

以都會模型探討影響人口郊區化的因素 Using an Urban Model to Investigate the Determinants of Suburbanization of Population

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【摘要】

過去數十年來，都會風貌有著顯著改變：副都心的興起和都會旅行中通勤比例的下降。本研究修改 William Alonso 1961年的都會模型以包含上述兩項重要發展。主要的模型假設為：一概念性城市位於一無邊際的平原上，其主都心位於其地理中心，副都心為一距主都心等距的圓，都會的邊界由農業地租所決定，都會旅行至主都心和副都心的次數取決於市區和郊區的人口比例、主都心的優勢地位、及居住地點。以人口梯度密度作為人口郊區化程度的指標，文中計算了一個概念性的城市之郊區化的彈性值，結果顯示八個彈性值中所得彈性和交通單價彈性顯著大於其他彈性值，其值大小約為0.9。

【Abstract】

We have observed that the rise of suburban centers and the growth of non-commuting travel in the last several decades. In this study, William Alonso's 1961 urban model is extended to include these two trends. The main layouts are the following. A metropolis locates at a featureless plain, and has a point-like central center and a circumferential suburban center. Its boundary is determined by the agriculture rent. The relative frequency of trips to each center is dependent on the population ratio of the inner city to the suburban area, the degree of advantage of the central center, and residential location. The author uses the population density gradient as the index of suburbanization. The simulation results, based on a conceptual city, indicate that both the magnitude of income elasticity and travel cost elasticity are about 0.9.