

A study on Trend to Small-Scale Projects of Land Readjustment

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Synopsis

This paper aims to analyze the trend to small-scale projects of land readjustment based on both merits and demerits of them, and also to examine the impacts upon adjoining areas, by using the actual data in 212 towns of Osaka. In addition, the actual condition of administrative evaluation for the small-scale projects was investigated by the questionnaire surveys in 125 towns all over Japan.

As a result, some major findings came out as follows; the ratio of small-scale projects has increased, especially in reserved land areas, the project period of them must be shorter than others, they had not so impacts on adjoining areas, and also many of administrative officials evaluated these may be effective in the urban developments in future.

KEY WORDS: Land Readjustment, Small-scale Projects, Adjoining Impacts, Questionnaire Survey

1. Introduction

Although many urban areas have been developed by the land readjustment projects over a long period, it is also true that there have been some major problems, such as the necessity of long period and excessive expensive, the difficulty of agreement of many landowners and so on. Then recently, many of projects have become implemented on small-scale to deal with these problems.

In this paper, actual data of 212 small-sale projects of land readjustment, which are defined as the projects under 5ha in Osaka Prefecture and questionnaire surveys in 125 towns all over Japan were analyzed, in order to investigate the basic characteristics including both merits and demerits.

2. Development Effects according to Project Scales

In this section, 212 projects of the Osaka Prefecture were classified into 8 classes by the project area, to comparatively analyze the change of the land use before and after project, the project period, the project cost and so on. As a result, major findings came out as follows; 1) amount of road developments didn't depend on project scale, 2) project period of small-scale projects have been remarkably shorter than that of other projects, except for rare cases with 7-8years, 3) as the project scale became smaller, the cost per unit area became higher, but the cost in case of under 0-5ha class is comparatively small as shown in **Figure-1**, 4) the ratio of reserved area in case of under 0-5ha projects were higher than other projects, because of no subsidy. Based on these results, the rank was given by the project scale about each item from the view point of

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development of public facilities, as shown in **Figure-3**. From these Figures, there should be remarkably differences between small-scale projects and others, as follows; the rank of "Shortening of the period of project" and "Securing of the reserved area" are high score in the class of 0-5 ha, on the other hand, in case of 20-40ha class "Cheapness of the project cost", "Public space development" and "Supply of park, and green tract of land" are relatively higher.

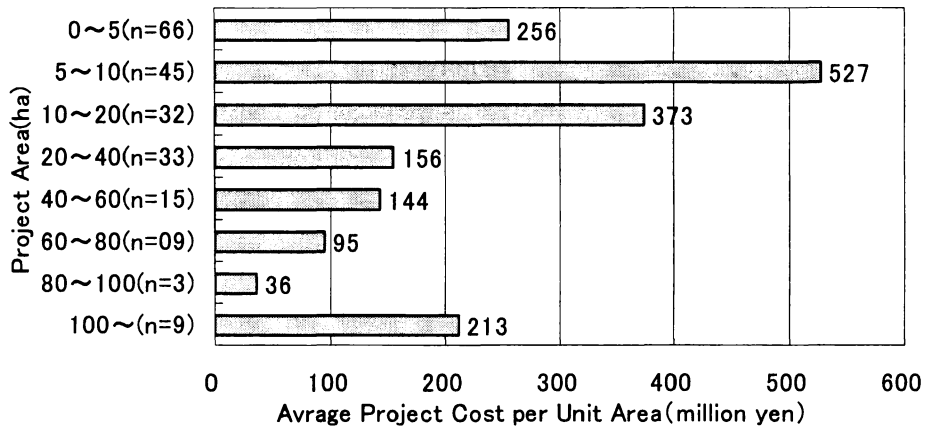


Figure-1 Average project cost per unit area

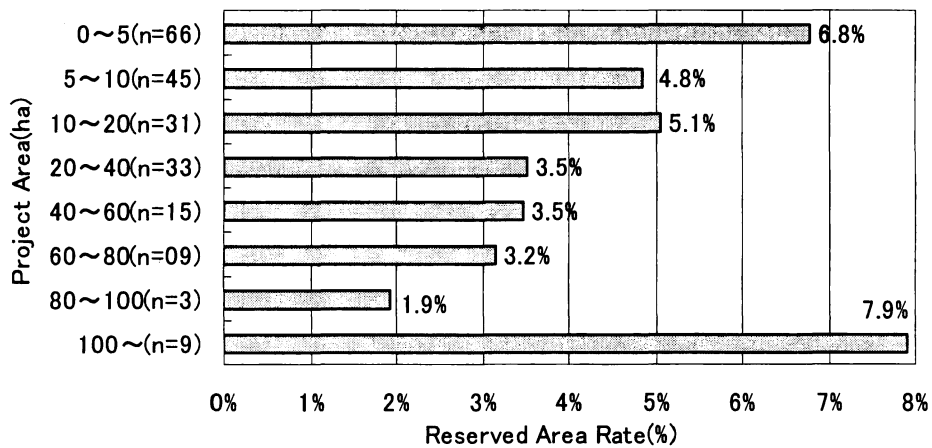
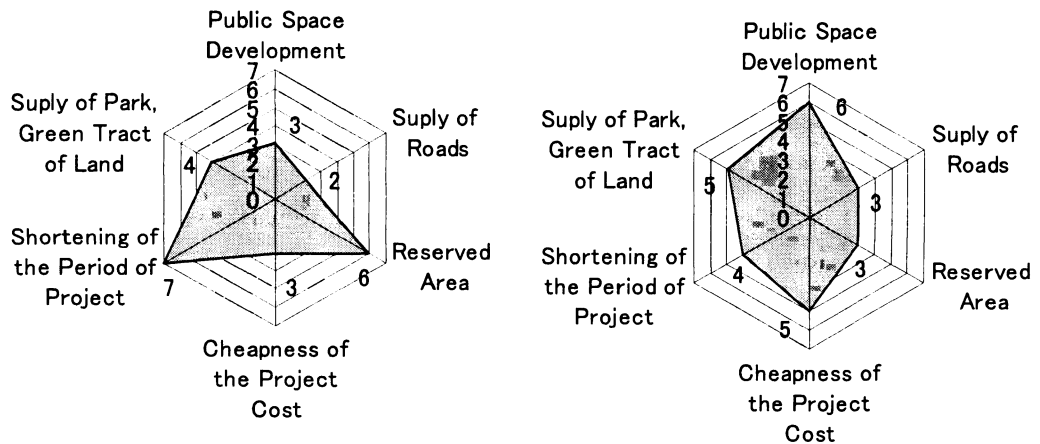


Figure-2 Ratio of reserved area after development



(1) under 5ha projects (66 samples) (2) 20-40ha projects (33 samples)

Figure-3 Rank of each item according to project scale

3. Development Impact on Adjoining Areas by Small-Scale Projects

To analyze the development impact on the adjoining areas, the ratio of residential areas was comparatively analyzed, in project areas and meshes (which was 500m mesh containing project area) and adjoining meshes (which were in are in contact with the mesh of project area), through 5 case projects (including 3 small scale areas, and 2 non-small scale areas) in Ibaraki of OSAKA.

As a result, the ratio of residential areas has rapidly increased in both area and mesh of non-small scale projects, while there are no great differences in the small scale areas as shown in Figure-4. Therefore, it became clear that in the small scale areas, development impacts to the adjoining areas were smaller than other projects, because of restriction on development of reserved areas.

(Legend)	Non-Small Scale Area		Small Scale Area		
	KOORI	UTISEHIGASHI	KAMIHOZUMI	SINNTYUZYU	SAWARAGINISHI
Project Area	□	■	■	□	■
Project Mesh	○	●	●	○	●
Adjoining Mesh	△	▲	▲	△	▲

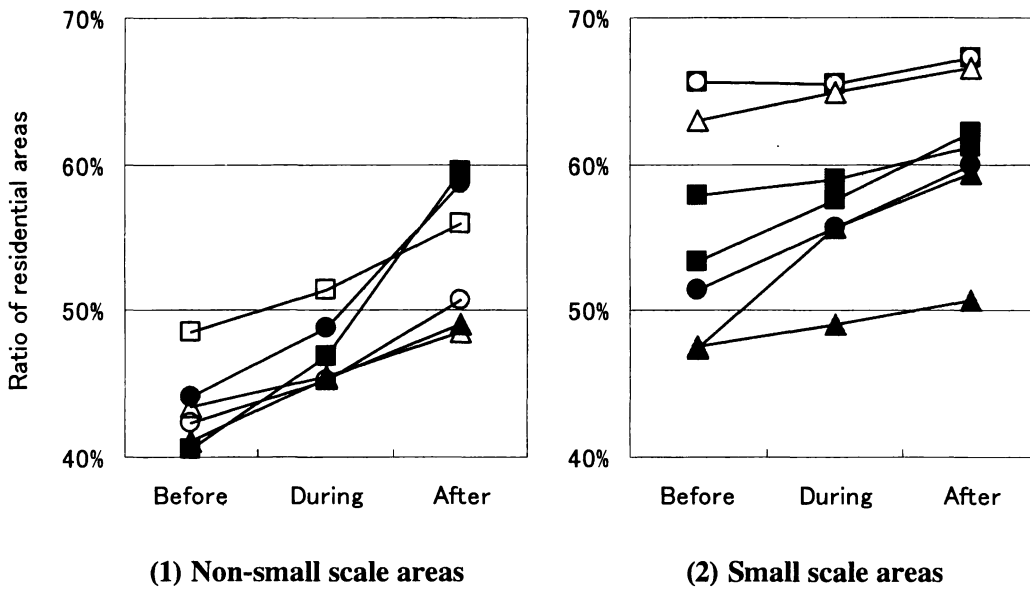


Figure-4 Comparison of the ratio of residential areas before and after project

4. Problems and Prospects of Re-development Projects

The questionnaire surveys were conducted 125 towns all over Japan, and questionnaires collected from 96 towns among them (response rate is 76.8%) were analyzed. As a result, some finding came out as follows; 1) the cities which carried out small scale land readjustment after 1990 years were 63% of the whole, 2) the 61% of 96 cities which responded surveys recognized that the small-scale land readjustment has been increasing because of some factors like easier agreement as shown in Figure-5. But it was also clear that there were remarkably different recognitions depended on experience of small-scale projects as follows; many towns experienced the small-scale land readjustment pointed out the shortening project period as the second factor, while easier security of project funds “was recognized as the second factor in the non experience towns.

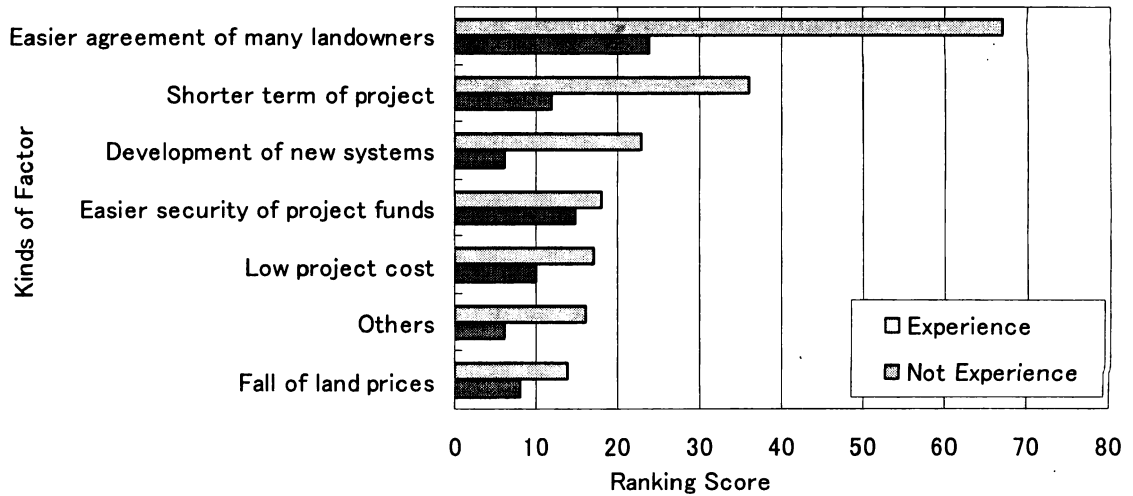


Figure-5 Factors to increase Small-Scale Land Readjustment

Next, regardless of the experience, more than 70% towns may admit that the land readjustment project will be applicable to the small scale areas. And the ratio of "Good" evaluation for applicability of "Experience" towns was higher by 20% than the ratio of "Not Experience" towns. Therefore, the experience of small-scale projects may lead the better understanding of these projects in the future city planning, as shown in **Figure6**.

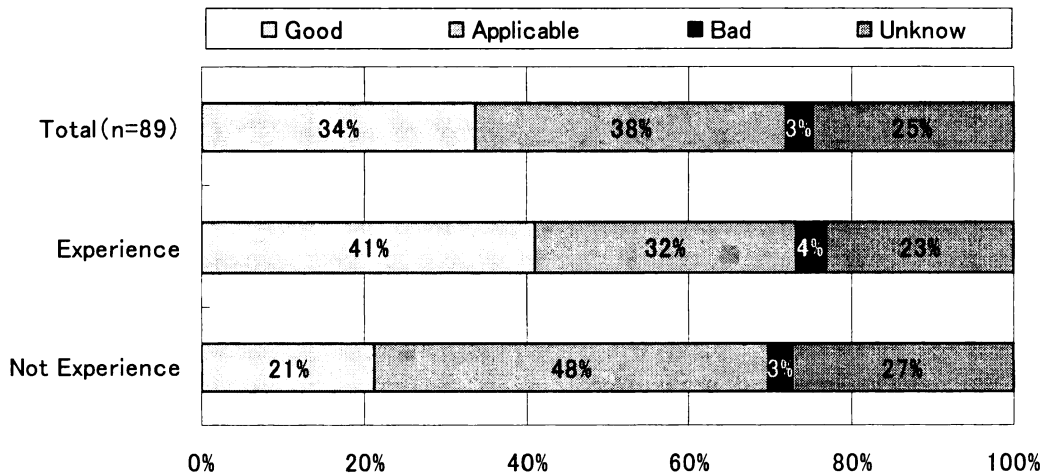


Figure-6 Applicability of small-scale projects to Land Readjustment

5. Conclusion

Some major results obtained in this study are summarized as follows;

- 1) The introduction of small scale projects makes project term shorter and cost lower, because of agreement of landowners.
- 2) On the other hand, in case of small-small projects, it may be difficult to secure the public facilities areas because of shortage of land areas obtained by reduced area. In addition, the wide area planning may be

obstructed because of discontinuity of land use in both project area and adjoining area.

- 3) There may be not much difference between small-scale projects and others, regarding the ratio of residential area and floor area.
- 4) The small-scale projects will be acceptable in future planning, because of especially the easier agreement of landowners.

It hasn't been passing for about 10 years yet since the small-scale land readjustment projects began to increase. Therefore, to discuss the suitable applicability of the small-scale land readjustment projects in the future City Planning, it must analyze impacts on the more long-term the impacts upon the adjoining areas and the continuity of land use to the whole planning.

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