REGIONAL INNOVATION FROM A THEORETICAL PERSPECTIVE

INOVARE REGIONALA- NOTIUNI TEORETICE

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Abstract: *This paper aims to look at innovation from a regional perspective. The concepts of regional innovation and regional innovation systems are approached from a theoretical perspective. The systems of innovation have developed an integrated approach to understanding the variety of levels at which innovation can affect performance, including at regional level.*

Keywords*: innovation, regional innovation, regional innovation systems*

INTRODUCTION

Innovation has long been recognized as one of the main prerequisites for the sustainable development of firms, regions and nations. More recently, innovations are recognized as the outcome of fruitful collaboration and interaction between business firms and a wide variety of institutional actors around them.

The promotion of innovation is a major concern at regional, national and supranational level, since there is a wide consensus about the benefits of innovation on social an economic progress.

If according to location choice models, agglomeration around knowledge creators and absorption of the knowledge which spills over thanks to high levels of absorptive capacities is a key strategy for firms to innovate, a growing strand of research on "regional innovation system" (Cooke, *et al.,* 2004), suggests that what really matters to innovate is the capacity to run cooperative relationships and to be integrated into a dynamic network of (local or regional) inventive actors. Hence organizations do not only need to open up their innovative processes to ideas floating in the

ambient air. They also have to work towards building and managing a riche set of active network connections and relationships so as to be able to draw on research and development that may lie outside their boundaries.

The literature on innovation systems can now be identified with different conceptualizations: National Innovation Systems (NISs) (Lundvall, 1992), Regional Innovation Systems (RIS) (Cooke et al., 1997), Sectoral Innovation Systems (Malerba, 2002) and Technological Systems (Carlsson, 1995; Carlsson and Stankiewicz, 1995). Although these concepts have been used extensively, it is acknowledged that they have been hard to operationalize.

REGIONAL INNOVATION SYSTEMS

The innovation system can be defined as a network of actors and institutions that develop, diffuse and use innovations (Breschi, Malerba, 1997). The innovation systems approach explains innovation patterns in terms of technology and knowledge flows mediated by institutions, being initially applied at national level (Lundvall, 1992), and following at a regional, industrial and technological ones.

The importance of RIS stems from the increasing interaction of regional actors on the outcome of the innovation process. Although having a similar economic and industrial background, RIS are far from being homogeneous given the multitude of characteristics specific to each regional unit. In a similar vein Innovation Systems need to take into account different spatial and technological levels of their actors. The origin of the concept of RIS is based on two main bodies of research: one that conceptualizes innovation as an evolutionary and social process and the other which tends to explain the socio-institutional environment where innovation emerges. As a consequence, innovation is stimulated and influenced by many actors and factors and innovation systems are characterized by cooperation between firms and other institutions.

Although some studies have been undertaken to characterize and/or explain the source and evolution of RIS (Cooke et al., 2000, 2003) a basic problem seems to persist in all types of studies involving RIS as it is not yet known how a RIS would look like in reality due to both the different capabilities and the different innovation potential of all actors of this RIS.

Asheim and Isaksen (2002) have put forward three types of RIS:

1. the territorially embedded regional innovation networks
2. the regional networked innovation system
3. the regionalized National Innovation Systems (NISs.)

Geographical, social and cultural proximity plays an important role in the generation of firms' innovative activities in territorially embedded regional innovation networks.

Learning-by-doing and learning-by-interacting are the main knowledge generating mechanisms as the presence and interaction with knowledge providers is relatively modest (Asheim and Isaksen, 2002). Although knowledge flows interactively among actors, most of them networking Small- and Medium-Sized Enterprises (SMEs), the probability of producing radical innovations is low due to the modest presence of knowledge providers. As firms in territorially embedded regional innovation networks rely on locally developed knowledge, innovations achieved tend to be mainly incremental in nature due to the lack of strong knowledge providers. The lack of cooperation with knowledge organizations in territorially embedded regional innovation networks may jeopardize the firms' ability to catch up with new technology. As a consequence, to remain competitive firms must develop external linkages in order to avoid lock-in situations. In regional networked innovation systems the regional institutional infrastructure is more systemic than in territorially embedded regional innovation networks. This is achieved by means of a strengthened infrastructure with more R&D institutions, more vocational training and more higher education institutions (Asheim and Isaksen, 2002).

As regional networked innovation systems are regarded as ideal-typical RIS, local firms have a higher probability of generating radical innovations than in the previous situation, which is the result of the strong networking activities of the regional cluster of firms.

As a consequence, regional networked innovation systems can be seen as an extension of territorially embedded regional innovation networks, in which firms have access to more regional competencies, which in turn reduces the likelihood of lock-in situations and increases the profitability of radical innovations.

CONCLUSIONS

The importance of RIS stems from the increasing interaction of regional actors on the outcome of the innovation process. These are not homogenous at all. It is rather difficult to see how RIS would look like in reality due to both the different capabilities and the different innovation potential of all actors of this RIS. However, regional networked innovation systems can be seen as an extension of territorially embedded regional innovation networks, in which firms have access to more regional competencies.

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