2011).

Tamura progressed his education of the public by going on a 'pilgrimage' all over Japan, lecturing citizens and local officers. For academics, attendance at such social events is usually the job of members of city planning committees and so on, but Tamura gave priority to citizens directly. Tamura himself supervised study groups on Town-Making in both Tokyo and Yokohama, consisting of citizens and local officers. Moreover, he was engaged in the foundation of the Japan Association of Local Government Policy Studies, which presents the Tamura Akira Award every year.

Tamura died at the age of 84, on 25 January 2010, with his wife at his side in a rest home in Izu, Atagawa district, Shizuoka prefecture. His life was filled with the pleasure he derived from city planning (or town-making) and his wife suggested that his faith in Christianity had a strong influence on him (M. Tamura 2012, p. 10).

In summary, we can tentatively understand Tamura's achievements in Yokohama's town planning in terms of three key aspects that drove a paradigm shift in local governance and planning. First, he pioneered the establishment of local initiatives and independent stance. Second, he promoted integrated methods of planning



which utilised all potentially available resources drawn from a variety of stakeholders. Finally, he emphasised the education and development of younger workers and assigned them important jobs that would encourage them to become responsible town planners and managers. Objective and scientific research activities concerned with Tamura's achievements have only been commenced by our organization and other scholarly work is planned to continue for several years to come. Besides his work in Yokohama, Tamura contributed to local Machi-zukuri groups and other local governments around Japan. We hope that we will be able to provide a full account and understanding of Tamura's legacy in this field in the near future.

From the nineteenth to the twentieth century big cities faced urban problems in western countries, and the local planners navigated the challenges of planning cities. Considering Tamura's achievement in Yokohama's city planning, he ranks among the pioneering planners and officers, such as Daniel Burnham in Chicago, in the modern city planning history of Japan.

Disclosure Statement

No potential conflict of interest was reported by the author.

Notes on contributor

Chihiro Tamura was the youngest brother of Akira Tamura. He worked as a director of a pharmaceutical laboratory. After retirement, he wanted to study more about human societies as well as the structure of towns and cities where people lived. He studied at a private school, which Akira had established, for about ten years. As Akira's planning activities for Yokohama city were vivid and unique in Japan, after his death many people interested in his field wanted to study more about his ideas or philosophy. Chihiro established this NPO Research Initiative to propagate Akira's vision and ideas.

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Bibliography

1. Architectural Institute of Japan: The Grand Prize of AIJ in 2000, 2000,

https://www.aij.or.jp/jpn/databox/2000/prize2000.htm, (inspected on 28/02/2018)

- 2. Asukata, Ichio. All Things Are in Flux: Memoirs by Yoshio Asukata, the Asahi Newspaper office, 1987
- Cabinet Office. GDP Statics, 2018, http://www.esri.cao.go.jp/jp/sna/data/data_list/kakuhou/files/h10/12annual_report_j.html (inspect14/03/2018)
- 4. Endo, Hiroshi. *The Hosei Years of Akira Tamura*, https://www.machi-initiative.com (inspected on 26/02/2018), 2015
- Endo, Tomoyo. 'How Did a Progressive Local Government Maintain and Stabilize Its Administration?: Urban Regime Analysis of the Asukata Administration of Yokohama City', Global Urban Studies, No. 10, 2017
- 6. Environmental Development Centre. *The Report for the Basic Study for the Yokohama's Future Planning,* unpublished, 1964
- 7. Kuniyoshi, Naoyuki. '44 years of activities in the urban design team in Yokohama', Architectural Journal, No. 1243, 2015



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- 8. Narusawa Hikari. 'Prof. Tamura's Backbone', Review of Law and Political Sciences Vol. 108-04. 2011
- 9. Suzuki, Shinji. 'Akira Tamura and His Years', Some Essays by Akira Tamura, Shunjyu-sha, 2016
- 10. Taguchi, Toshio. 'The Process of the Implementation in the Minato-Mirai Development', AIJ Collected Papers 2016, 2016
- 11. Tamura, Akira. Making a City of Yokohama, Chuou Koron Publishing Co., 1983
- 12. Tamura, Akira. Town-Making in Concept, Iwanami Publishing Co., 1987
- 13. Tamura, Akira. Town-Making in Practise, Iwanami Publishing Co., 1999
- 14. Tamura, Akira. Akira Tamura's War: Towards the Citizen's Government, Gakugei Publishing Co., 2006
- 15. Tamura, Akira. An Original Landscape for Tokyo People, Kobunsya Publishing Co., 2009
- 16. Tamura, Akira. '*Speaking of Takashi Asada*', *Asada Takashi---His biography*, edited by Katsu Sasada, Ohm Publishing Co. , 2014
- 17. Tamura, Makiko. 'A Vocation of My Husband was Machi-Zukuri', Journal of the Japan Association of Local Government Policy Studies, Vol. 25-1, 2012
- 18. Watanabe, Shunichi. '*The Logical Structure of the definition of Machi-Zukuri*', Journal of the City Planning Institute of Japan, Vol. 43-3, 2011
- 19. Yokohama city. The City-Making of Yokohama, Yokohama city government, 1965
- 20. Yokohama city. *The Change of Yokohama's Population*, 2000, http://www.city.yokohama.lg.jp/ex/stat/jinko/ayumi/pdf/honbun.pdf (inspected on 28/2/2018)