

IMPORTANCE OF SUSTAINABLE CITY POLICY TO CONTROL THE LOCATIONS OF SUPERSTORES

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Summary

- ▶ The main purpose of this paper is to make clear the importance of linkage with the policy on sustainability and the regulatory system on urban land use planning, especially to control the locations of large sized retail store (thereafter "superstore") developments.
- ▶ It seems that superstores in the suburbs are supported by people because superstores have been greatly increased under free competitive circumstances. So if we are to insist that there must be something wrong in the phenomenon, we should find some kind of "market failure" in it. But what is it?
- ▶ The authors verified the negative impacts by locations of retail developments, such as traffic congestion, parking, noise, public costs, etc. and got a conclusion that all of them indicate that the suburban locations are more preferable to the city center locations on each factor. Thus, the conclusion is that a higher positioned policy such as sustainable city is indispensable as the basis of controlling urban form and structure in current motorized society.
- ▶ Finally, the authors advocate the "total accessibility to the locations of regional services" as an indicator of sustainability of a city. Accessibility to the core of a city must be secured impartially including for people who not use a car in view of to ensure the quality of urban life.

1. Purpose

The main purpose of the paper is to make clear the importance of linkage with the policy on sustainability and the regulatory system on urban land use planning, especially to control the locations of large scale retail store (thereafter: superstore) developments.

2. Phenomenon of Superstore Sprawl - Current Situation of Japan

In Japan, until 1980's, the regulation by law was strictly implemented which controls opening large scale retail stores, in order to protect the business of existing shops and stores. But the deregulation policy was promoted in 1990's. As a result;

- ▶ Number of superstores increased rapidly as well as suburbanization of their location was strongly accelerated. (Figure 1).

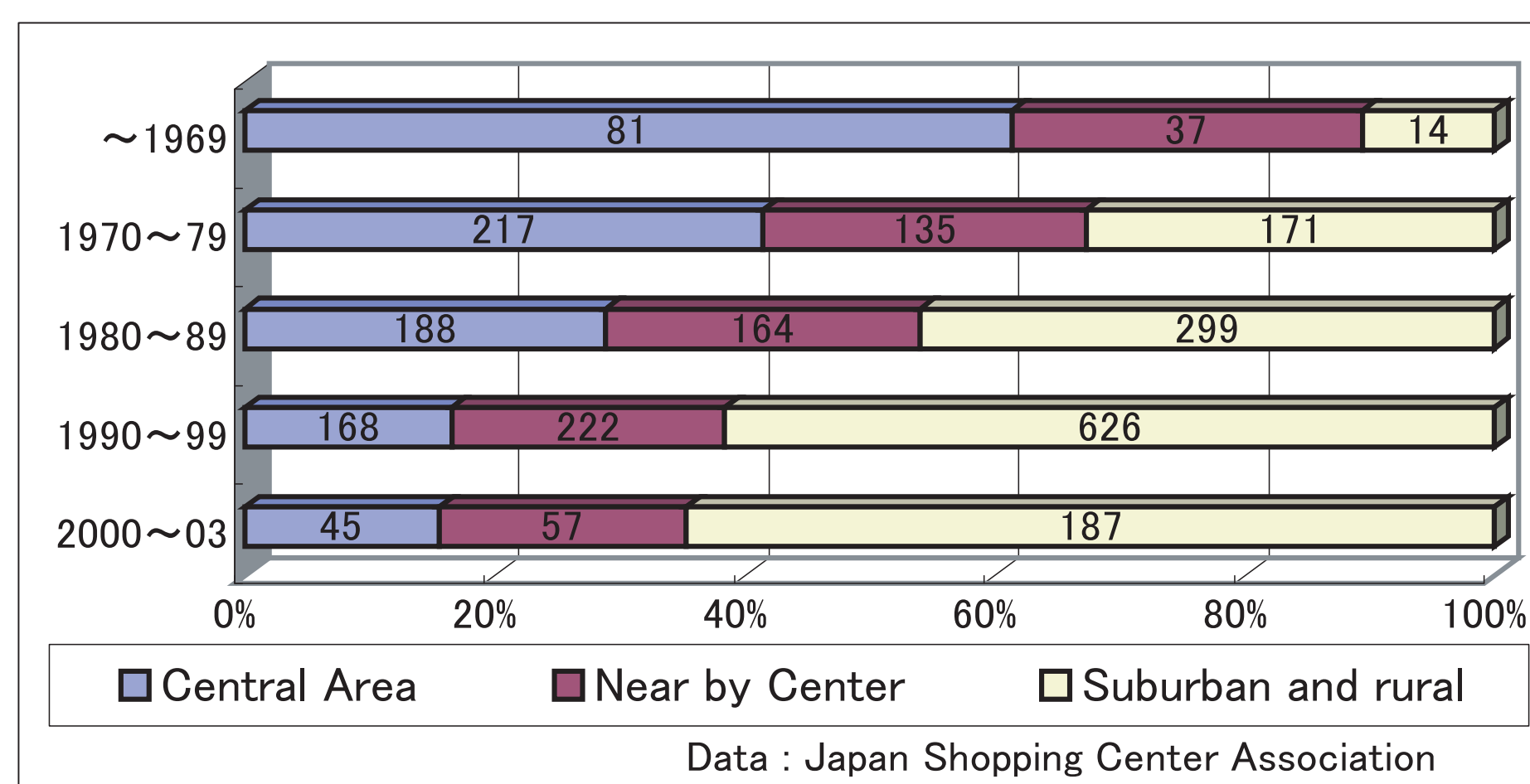


Figure 1: Suburbanization of Shopping Center Establishments in Japan

- ▶ Some of the superstores are extremely big. There are some stores which store space reaches about 50,000 square meters. (Figure 2)
 - ▶ The total store space of the existing central commercial districts in the local city regions are in the range of about 50,000 - 150,000 square meters. (Figure 3)
- So that it means only one superstore has more than half of the total store space of the average central commercial district.

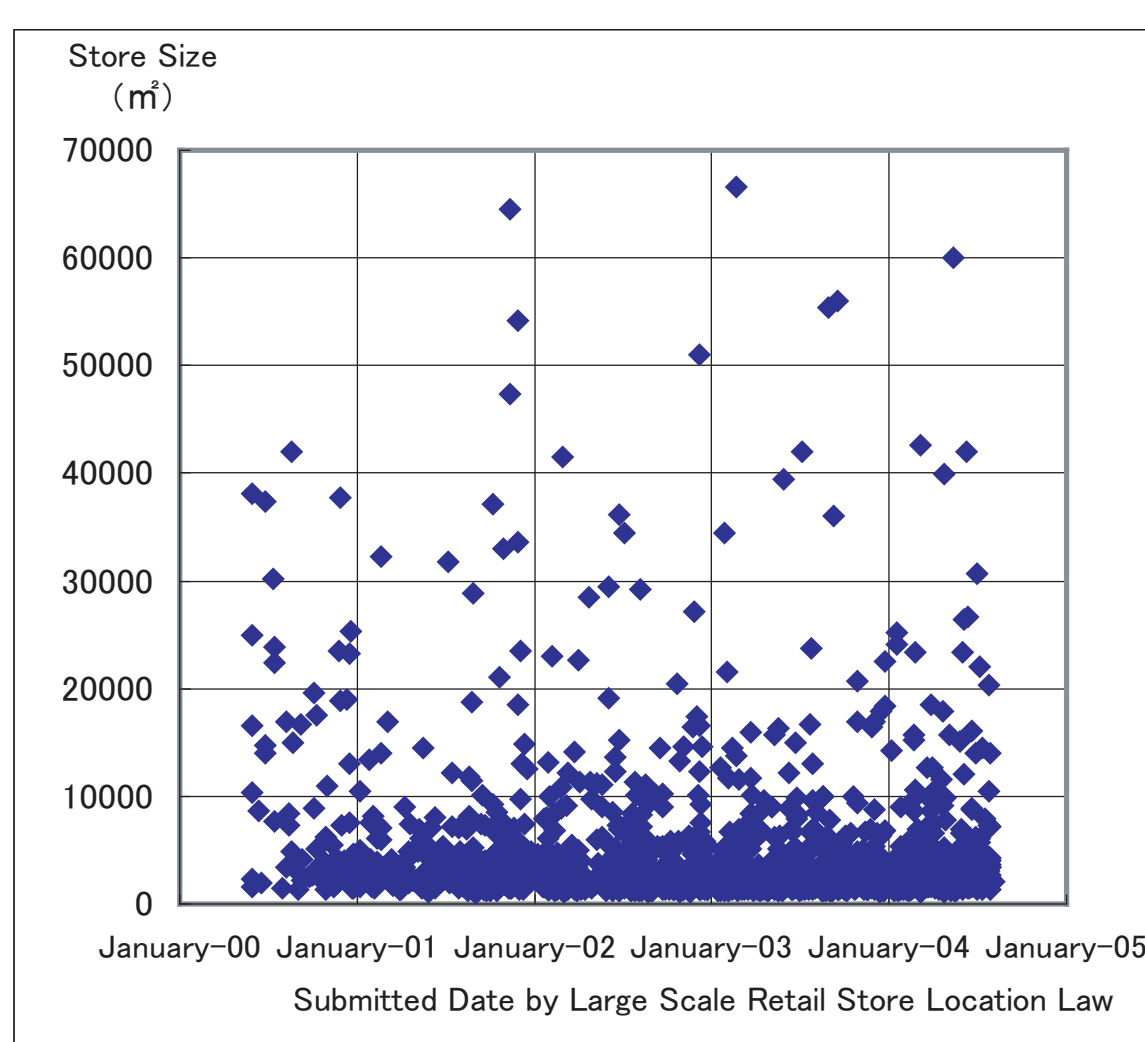


Figure 2: Size of New Retail Stores in the Local City Regions (Above 1,000m²)

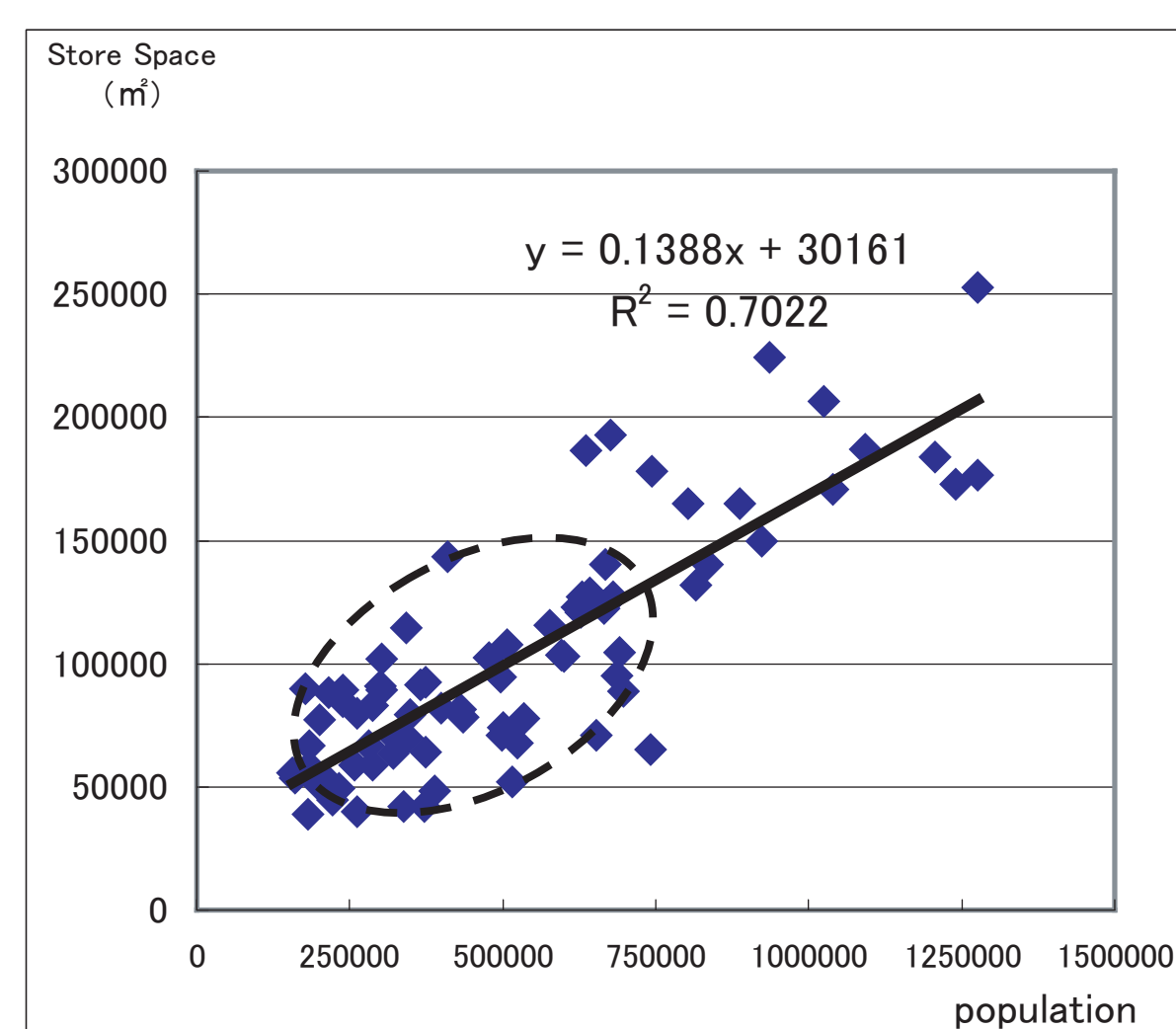


Figure 3: Total Retail Floor Space in City Centers and Population of Local City Regions

3. Negative Impacts really exist?

As followings, if private owned car is regarded as a general transportation mean of city residents, or if only minimizing negative influence on environment to the surrounding sites is sufficient, distributed urban pattern is more suitable than concentrated urban pattern with an accumulated city center district.

▶ Traffic Congestion

It could be taken for granted that traffic congestion on automobile tends to occur in the spots which traffic concentrates. Therefore, it is more advantageous to take distributed location than concentrated location. It means that distributed location of superstores in the suburbs would be more favorable in view of mobility of automobiles.

▶ Car Parking

If the number of parking lots is required dealing with the demand in peak hour, the parking space has always vacant lots except peak time of a week. Comparing development and maintenance costs between town center and suburbs, town center would be extremely disadvantageous.

▶ Noise

Figure 4 is concerning the noise level which generates from large sized retail stores. The standard of governmental guidance requires less than 60dB of principles in industrial zones and less than 55dB of principles in commercial and residential zones, though all the values are in the range of the standard, no big difference can be recognized by the store size. In addition, in case of factory former site or farmland where there are few people lives around the site, it is not necessary to care much about impact of noise.

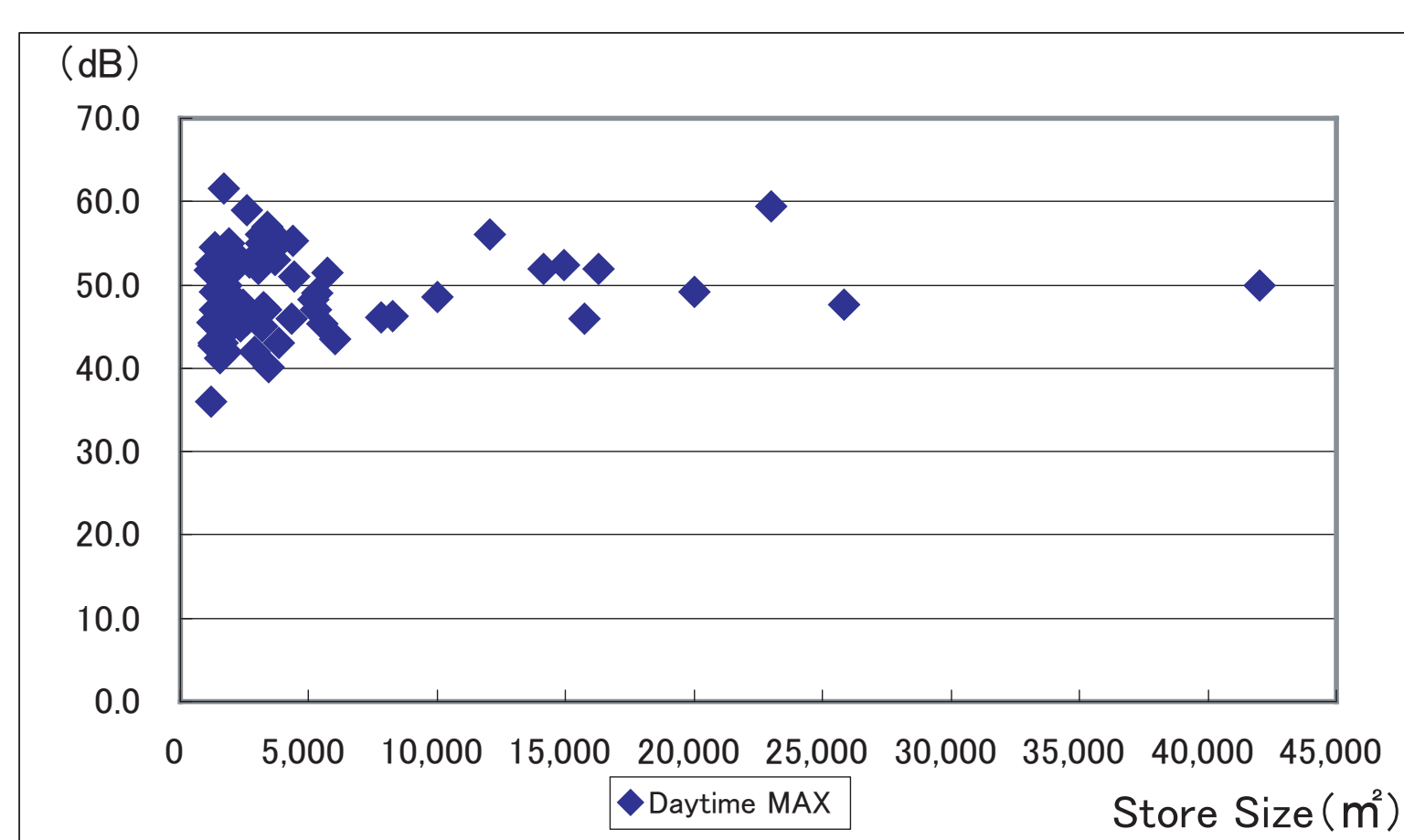


Figure 4: Expected Maximum Noise Level Impacts around the Large Store Sites

▶ Public Costs by Sprawl

In the case of residential developments, it is true that public expenses such as schools or some public service institutions are continuously needed. But in the case of independent private institutions such as superstores, are there any additional expenses to the public? For example, snow removal of the road has to be carried out inevitably, not being concerned whether there is a superstore located along the road or not.

▶ Competition among Municipalities

Superstore establishment is supported not only by consumers, but also by municipalities. It is common in Japan that a municipality induces superstores into their territory, and it often lead to facilitate suburban location of superstores. The main reasons are tax revenue and employment, and the worst situation for them to avoid is a superstore locates in other town, and people go shopping outside of their town. Thus municipal governments are not able to regulate superstore location in the suburbs.

4. Necessity of Sustainable City Policy

In comparison with Japan and UK, there must be a truth that the prevention of public nuisance cannot be sufficient to control the superstore sprawl, and there must be a necessity to make a tight linkage with the sustainable development policy and the regulatory system of city planning.

- ▶ Suburban location of superstores shall be increased without intervention by government. The situation in Japan since 1990s proves this fact.
- ▶ In UK, contrary to Japan, the regulatory policy was changed to be tightened up in 1990's, because they put the issue of sustainable development on a supreme proposition.
- ▶ As a result, UK has succeeded in restricting the suburban location of superstores. Especially, the revised PPG6 (1996) by the government enabled to induce the retail developments to town centers, and put an end to establish regional shopping center developments with more than 50,000 square meters floor space in out of center area. (Figure 5)

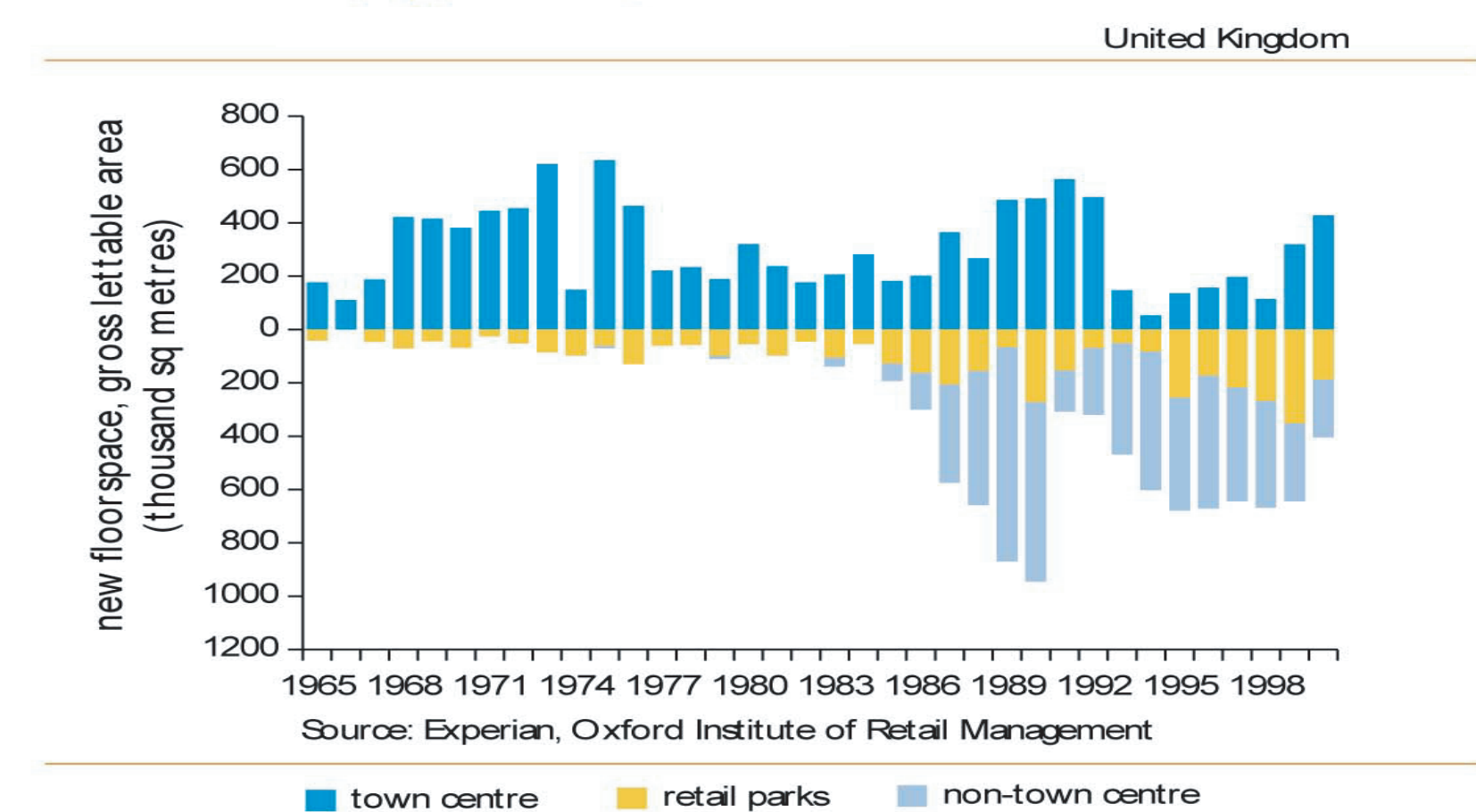


Figure 5: New Retail Floor Space in Town Centres and Out-of-Town in UK

5. An Indicator of Total Accessibility of the City

The authors advocate that the "accessibility performance for all the people including those who are not able to use a car" as a universal policy to spatial planning. It indicates the total accessibility performance of a city by means of public transportation availability in accessing important institutions of a city.

(The indicator for not making city structure into automobile dependence should be on a basis different from greenhouse-gases discharge, because a city should still has multimodal structure even in the case of greenhouse-gases free car were invented.) (Figure 6)

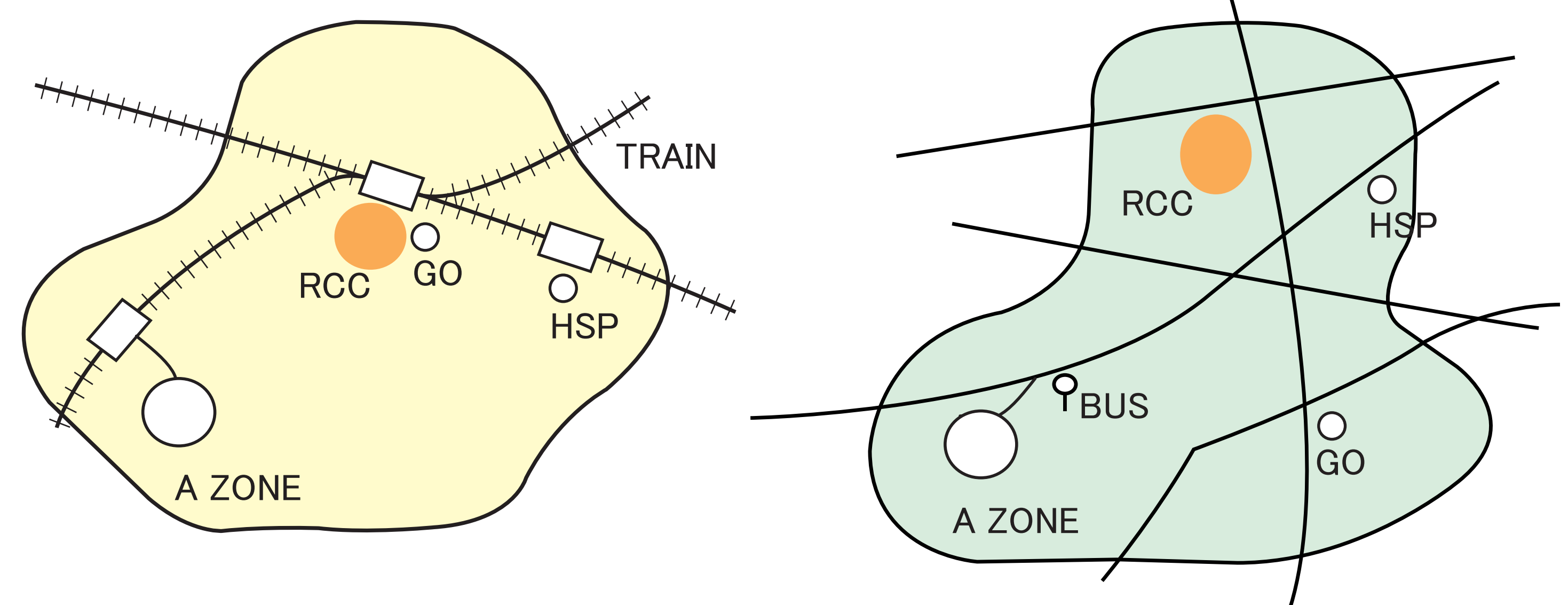


Figure 6: Comparison between Public Transportation Oriented Urban Form and Automobile Dependent Urban Form

- ▶ Considering a case that a person try to approach some institutions which provide regional wide services without using a privately-owned car or a taxi, only by using public transportation and on foot. In this case, the person shall visit these three institutions by one travel, and then shall get back home. Required time for the travel is as follows.

$$T_a = t_{HSF} + t_{SC} + t_{CH} + t_{HO} + t_{OS} + t_{HSF}$$

$$= 2 t_{HSF} + t_{min}(S, C, H, O)$$

t_{HSF} : time required for from home to the nearest railway station or bus stop on foot.

$t_{min}(S, C, H, O)$: the minimum time taken to visit three places (a regional commercial core, a hospital of regional service class and the city government office, turn is not asked) from the station and to return only by using public transportations and on foot. Supposing daytime of a weekday, frequency of public transportations is taken into account.

- ▶ Supposing the nearby area for every stations and average required time for the residents to the station on foot. For example, zone A that the area where the station A is the nearest, the average required time for the residents to the station A from home is t_A , population of the residents is p_A , then the total required time T_A is as follows,

$$T_A = p_A \times \{ 2t_A + t_{min}(S_A, C, H, O) \}$$

- ▶ Consequently, total required time for a average city resident to access regional wide service facilities by not using a car, i.e. accessibility performance of the city, becomes as follows.

$$T_{city} = \sum_{i=A}^N p_i \times \{ 2t_i + t_{min}(S_i, C, H, O) \} / P_{city}$$

Conclusion

- ▶ As a result of the study, the authors conclude that the objective of preventing public nuisance cannot be sufficient to control superstore sprawl, and there is strong necessity to make a tight linkage with the sustainable development policy and the regulatory system of spatial planning.

- ▶ According to the opinion poll in Japan, when people go to shopping, the sum total of those who answered always use a car and those who often use is 51%, on the contrary, the sum total of those who answered seldom use a car and not use is 33%. By this survey, it became clear that it is certain that people who use a car are majorities, but it is also certain that people who do not use a car are never minorities.

- ▶ Considering these results, a city should not reduce the mobility of those who cannot use a car, and ensure the accessibility to the place where is able to realize the quality of urban life for all the people. For that purpose, adequate relation of public transportation network and land use formation is extremely important to make a city sustainable. It is required to make a city into barrier-free space, and planning formation of city structure by the thought of a universal design.

- ▶ The large accumulation for shopping is an attractive place where many citizens gather and enjoy. We think it is an indispensable place for residents to enjoy their quality of life. So that, the right of easily available the place must be secured impartially for all the people living in the city.