Two Case Studies on Land Use Impacts of Rail Transit in China

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Can Light Rail Benefit Job-Housing Relationships and Land Use-Transportation Integration in New Town?

| Case Study of Yizhuang, Beijing |
Since 2000, Beijing urban transit construction has rapidly accelerated and many new towns have emerged near transit lines connected to the central city. As a municipality in an economic development zone, the new town of Yizhuang has faced challenges integrating transportation and land use. In particular, its transit line was built to carry commuters from nearby suburban areas to the city’s industry parks, while in reality local residents are using the line to commute to job opportunities in the central city of Beijing. This study applies GIS analysis to explore the reason for this reverse commuting by selecting three stations along the line and investigating the planned versus actual land uses within a 1 km radius of each station.

High-Speed Rail Causing Changes in Urban Form

| Case Study of the Beijing-Tianjin-Hebei Region |
With the rapid development of high-speed rail in China in recent years, mega-region urban form has undergone dramatic change, especially in terms of regional and urban development in the area surrounding Beijing. Using a theoretical framework, population and economic basic unit surveys data, and data from smart phone check-in records, this study applies spatial statistic, network, and scenario analysis methods in GIS to explore the influence of high-speed rail on cities of varying location and size. Specifically, the research tracks changes in population and job opportunity with respect to the growth of the rail system, as well as evaluating connectivity between different levels of rail transit.

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