The Spatial Pattern of Economic Rents of an Airport Development Area: Lessons Learned from the Suvarnabhumi International Airport, Thailand

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Abstract : With the rise of the importance of air transportation in the 21st century, the role of economics in airport planning and decision-making has become more important to the urban structure and land value around it. Therefore, this research aims to examine the relationship between an airport and its impacts on the distribution of urban land uses and land values by applying the Alonso's bid rent model. The New Bangkok International Airport (Suvarnabhumi International Airport) was taken as a case study. The analysis was made over three different time periods of airport development (after the airport site was proposed, during airport construction, and after the opening of the airport). The statistical results confirm that Alonso's model can be used to explain the impacts of the new airport only for the northeast quadrant of the airport, while proximity to the airport showed the inverse relationship with the land value of all six types of land use activities through three periods of time. It indicates that the land value for commercial land use is the most sensitive to the location of the airport or has the strongest requirement for accessibility to the airport compared to the residential and manufacturing land use. Also, the bid-rent gradients of the six types of land use activities have declined dramatically through the three time periods because of the Asian Financial Crisis in 1997. Therefore, the lesson learned from this research concerns about the reliability of the data used. The major concern involves the use of different areal units for assessing land value for different time periods between zone block (1995) and grid block (2002, 2009). As a result, this affect the investigation of the overall trends of land value assessment, which are not readily apparent. In addition, the next concern is the availability of the historical data. With the lack of collecting historical data for land value assessment by the government, some of data of land values and aerial photos are not available to cover the entire study area. Finally, the different formats of using aerial photos between hard-copy (1995) and digital photo (2002, 2009) made difficult for measuring distances. Therefore, these problems also affect the accuracy of the results of the statistical analyses.