

World Conference on Technology, Innovation and Entrepreneurship

## Urban System of Innovation: Main Agents and Main Factors of Success

Maria Markatou<sup>a\*</sup>, Efstratia Alexandrou<sup>b</sup>

<sup>a</sup> *University of Bosporus, Department of International Trade, Istanbul, Turkey*

<sup>b</sup> *University of Thessaly, Department of Planning and Regional Development, Volos, Greece*

---

### Abstract

The paper that follows studies the concept of the “urban system of innovation” and its possible methodological framework of analysis. The paper is structured as follows: Section one is the introductory section, in which the main idea of a system of innovation and how the city became gradually its main point of interest is analyzed. Section two deals with the theoretical and empirical analysis of the concept of the urban system of innovation, reviewing this way related studies and reports. Section three focuses on some methodological issues. Section four describes the examples of four urban systems of innovation, namely those of San Francisco, Los Angeles, New York and Boston. Section five is a section that synthesizes in an attempt to first identify the key factors associated with the rise of these areas as successful cases of urban system of innovation and second propose a methodological framework for their analysis. This implies, among other things, identifying its main and secondary actors-players, posing their main field of policy action and describing the necessary interactions between them. The “urban system of innovation” concept is an emerging one, which means that it is now shaped, structured and developed. Malfunctions and distortions are part of its initial formation. The existing concept of innovation system doesn’t deal with the unique societal aspects that tend to be formed upwards and downwards the urban environment. An innovation system of such a small scale has to pay attention not only to the economic actors but also to the whole spectrum of societal challenges. Therefore, now it is the ‘critical’ time to put the basis for future successful cases.

© 2015 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of Istanbul Univeristy.

**Keywords:** Intelligent cities; Start-up cities; Urban planning; Urban system of innovation.

---

\* Corresponding author. Tel.: +30 2410 552318, +30 6937 014156.

E-mail address: [markatou@uth.gr](mailto:markatou@uth.gr)

## 1. Introduction

While facing the rapid development of economic globalization and at the same time being argued that globalization and localization tend to be complementary processes, the concept of “territorial systems of innovation” (national, sub-national: regional, sectoral, etc) is helpful in understanding the factors that shape the process of innovation, as well as the interaction between innovation and geography. Freeman was the first to introduce the concept of “national system of innovation”, identify its main actors- players and describe the necessary interactions between them.

Gradually, the discussion and the point of interest moved from the national scale to other more “localized” units of analysis. Geography became more important, but narrower its boundaries as well. As a result cities became important players both nationally and globally, directly participating in the international economic spectrum and formally competing for attracting resources, labor force and foreign direct investments. Therefore, as Peng-fei, Jing and Yang has argued “the city has become the major engine of local, regional and national development”. Moreover, it is in the boundaries of the urban environment that innovation (political, institutional and technological) will be tested for promoting economic growth. In this context, the concept of the urban system of innovation has emerged, a concept that captures the research interest of academia.

The existing concept of innovation system doesn't deal with the unique societal aspects that tend to be formed upwards and downwards the urban environment. An innovation system of such a small scale has to pay attention not only to the economic actors but also to the whole spectrum of societal challenges. Therefore, now it is the ‘critical’ time to put the basis for future successful cases. Unfortunately it is a scale of SI that is still being explored so the next section tries to put a theoretical basis for the Urban System of Innovation concept.

This paper tries to analyze the notion of an urban system of innovation as well as the broad range of actors that construct this new system of innovation and how these interact with the innovational activity on an urban level. In order to examine in a more detailed way the points that are mentioned above, successful examples of innovative US metros will be presented and analyzed.

## 2. Literature Review

As Davenport argued innovation is the introduction of something new aiming to bring radical change. Whether it relates to processes, products or organizations, innovation determines the competitiveness of a nation, which depends ultimately on the companies' ability to innovate and improve (Porter, 1995). While trying to understand innovation and use it as well as its advantages more beneficially, the idea of a “system of innovation” comes up. This specific idea goes back to Friedrich List's conception of “The National System of Political Economy” (1841) which Freeman called –in 1995 – “The National System of Innovation. However, it was B.-Å. Lundvall who introduced – in 1985 – the concept of a “system of innovation” in general. This concept was later applied on regions and sectors.

Although there is no exact definition of an innovation system and the concept is still emerging, according to Freeman, a complex and interactional set of relationships among actors in the system (national, regional, sectoral) which includes enterprises, universities and research institutes is actually responsible for innovation and technology development. Additionally, a system of innovation has been described by Beije in 1998 as “a group of private firms, public research institutes, and several of the facilitators of innovation, who in interaction promote the creation of one or a number of technological innovations (within a framework of) institutions... which promote or facilitate the diffusion or application of these technological innovations”.

In the direction of pointing out the characteristics and comparing the different Systems of Innovation approaches one should observe and analyze the ways these systems deal with the following six dimensions (Coenen and Diaz

Download English Version:

<https://daneshyari.com/en/article/1110041>

Download Persian Version:

<https://daneshyari.com/article/1110041>

[Daneshyari.com](https://daneshyari.com)