New economic geography with heterogeneous preferences: An explanation of segregation

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Abstract

The Tiebout hypothesis (residential choice depends solely on local public goods) is extensively applied to explain geographic segregation, and the related literature finds that residents are segregated according to their heterogeneous preferences for public goods. This paper further examines the heterogeneous preferences for private goods in a spatial economy without public goods. Specifically, we employ a new economic geography framework in which the heterogeneous preferences of mobile workers on manufactured goods are incorporated. The rigorous general equilibrium analysis conducted here shows that the increasing-returns technology and monopolistic competition form a mechanism endogenously leading to persistent residential segregation. There is an evolving path with decreasing transport costs in which the two types of mobile workers are segregated, while two industries evolve from dispersion to agglomeration.

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1. Introduction

Spatial segregation is evident in a lot of cities in the United States (see [6,7,19]). While the traditional meaning of segregation in the USA is the separation of Blacks and Whites, the United
States Census 2000 reveals that this issue has been complicated by new forms of Latino and Asian separateness and mixing.

In economics, spatial segregation is widely interpreted by the Tiebout theory [27] on local public goods and its counterpart in the theory of clubs (see the original paper of Buchanan [4] and Scotchmer’s survey papers [20,21]). The literature examines Tiebout’s conjecture that efficient provision of public goods is realized in an economy where people “vote with their feet.” It turns out that the answer rests on a number of assumptions. For example, when there is no benefit in having people of different skills or cultures together in one community, a group of individuals with heterogeneous preferences would be better off forming a separate club for each homogeneous preference group (see Berglas [2], Brueckner [3], Conley and Wooders [5]).

While local policies clearly matter for residential choice, a paper of Rhode and Strumpf [19] reports that long-run trends in geographic segregation are inconsistent with the simple Tiebout theory. Instead, employment and other factors are more important. In other words, non-Tiebout incentives are perhaps the driving forces in residential decisions.

To find such a non-Tiebout incentive, this paper examines a spatial economy without public goods. Specifically, we focus on people’s heterogeneous preferences for private goods only. Consumers in the real world typically hold heterogeneous preferences for private goods. With respect to cars, the Thais like pickup trucks while the Indonesians like minivans. This paper shows that the preference heterogeneity is another reason for the persistent segregation. The importance of heterogeneous preferences is already noted by Scott [22], who finds that while external barriers (e.g. housing discrimination based on race) are still viewed as the main cause of black–white segregation, preference plays a larger role among Asians. In fact, there are districts, frequently referred to as “China Town,” which are populated primarily by Asians in many large US cities. Numerous varieties of goods preferred by Asian people agglomerate there. Preference plays a more important role for segregation in an ethnically homogeneous country, such as Japan. For example, the people in Kitakata City of Fukushima Prefecture have a preference for Ramen, a kind of Chinese noodles, while people in the Kagawa Prefecture prefer Udon, a Japanese noodle.

Since there is a wide variety of private goods in the real world, the differences in preferences deserve more attention in segregation research. The findings in this research will fill this theoretical gap by showing how heterogeneous preferences lead to the segregation of consumers and industries. The results may clarify why the leading automaker Toyota selected Indonesia as its global production base for minivans and Thailand for pickup trucks,¹ and how the difference in preferences between Kitakata and Kagawa people in Japan has resulted in the production of the well-known Kitakata–Ramen and Sanuki–Udon (Sanuki being another name given to Kagawa).

It was not easy to formulate a general-equilibrium model for the examination of heterogeneous preferences for various private goods, but the techniques devised in the framework of the new economic geography (NEG) have made it possible. NEG is concerned with how agglomeration is derived from monopolistic competition, increasing-returns technology, and transport costs. Extensive reviews on this subject can be found in the book of Fujita et al. [9] and the survey paper of Fujita and Mori [10]. The rapid development in recent years makes this research area a mainstream of trade theory and regional science. Unfortunately, due to model tractability,

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