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Emerging socio-spatial pattern of Chinese cities: The case of Beijing in 2006

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ABSTRACT

China's market reforms are restructuring its cities. The value of land, previously allocated by the state – is now better reflected in market price, with a strong gradient from high values in the center to lower values in the periphery. Using data from a 2006 Beijing household survey, this paper explores the extent to which the emerging socio-spatial pattern conforms to this new pattern of land value gradient. The results offer little support for this. We argue that although land prices are becoming a significant determinant of urban development, the actual settlement pattern is still strongly affected by other factors. One is the inertia of the socialist pattern placing households with higher standing in that system near the center. Another is the continuation of a set of policy rules that relegated migrants to peripheral locations. Land values do matter but market processes based on price still operate within a larger pattern determined by settlement history and public policy.

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Introduction

Compared to cities in market economies which are often characterized by their magnitude of socio-spatial differences, socialist cities have been described as relatively homogeneous, with little observable spatial segregation (Sykora, 1999). Studies in Chinese cities found that inequalities in the housing system exist in terms of household head's occupation, political party membership and the bureaucratic rank of the work unit (Logan, Bian, & Bian, 1999; Pan, 2004). But these inequalities were rarely manifested spatially because most employees at all levels lived in the same work unit housing complex in the socialist period. Spatial differentiation was more likely to correspond to the work unit's capacity to provide housing than to the individual employee's personal characteristics.

The processes by which households access housing have undergone dramatic changes in the 1990s, when the market reform was in full swing (Logan, Fang, & Zhang, 2010). Individual households have become more mobile, a growing share of the population is living in housing that was developed within a commodified land market, and a substantial minority of home buyers is paying prices that reflect market prices of land. Basic economic theory (Alonso, 1964) presumes that when residential land is valued differently in different parts of the city, residents will make a trade-off between their housing costs and commute costs. Therefore it is reasonable to expect that at some point a spatial gradient will emerge either with an affluent center and a poorer periphery (as in many European cities) or the other way round (as in many US cities), depending on how people perceive the relative advantages of centrality or suburbanization.

We study this question in Beijing, a city where market forces are likely to be attenuated by the fact that so many residents are employed by government institutions. Housing reform here has been implemented more cautiously than in South China (Logan, Fang, & Zhang, 2009b), and the privatization of public rental housing was carried out more slowly. However the basis for market pricing of land use rights was enshrined in the national Constitution in 1988. In December 2002, the Beijing Municipal Bureau of Land and Resources (2002) issued a pricing schedule and zonal map for land use based on a survey of the actual market prices of

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land in different areas of the city.[3] The first six zones form a clear concentric pattern around the central core – the highest values at the center (4740–7000 yuan/m^2) are four times higher than those in level six, the outermost zone. These differences in land value are clearly reflected in the cost differences of commercial housing throughout the city.

Differences in housing costs based on land value can result in sorting households spatially into different parts of the city based on their socio-economic characteristics. However such sorting manifests itself in different forms in different contexts (Brueckner, Thisse, & Zenou, 1999; Glaeser, Kahn, & Rappaport, 2008). The same kind of land value gradient can form a high income city center as in Paris (where subsidized housing has been concentrated in the suburban ring) or Sao Paulo (where a formal housing market exacts high prices in the center but informal squatter settlements are tolerated in the periphery). But it can also result in a low-income center (as it does in many American cities where suburban homeownership was highly subsidized by the state and lower income, higher density housing was excluded by suburban zoning regulations).

Our purpose of this paper is to empirically investigate the relationship between household characteristics and their residential location in the city of Beijing. Our results show that land values are important, but market processes operate within a larger pattern determined by settlement history and public policy.

Spatial pattern in Beijing

Research on urban patterns in China has focused on three main determinants of location. The history of development is perhaps the most consequential because of the durability of the built environment and the inertia of housing occupancy. Beijing is characterized by the central city within the historic walls which were destroyed after the Socialist government took over. While large single family courtyard houses were subdivided into smaller quarters after 1950, some of these neighborhoods were again redeveloped in late 1990s. Working class housing was generally dense and poorly serviced. Housing built in the socialist period and then during market reform has added new layers of construction types and variations in tenure and quality. Wang and Murie (2000) distinguish between these two more recent periods to divide the city into three zones. The central area is the legacy of the socialist economy and has undergone considerable redevelopment in the last two decades. The inter-mediate zone with large work-unit housing compounds is the legacy of the socialist planned economy of 1960s and 1970s. The outer ring of housing estates and related facilities is the direct product of the post-reform market economy. Li & Wu's (2008) study of Shanghai describes a similar pattern of concentric rings composed of a retiree concentrated city center, an intermediate layer of socialist housing, another layer of newly developed housing, and an outer layer of rural villagers. Both studies concluded that there is now considerable socio-spatial differentiation and that it is mainly marked by differences in development history and housing tenure.

A second significant factor is state policy changes on access to housing (Wang & Murie, 2011). Although a small private housing sector was tolerated in the socialist period, it was mostly comprised of old structures that could not be properly maintained by residents. Most of the local urban population was housed in apartments managed by work units or the municipal housing office (Logan et al., 1999, Logan, Fang, & Zhang, 2009a, Logan et al., 2009b), and their location depended on where land was available at a given time. As migration to cities began to accelerate after 1980, migrants were rarely eligible for public housing and were restricted to factory dormitories, temporary housing at construction sites, or private rental housing, mostly provided by villagers in areas on the edge of the city. Today, when a large share of the population of major cities is comprised of migrants, these historical and continuing restrictions on access to housing are a major determinant of the spatial pattern that places migrants in the periphery. This pattern is clearly illustrated in Fig. 1, based on census data from 2000 at the subdistrict (*jiedao*) level in Beijing. Migrants to Beijing in the 1990s clustered around the third ring road in Beijing. Later, they were removed because of government's determination in removing 'criminal activities' (Zhang, 2001) and residents were displaced towards suburban areas. This displacement was also facilitated by the growth of employment opportunities in suburban areas (Wu, 2008). Migrant households found relatively cheaper rental housing provided by local rural villagers (Song, Zenou, & Ding, 2008). Furthermore, Wu (2008) found that the best predictor of the concentration of the migrant population is employment opportunities, particularly the number of industrial establishments and state-owned establishments. This is the third factor leading to decentralization of migrants.

Socioeconomic differentials should have played into the spatial pattern created by the combination of development history and state housing policies. However past research provides little guidance about what we should expect to find. There seems to be class heterogeneity in all layers of historic development. Among Wang and Murie's three rings, the historic center counts persistent public rental housing, along with some redeveloped areas sold at market price. It has a mix of households from newly affluent government officials, along with old Beijingers living in dilapidated housing conditions. The intermediate ring evolved over a span of 50 years with spatial differences based on the relative position of the work unit within the institutional hierarchy of the state (Logan & Bian, 1993). In the outer ring that was developed under the new market economy, the picture is even more mixed: there are rural villagers with local registration who have been historically poor but who have the right to build their own homes and rent space to others (Wu & Treiman, 2004); an increasing village areas (both on the periphery and in some cases within the city itself) where migrants can find relatively cheaper rental housing (Song et al., 2008); large scale development targeting the mass market and accommodating displaced inner city residents; and also newly affluent people seeking space for their villa developments The presence of all kinds of urban growth is likely to create a complex pattern of spatial variation by social class. In Fig. 2 we use four-year college education as a proxy for social class composition, again at the subdistrict level. The northwest region, where major universities and recent high-tech industries are concentrated, has high shares of residents with four-year college education; lower levels are found in the southeast; and lowest levels are in the areas farthest from the city center.

In addition, the system is in flux. Earlier studies found that most affluent households in Chinese cities lived in public housing rather than in residential districts for the rich (Hu & Kaplan, 2001). Gu, Hu, Liu, & Song (1999) predicted that in Beijing the rich tend to move into the near suburban districts due to the declining living standards in the inner city districts and the poor would concentrate in the city center. These studies did not foresee the large scale urban redevelopment in early 2000s in inner city Beijing. New housing

[3] The actual land leasing fees are further adjusted by factors including the land size, shape, Floor Area Ratio, and other micro-level factors. Although there have been many discussions on the revision of this standard, this 2002 version is still being used today as the basis for calculating the land leasing fees in Beijing. The upward revision will imply a rise in the relocation compensation, further increase development cost, and even higher housing price in Beijing.