Building and Operating a System to Promote Regional Competitive Industries Through Cross-Sectoral Collaborations: Findings From the Experience in Germany

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ABSTRACT

Initiated by regional governments, economic associations, etc., many regions are trying to promote competitive industries through cross-sectoral collaboration. The purpose of this study is to consider management approaches to build and operate a regional system for facilitating a self-organizing process of cross-sectoral collaborations. First, related literatures are reviewed. Then, the concept of constructing regional advantage is introduced. Then, a platform policy through building a Regional Innovation System based on the Triple-Helix model is examined. In the case study, the experiences of three states in Germany are examined by focusing on the medical technology industry. In these states, to promote regional industries, regional systems to facilitate cross-sectoral collaborations are structured. The main focus is how the systems were built and operated through the involvement of regional stakeholders. Last, the results of the case study are comparatively analyzed and the implications for the management are discussed.

KEYWORDS

Constructing Regional Advantage, Cross-Sectoral Collaborations, Management Approach, Platform Policy, Regional Industries, Regional Innovation System, Self-Organization Process, Triple-Helix Model

INTRODUCTION

Region is a key component for economic and industrial development. Today, through restructuring and reorganizing relationship between industry, university, government, and even civil society, promotions of new and competitive regional industries are undertaken in many areas in the world. The purpose of this study is to examine the management approach to consider how regional systems can be built and operated to facilitate self-organization process of cross-sectoral inter-organizational collaborations for promoting regional competitive industries. In the literature review, firstly, the concept of “Constructing Regional Advantage (CRA)” is introduced and discuss platform policy for CRA which aims to promote regional competitive industries by facilitating self-organization process of cross-sectoral collaborations. Then, structure and functions of regional innovation system (RIS) which is based on Triple-Helix Model for implementing the policy are examined and consider how the system should be built/operated and how the support by the public sector should be implemented. Based on the literature, three states in Germany (North Rhine-Westphalia, Bavaria, and Baden-Wuerttemberg), where competitive regional industries are promoted through cross-sectoral collaborations between public sector, industry, and research institutions etc., are studied and analyzed. Here, the process to

DOI: 10.4018/IJSSOE.2019010103

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construct the structure and functions of the system are examined by focusing on the effort to promote medical technology industry. Then, the three regions are compared and examined the common and the difference.

REVIEW OF RELATED LITERATURE

Why Regions?

Region is conceptually regarded under the level of country but above the local or municipal level (Cooke and Leydesdorff, 2006, p.6). Today, region is increasingly recognized as a key component for economic development (Pessoa, 2013, p.101; Kitson et al., 2004, p.991), a locus for process and patterns of innovation, and competitiveness in the globalization (Fiore, et al., 2011, p.1400). This is because regions, as is stated by European Commission (1995), “the best level for contacting enterprises and providing them with the necessary support for the external skills they need (resources in terms of manpower, technology, management, and finance). It is also the basic level at which there is natural solidarity and where relations are easily forged (p.45)”. In this trend, Cooke et al. (2006, p.29) also indicates region is strategically important for constructing its advantage, however at the same time, since regional innovation systems are open, socially constructed and linked to global, national and other regional systems of innovation, it is necessary to employ multi-level approach to innovation and governance.

Concerning competitive advantage of regions, Cellini and Soci (2002) show regional competitiveness is more than the potential ability to export or trade surplus and “include different economic elements, demographic and social aspects (p.90)” and says the concept is complex and elusive. It is also indicated that there is no unanimous agreement concerning the definition and the framework to consider regional competitiveness (Borsekova et al., 2012). On the other hand, Pessoa (2013) proposes to recognize regional competitive advantage in the dynamics in “i) sales of local products in contested external markets, ii) use of local assets (people and other endogenous resources) in an efficient way, iii) adding value to its firms and workers which means to maintain or increase employment (p.107)”. Moreover, with reference to Porter (1998)’s argument about clusters, Pessoa (2013) concludes the improvement of continual innovation capability through productive use of inputs is essential for regional competitive advantage. Therefore, here the fundamental question is “how can the innovation capability be improved in a regional context (p.108)”.

How to Promote Regional Competitive Industries?

Cooke and Leydesdorff (2006) define Constructed Advantage as “both a means of understanding the noted metamorphosis in economic growth activity and a strategic policy perspective of practical use to business firms, associations, academics, and policymakers (p.10)”. Cooke et al. (2006) recognize Constructed Advantage “as the next evolutionary step in regional economic development (p.12)” and discuss some key elements for Constructing Regional Advantage (CRA) as follows.

Firstly, understanding the initial conditions of a region is necessary to consider policy options which are often limited by the historical trajectory of a region. Here they indicate regional endowments such as historical and geographical background and economic, socio-institutional and political conditions should be taken for consideration. More concretely, as initial conditions to be considered, it introduces typology of regions, as well as individual factors such as an access to natural resources, the degree of centrality and connectivity with respect to its geographical location, the size of its population, the quality of regional communication infrastructures, the knowledge base strengths of the region, and evolutionary processes based on path-dependent technological trajectories. Here, it is presumed that “true regional innovation system connectivity is not complete in most regions (p. 33)”. Regarding the methodology to analyze the initial condition, Borsekova et al. (2012) propose to conduct SWOT analysis which clarifies internal environment (strengths and weaknesses) and the
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