

THE ROLE OF SOCIAL CAPITAL IN REGIONAL DEVELOPMENT

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Abstract

The role of social capital in the development process is rendered essential by the intervention of local authorities, local initiatives, relations and networking. In this article is attempted the association of the means of social capital, such as the information transfer, relations of trust, networking, and cooperation, with the main instruments of regional policy, which endogenous growth strategy utilises. Instruments, such as industrial districts, technological parks, local productive systems, business clusters, creative cities, etc. are based on the utilisation of local social capital, which is a prerequisite for a viable application of the endogenous growth and local development policies. The aim of this paper is to examine the relation between endogenous growth and social capital in the configuration of a local development strategy.

Keywords: social capital, economic development, regional development, endogenous growth, local development

JEL classification: O10, R10, Z13

1. Introduction

During the last decades scientific bibliography records the contribution of social capital to the economic development process. As it is pointed out by Granovetter (1973; 2005), structures such as the social networks can influence positively the economic outcome through the diffusion of information and technological knowledge, as well as via the containment of the information costs. Moreover, social capital, with the consolidation of interpersonal interactions and relations may strengthen trust between firms, employees, banks, entities and consumers, achieving a decrease in the transaction cost, facilitating access to funds, improving the employer-employee relations, also achieving an easier access to the required workforce, more effective consumer protection, and a decrease in the firm operating costs (Uzzi, 1996), clearly affecting the economic performance of firms. Engbers et al. (2013), claim that higher social capital levels relate to higher levels of economic development.

Furthermore, positively valuated is the importance of social capital through a macroeconomic perspective. As it is extracted from the analysis of Knack and Keefer (1997) in a sample of 29 countries, trust, values and norms have a positive impact on macroeconomic performance, while Zak and Knack (2001), in an analysis of a greater sample, deduce that trust has a strong impact on collective economic activity. Moreover, Beugelsdijk and van Schaik (2005), record the significance of social capital as a determinant of the development inequality in the European regions.

Concerning the innovational dimension that characterizes the social capital, Breschi and Lissoni (2001), claim that innovation spreads more easily among actors that are located in the same area, because of the social bonds that inspire mutual trust, as well as the face-to-face contact. Thus, the generation and diffusion of innovation depends on the intensity of the relations among people and organisations.

According to Agrawal et al. (2008), the spatial, and the social proximity contribute to a great extent to the knowledge exchange as well as to other economic interactions (De Dominicis et al., 2013). De Dominicis et al. (2013), suggest that the aforementioned relations allow firms to share the cost and risk of innovation with a greater number of actors, to have access to new research results, and obtain significant technological components of new

products or methods. De Dominicis et al. (2013), conclude that regions with higher levels of social capital tend to be more efficient in the production of new knowledge.

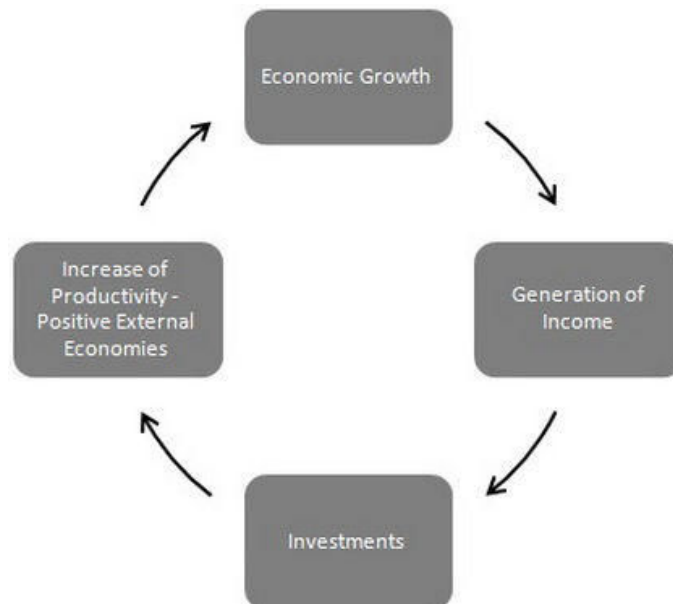
Aim of this article is to examine the role of social capital in regional development. More specifically, it intends to highlight the relation between the endogenous growth model and the utilisation of social capital, as well as the role of the central and local government in the activation and reinforcement of the aforementioned relation. The role of the government entities is also being considered in the routing of the endogenous growth process. In addition, this paper records the utilised instruments of regional policy for the processes of local development and endogenous growth, which in turn leverage social capital in the regional and local level.

2. Endogenous growth

The adequacy of the economic development neoclassical model has been strongly questioned due to the exogenous nature of technological change, among other characteristics. The essential role of technology in the generation of development, through the creation and the utilisation of innovation, makes its exclusion from an economic development theory rather controversial.

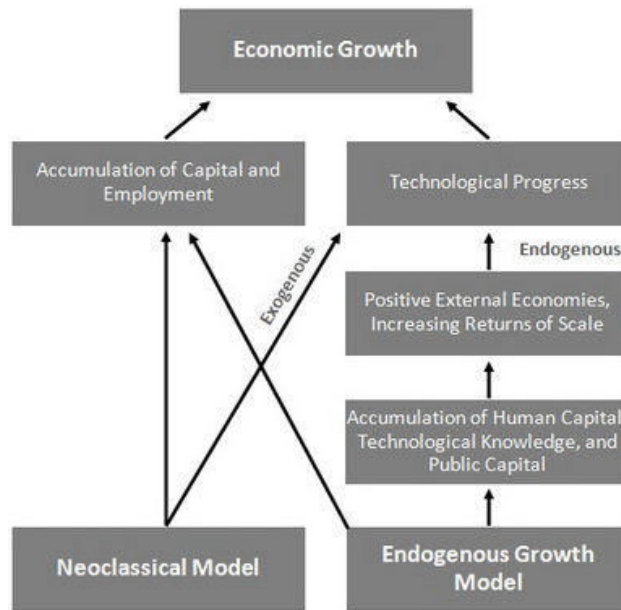
According to the approach of endogenous growth, that emerged during the 1980s, economic development results from the activation of economic actors (households, firms, and the state), which invest through accumulation of capital (human capital, research and development-R&D, physical capital and public capital-infrastructure). These investments are funded by the economic growth generated incomes, which in turn -through the increase of total productivity, and the simultaneous form of positive external economies- create growth. Therefore, development is self-sustained, cumulative, and depended on the reserves of capital, infrastructure, accumulated knowledge, innovation, etc. The term “endogenous” refers to the interpreting qualities of the endogenous variables, the capabilities, and the behaviours of the economic actors, as far as the generation of development is concerned.

Figure 1. The process of economic growth



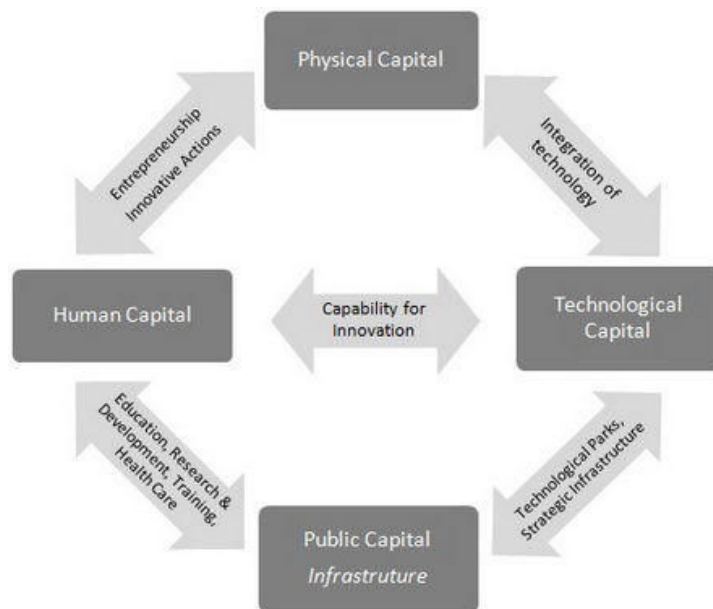
The theories of endogenous growth allow for a more accurate interpretation of economic growth, in contrast to pre-existing theories, which explained the generation of growth through the quantitative increase of the production factors (capital and labour), and the exogenous component of technological progress. Endogenous growth theories show that technological progress is not inexplicable. Development is self-sustained because it allows the funding of investment that reinforces its process, and results from the behaviour of economic actors, that is, it is generated inside the system (endogenous nature).

Figure 2. Neoclassical model vs endogenous growth model



In the theories of endogenous growth, one can find different approaches. Romer (1986) focuses on the accumulation of technological knowledge, while Lucas (1988) focuses on the accumulation of human capital. Moreover, Aghion and Howitt (1989), and Romer (1990) highlight the accumulation of innovation, while Ashauer (1989) and Barro (1990) concentrate their research on the public form of capital.

Figure 3. The relations between the different types of capital



The behaviours that allow the generation of economic development, are the investments carried out by firms, the state or individuals utilising different types of capital, such as natural, technological, public (infrastructure), and human capital. These investments create positive external economies and increase the total productivity of the production factors.

3. Endogenous growth and state intervention

The theories of endogenous growth give reason for state intervention in the economy, which aims at:

- the decrease of the social cost, caused by the underemployment or the inefficient employment of humans and natural resources
- the decrease of regional disparities, the strengthening of a balanced development and the redistribution of wealth
- the rationalisation and utilisation of developmental means, such as the balanced allocation of funding resources, targeted sectoral development programs, and special policies for local development
- the creation of a favourable environment for local development through the utilisation of local developmental reserves, reinforcement of local initiatives, and adoption of an endogenous growth model
- the generation of growth poles in order to develop important urban centres and strengthen the exogenous growth model
- the building of strategic infrastructure that reinforces the endogenous as well as the exogenous growth

The state constitutes one of the key factors for economic development, since it can promote the accumulation of technological capital and generate positive externalities. The aforementioned fostering takes place through the reinforcement of business research, of higher and technological education, and of vocational and technological training, the support of innovational actions, the operation of public research centres of human capital, etc. The generation of positive external economies concerns the technical infrastructure, the entrepreneurial infrastructure, the telecommunications and health infrastructure, etc. The accumulation of this knowledge over time provides development with an accumulative dimension, in the sense that knowledge constitutes a collective good of accumulative nature.

The endogenous growth is based on local initiatives. The regional disparities are interpreted through the entrepreneurial capacity and adaptability of a region. Development is achieved by mobilizing the local resources of the region, rather than through external factors, such as foreign investment at its growth poles. The economic policies that are based on this type of development are called “bottom-up” development policies.

The basic elements that characterise endogenous growth is training, R&D, the building of necessary for the development process infrastructure, as well as the support of local entrepreneurship.

The strategies of regional development are based more and more on the endogenous growth model, aiming to generate a favourable environment for local initiatives which focus on the increase of the regional capability to adapt to the contemporary developmental reality at the macroeconomic level, where economic policy integrates social, cultural and environmental factors.

Endogenous growth is based on three assumptions:

- Development is a process that takes place at the international level
- Local initiatives matter for the international development
- Human and social capital constitute the driving forces of development

So, development policies aim to reduce the inequalities at the interregional, as well as the intraurban level.

The theory of endogenous regional growth tries to integrate the policies, and the social and cultural dimensions of development, into the economic development. Such dimensions appertain to cultural trends, the utilisation of local heritage and identity, the local communities, the participatory processes, the existing interactions and social relations.

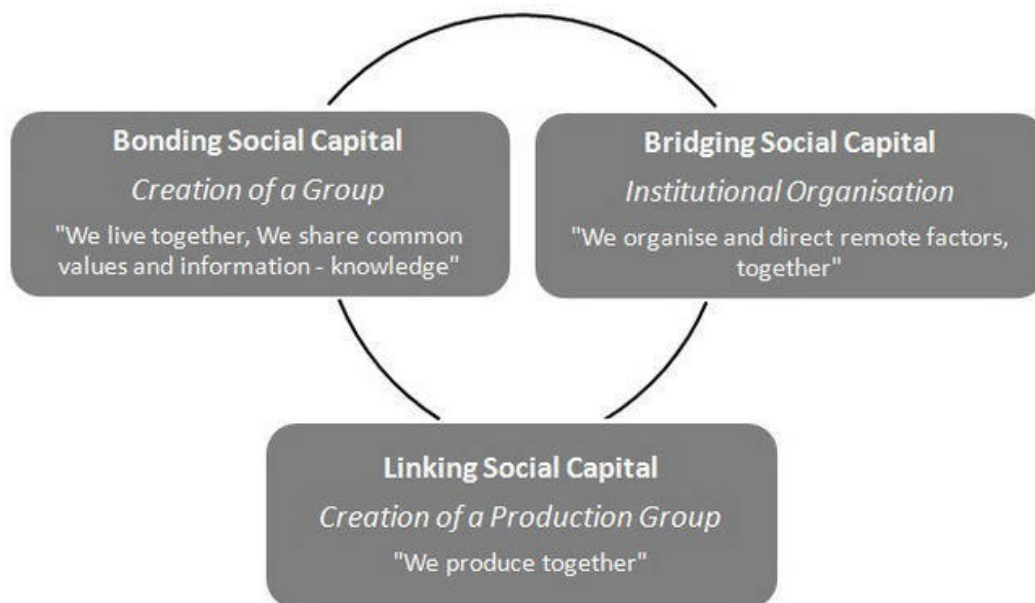
To sum up, the analysis and the utilisation of social capital is at the core of regional development, since its vital role is acknowledged as a determinant for the prosperity of a community, as well as the local and regional development.

4. Social capital

According to Bourdieu (1980), social capital is perceived as “the aggregate of the actual potential resources which are linked to the possession of a durable network of more or less institutionalised relationships of mutual acquaintance and recognition, that provides each of its members with the support of the collective capital”.

Analysing social capital from a network perspective, one can distinguish the bonding social capital and the bridging social capital (Aldridge *et al.*, 2002; Gittel and Vidal, 1998; Putnam, 2000). Bonding social capital refers to the horizontal relations among people in the same community, and it is characterised by geographical proximity, while bridging social capital is about the vertical relations between different -and more distanced- communities (Dolfsma and Dannreuther, 2003; Narayan, 2002; Wallis *et al.*, 1998). Moreover, Anheier and Kendall (2002), relate bridging social capital to low levels of trust, while its bonding counterpart is characterised by high levels of trust. Some researchers claim that there is also a third type of social capital, the linking social capital (see Aldrich, 2012; Woolcock, 1998 and 2001). This particular form, which shares common characteristics with bridging social capital, is about the connection of people with formal institutions, that gives the opportunity to access institutional resources.

Figure 4. The different types of social capital



Another categorisation of social capital is that from the perspective of social structure. The relevant types are the structural social capital, the cognitive, and the relational one (Nahapiet and Ghoshal, 1998). Structural social capital refers to the forms of social organisation that comprise society. According to Hitt *et al.* (2002), structural social capital promotes mutual beneficial collective action through the established roles and social networks, with the contribution of norms, procedures and habits. Consequently, interaction, exchange and cooperation are strengthened, and the cost of transactions is contained. Cognitive social capital constitutes the social environment that determines human behaviour in any given situation. The cognitive form includes social norms, values, behaviours and beliefs, while it predisposes people toward common action (Uphoff, 1999). According to Uphoff and Wijayaratna (2000), the structural and cognitive dimension of social capital closely relate and reinforce each other. Last but not least, relational social capital is about the personal relations that people develop through interaction (Granovetter, 1992, cit. Nahapiet and Ghoshal, 1998), while Lefebvre *et al.* (2016), claim that it also refers to the nature of these relations. The distinction between cognitive and relational social capital can be described as confusing since both notions concern intangible elements detected through observation, perception, and opinion, and therefore are rather objective and varying among different individuals and different contexts.

Dudwick *et al.* (2006), distinguish the following dimensions of social capital: 1) groups and networks, 2) trust and solidarity, 3) collective action and cooperation, 4) information and communication, 5) social cohesion and inclusion, and 6) empowerment and political action. These dimensions allow for a consideration of social capital from two different perspectives,

each of which relates to the sociologist Pierre Bourdieu and the political scientist Robert Putnam, respectively.

The first one focuses on the way that social relations function as a means of securing access to resources for people, households, or small groups. Consequently, the access to important resources or a favourable position in a network, are considered as “higher” social capital for people, households or small groups, as their social relations and position in the network secures better access to and control of the available resources. From this perspective, unequal distribution of community social capital is implied, while social capital may function as a mechanism for exclusion or inclusion, as well.

Alternatively, the analysis –in the second perspective- moves towards the community unit, focusing on the nature and the extent of the cross-cutting ties, along with the participation of individuals in informal networks and formal civic organisations. From this perspective, weight is given to the way that members of the community cooperate, particularly when it comes to matters of common interest. The consideration of social capital as an indicator, or a prerequisite of civic capacity, the role of the state and legal institutions are of great importance for the facilitation –or the undermining- of the civic participation.

According to Dudwick *et al.* (2006), the dimensions of social capital in detail are:

- 1st Dimension: Groups and networks, is about the groups and networks that support access to resources, as well as the cooperation between individuals to achieve common goals. Informal networks are spontaneous, informal, and unregulated ways of exchanging of information and resources inside the community, as well as efforts for cooperation, coordination, and mutual assistance for the maximization of the utilisation of the resources available.
- 2nd Dimension: Trust and solidarity, refers to how strongly individuals feel that they can rely on the elements of their greater social environment, such as relatives, neighbors, colleagues, acquaintances, providers of basic services, and strangers. As far as trust is concerned, it can be characterised as a choice, while in other occasions, it is considered as a necessary dependency, based on existing relations or familiar networks.
- 3rd Dimension: Collective action and cooperation, relates highly to the dimension of “Trust and solidarity”, however this third dimension focuses on the presence and the extent of the efficient cooperation between individuals in a community, in order to achieve a common goal or to deal with a common problem.
- 4th Dimension: Information and communication, concerns the forms and the means utilised by households for receiving and sharing information on community issues, as well as the degree of access to communication infrastructure. World Bank (2002) claims that better access to information is increasingly recognised as of vital importance for the reinforcement of disadvantaged communities in matters related to their prosperity.
- 5th Dimension: Social cohesion and inclusion, is closely related to all the aforementioned dimensions. However, it focuses on the durability of social bonds and the twofold dynamics, regarding the inclusion or the exclusion of the community members. The degree of community cohesion and inclusion can be recorded through the events or the actions, that increase solidarity, reinforce social cohesion, improve the diffusion of information, etc.
- 6th Dimension: Empowerment and political action, which examines the sense of satisfaction, efficacy, and the capacity of networks and group members to influence local scale events, as well as broader political outcomes.

Moreover, at the national level it has been confirmed that certain elements of social capital strengthen economic development. Business partnerships, networks and specific local features have a positive impact on the process of local development (Callois, 2004). Coleman (1988) highlights that private resources drawn by individuals through social capital utilisation have a macroeconomic impact, while Putnam *et al.* (1994) claim that social capital favours collective action, cooperation, governance and economic development.

The importance of social capital is based on the ascertainment that social actors influence economic phenomena. In his definition, Lin (2001), characterises social capital as resources integrated into a social structure, mobilised for certain actions. Social capital is highly related

to the technological and the public form of capital, although it has a more obvious connection to the human capital, which refers to knowledge, skills, abilities and general characteristics of a person, that facilitate the attainment of personal, social and economic prosperity (OECD, 1998).

The differences between social and human capital are presented in Table 1.

Table 1. Differences between human and social capital

	Human capital	Social capital
<i>Focus</i>	Individuals	Relations
<i>Support measures</i>	Education Specialisation Training	Reinforcement of values Participation in groups Increase of the degree of trust
<i>Aim</i>	Income Productivity Health care Social action	Social cohesion Economic development

Social capital resources (information, goods, services, and behaviours), are necessary to be integrated into social relations and flows, in order for development to be attained. Thus, social capital becomes a determinant of local development via certain relation mechanisms (see Table 2).

Table 2. The social capital as a factor for local development

Mechanisms of relations	Effects on development
Transfer of information	Specialised employment
	New techniques
	Market knowledge
Relations of trust	Image- Promotion of the regions
	Engagement to the goals
	Dedication- stability of employment
Cooperation	Informal contracts
	Trust between firms
	Decrease of risk
	Reinforcement of external economies
	Shared utilization of resources
	Local public goods

Putnam (1994), integrates relations and networking in the definition of social capital, stating that social capital “refers to characteristics of social organisation, such as trust, norms and networks, that are capable of improving the efficiency of society by facilitating the actions of coordination”. As it is pointed out by Gagnon *et al.* (2008), the emphasis shifts from the role of social capital as a factor of personal promotion, towards a role as a factor of local development, involving social relations and flows. Thus, bridging social capital (Putnam, 2001; Woodhouse, 2006), is of particular importance, since it is generated from the interactions among heterogenous group members, the networking of which allows an increase of the information diffusion and the economic and human resources mobilisation.

The handling of information shortage regarding, among others, prices, employment and investment opportunities, which is achieved through interaction, adds an economic dimension to the notion of social capital. Moreover, social capital strengthens the knowledge of techniques and operation of service production, and eventually constitutes a source of learning externalities, human capital reinforcement, as well as the improvement of entrepreneurial efficiency (Coleman, 1988; Westlund & Bolton, 2003).

Eventually, social capital represents the networks, patterns, values and agreements that facilitate cooperation inside and between social groups, and becomes a mediator and a determinant of local development.

5. The spatial dimension of endogenous growth and the utilisation of social capital

In the late 70's, regions of industrial tradition were hit by the economic crisis, while at the same time successful development endeavours were noted at the local level, leading to a search for alternatives of the exogenous growth models (or "top-down" development). The exogenous growth was based on the model of stages, growth pole model and core-periphery model. The inefficiency of the exogenous growth policies, particularly the ones dealing with regional inequality, resulted in the quest for a new model, utilising the local resources and the strong synergies of small and medium-sized enterprises (SMEs) networks. Thus, the model of endogenous growth or "bottom-up" development came out. Theories of endogenous growth concern models of local development, community economic development and innovative milieu.

According to the definition by the French Regional Planning and Regional Attractiveness Delegation (Délégation interministérielle à l'aménagement du territoire et à l'attractivité régionale, DATAR) (Gouttebel, 2003), local development is the activation, in the context of a community cooperation, of an integrated development plan that mobilises development, economic, social, cultural and human resources. Vachon and Coallier (1993), claim that local development is a strategy aiming to create, through mechanisms of cooperation, a favourable environment for the local initiatives in order for the spatial entities to increase their potential to adapt to the new rules of the development process at the macroeconomic level or to find other development forms, which through informal ways of organisation and production, will incorporate the concern for social, cultural and environmental order, among strictly economic considerations.

Local development is based on the following principles:

- Development is a global process
- Initiatives at the "micro" level contribute to the global development
- Human resources constitute a driving force for development

Community economic development -a term more widely used in the USA- is a special form of local development based on the same theoretical foundations, such as civic activation for the development process and local entrepreneurship (Newman *et al.*, 1986). Its aim is to mobilise citizens, solidarity, and creativity and to utilise local natural resources.

The innovative milieu theory (see Aydalot, 1986; Beccatini, 1992a; Camagni, 1990), with reference to the Silicon Valley and the "Third Italy" is mainly about the formation of new innovative firms, highlighting the importance of milieu as a source of innovation.

Endogenous growth is applied at the local level, with local development being a special form of endogenous growth. Moreover, in order to support endogenous resources and to reinforce local SMEs local development strategy adopts as main instruments of action the following:

5.1. Industrial districts

In 1898, Alfred Marshall highlighted the agglomeration economies and the operation results of industrial districts. Their advantages are:

- the generation of a specialised labour market
- the supply of specialised inputs at lower prices, due to the interpersonal relations, among others, and
- the diffusion and circulation of information, new ideas and innovation

Industrial districts constitute socio-spatial entities with main features:

- the accommodation of specialised SMEs, organised with reference to a leading industrial firm
- the perfect osmosis between local communities and firms
- an organisation model based on the triptych "competition, emulation, cooperation", and
- an "industrial atmosphere" resulting from training and accumulation of skills

Despite the use of the term "industrial district", in this type of infrastructure are located service sector firms, as well. Contemporary instruments of regional policy related to the

organisation of entrepreneurial infrastructure (industrial parks, business parks, etc) can be considered as transformations of the Marshallian industrial districts.

5.2. Italian industrial districts

Becattini (1992b) defines an industrial district as a spatial agglomeration of SMEs in a particular industrial sector, each one specialised in a different stage of the production process. Italian industrial districts concern a delimited settlement for SMEs of a particular employment pool, and an operation based on the endogenous growth model (specialised human resources, dynamic labour market, industrial culture).

This model is applied to particular places, where economic activities are firmly connected to social and cultural structures. Thus, an industrial district is a local or regional territory with concentrated SMEs of the same sector, which rely on an artisan or industrial tradition and local expertise that facilitate innovation (Levesque *et al.*, 1996). Every firm is specialised in the production of a specific product part, resulting to the division of labour among firms. The industrial district model falls into the model of endogenous growth, and depends not on foreign investment, but on the potential of local entities.

5.3. Local productive systems

According to Courlet (1994), a local productive system is an agglomeration of firms on one single or more industrial sectors, which relate to each other and to the sociocultural innovative environment in which they operate. These relations are not always market-based; on the contrary, there exist informal relations that generate positive external economies for all firms.

Local productive systems are based on the agglomeration of specialised firms, they require locations embedded with innovation and business setups, and are characterised by flexibility and agglomeration economies. Flexibility refers to the small size of the production units, the density of relations between them and their ability to adapt to external changes. Agglomeration economies result from the firm specialisation of production, mobility degree of the specialised workforce, and frequency of interpersonal relations.

Local agro-food systems are a special form of local productive systems, which are delimited agglomerations for agro-food production, characterised by their tradition, relations with the internal and external markets, sectoral structure, location, and last but not least, their socioeconomic organisation. The aforementioned characteristics outline the importance of Local Agro-Food Systems for the local economy.

5.4. Milieux innovateurs

According to Aydalot (1985), innovation is not generated by the firm, but in specific milieus with innovative environment instead. Creativity is integrated into experience and tradition, while the accumulated knowledge is the basis for progress. Aydalot (1985) laid the foundations for the approach, which is part of the endogenous growth theory.

The milieux innovateurs (innovative milieus) theory was formed by the Research Group for Innovative Milieus (Groupe de recherche sur les milieux innovateurs, GREMI), established by Philippe Aydalot, who noted from as early as 1974 that large firms do not seem they are still capable of playing a dominant role in the generation of innovation. The framework of economic development is mainly formed by endogenous factors, which highlight specific milieus that are capable of generating innovation.

The model of milieux innovateurs rely on:

- the ability of industrial firms to extend
- the ability of local resources to attract economic activities
- the interaction between firm innovation process and their location milieu
- the reinforcement of local firm networks
- the opening to interlocal networks
- the examination of the relation between innovation networks and Innovative Milieu
- the long term evolution of Innovative Milieus

- the examination of the relation between an Innovative Milieu and dynamic urban centres
- the utilisation of relevant resources, such as the natural environment and culture
- the role of technology
- the role of firm organisation and synergies
- the role of milieu (accumulation of knowledge, skills and capital) and the presence of innovative firms

Milieu innovateur can be defined as a cognitive unity (Maillat, 2006), which results from a process based on the strategies of the stakeholders and collective learning phenomena.

Highly relevant to the application of the milieu innovateur is the designation of the innovative region, which treats the economy of a region as a network of firms, institutions and individuals connected through varied, formal or informal, bonds.

Innovative region as a model of endogenous growth concedes firm a central role in the development process, utilising local and global resources. This model is based on initiatives of the central government, or the regional/ local government, which focus on research and development, regional deliberation and the activation of human resources, the diffusion of knowledge and the integration of technology.

The innovative region can be defined as a coalition of firms, entities and researchers for the development-integration of innovation and the regional economy extroversion (Milcent, 2018). This model is mainly based on trust and networking among stakeholders, whereas the function of innovative region is based on the model of endogenous growth, namely the utilisation of local resources (natural resources, traditions and skills), as well as the capability of the region to feature and utilise innovative solutions to every aspect of the economic and social life (Commissariat général à l'égalité des territoires, 2015).

5.5. Creative city

Creative City is based on a sociological approach, that aims to define the elements, enabling an urban centre to attract groups of people able to make up a decisive factor for the urban dynamics. The aforementioned approach has its roots in the view of the endogenous growth theory that technological change is essentially a process of cultural change (Perret, 2011).

Key notions of this approach are:

- The creative economy, which includes sectors of economic activity relevant to the cultural creation.
- The creative class, which consists of scientists, researchers, artists, writers, etc.
- The creative city, where the creative class and the creative economy sectors concentrate and operate.

The creative region approach focuses on the attraction of talents and the preservation of a relevant pool in a specific territory (Tremblay, 2012). According to the theory of Florida (2002, 2004 and 2005), the density and variety of talents or human capital contribute to the volume and speed increase of knowledge circulation, in the fields of innovation, quality employment and the creation of new firms. Thus, human capital constitutes a source of competition and development.

5.6. Clusters

A cluster can be defined as a network of small and very small-sized firms, located in and connected to a place, often in a niche of production, or in the same field that mobilises around a common strategy and the utilisation of common actions and services.

Business clusters, in contrast to Innovative Milieus, which concern multiple sectors of economic activity, refer to a specific sector; they are established by firms and supportive organisations, and are geographically concentrated.

Key function of a Cluster is the utilisation of social and human capital for supporting the co-located firms, in the form of human capital participation in production, interactions, synergies, and exchange of views and ideas in the context of the cluster function (Julien,

2005). Moreover, the characteristics of social capital, such as the role models, trust, and conventions, facilitate the development of relations, the networking, the exchange and the synergies inside the cluster.

Clusters accelerate the circulation and analysis of information to the benefit of firm development, allow the comparison and competition of firms, and provide new information to the companies mainly in the field of innovation thus leading to the diffusion of information to cluster firms, and ultimately reinforcing the inter-firm cooperation, without eliminating the competitive relations.

According to OECD, clusters of firms and networks allow small firms to combine the advantages of a small size with the potential of a large scale in the field of international competition, given that it is difficult for them to be small and efficient at the same time (OCDE, 2004). Thus, more and more countries and regions with a significant number of SMEs turn to the formation of business clusters and networks.

5.7. Scientific and technological parks / Technopoles

According to the definition of OCDE (1998), a scientific – technological park (STP) or technopole is an initiative that includes the formation of an organised area with all the necessary infrastructure and equipment, for the location of higher education units, scientific centres, and high technology organisations and firms, with key characteristics the production, diffusion and integration of high technology. Hansson (2007), defines STPs as man-made physical infrastructure that facilitate the interaction among the co-located firms (Jimenez-Moreno *et al.*, 2013).

Technopole agglomerations refer to large urban centres, in which knowledge and technology is accumulated for the generation of production activity, or delimited areas of urban centres in which scientific centres and hi-tech firms are located. Innovative actions take place in the Technopole area, where universities and scientific centres operate, rather than in the interconnected STPs area (Merlin and Choay, 1996).

The importance of technological parks and scientific – technological parks in the policy debate for local development makes local communities concern themselves with the technological attractivity of their spatial entity. However, in the international experience difficulties emerge for the local governance, and a lack of adapted tools and policies for the development of technopoles and its diffusion in the local economy. Particular attention is required in the functions of planning and governance since in many cases, the desired connection of technological parks with their region and local economy has failed (Gouvernement du Quebec, 2006).

The policy of technological parks refers to endogenous growth, but has evident elements of exogenous growth as well, which result from the need to attract foreign companies, the integration in international networks, the focus on the tackle of international competition, the international cooperation, etc.

According to the European Commission (2008), key actors that create social capital in the STPs are:

- Universities, Institutes of research and development, as well as other higher education institutes, which participate in the creation and commercialisation of the outcome of the research.
- Other renters that seek for new cooperations in order to upgrade research and development with world class ideas, improved information systems, specialised employment markets, better location, and optimal services for the increase of their profits.
- Managers of the STPs, that act as mediators for the development and facilitation of the relations aiming to the increase of profits, providing the necessary infrastructure and services for the development and consolidation of the STP.

5.8. Pôles de compétitivité

Pôles de compétitivité (Competitive poles) gather in a particular space, and most of the times in a particular thematic, SMEs and large enterprises, laboratories, research centres and training centres (Tholoniati and Bouabdallah, 2006). National and local authorities back the

whole effort, which aims to support innovation, R&D and firms through new products and new production processes, that come out of the research activity.

The advantages of pôles de compétitivité are:

- the local socioeconomic culture
- the generation and tolerance of change
- the tolerance of new cultures and of actors capable to support them, such as creators, intellectuals, designers, researchers
- the adaptation of firms to new technologies and to the international competition
- the formation of efficient mechanisms for the diffusion and exchange of social and entrepreneurial services

The main characteristics of pôles de compétitivité policy are:

- the investment in local social capital
- the strengthening of education and training
- the adoption of the endogenous growth model
- the adaptation of a participatory governance model.

The emergence of pôles de compétitivité aims to the configuration of a new industrial policy with specific spatial dimension, connecting private and public bodies in common projects of innovative nature and an extrovert – international perspective (Darmon, 2004).

5.9. Metropolises

The, among others, endogenous nature of the metropolitan development process, which involves focusing on fields as the city tourism and creative economy (Local Government Institute, 2017), is largely based on the existence and strengthening of social networks (social capital).

Labasse (1994), records the characteristics of global metropolises as follows:

- Population that participates in networks of economic, scientific and cultural exchange
- Supply of international level services in the fields of technology, financial services, business administration, and R&D
- Foreign human capital in businesses and multinational organisations that collaborates with the corresponding metropolitan workforce
- International reputation in the fields of special tourism, recreation and culture.

Thus, social capital may be considered as a potential determinant of the metropolitan area competitive advantage, because of its effects on human capital, entrepreneurial environment, and the attraction of the creative class (Engbers *et al.*, 2013).

6. Conclusions

Development policy at the national, regional and local level, particularly under the current economic conditions, may and should be disengaged from the rationale of exclusive exogenous growth and the expectations for large foreign investment. As it was presented in the previous sections of this paper, endogenous economic growth may be promoted through the reinforcement of human capital, infrastructure, technological capital and physical capital as well as through the overall utilisation of social capital and the means of endogenous growth.

As the relevant theory and international practice advocate, social capital utilisation may eventually reform the main instruments of regional policy to function as means of endogenous growth. Their classification by, firstly, the type of participation and secondly, the type of initiative is presented in Table 3.

Table 3. Classification of the main instruments of Regional Policy by type of participation and initiative undertaking

	Private initiative	Initiative of public authorities
<i>Participation of Firms</i>	<ul style="list-style-type: none"> • Industrial Parks • Industrial Districts • Innovative Milieus 	<ul style="list-style-type: none"> • Local Production Systems • Industrial Entrepreneurial Areas
<i>Participation of Organisations/ Firms/ Universities/ Researchers</i>	<ul style="list-style-type: none"> • Clusters • Creative Region 	<ul style="list-style-type: none"> • Competitive Poles • Metropolitan Development • Technological Parks • Innovative Region

In conclusion, the potential of endogenous growth points out the importance and the decisive role of central, regional and local government, as well as that of local communities, in planning, activating and supporting the economic development process, at the regional and local level. A significant precondition for the activation of the main instruments of regional policy that endogenous growth utilises, is the systematic integration of local social capital.

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