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Growth strategies: Fiscal versus institutional policies[☆]

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Abstract

This paper analyzes the growth impact of fiscal and institutional policies for alternative sizes of regions. The local government provides a public input that may be subject to relative congestion thus reducing its individual availability. Then private capital productivity is affected by the number of firms utilizing the governmental input. Institutional policies include the decision about the type of public input while fiscal policies decide on its extent. Private capital accumulation incurs adjustment costs that depend upon the ratio between private and public investment. After deriving the decentralized equilibrium, fiscal and institutional policies as well as their interdependencies and welfare implications are discussed. Due to the feedback effects both policies may not be determined independently. It is shown that depending on the region's size a certain type of the public input maximizes growth.
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1. Introduction

The fact that economic activity is not equally spread across space is well known and provides the basis for various fields of economic research to analyze corresponding causes and consequences: while growth theory focuses on debates about convergence/divergence as consequence of different growth rates, the new economic geography analyzes how the interaction between individuals in different regions shapes the economic landscape. In case of incomplete competition and increasing returns to scale of the technologies, economic activities tend to cluster, mainly in metropolitan regions, and these agglomerations in turn tend to gain importance as principle engines of growth. Consequently growth rates in these regions differ from those in the periphery and ground is set for further divergence (see Barro and Sala-I-Martin

(2004), Krugman and Venables (1995) or Baldwin et al. (2003) for recent overviews over growth theories and economic geography). However, the recent report of the OECD (2006) on the competitiveness of cities in the global economy also shows that size is not automatically synonymous with economic success as measured by income per capita. Again, one of the main questions in economic analysis, namely should the government intervene the market process and how, remains relevant also at a regional level.

One of the main topics addressed during the last several years within growth economics has been to point at the fundamental role of institutions in the growth process. Institutions are referred to as economic, legal or social arrangements (see e. g. North (1990), Knack and Keefer (1995) or Acemoglu et al. (2001, 2005)). More precise formulations include the focus on property rights protection or regulations in financial, labor or product markets (see e. g. Eicher and García-Peñalosa (2006)). Most recent discussions refer to 'appropriate' institutions that are based on the seminal work of Gerschenkron (1962) and argue that different types of institutions or policies maximize growth (see e. g. Aghion and Howitt (2005), Rodrik (2005) or Acemoglu et al. (2006)).

This paper confers the discussion of the institutions' impact on growth at a regional level and extends it with respect to its contribution within a comprehensive governmental policy mix. As growth determinant serves a governmentally provided public production input that – depending on its characteristics – may be interpreted e. g. as basic research, road networks or regional public good such as a harbor or an airport. The analysis is carried out in the context of an endogenous growth model that is applied to a regional level. The regions may be distinguished with respect to their size and possibly the type of productive input provided by the government. With this respect the model is based on the seminal work of Barro (1990) but explicitly focuses on the impact of the region's size as measured by the number of firms utilizing the public input. In analogy to Turnovsky (1996) the public input acts as complement to private capital within the production process, increases private capital productivity and affects the firm's adjustment costs. Institutional policies include the decision on the type of the governmental input, as characterized by the prevailing degree of congestion, as well as the choice of the economy's size. The latter argument gains importance e. g. in the discussion about the EU enlargement or decisions at a regional level about the extent of metropolitan areas. The governmental input is provided free of charge to the individuals, hence taxes are levied to finance the provision.

The emphasis is laid on the relationship between specific governmental policies and regional growth. Since the public input may be congested, the region's size is of major importance for the resulting policy options. With this it is possible to answer e.g. questions like: How big should an economy be given that a certain public input exists? Which public input should be provided by the local government for a given size of the region? Which growth impact is incorporated in certain fiscal or institutional policies respectively? Which determinants characterize an optimal policy mix? It is shown that politicians have substantial room for creatively packaging alternative instruments into a policy mix that is sensitive to local opportunities and constraints. In addition it becomes obvious that it is not possible to derive a unique policy recommendation but that regional peculiarities have to be carefully considered if the goal of maximizing growth is to be sustained.

The paper is organized as follows: After presenting the analytical framework in Section 2, the equilibrium in the decentralized economy is derived in Section 3 and its economic implications are discussed. Section 4 focuses on welfare and the interdependencies between fiscal and institutional policies. Subsequently numerical simulations are carried out since it is not possible to derive closed–form solutions of the model. Section 6 concludes while some formal details are relegated to the appendix.

2. The analytical framework

2.1. Regional aspects and production technology

We consider a multi-region economy in which a benchmark region with total population size normalized to $N = 1$ is used as numeraire. It is assumed that the other regions are populated with $N > 1$ identical individuals. This specification has two major advantages: It allows to (i) analyze the growth impact of governmental policies for regions of different sizes and (ii) to consider the scale impact of alternative institutional settings within the model. The latter argument will be detailed during the further presentation of the model. We focus on regional size as explicitly defined by the population size, N, and its interdependence with regional growth. This allows to address issues like economic growth of mega-cities or congestion in populous regions.