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Taste heterogeneity, labor mobility and economic geography

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Abstract

This paper investigates the impact of the heterogeneity of the labor force on the spatial distribution of activities. This goal is achieved by applying the tools of discrete choice theory to an economic geography model. We show that taste heterogeneity acts as a strong dispersion force. We also show that the relationship between the spatial distribution of the industry (the wage differential) and trade costs is smooth and bell-shaped. Finally, while Rawlsian equity leads to the dispersion of industry, our analysis reveals that efficiency leads to a solution close to the market outcome, although the latter is likely to involve too much agglomeration compared to the former.

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1. Introduction

The evolution of the spatial distribution of population and industry is known to be strongly correlated to the various stages of economic development (Williamson, 1965; Alonso, 1980; Wheaton and Shishido, 1981; Alperovich, 1993). In particular, it is often argued that a high degree of urban concentration together with a widening wage differential is expected to arise during the early phases of economic growth; as development

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proceeds, spatial deconcentration and a narrowing wage differential should occur. However, it is fair to say that the empirical literature does not provide clear-cut evidence supporting the bell-shaped hypothesis, thus suggesting that it remains "hypothetical". This paper aims at contributing to this debate by providing some theoretical foundations to the bell-shaped hypothesis. To do so, we combine a new model of economic geography with a discrete choice model of migration. Among other things, this allows us to show how falling transport costs and individual heterogeneities in perceptions of regional differences interact to affect firms' and workers' locations and, therefore, the geographical pattern of the industry and population.

It is well known that economic geography models rest on very strong assumptions (see Fujita et al., 1999, for an extensive overview). In particular, they all assume that individuals have the same preferences. Although this assumption is not uncommon in economic modeling, it seems highly implausible that all potentially mobile individuals will react in the same way to a given "gap" between regions. Some people show a high degree of attachment to the region where they are born; they will stay put even though they may guarantee to themselves higher living standards in other places. In the same spirit, life-time considerations such as marriage, divorce and the like play an important role in the decision to migrate (Greenwood, 1985). Note also that regions are not similar and exhibit different natural and cultural features, whereas people value differently local amenities (Rosen, 1979; Roback, 1982; Courant and Deardorff, 1993; Brueckner et al., 1999). More precisely, as argued in hedonic models of migration, once individual welfare level gets sufficiently high through the steadily increase of income, workers tend to pay more attention to the non-market attributes of their environment (Knapp and Graves, 1989). Typically, individuals exhibit idiosyncratic tastes about such attributes. Falling transport costs and more heterogenous individuals can therefore be considered as being closely related to the level of economic development. This is why we believe it is important to investigate how heterogeneity in migration behavior may affect the core-periphery model.[1]

Furthermore, although the standard assumption of a priori identical regions made in economic geography is convenient to isolate the pure effects generated by the interplay between the agglomeration and dispersion forces, it does not permit us to study the impact of differential amenities. Yet, empirical evidence shows that natural amenities, such as a coastal location and good climate, may explain the spatial distribution of industrial activities (Perloff et al., 1960; Mills, 1972; Black and Henderson, 1999; Gallup et al., 1999). This is our second modification of the core-periphery model: amenity levels need not be the same across regions but are given. Indeed, our model allows for a simple determination of the market outcome even when regions have different amenities. In such a context, both the market outcome and the optimum are asymmetric and it is worthwhile exploring their difference.

To sum up, we consider a setting in which potentially mobile workers make their decision to move (or to stay put) because of non-economic considerations. As argued

[1] Our approach somewhat resembles that followed by Brueckner et al. (1999). These authors assume that households with different incomes may react differently to the presence of urban amenities. In this paper, we assume that individuals react differently to differences in regional amenities according to the stage of development of the economy.