

# Evaluating the Occupancy Rate of Apart and Mansion around Tsukuba Station

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## 1. Introduction

The purpose of this research is to find out the relationship between occupancy rate and the location of apart and mansion.

Research Area is the region near Tsukuba Station. The longest distance of all the areas to the station is 1.0km so that people can reach all the areas from Tsukuba Station in 10 minutes by walking.

## 2. Methodology

In order to get the occupancy rate, the amount of rooms and the amount of rooms with residents in were collected. The type of the building (an apart or a mansion) was also recorded. The data of zerin 2008 provides the location and the floor numbers of all the apart and mansion in research area. Use the collected data to calculate the rate and draw maps of Occupancy Rate to see the characteristics of the location.

## 3. Results

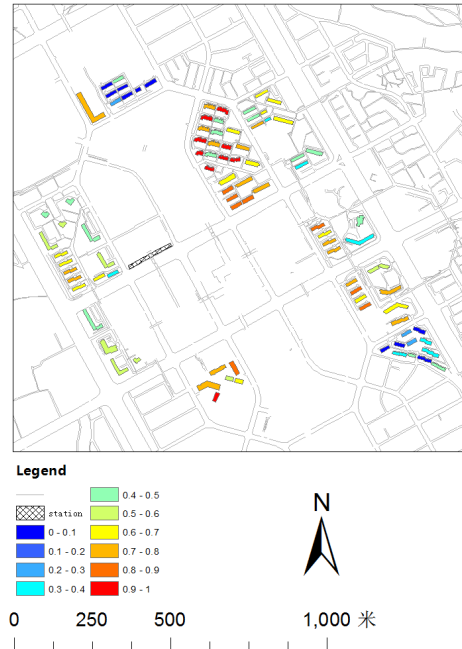
A total number of 85 buildings were collected around Tsukuba Station. Figure 1 shows the entire occupancy rate of apart and mansions. The red parts in the picture present for the buildings with high occupancy rate ( $\geq 70\%$ ); the yellow parts in the middle ( $40\% \sim 70\%$ ); the blue parts are the lowest areas ( $< 40\%$ ).

Occupancy rate of apart and mansion are also calculated separately. The result is shown in Table 1. Only the areas which has both apart and mansion are calculated.

**Table 1.** Occupancy rate of apart and mansion

	Apart rate	Mansion rate
Azuma 1	0.73438	0.43006
Azuma 2(area 1)	0.67857	0.53421
Azuma 2(area 2)	0.53906	0.48967
Azuma 2(area 3)	0.85	0.71698
Takezono 1	0.78125	0.59589
Sakura	0.76667	0.80682

Occupancy Rate of Apart and Mansion Around Tsukuba Station



**Fig. 1.** The Occupancy Rate of Apart and Mansion around Tsukuba Station

## 4. Discussion

The main results are presented in Fig. 1 and Table 1. From the results three main characteristics of occupancy rate can be drawn: 1) the apartments and mansions with the highest occupancy rate are located at the area with a distance between 200m and 500m to the station and the lowest rate appears in the area furthest to the station; 2) in most cases, apart has a higher rate of occupancy compared to mansion in the same area; 3) the new buildings (e.g. 桜団地) are more popular for residents.

There are some other factors that can affect the occupancy rate, such as the sunlight hours of the building, the size of the room, the distance to shopping center, kindergarten and park, etc. Further work can pay attention to these factors.