Xymax Real Estate Institute
RESEARCH REPORT

Changes in the Use of Real Estate Over Time

Diversification of usages and changes in area characteristics in central Osaka

April 17, 2017

How real estate is used changes over time due to various factors including economic trends, industrial structure, lifestyle changes, and government policies. The source of such changes is the developments of each property, such as the replacement of aged buildings with new ones (re-building), conversion of existing buildings into new usages, or construction of new buildings on vacant land.

Although we can sense that the use of real estate has changed, which changes the impression of the streets, there are few surveys that "visualizes" the change in concrete figures. Therefore, Xymax Real Estate Institute (hereinafter, "Xymax REI") carried out a survey of central Osaka where change in real estate use has been seen in recent years due to the surge in inbound tourism demand and large-scale developments.

We hope these basic data on real estate use help many people, including not only individual owners, users, and investors of property but also policy-makers, in thinking of the future use of real estate.

Key Findings

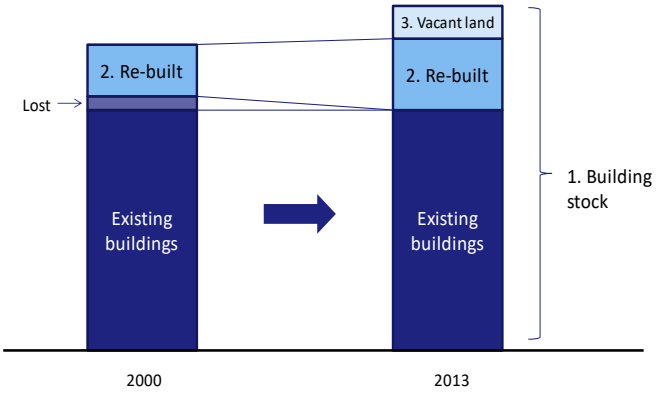
- In central Osaka, buildings have become larger and used more for purposes other than office.
- Many of the newly built office buildings are located north of Honmachi, mainly in Umeda, indicating that the center of offices is shifting north.
- There has been a return of population to the central areas due to a surge in the construction of condominiums.
- Commercial and accommodation facilities are increasing on the back of inbound tourism.

Introduction

In carrying out our survey, we used the Land Use Survey provided by Osaka city and looked at "1. Change in building stock" between 2000 to 2013 for the three central areas of Osaka (Umeda, Yodoyabashi/Honmachi, and Shinsaibashi/Namba) combined and studied the characteristics of each of the three areas. Then we looked at "2. Re-built buildings" and "3. Buildings built on vacant land," which are the sources of the changes in stock, to see the usages of the buildings that were built (**Figure 1**).

Furthermore, we studied the recent trends of buildings for offices, residences, and accommod -ation from data obtained independently and field surveys.

Figure 1: Image of Building Stock



1. Change in Building Stock (Gross Floor Area)

We first categorized the 21 municipal blocks in Osaka city's Kita ward, the 88 blocks in the Chuo ward, and the 10 blocks in the Nishi ward as "Umeda area," "Yodoyabashi/Honmachi area," and "Shinsaibashi/Namba area," respectively, and looked at the characteristics of the change in building stock from gross floor area (**Figure 2**).

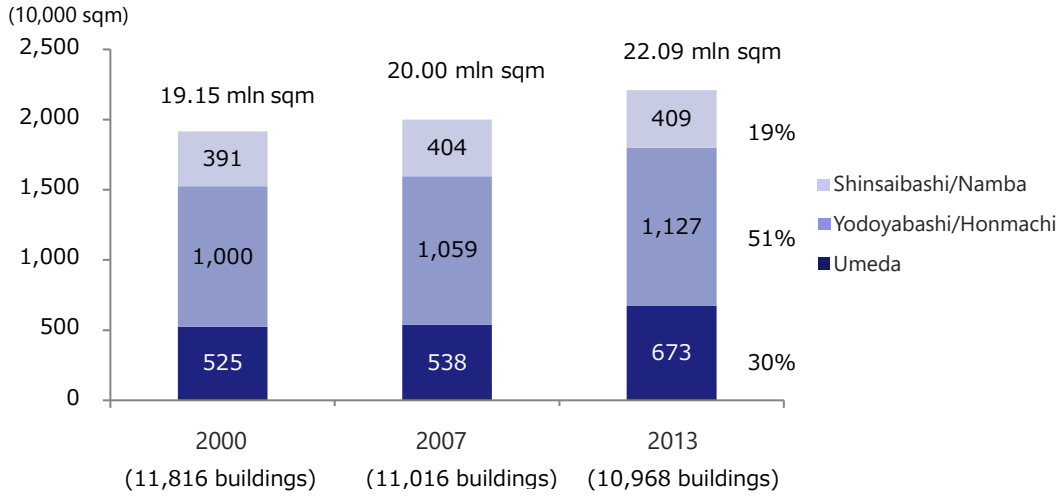
Figure 2: Target Areas

Map source: Google Map

(1) The entire three areas

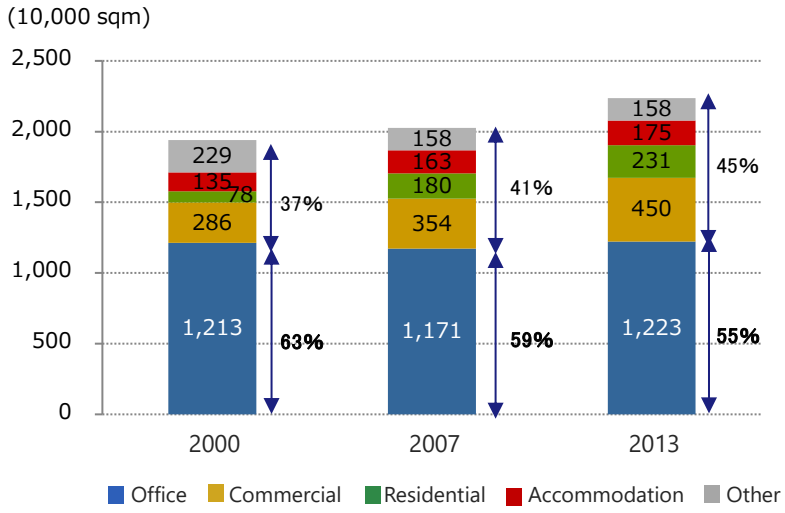
The total gross floor area in 2013 was 22.09 million sqm, with "Umeda," "Yodoyabashi/Honmachi," and "Shinsaibashi/Namba" accounting for 30%, 50%, and 20%, respectively. The number of buildings in the three areas combined decreased by 848 (7%) between 2000 and 2013, but the total gross floor area increased by 2.94 million sqm (15%) (**Figure 3**). We believe the increase in gross floor area was the result of using up surplus floor-area ratio due to re-building, increased floor-area ratio due to integrated design, alleviation of height restrictions on the Midosuji, and new developments in the Kita Yard, which used to be vacant.

Figure 3: Trend of the Total Number of Buildings and Gross Floor Area (Three Areas Combined)



When we look at the percentage of gross floor area by usage, office accounted for the most in 2000, at 63%. By 2013, however, commercial, residential, and accommodation increased, pushing down the percentage of office to 55% (**Figure 4**).

Figure 4: Trend of Gross Floor Area by Usage (Three Areas Combined)



Looking at the change in gross floor area by usage between 2000 and 2013, office showed hardly any change, while commercial and residential saw increases of 1.64 million sqm and 1.52 million sqm, respectively (**Figure 5**). Furthermore, the gross floor area in 2013 for commercial, residential, and accommodation use were 1.6 times, 2.9 times, and 1.3 times that in 2000, respectively (**Figure 6**).

Figure 5: Change in Area Size between 2000 and 2013

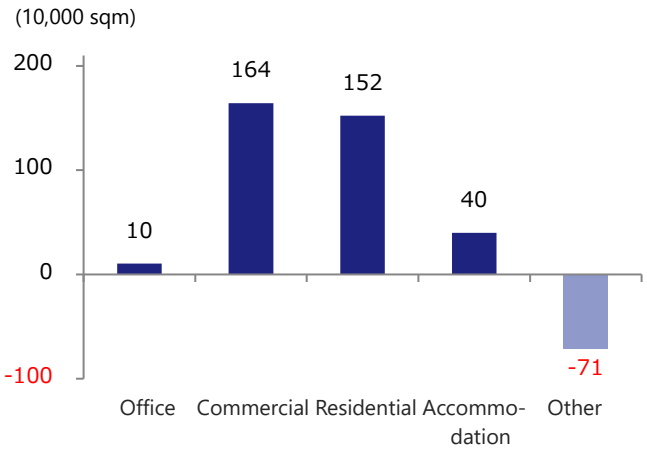
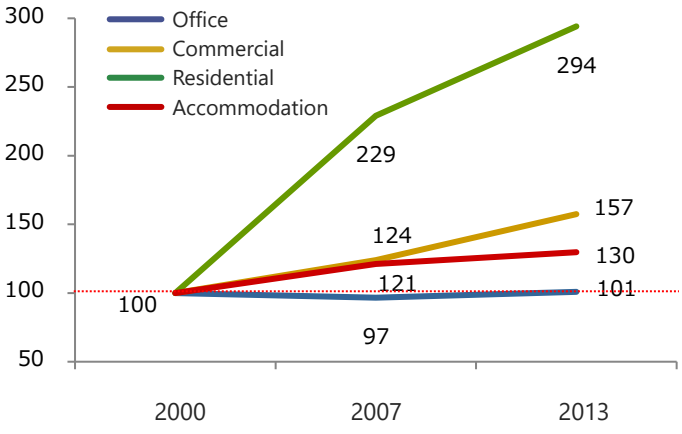


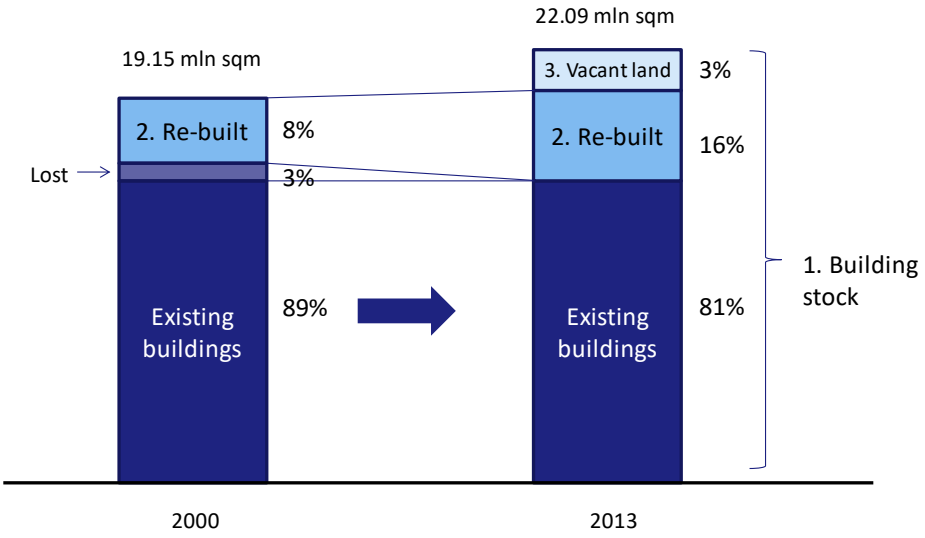
Figure 6: Change in Area Size (2000=100)



When we look at buildings of the building stock in 2000 that were changed in some way by 2013, 8% (based on gross floor area) was re-built and 3% was demolished. 89% of the buildings remained as they were. In terms of the percentage of stock in 2013, 16% of the buildings had been re-built since 2000, and 3% was newly built on land that had no construction on it in 2000. Although existing buildings showed no change in area size, the percentage of such buildings of the overall building stock dropped to 81% (**Figure 7**).

Figure 7: Percentage Mix of Building Stock (Gross Floor Area Basis)

(Image)



(2) Change by Area

Here we look at the change in the use of building stock by area.

① Umeda Area

The total gross floor area in the Umeda area, with a concentration of office buildings and large commercial facilities around Umeda Station, was 6.73 million sqm in 2013, an increase of 1.48 million sqm (28%) since 2000 (**Figure 8**). Since around the time of the development of Kita Yard, which is the area north of JR Osaka Station, re-building and new construction of large commercial facilities increased in the surrounding areas, as well as openings of flagship stores from the Kanto region. This resulted in a 1.37 million sqm increase in gross floor area of commercial facilities, 2.5 times compared to 2000. Residential properties, which used to be few in the area, have increased by more than 10 times due to the construction of tower condominiums (**Figures 9 and 10**).

Figure 8: Trend of Gross Floor Area in the Umeda Area

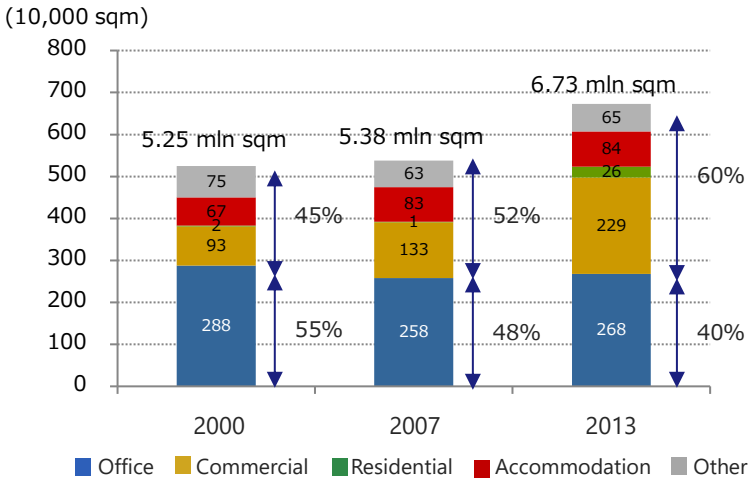


Figure 9: Change in Area Size between 2000 and 2013 (Umeda Area)

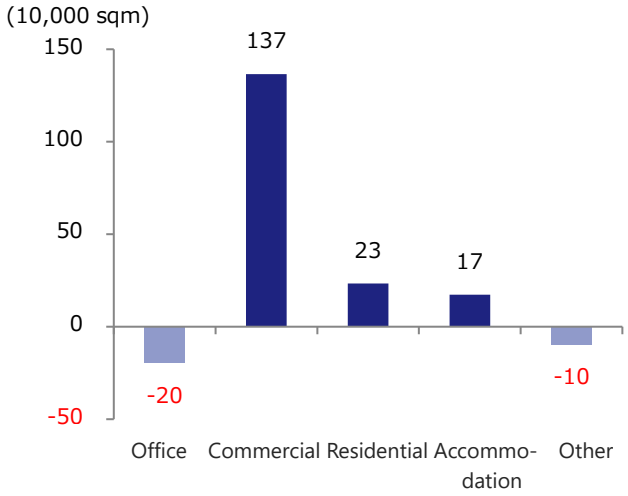
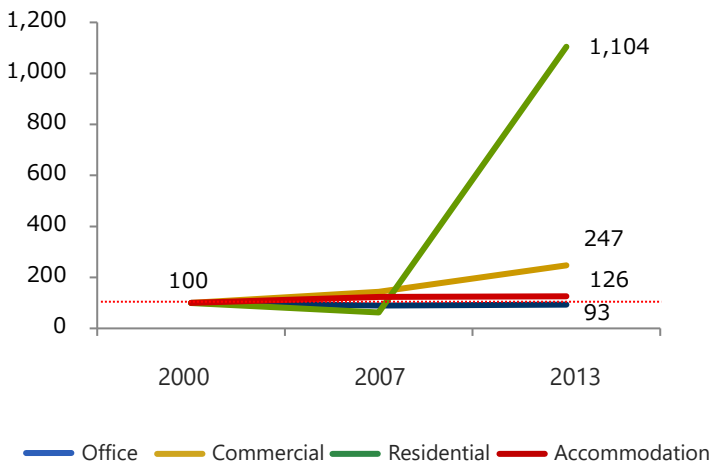
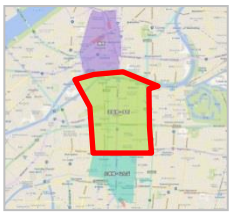


Figure 10: Change in Area Size (2000=100; Umeda Area)



② Yodoyabashi/Honmachi Area



The total gross floor area in the Yodoyabashi/Honmachi area, the center of offices, was 11.54 million sqm in 2013, an increase of 1.29 million sqm (13%) since 2000 (**Figure 11**). The growth of the gross floor area of offices has been roughly flat. There has been a notable increase in buildings for new usages, such as residential and accommodation, which increased in gross floor area by 1.03 million sqm, or more than 3 times, and by nearly 3 times, respectively (**Figures 12 and 13**). Commercial facilities saw an increase of 30%, which, in terms of industry, was an increase in retail stores and a decrease in wholesale outlets. We believe this was influenced by the increase in inbound tourism and changes in the distribution structure.

Figure 11: Trend of Gross Floor Area in the Yodoyabashi/Honmachi Area

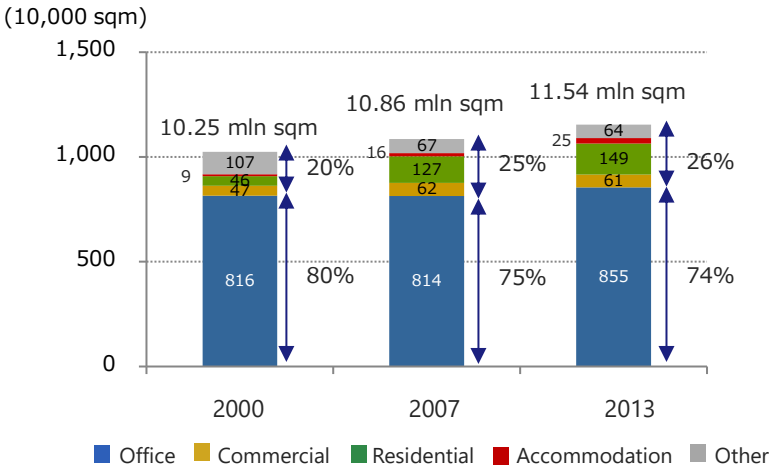


Figure 12: Change in Area Size between 2000 and 2013 (Yodoyabashi/Honmachi Area)

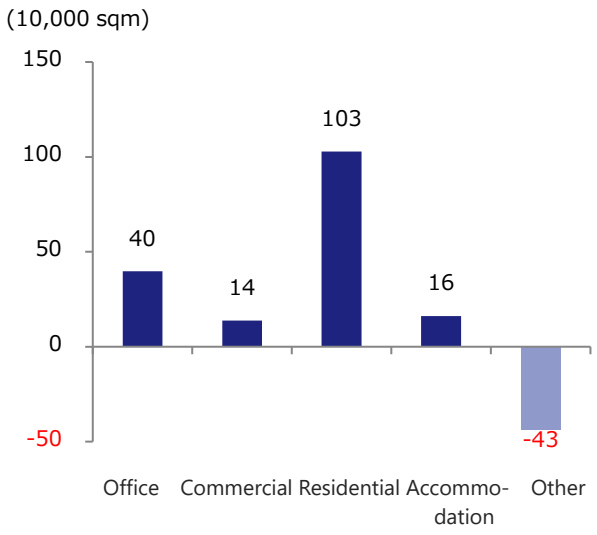
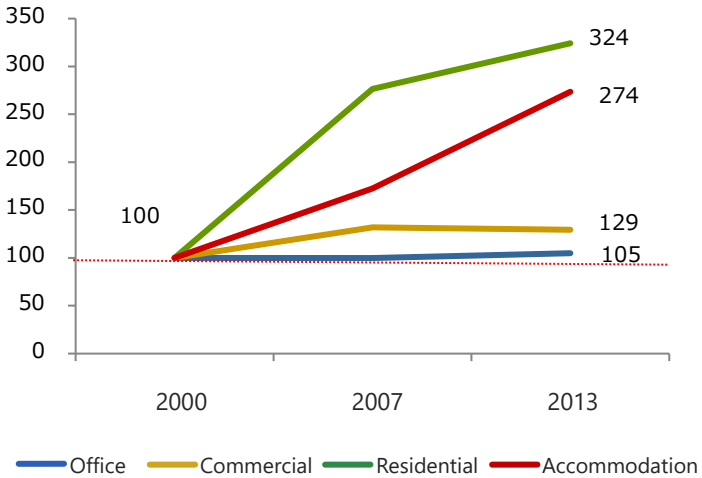


Figure 13: Change in Area Size (2000=100; Yodoyabashi/Honmachi Area)



③ Shinsaibashi/Namba Area

The total gross floor area in the Shinsaibashi/Namba area, which contains many commercial outlets, was 4.09 million sqm in 2013, an increase of 0.18 million sqm (5%) since 2000 (**Figure 14**). The gross floor area of offices decreased by 0.1 million sqm, or 10%. As in other areas, residential properties saw an increase in gross floor area, almost doubling since 2000. On the other hand, commercial and accommodation facilities showed no significant change, with the gross floor area of both facilities increasing by around 10% (**Figures 15 and 16**). In the surrounding areas of Namba which contain many shopping streets, the upper floors of stores are not effective in terms of attracting customers, resulting in cases where buildings were constructed below the maximum floor-area ratio.

Figure 14: Trend of Gross Floor Area in the Shinsaibashi/Namba Area

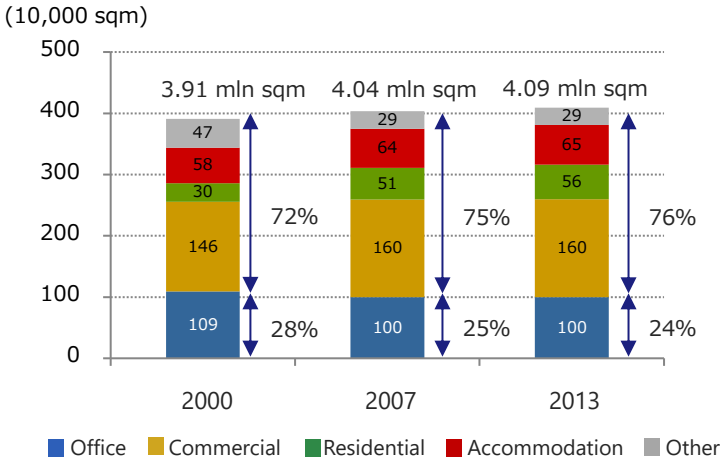


Figure 15: Change in Area Size between 2000 and 2013 (Shinsaibashi/Namba Area)

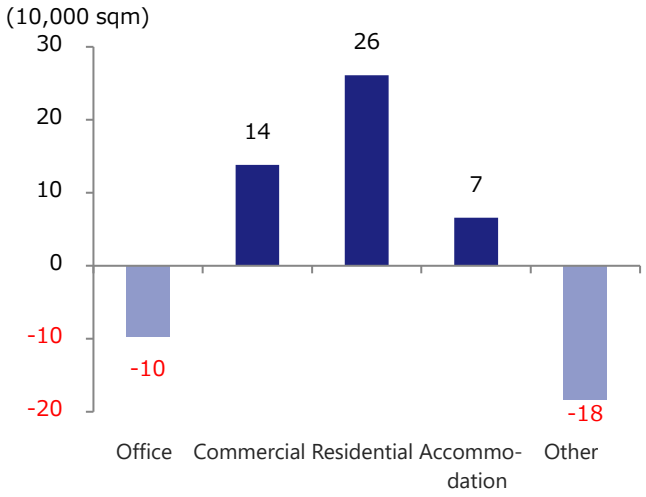
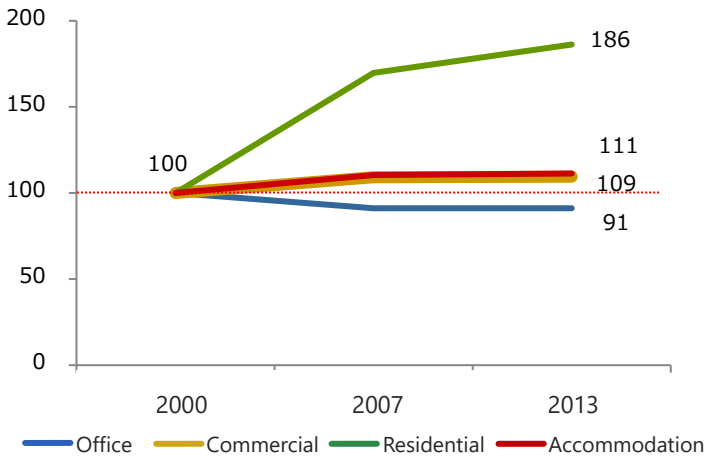


Figure 16: Change in Area Size (2000=100; Shinsaibashi/Namba Area)

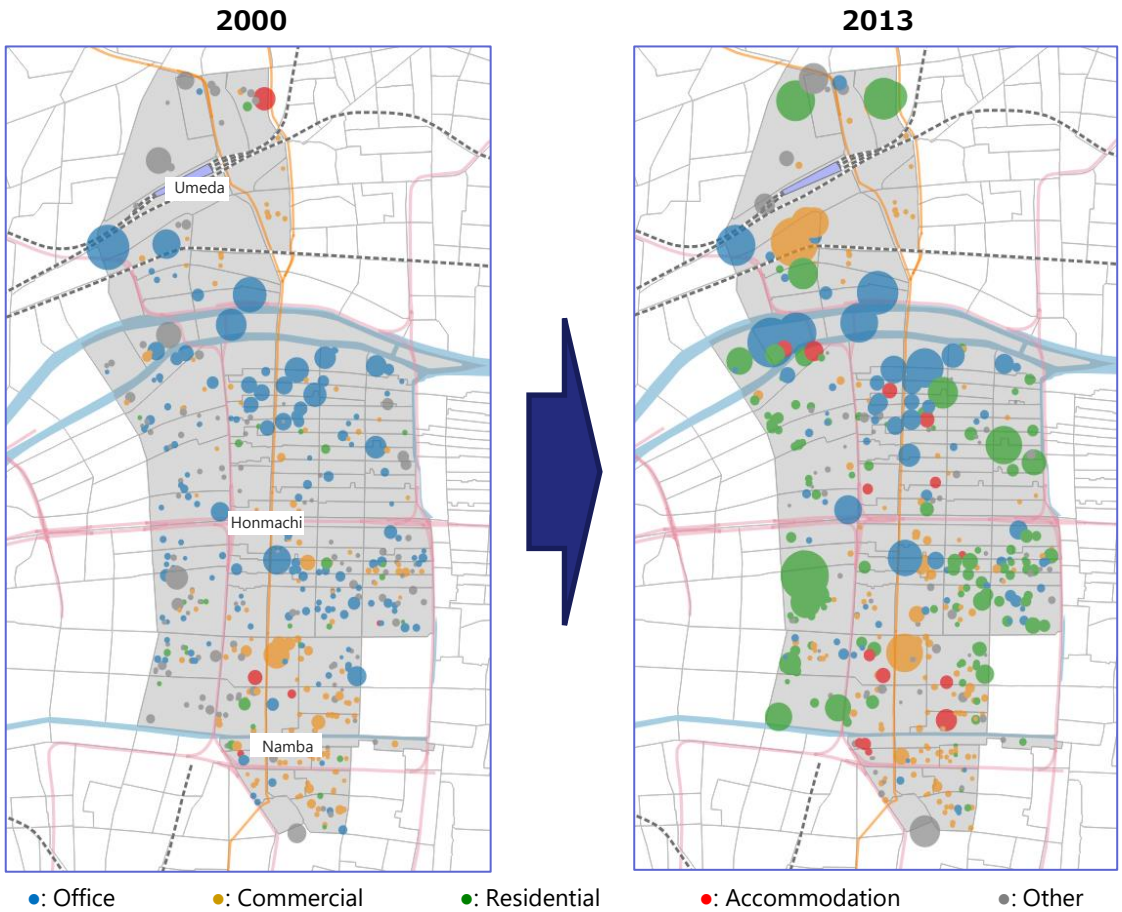


2. Changes Due to Re-building

Here we look at re-building, one of the sources of changes in building stock, which we examined in the previous section. **Figure 17** plots buildings that were re-built between 2000 and 2013 by usage. The size of the circles indicates the size of the building.

One of the characteristics of the changes during this period is that many of the buildings were re-built into larger buildings, and another is that the usages of re-built buildings have become diversified. Specifically, office buildings (blue circles) in the Umeda area and along the Midosuji became larger office buildings when they were re-built, while many of the office buildings in other areas were re-built for other usages. Commercial facilities (yellow circles) were re-built into several large facilities, but most were small-scale re-buildings in the Shinsaibashi/Namba area. Residential properties (green circles) increased in the peripheral areas, notably larger in size. Accommodation facilities (red circles) increased in the Yodoyabashi/Honmachi area and the Shinsaibashi/Namba area.

Figure 17: Re-built Buildings—Changes in Usage and Size



Figures 18 and 19 show the number of buildings that have been re-built and the change in gross floor area for each of the different usages. 763 buildings were re-built between 2000 and 2013, reducing the number of buildings to 580, while gross floor area increased from 1.55 million sqm to 3.43 million sqm.

In terms of the usage of buildings, many office buildings have been re-built for other use such as residential and accommodation. However, while the number of office buildings decreased by 138 (60%), many of them were re-built into large buildings, resulting in an increase in gross floor area by 50%.

Commercial facilities were often re-built to the same size. The number of buildings increased by 24 (10%), while gross floor area increased by 80% due to commercial facilities that were re-built into large facilities. Residential properties saw their number of buildings double and gross floor area increasing as much as by 30 times. This is influenced by the re-building of many existing buildings into tower condominiums. Accommodation facilities are few among the total, but both the number of buildings and gross floor area have nearly tripled.

Figure 18: Number of Buildings Before and After Re-building

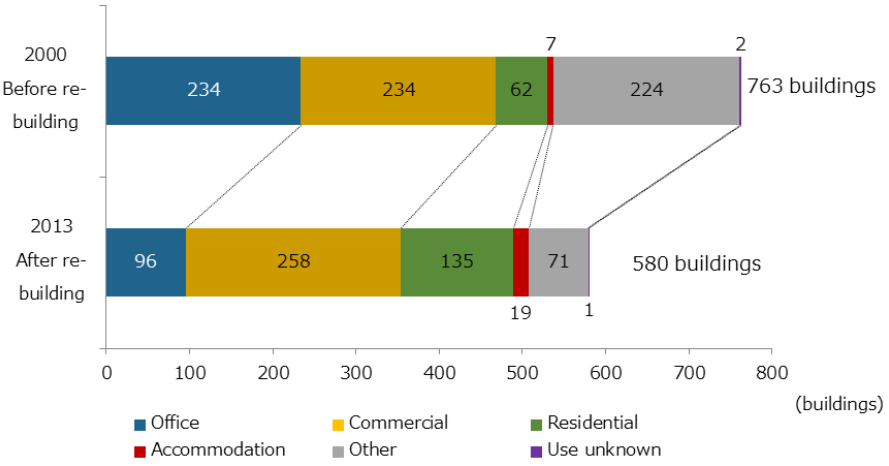
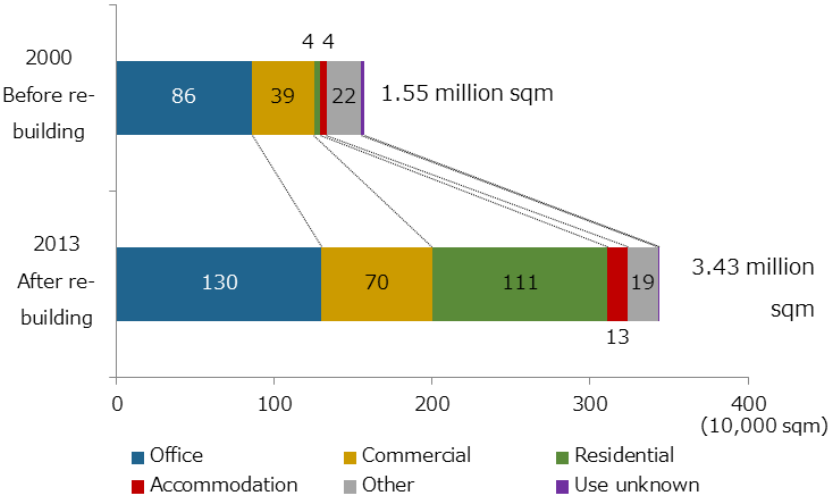


Figure 19: Gross Floor Area Before and After Re-building



3. Buildings Built on Vacant Land

Here we examine buildings that were built on vacant land,* another source of change in building stock. **Figure 20** plots the buildings that were built between 2000 and 2013 on land that had no construction on it in 2000 by usage. As in **Figure 17** that plotted re-built buildings, the size of the circles indicates the size of the building.

Large buildings are notable north of Honmachi, while residential properties and small commercial facilities were built in peripheral areas and the Shinsaibashi/Namba area, respectively. This trend is similar to that of re-building.

The number of buildings built on vacant land was 331. The breakdown is 84 for offices, 118 for commercial facilities, 65 for residential use, 10 for accommodation, and 54 for other purposes (**Figure 21**). The gross floor area is 0.75 million sqm, which is broken down to 0.29 million sqm for office use, 0.24 million sqm for commercial facilities, 0.14 million sqm for residential use, 0.05 million sqm for accommodation, and 0.04 million sqm for other purposes (**Figure 22**).

*We defined vacant land as land such as empty lots and open-air parking lots, where buildings have not been built.

Figure 20: Usage and Size of Buildings Built on Vacant Land (2013)

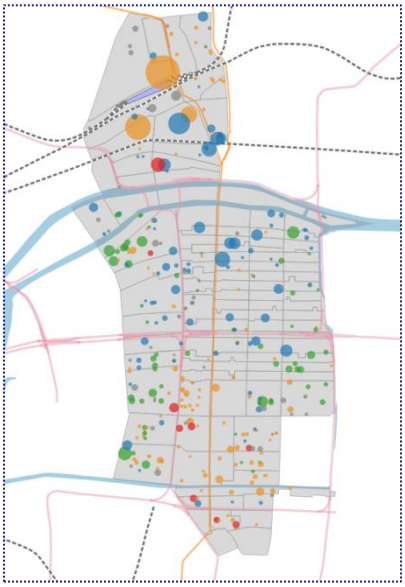


Figure 21: Number of Buildings Built on Vacant Land

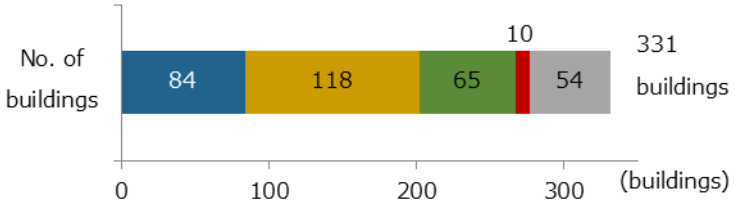
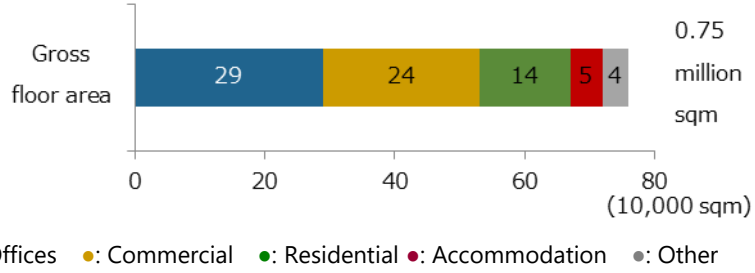


Figure 22: Gross Floor Area of Buildings Built on Vacant Land



Vacant land decreased by approx. 0.14 sqm between 2000 and 2013, with the percentage of such land of total land dropping from 7.6% in 2000 to 5.4% in 2013. The number of blocks has also decreased, as has the size of vacant land per block (**Figure 23**).

Figure 23: Change in Vacant Land

	2000	2013
Total area size within the area	6,345,586㎡	6,344,849㎡
Of which, vacant land	483,227㎡	343,402㎡
Percentage of vacant land	7.60%	5.40%
Number of blocks	1,218	1,052
Area size per block	396㎡	326㎡

4. Recent Trend

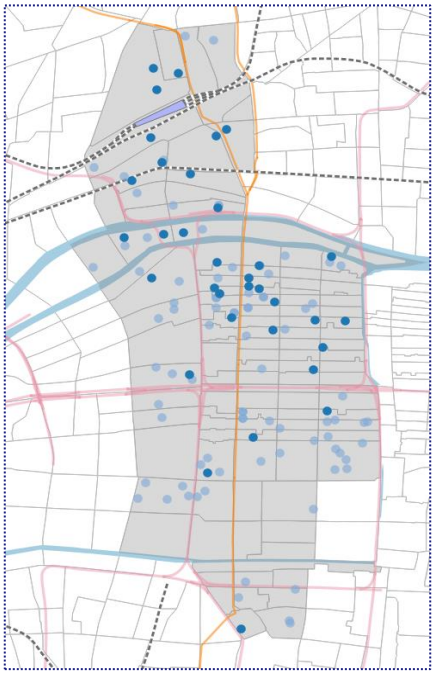
Since the latest version of Osaka city's Land Use Survey was 2013 at the time of writing, we carried out additional analyses for the subsequent years using different data and field surveys.

Figure 24 indicates buildings that were re-built by 2013 (the map on the right in **Figure 17**) by usage with pale circles and plots office buildings (rental office buildings), residential properties (condominiums), and accommodation facilities (hotels) that were completed or opened after the Land Use Survey with dark circles.

Office buildings (rental offices) are supplied north of Honmachi, residential properties (condominiums) are more or less concentrated in the center, and accommodation facilities (hotels) have increased across the entire area. This indicates that the change in real estate use that we have seen so far is accelerating.

Figure 24: Buildings Completed or Opened after the Land Use Survey

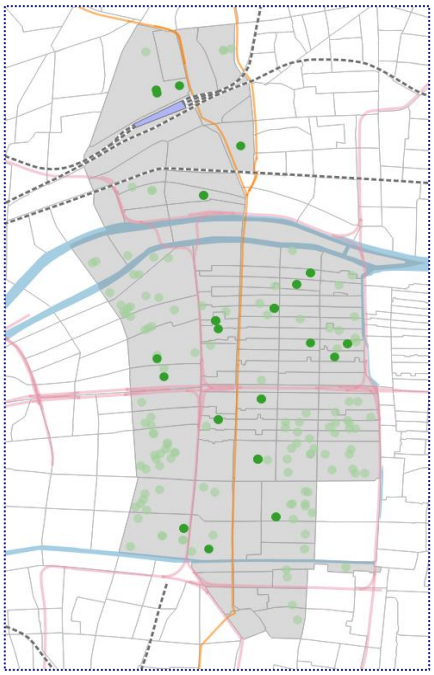
Office (Rental Offices)



●: Office buildings completed between 2000 and 2013

●: Rental office buildings completed after the survey

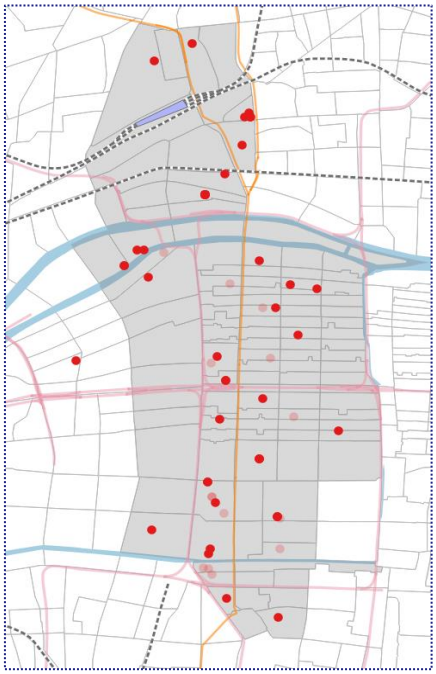
Residential (Condominiums)



●: Residential properties completed between 2000 and 2013

●: Condominiums completed after the survey

Accommodation (Hotels)



●: Accommodation facilities completed between 2000 and 2013

●: Hotels that opened after the survey

Conclusion

In this survey we looked at the changes in real estate use in central Osaka since 2000, based on Osaka city's Land Use Survey and other sources. Real estate use in central Osaka has changed over time, with usages being diversified and area characteristics shifting. We believe social and economic factors are behind the changes (**Figure 25**).

Offices have been re-built into large office buildings along the Midosuji in the Yodoyabashi/Honmachi area, while in the blocks a little behind the Midosuji some of them have been re-built into residential properties and accommodation facilities. The Umeda area, which encompasses Kita Yard, now has a higher concentration of companies, as several large office buildings have been completed, inviting companies to relocate to the area. The center of offices is shifting from the Yodoyabashi/Honmachi area to the Umeda area.

Commercial facilities have seen a string of openings and increased floor space of large properties such as department stores and consumer electronics retailers in the Umeda area, attracting a larger number of customers and significantly changing the flow of people. Small stores catering for surging inbound tourism demand have opened in large numbers in the Shinsaibashi/Namba area, revitalizing its shopping streets.

Residential properties have increased across the entire area. Demand for condominiums—tower condominiums in particular—is robust mainly among the generation that has finished child-rearing as well as DINKS households. Residential properties have increased in the central areas, which has prompted populations to return to the city center.

Accommodation facilities, like residential properties, have increased across the entire area. Demand for hotels is strong, not only from business customers but also from the rapidly growing number of foreign tourists. This has led to cases of converting existing buildings into accommodation facilities.

Figure 25: Characteristics and Main Causes of Change

Usage	Characteristics of the changes	Main causes of the changes
Office	• Stable office stock (gross floor area) and size expansion • Office building locations moving north	• Deregulation on the Midosuji • Development of Kita Yard and other areas • Companies relocating from areas surrounding the central area • Infrastructure development in northern area
Commercial	• Size expansion in the Umeda area • Active re-building into small stores in the Shinsaibashi/Namba area	• Development of Kita Yard and other areas • Expansion of commercial operators' flagship stores into Osaka • Increase in foreign tourists
Residential	• Increase from surrounding areas to the central area (apartments) • Size expansion (tower condominiums)	• Change in lifestyle • Change in family structure • Convenience of living in urban center • Stable land price
Accommodation	• Increase across entire area	• Increase in foreign tourists due to an increase in LCC (Low Cost Carrier) operations

Real estate is used for certain purposes in different times based on the diversity of usages and usefulness, and forms the basis of our lives and activities. Due to the limited nature of real estate as a resource, how they should be used is an extremely important theme.

We hope that this survey helps many people, including not only individual owners, users, and investors of property but also policy-makers, in thinking of the future use of real estate. Xymax REI will continue to carry out research and analyses on themes surrounding real estate and provide useful basic data.

Survey Overview

Period	2000–2016
Areas	119 municipal blocks in central Osaka, i.e. the Kita, Chuo, and Nishi wards
Survey data	● Osaka city's Land Use Survey [Usage] Office: Business facilities such as offices, finance, and insurance outlets Commercial: Facilities that mainly cater to general consumers such as wholesale/retail outlets, restaurants, entertainment facilities, and service outlets Residential: Detached houses, tenement houses, apartment houses, and apartment houses containing stores (excludes stores and apartment houses containing factories) Accommodation: Hotels and all other types of accommodation Other: All building facilities other than the above (e.g. schools, hospitals, supply facilities, industrial, communication & transportation, and government agency facilities) [Gross floor area] Since the Land Use Survey lacks buildings' gross floor area data, "building area x number of floors" is substituted as the gross floor area for convenience. Therefore, buildings with no data of the area size of the building or the number of floors have not been included in the targets of the analysis. [Criteria for re-building and demolition] We compared the GIS data of the Land Use Survey for 2000 and 2013 to extract buildings that differed in shape as buildings that have been re-built (approx. 5,000 buildings). However, since some GIS data showed different shapes for buildings that have clearly not been re-built, we compared individual building data for 2000 and 2013 and extracted buildings that had a difference of five floors or more in the number of floors, a difference of 10 sqm or more in the building area, or a difference of 10% or more in the error in the building area (approx. 500 buildings) and checked with Google Street View whether they had been re-built to the building shown in the 2013 data. ● Building data of leased offices, hotels and accommodation facilities, and condominiums independently gathered by Xymax Real Estate Institute

*The figures indicated in the charts contained in this report are rounded to the first decimal place and therefore the changes in area size may not match the difference in the number of years passed.

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