

## Historical changes in land price formation factors over 100 years in Kyoto, Japan: comparison of the land price distribu

AOKI, Kazuto<sup>1\*</sup> ; TAKEDA, Koji<sup>2</sup> ; YANO, Keiji<sup>3</sup> ; NAKAYA, Tomoki<sup>3</sup>

<sup>1</sup>Research Center for Disaster Mitigation of Urban Cultural Heritage, Ritsumeikan University, <sup>2</sup>PASCO CORPORATION, <sup>3</sup>Ritsumeikan University

The land price formation factor is an index, which shows the social economy situation of the time.

Although a large number of studies have been made on evaluating land price formation factors which show socio-economic situations, most of the studies have been cross-sectional analysis focusing on specific factors, such as zoning, road width and accessibility to public transportation. Little attention has been paid to historical changes of land price formation in a long-term perspective, mainly because of the lack of historical data representing land price distribution in the past. Fortunately, the Kyoto cadastral map made in 1912 was digitized to create the historical GIS database containing detailed land price information for each land parcel by the GIS research team at Ritsumeikan University. It should be noted that the city has not received large-scale disasters and war damages since the age of the cadastral map. We can thus investigate historical changes of the city without effects of such large-scale disasters. Comparing the current land price distribution with that in early 20th century in the city of Kyoto, we examine historical changes in the geographical factors of land price formations reflecting changes in urban physical and social formations of the city. With the aid of GIS-based mapping and overlay analysis, we mainly argue on the effects of the changes in urban formation on land price distributions over 100 years in the city.

The land price formation factors of quantitative getting are road width and distance from the train station is easy. However, quantitative getting of ambiguous land price formation factor represented by downtown property is difficult. In this study, for the understanding of land price formation factor of 100 years ago, take advantage of old photographs.

Keywords: Kyoto cadastral map, land price formation factor, old map