

# Chapter 7

## The Potential Role of Government in Development Process of a Cluster Policy

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### ABSTRACT

*Recent evidence strongly suggests that firms' joint action may be insufficient for the creation of clusters in order to face the new competitive pressures of globalization. To cope with these pressures, the authors argue that governments can play an important role in the process of creating the development of clusters. Based on a theoretical framework, they examine the way in which governmental intervention and public policies to foster cluster creation may provide positive outcomes. Here, the authors study the different approaches developed in cluster theories and provide an insight into the set of governmental and policy roles that may facilitate the formulation of local clusters. Finally, they propose a re-conceptualization of clusters theory that will potentially increase its value as a comprehensive tool for regional economic development.*

### INTRODUCTION

With increasing frequency in the last decade, references have appeared in economics literature that all developing economies have faced a shift towards more liberalized regimes, and the open-

ing up to new markets has exposed firms and even more Small- and Medium-Sized Enterprises (SMEs) to the benefits and threats of globalization. SMEs make their innovation decisions in a global economic context characterized by its high dynamism, continuous change, and broader international competition. The rapid speed of change is thus generating more uncertainty, which,

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as a consequence, creates unforeseen impacts on firms and especially on SMEs (Albaladejo, 2001). Moreover, to remain competitive, firms must innovate and internationalize continually. However, firms do not normally innovate individually for a number of reasons such as the costs of innovative processes, the difficulty of these processes, etc. Instead, innovative enterprises tend to form groups to develop new technologies, conduct research activities, enroll skilled personnel, etc.

Both economic theory and empirical analysis underline the key role of expenditures on Research and Development (R&D) in economic growth, if measured correctly (Grilliches, 1979). Nevertheless, state and local governments, along with private sector consultants, have further developed R&D experiences (Waits, 2000). R&D, in the notion of clusters, which may take the form of basic research, applied research or experimental development, is comprised of “*creative work undertaken on a systematic basis to increase the stock of knowledge and the use of this stock of knowledge to devise new applications*” according to the definition provided by the OECD in the well known Frascati Manual (OECD, 1994, p. 30). This knowledge, as emphasized in this section is created through innovative processes, and, as will be discussed below, R&D expenditures are a critical input into those innovative processes (Leyden & Link, 1992). In those processes, the knowledge flows within and between clusters are critical to fostering and sustaining innovation (Wolfe & Gertler, 2006). Moreover, different networks of firms rely upon different tangible assets of capital and knowledge in which cluster (or networking) policies shaped by governmental interventions rooted by particular initial conditions of public and private R&D. However, the innovative processes in between firms by which technology is created and diffused in an economy and the role of governments is not very well understood (OECD, 2001). Regarding this point, Kolluri et al. (2000) demonstrate that the growth of public expenditure and its impact on economic activity

have been important issues in the economic literature as far back as the mid-1800s. Relative to the latter issue, a considerable amount of attention has been directed towards assessing the effect(s) of the general flow of government services on the productivity of the private sector of an economy and, more specifically, the impact of public-sector investment on private decision making considered with the optimal size of government. Here, it is important to note that the notion of the effects of government policies substantially analyzed from the point of view as in the previous economic development literature.

This chapter aims to further study the reasons for firms clustering and moreover to analyze the ways through which governmental policies could support the formation and the development of clusters. Based upon a theoretical framework proposed by the OECD, we provide recommendations for government policies in order to foster the development of a regional cluster. The remainder of the chapter is organized as follows: in the first section, we study the relation between regionalization and clusters and we analyze the theory of clusters as a model for spatial and business development. In the second section, we analyze the process for developing a regional cluster policy while in the third section we focus on the roles of the government in such a process. Here we present a framework for the development of a cluster policy and further analyze its characteristics. In the final section, we conclude by summarizing the arguments presented here by providing a list of possible policy recommendations to foster the formation of clusters in the pace of government intervention.

## **BACKGROUND: THE THEORY FOR INDUSTRIAL CLUSTERS AND REGIONALIZATION**

Today, modern industrial nations’ indicators based on trademarks point to large numbers

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