

Collaborative Networks Development Based on the Convergence of Strategic Axes for Increasing Competitiveness

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ABSTRACT

The emergence and development of collaborative networks can be analyzed from different perspectives and different levels of complexity. Collaborative networks are formed and developed as a result of the strategic axes for increasing competitiveness. The dynamics and complexity of the business environment led to the innovation of business models and to the identification of new ways to capitalize the organizational potential. The main objective behind the emergence of collaborative networks is to capitalize on the organizational potential through collaboration. Organizational progress and economic development can be achieved through innovation, knowledge and transfer of knowledge and by making the best use of the organizations' distinctive potentials in a collaborative and synergistic manner.

KEYWORDS: *strategy, collaborative networks, innovation, entrepreneurship, competitiveness*

JEL CLASSIFICATION: *M10, M19, P13*

INTRODUCTION

The emergence and development of collaborative networks is closely related to the convergence of complex strategic axes that can be studied on different levels of complexity. These strategic axes arise, on the one hand, at the micro level as a consequence of the organizations' strategic approach to collaborate and, on the other hand, at the macro level as a result of the government's strategies for increasing competitiveness. Linking these axes generates the emergence of new collaborative forms that bring a gain of value in the organizational, regional, national or Euro-regional context.

Studying the role of strategic axes is very important because it provides us information on how collaborative networks exploit entrepreneurial initiatives, the organizational, regional and national potential.

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Collaborative networks arising in emerging business sectors, in traditional sectors or in areas of excellence, have multiple features and are much more complex because they involve the contribution of extremely varied entities. Identifying the strategic axes will allow us to study the current and future trends of collaboration between organizations within collaborative networks. This is relevant as the most companies communicate their set priorities as part of their strategic plan (Cioană & Ohotă, 2011).

The emergence of collaborative networks is driven by the strategic reorientation of national economies. Identifying and capitalizing on areas of excellence creates distinctiveness and generates competitive advantages as a result of collaboration between organizations, institutions and governments. The global trend is to capitalize on the strategic potential of organizations from emerging strategic areas or to increase the visibility of organizations through collaborative partnerships. The emergence of collaborative networks was largely driven by the organizations' refocus on collaboration for systemic innovation to the detriment of independent innovation. The action of organizations to integrate into complex innovation systems in order to achieve their strategic goals converges with the strategic axes that the governmental and regional factors are initiating in order to increase competitiveness. We can think also at the competitive advantage in the public sector, as it plays an important role; it not only helps improve public services but also helps eliminate inefficiencies and waste (Popa, Dobrin, Popescu & Draghici, 2011). It's also important as the public-private partnership is designed to lead to increased competition between operators, aimed at marketing of products or services within their portfolio of public organizations. (Jiroveanu & Drăjneanu, 2011). This convergence strengthens our argument that the new strategic focus of organizations on systemic innovation and the contribution of strategic axes to increase competitiveness have produced the shift to the emergence of collaborative networks. Therefore, there is a very important connection between the actions of organizations to become more competitive through innovation and research and development and the strategic axes as development trends at regional and national levels.

In this paper, we will refer to collaborative networks as generic term for the collaborative relationships that can occur between different entities such as business organizations, enterprises with a profit objective, government agencies and academic and research institutions. The diversity of collaborative relationships has generated a number of names for the forms that these collaborative relationships can take. In literature, we may encounter names such as spatial agglomeration, clusters, extended enterprises, fractal enterprises, holonic enterprises and others, all these representing different manifestations and forms of collaboration between organizations (Cross, Parker & Sasson, 2003).

1. STRATEGIC TRENDS AND CONTEXTUAL FACTORS, DETERMINANTS OF THE EMERGENCE OF COLLABORATIVE NETWORKS

The study of the emergence of collaborative forms assumes from a methodological point of view grouping the factors that influence the emergence and development of collaborative networks in four major categories, namely: contextual factors, strategies, policies and programs for the emergence and development of collaborative networks, strategies and strategic orientations of collaborative networks, strategies for managing the common potential and the individual potential unified in collaborative networks.

The objectives of collaborative networks, regardless of their names and forms, can be extremely varied. The strategic objectives of collaborative networks in regional and national context are set for longer time horizons and can target the economic growth, competitiveness improvement, identification and capitalization of organizational potential, development of innovative potential, development of new business areas, raising foreign direct investment and support for small and medium enterprises. Collaboration within networks, regardless of the type of strategies or initiatives, aims to develop and increase competitiveness in a joint and collaborative manner. Organizational progress and economic development can be achieved through innovation, investment and capitalization of the distinctive potentials of organizations in a collaborative and synergistic manner.

In the current economic climate, given the dynamic and complex business environment, the improvement of organizational competitiveness through collaboration is a prerequisite for them to become visible in the global space. Also, the improvement of competitiveness of business sectors is the foundation of long-term development and prosperity in a dynamic and complex context.

Developing the organizational potential to collaborate within networks is a way through which organizations can gain competitive advantages and become more competitive through innovation, due to the access to information and know-how (Atherton, 2003).

By the actions that they promote, collaborative networks have a critical role in contributing to the regional development and capitalization of entrepreneurial initiatives. Collaborative networks, regardless of the form they take, either networks with a low degree of interconnectivity, clusters or source networks, they represent a way of implementing, at regional level, integrated development strategies based on the potential and existing needs of the organizations and institutions.

At regional and national level, collaborative networks can be a real alternative to guarantee investment flows and foreign direct investments by making the best use of venture capital. By linking “top-down” strategies, in which state agencies and institutions are directly involved in generating the emergence of collaborative networks, with national strategies for attracting foreign investments, not only foreign direct investments can be encouraged, but also the transfer of technology and know-how (OECD, 2005).

Maintaining regional attractiveness for investors requires that the pace of development be correlated with permanent renewal of competencies and know-how. Continuous learning is a prerequisite for the organizational progress and a requirement for the continuity of collaborative networks. To maintain the increased interest of investors, member organizations within collaborative networks acquire greater capacity to continuously improve skills, to facilitate the adoption of technological progress and to become flexible. Also, the formation of distinctive competencies brings sustainable competitive advantages to organizations and the synergy generated through collaboration with other business partners improves these competencies.

Another strategic axis underlying the emergence of collaborative forms is the focus on innovation, technology and science. These strategies are based on the emergence of collaborative relationships through interaction within the Research - Industry - Government institutions triptych (OECD, 2006). Transforming business sectors and developing new

leading business sectors, in regions where spatial agglomerations reunite organizations with a high innovation potential, can be achieved through collaboration between entities coming from the three specified environments. Regional development through regional innovation systems can be achieved by creating collaborative relationships between the academic institutions, research and development institutions and the business environment to commercialize intellectual property products and innovations. In this triptych, the regional governments have an essential role, because they design and implement strategies for capitalizing on the organizational potential through collaborative networks.

Most new business sectors and best-performing fields are composed of small and medium-sized enterprises resulting from the event of entrepreneurial initiatives or spin-offs that import the research results from the academic environment into the business environment. Collaborative networks in top sectors reunite these companies for the access to skills, resources, know-how, technology and joint potential.

In practice, we have identified two distinct trends based on strategic axes that lead to the emergence of collaborative forms. Collaboration between organizations may emerge as a consequence of the local or regional initiatives of contractors or other agents that generate collaborative relationships. This type of emergence is also called "bottom-up", because it is based on initiatives from the business environment like simple collaborative relationships, affiliations, joint-venture, alliances or any other type of relationships that are formed in the business environment at local or regional level, without the direct intervention of an institution that is initiating or coordinating such process. Collaboration based on these initiatives has its origins in the strategic approach of organizations to strengthen their position to become more competitive. Some of the arguments underlying these initiatives are improving competitiveness, outsourcing, risk sharing and access to skills, know-how, information and resources, as well as increasing visibility into a broader context.

The second type of initiatives that may lead to the emergence of collaborative networks is the "bottom-up" initiative. These initiatives are actually policies, strategies and actions carried out and implemented by agencies, institutions and organizations belonging to the state apparatus or regional governments and have as main objective the economic development on several levels, at organizational, local, regional and national levels. The initiatives generally known as "bottom-up" have as main objective to identify the features and potentials of organizations and regional contexts, and they represent the basis of the development and implementation of the most appropriate strategy to increase competitiveness and regional development, most often through innovation, access to knowledge and technology transfer (OECD, 2010a).

In literature, but also in the specialty practice, we can distinguish a distinct category of collaborative networks that emerge or arise through "bottom-up" initiatives. The government's "bottom-up" initiatives are designed to promote the collaborative behavior and reunite the individual potential of organizations into a common potential through collaborative networks. The emergence of collaborative networks is largely favored by the pre-existence of contextual factors that facilitate the interaction between entities that are part of the networks. Moreover, the strategic reorientation of organizations and the shift from independent innovation to systemic innovation generated the emergence of more complex collaborative networks, due to the existence of favorable preconditions, as well as to the diversification of interaction between organizations.

Creating a context in which the manifestation of collaborative spirit leads to value creation involves several steps. The objectives of this initiative are focused both on building a context, with all its components, enabling linking across multiple levels of complexity between organizations, and on developing and making the best use of both individual and common organizational potential (Passiante, 2010).

The economically and technologically developed countries have a unified vision regarding the development and capitalization of national potential, they have used simultaneously and consistently both types of initiatives, the "bottom-up" and "top-down" type. A distinctive feature of the countries with developed economies towards countries with emerging economies is that they capitalized on the local and regional entrepreneurial initiatives by supplementing them through a common vision with complementary strategic axes through "top-down" initiatives (OECD, 2010b).

Sustainability is a key objective of the collaborative relationships. The time period in which organizations collaborate depends largely on individual goals, common goals and contextual factors.

For example, in regional clusters, where the verticalized multinational companies represent the central nodes, the duration of collaborative relationships can vary from medium to long periods, as determined by the complexity of the products achieved and by the specialization. However, there is also a relational dynamic within collaborative networks, due to the incompatibility of partners or to the partnership completion.

At regional and national level, a mix of policies, coordinated by a macro-strategy, may occur, whose main objectives are focused on economic development and growth. For these policies to be effective, the following are required: to support entrepreneurial initiatives, to implement development strategies of small and medium enterprises, especially in emerging but with growth potential sectors, policies in the fields of education and research and development, regional development policies and strategies, strategies for increasing competitiveness, so, a mix of policies and strategies at different levels. The main role of the entrepreneurship in the emergence of collaborative networks envisages the need that, through strategies, the education and trainers develop the mentality, skills and abilities of the social capital to collaborate. The regional institutions have a critical role in identifying the compatibility between organizations and creating the most appropriate context by coordinating and providing support type services for collaboration within collaborative networks (OECD, 2007). To bring together organizations that develop their potential through collaboration, the regional institutions and agencies created clusters, industrial, entrepreneurial and technological parks and business incubators through which the individual and joint potential of the organizations can be exploited (Becattini, 2004).

2. COMPLEXITY LEVELS OF THE EMERGENCE OF COLLABORATIVE FORMS AT REGIONAL AND NATIONAL LEVEL

At regional level, collaborative networks have an important role of capitalization through the convergence of entrepreneurial initiatives, innovation and research and development products. The convergence and the integration of entrepreneurial initiatives, innovation and research in collaborative networks generate a series of individual, mutual but also common benefits for the member organizations. The collaborative networks can increase the

visibility of organizations, facilitate the technology and knowledge transfer, exploit and develop the entrepreneurial initiatives, facilitate the identification of the most appropriate financing sources, generate synergies and new business opportunities.

The emergence and development of collaborative networks may occur as a result of "top-down" initiatives caused by the policies and strategies that considered regional and national economic development. Also to support the entrepreneurial initiatives or the start-ups and spin-offs, governments can initiate programs and strategies implemented at regional or national level, especially in terms of financial support and international visibility improvement. Table 1 reflects the evolution of the most significant modern and postmodern strategic trends.

A first level is represented by the strategies implemented at regional level that take into account the capitalization of the organizational potential. The policies initiated at national or regional level focus on reducing the existent economic gap between developed and less developed regions from an economic and social point of view, due to the restructuring of industrial or mono-industrial sectors by providing financial support.

In addition to these funds, the government agencies develop and implement complementary strategies and programs at regional level, especially in the field of science and technology, but also provide support to small and medium enterprises to reorient towards innovative approaches in order to integrate into regional innovation systems.

A second level is that of innovation strategies in science and technology, by capitalizing on the research products on the purpose of value creation. A significant number of collaborative networks that are currently operational arose as a result of the strategies for capitalizing the technical and technological progress, innovation and research products.

Table 1. Modern and postmodern approaches of the strategies underlying the emergence of collaborative networks

Strategies	Modern Approach	Postmodern Approach	The objectives of postmodern approach
Strategies for regional development	Income redistribution from developed regions to regions with economic gap	Increasing regional competitiveness through synergies between the main regional actors Role of transforming traditional sectors Role of developing sectors through synergies and capitalization on the innovation, particular by SMEs	<ul style="list-style-type: none"> • Inclusion of regions with economic gap into development programs • Focus on small enterprises, companies and organizations with a high potential for innovation and creativity • Importance given to SMEs • A more complex approach of the business sectors to identify their potential • Focus on innovation • Generation of synergy effects • Capitalization of distinctive potentials of organizations

<p>Strategies for exploiting the scientific and technological potential through research and development and innovation</p>	<p>Financial support for research and development and innovation in organizations or sectors</p>	<p>Financing of collaborative research projects Financing of innovative projects Support for innovative entrepreneurship and entrepreneurial initiatives Financing of synergies and projects related to the convergence of the academic and research environment with the business environment Transforming role</p>	<ul style="list-style-type: none"> • Focus on the emergence and development of top business sectors • Financing of research and innovation in fields like information technology, electronics, biotechnology and nanotechnology, optoelectronics • commercialization of research and development products and access to emerging markets • Positive effects generated by spatial agglomerations like clusters • Positive effects generated by investments in basic research in future areas • Development of the context and tools for collaborative research • Support and development of entrepreneurial spin-offs and start-ups
<p>Strategies for increasing the competitiveness of organizations</p>	<p>Support granted to subsidiaries of companies Preferential financial support Support granted to companies with significant financial results or important strategic results</p>	<p>Support for common needs of organizations Support for groups of companies, small and medium-sized enterprises Transforming role</p>	<ul style="list-style-type: none"> • Transfer of technology, know-how and competences towards small and medium enterprises • Innovative and creative potential improvement by making use of technology • Identification of potentials and reference areas that may lead to regional and national economic development • Provision of necessary support (services and financially - as venture capital) for the emerging sectors • Provision of all necessary support for the sectors that experience a complex process of transition and transformation • Support for the SMEs to overcome the barriers for the uptake of modern technologies • Creation of conditions to attract FDI • Creation of the necessary conditions for acquiring competitive advantages through innovation • Facilitation and support for collaboration and access to collaborative networks

Source: authors

These strategies have as main objective the diversification and development of regional specialization and capitalization of products of intellectual property, innovation and research and development, either by technology transfer or by incorporating them into complex products or services.

The third level, which presents a higher degree of complexity, includes strategies for increasing organizational competitiveness through collaboration. These strategies primarily aim at supporting the groups of organizations that have a significant contribution to national economic growth and development. These approaches do not focus on providing individual support to organizations, but on increasing cohesion within the groups of organizations belonging to the business sectors with high growth potential, and especially in top sectors like biotechnology and nanotechnology. One of the primary objectives of these strategies is the transition to the economic development models based on knowledge and complex collaboration between organizations. These strategies are primarily intended to identify the factors in the business environment that can generate the emergence of collaborative networks and collaborative synergy effects.

CONCLUSIONS

The new business models are the response of organizations to the business environment dynamics. The technological progress has significantly influenced the coordination and management mechanisms of processes and activities within organizations, with particular emphasis on collaboration between organizations. The knowledge-based economy and the important role of the technological progress in the new economy have generated the emergence of new business sectors and the restructuring of existing ones. The emergence of collaborative networks has led to the decentralization and flattening of organizational structures, and the increasing pace of globalization has resulted in some business sectors that were visible only nationally to become visible globally. Innovation, knowledge and research products thus become accessible to a wider context, either by transfer or by their embedding in complex products and services in collaborative networks. Identifying the strategic trends and contextual factors allowed us to identify distinctive features, on complexity levels, of the emergence of collaborative networks from a modern and postmodern perspective.

Collaboration between organizations through networks increases the capacity to capitalize on their individual potential, especially to capitalize on the organizational joint potential through synergies. The risks arising from the complexity and uncertainty existing in the business environment can be reduced through collaborative activities. High costs sharing associated with innovation and research and development, and the access to the technology and know-how owned by other organizations and academic institutions lead to risk reduction inside networks. Furthermore, the access of organizations to customers and top business sectors or industries, where the selection of partners uses extremely rigorous criteria, is much easier through collaboration within networks.

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