1 Introduction

In new economic geography (NEG) models that explain firms' and workers' localization decisions, consumers'/workers' preferences are usually assumed to be homogenous and represented through the same utility function. In particular, in many of these models there is a specific category of workers who are interregionally mobile - usually identified as skilled workers - and a category of interregionally immobile workers - usually identified as unskilled workers. Thanks to NEG models we can analyze how the actual and endogenous movements of mobile workers, together with those of firms, give rise to a certain number of centripetal and centrifugal forces, whose interplay leads to a particular equilibrium outcome in which the economic activity is more or less agglomerated depending on the strength of all particular forces at work. However, NEG models do not generally consider the case in which some of these forces may be generated by workers' preference differences, even though there are some exceptions to which we will refer later on. In any case, we may think that the assumption of homogenous preferences across workers has the capacity to keep things simple in already complex frameworks.

Let us consider, for instance, the seminal core-periphery model by Krugman (1991). In this model a change in trade cost levels, through skilled workers' and firms' mobility, may modify the intensities of two agglomeration forces - described as the market access effect and the price index effect - and the intensity of one dispersion force - the so called market-crowding effect.[1] Depending on trade cost levels, these forces will lead to a stable equilibrium of complete agglomeration of the modern sector in one region, or to a symmetric equilibrium in which all economic activity is evenly distributed across space. We would like to point out that skilled and unskilled workers considered in this model have the same preferences. Moreover, changes in their interregional distribution cannot modify the strength of forces that determine the distribution of the economic activity, because of the assumption of the particular version of the monopolistic competition model

[1] See, for instance, chapter 2 in Baldwin et al. (2003).

developed by Dixit and Stiglitz (1977) and of iceberg trade costs.[2] According to Ottaviano et al. (2002, p. 410):

> Taken together, these assumptions yield a demand system in which the own-price elasticities of demands are constant, identical to the elasticities of substitutions, and equal to each other across all differentiated products. This entails equilibrium prices that are independent of the spatial distribution of firms and consumers. Though convenient from an analytical point of view, such a result conflicts with research in spatial pricing theory that shows that demand elasticity varies with distance while prices change with the level of demand and the intensity of competition.

Thus, Ottaviano et al. (2002) propose a new framework in order to take into account their objections and, in this work, we will heavily draw on their model, which we modify to show our point.

In particular, we argue that, besides the traditional forces treated in new economic geography models, we may consider a new kind of force generated from workers' preference differences, whose nature of agglomeration or dispersion force will be discussed and identified below, and whose action contributes to the determination of equilibria stability properties. Moreover, in order to simplify our analysis, we assume that workers' preference differences are connected to skills differences and we will later justify this assumption. Now we observe that a class of new economic geography models distinguish two groups of workers, that is: interregionally immobile unskilled workers and interregionally mobile skilled workers. Hence, we retain this distinction introducing the following additional assumption: we associate to the difference in workers' skill endowments and mobility characteristics differences in their preferences, with one group of workers more willing to consume the modern differentiated good than the traditional good and, at the same time, more keen on having a greater variety of the differentiated good. In fact, it does not seem unrealistic to think

[2] See, for instance, Ottaviano and Thisse (2003).

that agents which have a greater love for the modern good also appreciate its differentiation more.

Moreover, at this stage of the paper, we do not have to state which of the two types of workers has a stronger preference for the modern good and for a greater differentiation in its consumption. Nevertheless, in many of our comments in the paper, we will refer to the case in which this type of workers is that of mobile skilled workers, since it seems fair to assume that more skilled mobile workers are also the ones that have a stronger preference for the consumption of the modern good and for a greater variety in its consumption.

As mentioned before, we need to say that, even if new economic geography models generally consider that all workers have the same structure of preferences, the papers by Tabuchi and Thisse (2002) and by Murata (2003) are an exception to this common line. Tabuchi and Thisse (2002) introduce taste heterogeneity by allowing different mobile workers to react in different ways to regional differences, and they show that this heterogeneity produces a strong dispersion force. Tabuchi and Thisse (2002, p. 156) write that, in this way, they are allowed 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". Also in Murata (2003) taste heterogeneity in residential location of the single type of mobile workers acts as a dispersion force.

However, the form of heterogeneity that we introduce differs from that considered by Tabuchi and Thisse (2002) and Murata (2003) in different aspects. First of all, because the heterogeneity that we consider arises from a different source, that is from different tastes in the consumption of goods, and not from different reactions to regional differences. Secondly, because it does not arise within the same category of mobile skilled workers, but between the two different categories of skilled and unskilled workers.

The remaining part of the work is organized as follows. In Section 2 we introduce a simple modification in the linear model of economic geography proposed by Ottaviano et al. (2002) by

allowing preference differences between skilled and unskilled workers.[3] Section 3 shows that the introduction of this assumption may affect the results of the interplay of agglomeration and dispersion forces in determining the equilibrium outcomes, and Section 4 more deeply discusses the *preference* and *competition effects on prices* determined by changes in the localization of workers and firms, underlining that the heterogeneity in preferences we introduce may be responsible for the emergence of stable asymmetric equilibria. Finally, Section 5 concludes.

2 The model with heterogeneous preferences

We consider a model with two regions, indexed with r and s, endowed with two factors/workers, which are distinguished between skilled interregionally mobile workers, indexed with H, and unskilled interregionally immobile workers, indexed with L. The total number of skilled workers is H, while each region is endowed with $L/2$ unskilled workers. Workers consume M varieties of a modern manufactured good, with each variety denoted by suffix i and consumed in the quantity q_i, and the quantity q_0 of a traditional good (the numeraire of the model). Moreover, workers' preferences are represented by the following quadratic utility function:

$$U(q_0; q_i, i \in [0, M]) = \alpha_j \int_0^M q_i di - \frac{\beta_j - \delta_j}{2} \int_0^M q_i^2 di - \frac{\delta_j}{2} \left(\int_0^M q_i di \right)^2 + q_0 \qquad (1)$$

with $j = H, L$, $\alpha_j > 0$ and $\beta_j > \delta_j > 0$.

The total number (mass) of produced varieties M, is the sum of the n_r varieties produced in region r and the n_s varieties produced in region s. Parameters α_j, β_j and δ_j describe workers' preferences. Particularly, parameter α_j expresses the intensity of the preference for the differentiated good with respect to the traditional good, and the two parameters β_j and δ_j, with $\beta_j > \delta_j$, express the intensity of the preference of consumers of type j for differentiation in the consumption of the modern good. Hence, for any given value of β_j, parameter δ_j underlines the degree of

[3] We choose to work with this model because of its tractability. Moreover, we notice that Tabuchi and Thisse (2001) also adopt this structure.