

Competitiveness of East Asian science cities: discourse on their status as global or local innovative clusters

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Abstract In a knowledge-based economy of the globalizing economic order, the role of regions is very significant in order to create and to disperse knowledge. Particularly, geographical clusters of firms in a single sub-national region may contribute to transmitting certain kinds of knowledge between and among firms. In addition, markets prefer to favor specialized firms with a coherent body of knowledge when knowledge creation and the use of new knowledge become increasingly important for maintaining and improving a firm's competitiveness. Therefore, regional policy makers may not interfere directly with markets and firms when the process of globalization pushes national economies into a world of learning and innovation. The reason is that the institutional framework for market exchange favors knowledge exchange in a globalizing economic system. This paper argues how East Asian science cities such as Tsukuba Science City in Japan, Daejeon Innopolis in South Korea, Hsinchu Science-based Industrial Park in Taiwan, and Zhongguancun Science Park in China have been developed in order to create technology innovation as well to contribute to national and regional economic growth. Moreover, it also focuses on their competitiveness and the further development strategy that aims to become global science cities. Finally, it also discusses whether their competitiveness as innovative clusters is based on global or local levels.

Keywords Competitiveness · Innovative cluster · Knowledge economy · Technology innovation · Globalization · Science cities

1 Introduction

Moulaert explains that the term “globalization” has been at the heart of economic and political discourse for the last 20 years. It is regarded as a major driving force of contemporary economic transformation. Additionally, both conservative and progressive political parties use it as an argument to support changes in socio-economic policy (Moulaert 2000).

Since the 1990s the debate has focused on the relationship between the globalization of the world economy and its impact on the different spheres of society, such as production, trade, culture, politics and governance, which develop more and more at a global scale. With globalizing economic process, the production of social and economic structures at different spatial levels generates a threat to the creativity of local and regional territories. Shachar urges that the emerging global economy is characterized by the simultaneous operation of a number of processes that produce the transition from an international to a global economy (Shachar 1997).

Additionally, Dicken distinguishes processes between internationalization and globalization. According to his explanation, the former is a quantitative process which leads to a more extensive geographical pattern of economic activity, while the latter is a qualitative process that is based on the functional integration of internationally dispersed activities (Dicken 2007).

Globalization is the new economic, political and cultural order in which nation-states are no longer significant actors

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