Influence of Hosting Olympic Games on the Real Estate Price: An Analysis of the 2018 PyeongChang Winter Olympic Games

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Facilities/Events - Other (Olympic Sport) virtual asynchronous
Poster
Abstract 2020-031 Session: Poster Session I

This study examines the economic legacy of hosting the 2018 PyeongChang Winter Olympic Games by investigating the real estate price change of the host cities before and after the successful Olympic bid announcement in 2011.

A difference-in-difference (DID) analysis was performed to examine the amount of real estate price change before and after the successful Olympic bid announcement in 2011 for the three host cities (i.e., PyeongChang, Jeongseon, and Gangneung) compared to the remaining fifteen non-host cities (i.e., Sokcho, Yangyang, Goseong, Donghae, Taebaek, Samcheok, Yeongwol, Yanggu, Inje, Wonju, Cheorwon, Chuncheon, Hongcheon, Hwacheon and Hoengseong) within the same province where the Olympic was held. A time-series cross-sectional real estate transaction data, collected for 422 apartment complexes in the three host cities and 1,285 apartments in the fifteen non-host cities from 2009 to 2017, was analyzed.

Based on the hedonic pricing theory (Monson, 2009), a total of twelve property and neighborhood factors were identified as the antecedent factors of the real estate price. Along with these twelve antecedent factors as control variables, two dummy variables—the host city dummy (host vs. non-host cities) and the Olympic announcement dummy (before vs. after announcement)—and their interaction term were entered in the regression model for the DID analysis.

Overall, the findings indicate that the real estate prices did increase after the successful bid of the Olympic Games, and that the amount of increase was greater for the three Olympic host cities than the remaining non-host cities. In particular, when the two years before the announcement, 2009-2010, were compared to the two years after the announcement, 2012-2013, the interaction between host and announcement dummy variables was significant (b = .069, p < .01), indicating a greater impact of bid announcement on real estate price for host vs. non-host cities. Specifically, for the three host cities, the real estate prices increased 38% after the bid announcement, whereas the real estate prices increase only 31% for the remaining non-host cities. The same pattern of relationships was found when the real estate prices for 2009-2010 was compared to that of 2014-2015, and 2016-2017, respectively.

The findings provide empirical evidence of the economic legacy of hosting Olympic Games. Theoretical and practical implications were discussed.