Home-market vs. vote-market effect: Location equilibrium in a probabilistic voting model

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Abstract

This paper considers the location of manufacturing activities when regional policies are endogenous. We find that once the political economy of regional policy is explicitly taken into account, regional population size has an ambiguous effect on the level of regional subsidy, even though it plays a key role in determining the equilibrium spatial allocation of industry. In particular, the final allocation of firms depends both on the relative economic strengths of the two regions, as predicted by more orthodox economic geography models, as well as by their relative political strengths.
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1. Introduction

The de-location process associated with trade integration has been a major concern for European policy makers for decades. It is reflected, for instance, in the quadrupling of cohesion spending as a share of the EU budget since 1986, and in the important level of spending by member states on their disadvantaged regions such Germany's Eastern Länder and Italy's Mezzogiorno. Much of this spending is explicitly aimed at preventing, delaying or even reversing the agglomeration of economic activity in favoured regions.

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The aim of the present paper is to address the issue of agglomeration during a process of regional integration in a framework where regional policy is determined by political economy forces. More precisely, taking a laissez-faire equilibrium as a benchmark, we show how politics and economic integration interact in both directions to speed up or slow down the agglomeration process that results from integration.

The economic model we propose is in the tradition of the so-called "new economic geography" à la Fujita et al. (1999). Specifically, we use a simplified monopolistic competition model of a nation with two asymmetric-sized regions. Industrial output is produced with capital and labour, and by assumption capital is inter-regionally mobile while labour is not. The interaction of transportation costs and increasing returns gives rise to the well-known home-market effect (Krugman, 1980). In simple settings such as ours, the home-market effect implies that a gradual lowering of trade cost will induce all industry to agglomerate in a single region. We refer to the region in which industry clusters as 'the core' and to the other region as 'the periphery'.

To keep the analysis simple, capital owners are not inter-regionally mobile so that all capital earnings are "repatriated" to the owner's region. The fact that capital income is repatriated and that labour is immobile across regions breaks the "circular causality" processes typical of more general economic geography models. This has two consequences. First, the location equilibrium is unique, so to a given regional policy corresponds a unique spatial allocation of industry. Second, the model does not feature the catastrophic behaviour that is the hallmark of many economic geography models (catastrophic behaviour is said to arise when an infinitesimal change in transport costs produces a discrete shift in the location of firms). Because of these properties, we are able to obtain analytical results (as is well known, very few analytical results are available in models of economic geography displaying catastrophic behaviour, even without adding endogenous regional policy variables).

State intervention at the regional level could take any form, from infrastructure spending to tax reduction and so forth. To be concrete we focus on a location-specific subsidy that reduces the fixed cost a firm faces when setting up production in the subsidised region. In our simple model, the fixed cost consists of only capital, so the location subsidy ends up as a subsidy to capital (and, in equilibrium, to the level of production). The interaction between the two regions at the political level determines the direction and the amount of the regional subsidy. We assume lump-sum transfers are available; in this context, the policy instrument chosen is non-distortionary, which implies that the results of our analysis do not depend upon the choice of instrument.

The political economy model we work with is based on electoral competition rather than on a lobbying approach. Sectoral concerns are likely to be transmitted to the decision makers through lobbying activities (see, e.g., Becker, 1983; Grossman and Helpman, 1994; Olson, 1965). However, when we look at regional issues, we see regions as spatial entities and not as sectors. Since they are often recognized as distinct entities in the political system, regions are more likely to influence the policy outcome directly, i.e. through elections. Hence, we will not rely on a lobbying approach to characterize the political game. Instead, we use a Hotelling–Downs probabilistic-voting model (Hinich, 1977; Ledyard, 1984).