## RESIDENTIAL VACANCY IN CITY CENTER: THE CASE OF SÃO PAULO

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São Paulo's Metropolitan Area is one of the largest urban spaces in the world. As it happens with any other large metropolitan area, understanding its structure, problems and dynamics is not a simple task. The structure of cities has been studied by urban economics ever since von Thünen's land use theory was adapted to urban contexts. The von Thünen model was originally developed to address spatial allocation of agricultural activities. However, the theory has been adapted to urban areas by Alonso (1964). Research on property and housing markets have followed a related but different approach. On the one hand, housing markets have been modelled with emphasis on the specific features of properties such as durability, heterogeneity, and construction costs. On the other hand, research on real estate finance has been developing and applying a variety of valuation methods, focusing on the supply and demand adjusting mechanisms and considering properties as assets. These three areas of investigation have not always been connected in a systematic manner. Yet, we argue that there is a case for integrating them, since they analyse issues embedded in urban areas, where the spatial features of markets represent a unifying theme.

The vacancy rate is the amount of vacant properties with respect to the total inventory. Market frictions such as searching and transaction costs, matching and price adjustment process make prices incapable of clearing the market. The first studies that incorporate vacancy on housing markets models propose the existence of a causal relationship between deviation of vacancies from a natural level and price movements. The natural vacancy rate is the one at which prices tend not to change. The validity of this price adjustment mechanism is questioned by Wheaton and Torto (1994). According to them, there should be a contemporary relationship between vacancy and rents. In their model price movements depend on an equilibrium rent, which in turn depends on the net flow of consumers and past vacancy rate.

This work adds to that discussion the focus on differences in segmented markets inside a city, specifically the historical city center. São Paulo has a general spatial pattern of residential vacancy: high vacancies in central areas and low vacancies in suburbs. We show evidences for the commuting time advantages of the center, that the center is no longer the most valued area in the city and new constructions are more distant from the center. The city centre location advantages and urban amenities are a misuse of scarce resources and the owners of vacant properties might be waiting for a rise in prices.

This paper pretends to contribute to the empirical analysis of the determinants of vacancy rates, and its differences in historical city centers. We use a São Paulo Metropolitan Area (SPMA) panel of census tract level data for the years 2000 and 2010, combining standard spatial econometric methods with hedonic modeling. We find evidence that historic central city is a submarket and its determinants work in a different way from the whole market. The spatial pattern of residential vacancy, misusing positive amenities of the center is a motivation for the intervention in this submarket conditions. If social and housing heterogeneity leads to less vacancy, in spite of their role in frictions for the market, they can be encouraged. If apartments have less vacancy because they are newer, beyond its more inelastic supply, this is a motivation to encourage renewal programs. The connection with vacancy comes from the hypothesis that, apart from playing a role in the natural market friction, those variables explain deviations of vacancy rate above from its natural level.

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