9 The Regional Impact of Innovation Networks

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9.1 Introduction, Method of Analysis and Clarification of Terminology

In recent years innovation networks have been adopted as an instrument of local development policy in many European cities. The main idea and hope behind this policy is that through such networks synergy effects will be created and innovation promoted, thus strengthening the competitiveness of the respective region. Numerous authors (e.g. Porter 1998) even maintain that intra-regional cooperation could become a locational factor for investors from outside the region. The high acceptance of the network concept among politicians derives at least partially from the many studies which explain regional development processes in terms of the so-called 'network paradigm' (see Cooke and Morgan 1993). A large number of recent studies in fact concentrate their analysis on the network idea, when explaining regional development. The ‘Third Italy’ has served as the most cited empirical proof of this kind of region in which intra-regional networking is well-developed and has led to economic success, as shown by Bathelt (1998).

In this chapter, we firstly examine the current theoretical concepts of regional development, discussing whether and to what extent they value innovation networks. In the following section, we then group together the results of empirical studies which analyse the connection between integration in networks and business success (and, thereby, implicitly regional growth as well). This is followed by an investigation of the role of intra-regional innovation linkages, using data from the European Regional Innovation Survey (ERIS). In conclusion, the political implications are illustrated and some unanswered research questions mentioned.

In the context of this study, innovation networks are considered to be linkages between businesses, politicians and researchers – the most important participants in innovation. A network is considered innovative when it continually restructures itself, remaining creative and open for new members (and excluding old members when necessary). According to Lundvall and Borrás (1998, p. 108), an innovative network represents "an explicit organisational co-operation and exchange
arrangement aimed at the development of knowledge, products or services". The restriction to intra-regional networks is ignored here.

Innovation networks, as described above, belong to the group of economic networks with more than two participants and are characterised by four characteristics (see Kilper and Latniak 1996): benefit for the majority of the participants, dependency of the participants on resources controlled by others, formation of complex relationships in communication (requiring an openness of the various participants), and an informal and implicit method of functioning.

9.2 Main Theoretical Concepts

With regard to the relationship between innovation networks and regional development two partially-interdependent perspectives are conceivable. It can be argued that the spatial proximity of actors (as an input factor of business innovation – organisationally represented as innovation networks) leads to a higher innovation output from the respective participants, which results in positive impulses for regional development, taking the above assumptions as given. On the other hand, it could be claimed that successful regional development increases the likelihood of spatial clustering of innovation actors due to expected agglomeration economies. This would in turn lead to an improvement in innovation co-operation in the region. In this chapter we primarily explore the first hypothesis and thus the role of innovative linkages between various participants in innovation (businesses, politicians, financial institutions, research facilities). As a result, the function of spatial clustering is discussed, which can be seen in Fig. 9.1.

The analysis of innovation networks and their importance in regional development is neither new, nor solely limited to the field of economics (see Kamann 1998). The idea of innovation networks was already addressed in the theoretical studies of Marshall (1890), Weber (1929) and Schumpeter (1934), who stressed the advantages of inter-firm linkages for the businesses involved as well as for the location in which they operate. Their argumentation primarily concerns economies of scale and scope in the form of positive agglomeration economies. More recent institutional economic approaches (in particular Williamson 1985) emphasise inter-firm network arrangements as a transaction cost saving alternative (which is especially important in times of increasing vertical integration in production) to open markets and business-internal organisational hierarchies.

Since the eighties numerous explanatory approaches for dynamic regional development have arisen, sometimes with closely linked and sometimes highly conflicting characteristics. Despite all the differences between these approaches (the schools of thought of the various authors and their regional, national and disciplinary origins), common ground exists. They differ from earlier regional development theories and justify the claim of a change in paradigm regarding an explanation of the creation and growth of innovative businesses and products and the resulting effects for the region (Capello appropriately called it the 'network paradigm', see Table 9.1). Characteristics promoting consensus include the trend to post-Fordist rather than Fordist production and capital accumulation, the