ゼンリン住宅地図から見る川越伝統的建造物群保存地区の建物用途の変化

Changes of Building Uses in Kawagoe Historic District based on the Zenrin Residential Maps

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1. Introduction

(1). Background

Since the 1960s, a series of systems and policies for the protection of historical buildings and cultural heritage have emerged in Japan, such as the Ancient Capitals Preservation Law, the Law on the Maintenance and Improvement of Historic Landscape in a Community, and the system of the important preservation district of historic buildings.

The Kawagoe Historic District is one of the important preservation districts of historic buildings which was selected in 1999. In the historic district, there are about three hundred buildings, including more than one hundred traditional buildings. These buildings include both unique warehouse-style buildings and Western-style buildings built since the modern era. The historical development process of Kawagoe can be seen in these buildings, which can also reflect the openness and tolerance of Kawagoe citizens and the spirit of keeping up with the times.

Since the 1970s, many local people have been engaged in historic district preservation activities to preserve Kawagoe's unique architecture and landscape. As a result of these activities, some regulations and plans related to preserving historic districts have been developed. These ordinances and plans have promoted the historic district's development and brought some changes to the district, including changes in the use of buildings.

(2). Research Objective

The purpose of this thesis is to summarise the process of change in the Kawagoe Historic District based on data from residential maps and statistics on building uses within the historic district in each era.

The Kawagoe Historic District experienced a period of depression after the 1950s, and the development of tourism has since revitalised it. By investigating the changes of historic districts, we can understand the influence of various preservation activities of historic districts, which can provide a reference for making appropriate policies when promoting the revitalisation of the district.

(3). Research Methodology

The research methods of this paper are the literature survey, field survey, and data analysis.

First, learning about policies related to historic districts and the history of Kawagoe by literature survey. Second, conducting a field survey on the current status of Kawagoe's historic district. After that, statistics on changes in building use in the Kawagoe Historic District through the Zenrin residential maps. The residential map data shows the name of the building owner and the name of the store. However, sometimes it was not very clear to distinguish the specific use. Therefore, it was necessary to use the residential map and the Google Earth and Google Maps time slider feature. Finally, Using ArcGIS to organize and analyze the changes in Kawagoe's historic district based on data from the Zenrin residential maps and Google Maps.

2. Kawagoe Historic District

(1). Introduction of Kawagoe Historic District

The Kawagoe Historic District is located in the Kanto region of Japan, in Kawagoe City, Saitama Prefecture, 30km from Tokyo. The historic district covers an area of 7.8 hectares from the Fudanotsuji intersection to the Nakacho intersection. Taking the Chuodori(中央通り Central Street) as the core, the length from south to north is about 430 meters and the width is about 200 meter. The area of the Kawagoe Historic District includes the whole district of Saiwaicho, and parts of 1 Chome Motomachi, 2 Chome Motomachi, and Nakacho.



Figure 1. The Location of Kawagoe Historic District

The history of the Kawagoe Town can be traced back to the 15th century. In 1457, Oota Doshin and his son Oota Dokan (太田道真、道灌) built the Kawagoe Castle (河越 城) at the eastern end of Musashino Plateau (武蔵野台 地), which established the original form of Kawagoe. Kawagoe once had a big fire in 1893. When it was rebuilt, local merchants built many warehouse-style buildings(蔵 造り) to prevent fire. By 1907, the streets in the warehouse-style buildings were formed in Kawagoe. Since the Taisho era (1912-1926), many modern buildings Western-style and townhouses with Western-style facades have also been built. The buildings of different times coexisted harmoniously, forming a unique style in Kawagoe.

The district was selected as the Important Preservation Districts for Groups of Historic Buildings in 1999. There are 131 traditional constructions in the preservation area, including 114 architectures and 17 infrastructures. Nowadays, Kawagoe is also known as Koedo and attracts a large number of tourists to visit every year.

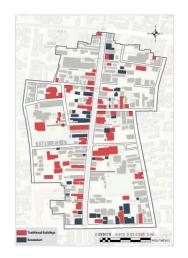


Figure 2. Traditional Buildings and Kura-zukuri Buildings in Kawagoe Historic District

(2). Protection Planning and Policy of Historic District in Kawagoe

The preservation of the Kawagoe Historic District can be seen as a microcosm of the process of preserving historic buildings in Japan. Since the 1970s, the citizen's movement at that time gave birth to several associations and organizations related to the preservation of historic buildings, and also brought attention to the preservation of historic districts. Subsequently, the Kawagoe City government and the local committee developed a series of policies and plans related to the preservation of the historic district. Such as the Kawagoe City Urban Landscape Ordinance, the Kawagoe City Traditional Building Preservation District Preservation Ordinance, and so on.

(3). Population and Industry in Kawagoe Historic District

According to the Plan of Kawagoe Traditional Buildings Preservation Area, the area of the Kawagoe Historic District includes the whole district of Saiwaicho, and parts of 1 Chome Motomachi, 2 Chome Motomachi, and Nakacho. Considering that the development of historic districts will also have an impact on the surrounding area, I searched the national survey data of the four blocks and counted the changes in population and industry in these four blocks.

(i). Population

According to the homepage of Kawagoe city, up to December this year, the total population of Kawagoe City was 353,199. In 1955, the population of Kawagoe was around one million. The population of Kawagoe grew significantly from the 1960s and leveled off from the 1980s. After 1995, the population growth rate of Kawagoe City began to decline due to the decrease in birth rate and the decrease in population mobility.

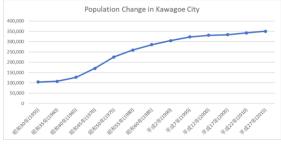


Figure 3. Population changes in Kawagoe City

The population distribution map of Kawagoe City in 2015 shows that the population of Kawagoe City is

mainly distributed around Kawagoe Station in the central part of the city and along the railway line in the northeast. (Figure 4)

The historic district is located in the central part of Kawagoe City, near the areas of high population concentration. According to the data from the national survey, from 1995 to 2015, the total population of the four blocks in which the historic districts are located showed a decreasing trend. Among the four blocks the populations of Saiwaicho, 1 Chome Motomachi and 2 Chome Motomachi all showed a decreasing trend, while the population of Nakacho gradually increased after 2000 and then decreases slightly after 2010. (Figure 5)



Figure 4. The population distribution map of Kawagoe City in 2015 (500m mesh)

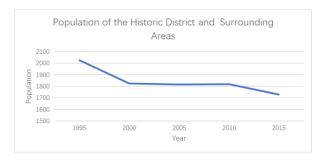


Figure 5. Population of the Historic District and surrounding areas from 1995 to 2005

(ii). Industry

Kawagoe historical district is located in the central part of Kawagoe City, with convenient transportation and a variety of occupations for residents. According to the data from the national survey, the number of employees in the four blocks has been declining from 1995 to 2015. But on the other hand, the occupation types of residents have become more and more diverse.

From 1995 to 2000, retail was the most popular occupation for residents. In 2005, the service industry, which consists of various industries such as

accommodation, education, and medical care, replaced retail trade as the industry with the largest number of employees. Employment in the retail sector has gradually declined over 20 years. At the same time, the number of people working in the service industry as a whole is on the rise, and the variety has also increased. It can be seen that from 1995 to 2015, the tertiary industry has been the main occupation for residents.

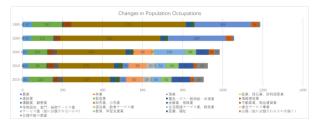
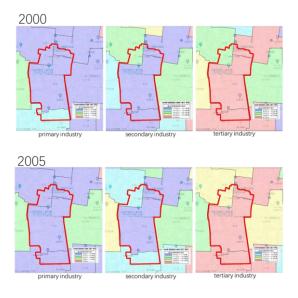


Figure 6. Changes in Population Occupations of the Historic District and surrounding areas

In terms of the number of workers by industry, the primary and secondary industries have been on a downward trend. The number of workers in the tertiary industry has been on an increasing trend from 1990 to 2005.

The number of people employed in various industries in the historic district and surrounding areas has been changing but has not changed significantly overall. The industrial structure of these four blocks has always been dominated by the tertiary industry. 2 Chome Motomachi has a larger proportion of secondary industries and a smaller proportion of tertiary industries compared to other areas. Between 2010 and 2015, the proportion of employment in the tertiary industry in the 1 Chome Motomachi and Nakacho areas had decreased



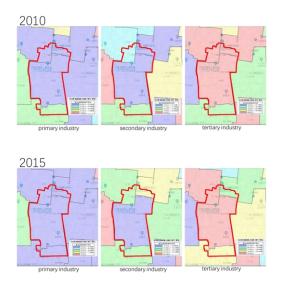


Figure 7. Changes in the percentage of workers by industry

3. Changes of Kawagoe Historic District

(1). The Current Situation of Kawagoe Historical District

As of 2020, there are approximately 287 buildings in the historic district. Among the buildings whose uses can be determined, there are 56 restaurants, 55 stores, 107 residences, ten buildings used for the service industry, 11 buildings related to religion, 20 buildings used for tourism, and nine buildings used for other purposes.



Figure 8. Building Uses in the Historic District (2020)

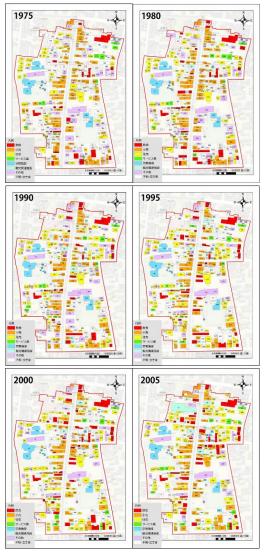
There are many different buildings in the historic district, except for the warehouse-style, which is typical of Kawagoe. There are also Japanese style buildings, western-style buildings, and Shin-kabe buildings.

There are three main roads in the historic district, namely Kawagoe Ichiban-Gai Street(川越一番街), Kanetsuki Street(かねつき通り), and Nakacho Street(仲 町通り). Restaurants and shops are mostly located on either side of these three roads, and warehouse-style buildings are mainly located near these roads.

Kawagoe historic district has been a commercial district since ancient times. In recent years, tourism in Kawagoe has been developed along with various conservation efforts.

(2). Changes in the Building Usages

Since the 1970s, with various preservation policies and various landscape restoration work sites, significant changes have occurred in Kawagoe historical districts. The district's history shows that after the 1970s, the historic district underwent a transformation from a commercial district mainly for nearby residents to a tourist-oriented district, and such transformation is also reflected in the changes in the architecture within the historic district.



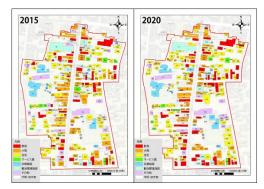


Figure 9. Changes in Building Use from 1975 to 2020

The number of stores in historic districts declined from 1975 to 2020. However, most of the shops catering to residents have been replaced by souvenir shops and speciality shops catering to tourists, especially those in Ichiban-Gai Street and Kanetsuki Street. At the same time, many traditional handicraft stores in the neighbourhood have been preserved to this day.

The number of restaurants is on the rise. The newly added restaurants are mostly clustered around Ichiban-Gai Street. After the landscaping work, the number of stores in Kanetsuki Street's vicinity has also increased significantly. Some of the old stores with a long history have remained open until today, and the main source of customers for the restaurants has changed from locals to tourists.

The service industry in the historic district is mainly hairdressers and caters to the neighbourhood. Since 1975, the number of buildings used for services in the historic district has gradually decreased.

The buildings classified as "other" are mainly those used for offices and clinics. The number of buildings being used for offices decreased significantly, while the number of clinics remained virtually unchanged. With tourism development, many residences in the historic district have been transformed into buildings that serve as both stores and residences.

The change in the use of buildings in the Kawagoe Historic District from 1975 to 2020 shows that tourism in Kawagoe has developed considerably in the last fifty years. To get a clearer picture of the changes in tourism, I counted the main customers for shops and restaurants in historic districts in 1980, 2000, and 2020. The statistical method is to use Google Street View and Residential Maps to infer the main customers served by the store based on the appearance of the store, the products sold

and the comments on the web. Since only data after 2012 can be seen in Google Street View's time slider function, data from 2000 and 1980 are judged based on residential maps and comments on the web. The shops and restaurants were divided into three categories: mainly for tourists, mainly for residents, and for both.

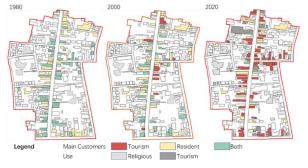


Figure 10. Changes in Main Service Targets of Stores and Restaurants

It can be seen from the figures that in the Kawagoe historic, tourist-oriented stores are concentrated in the vicinity of major roads and tourist attractions, especially on the Ichiban-Gai Street and Kanetsuki Street. From 1980 to 2020, among the stores where the main target group can be inferred, there has been a significant decrease in the number of stores catering mainly to residents and a large increase in stores catering to tourists.

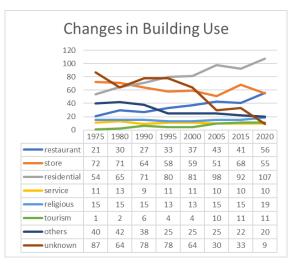


Figure 11. Changes in Building Use

45% 40% 35% 25% 20% 15% 10% 5%								
0%	1975	1980	1990	1995	2000	2005	2015	2020
restaurant	10%	13%	12%	15%	16%	17%	16%	20%
store	34%	30%	28%	26%	26%	20%	26%	20%
residential	25%	27%	31%	36%	35%	39%	36%	38%
service	5%	5%	4%	5%	5%	4%	4%	4%
religious	7%	6%	7%	6%	6%	6%	6%	7%
tourism	0%	1%	3%	2%	2%	4%	4%	4%
others	19%	18%	17%	11%	11%	10%	8%	7%

Figure 12. Changes in Building Use (%)

5. Conclusion and Recommendation

The change in building use shows that from 1975 to 2020, tourism in the Kawagoe Historic District has been growing with the implementation of various historic district preservation efforts. The historic district is becoming more and more developed in terms of tourism and connected to the outside world. Historic district preservation efforts promote tourism and bring vitality to the old district.

The residential map data shows the location of buildings, and the name of the building owners and the stores. Google Maps' Street View and time slider can distinguish the use and appearance of buildings in the same area at different times. Combined the residential map with Google Maps can analyze the process of change of an area in many aspects such as architecture and landscape. Also, it can be used to analyze the change process of individual buildings.

The transformation of historic districts is influenced by many factors and can be manifested in many different ways. The change of architectural use is not enough to reflect the complete process of change in the historic district. Using residential maps and Google Maps, further research can be conducted on the changes in the historic district, such as changes in historic buildings, changes in road structures, changes in the distribution of buildings, and so on. With these further studies, it is possible to have a more comprehensive understanding of the process of change in the historic district.

But at the same time, this survey method also has some shortcomings. For example, when investigating the main target groups of stores in historic districts, sometimes it is difficult to determine the main customer groups of stores only through the appearance of buildings and the information of residential maps. At such times, it is necessary to go back and search for additional information on the Internet. When there is no information or less information available online, it is impossible to determine the use of the building, thus affecting the accuracy of the data. However, this information can be quickly obtained by asking the store owner during the field survey. No matter how science and technology develop, on-the-spot investigation and face-to-face communication are irreplaceable.

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