# The Timing of Spatial Competition: Price Reaction Functions Across Booking Horizons

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**Abstract:**

This paper examines the interplay between spatial and temporal dimensions of price competition in the hotel industry, where services are non-storable and consumers must book in advance. We study how spatial price competition among hotels evolves across different booking horizons. Using a panel dataset of hotels in Venice covering daily asking prices, we estimate spatial price reaction functions for multiple booking lead times using Spatial Durbin Models. Our results provide evidence of heterogeneous spatial price mimicking across booking horizons: spatial dependence peaks at mid-range lead times. Furthermore, hotels with greater room variety are able to charge higher prices, while greater variety among nearby rivals exerts downward pressure on prices. These findings reveal that the strength of spatial competition is not constant but jointly shaped by timing of booking and seasonal demand, offering new insights into intertemporal pricing and strategic interactions in perishable service markets.

**Keywords:** spatial price dependence; booking horizon; product variety; Spatial Durbin; hotel industry; monopolistic competition

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