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TERRITORIAL RESOURCES IN THE KNOWLEDGE ECONOMY

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The paper proposes to refine the analysis of the built resources by distinguishing intentional and non-intentional resources. The proposed distinction enables us to reconsider the actors' role in the territorial dynamics by integrating the local population in the analysis and helps to reformulate the specification of resources. Secondly, the authors propose a typology of resources in the knowledge economy. In a global economy, knowledge based clusters rely on cognitive, relational and symbolic resources. The combination of these resources is a condition for the building of the learning regions.

Introduction

The period of 1990s is dominated by approaches focused on "endogenization" of the "territory" without having postulated it from the beginning. On top of the explanations of the firms' agglomeration phenomenon elaborated by Marshall (1890) and Krugman (1991), new theories emerged contributing to the understanding of why some territories experience growth and development while others suffer from crises. Furthermore based on these theories a simple agglomeration of activities can be distinguished from a situation of territorial specification (economy of proximities of Bellet, Colletis, Lung, 1993; collective efficiency of Schmitz and Nadvi, specific/generic resources of Colletis and Pecqueur, 1993, 2004). A common feature of these approaches is a special emphasis placed on the role of actors in territory's performance. Consequently, three different situations can be distinguished - agglomeration, specialization and specification (Zimmerman and al, 1998). Moreover, Schmitz (1995) and Nadvi (1996) criticize Marshall's (1920) and Krugman's (1991) approach which takes into account advantages exclusively related to geographical proximity, without distinguishing external economies and collective efficiency resulting from actors' strategies and their intentional actions.

Recent researches related to the economy of proximity lead sometimes to the illusion of a possible insignificance of actors' and activities' *localization*, by prioritizing transactional and interactional dimensions of the territorial economy (Rallet, Torre, 2000, 2004). However, a fine methodological balance in the analysis of social phenomena

requires taking also into account the structural characteristics of territories such as geography, history or culture, as well as the fact that they are located, embedded and networked within broader ensembles. It is in this methodological tension that we intend to revisit the concept of territorial resource which represents an output of actors' activities and strategies, but also a structural and constitutive characteristic of a territory. Hence, the territory may carry two forms of localized productive organizations: the system of companies creating externalities and the agglomeration, as long as they generate resources. The aim of the paper is to elaborate a comprehensive and operational typology of territorial resources, which by far surpasses the simple descriptive dimension and focuses mainly on methodological and theoretical aspects.

With the concept of territorial resources we are shifting from the resources' availability and allocation to the creation of resources by the actors of the territory (Colletis and Pecqueur, 1993). The built resources are often defined as originating from the combinations of strategies aiming at finding solution to a problem. We will show that built resources may pre-exist to the production process, consequently implying a non-intentional dimension of resources' genesis (such as diasporas, pre-existing local networks or innovation-friendly culture). Thus, in the first part of the article, we propose to refine the concept of built resource by distinguishing intentional and non-intentional resources. This distinction coincides with several researches dedicated to the economy of the territories (the "planned" and "unplanned collective efficiency" of Schmitz (1999), the resources-externalities of Billaudot (2004), etc).

Although since the 1990s there have been a great number of theoretical articles devoted to territorial resources for traditional industries, a lack of research on territorial resources in intelligence intensive activities is commonly evidenced. The knowledge economy arises from two major tendencies appeared since the 1990s: on the one hand, the increase of the resources devoted to the production and the transmission of knowledge (education, trainings, R&D, etc.) and on the other hand, the arrival of new information and communication technologies (ICT). We propose to explore the resources that grant a territory "the specific status" in the knowledge economy. Is knowledge the sole territorial resource in these sectors? Does a territory with highly qualified people always generate "the territory effect" (Colletis, Pecqueur, 1993)? We endeavour to answer these questions through a typological analysis of territorial resources in the knowledge economy.

The analysis of the actors' strategies based on the distinction between cognitive, relational and symbolic resources opens new possibilities for the construction of the conceptual framework for the interpretation of territorial dynamics.

1. The territorial resources revisited

1.1. Intentional and non-intentional ressources

The theoretical framework of territorial resources has known the important contributions since the 1990s (Colletis and Pecqueur, 1993, 2004; Kébir, 2004, Crévoisier and Kébir, 2004, etc). The principal breakthrough as we have already emphasized is the

distinction between the resources' allocation and the construction. In this part we propose to refine the concept of built resources.

The concept of built resources generally refers to the intentionality of their genesis. According to Colletis and Pecqueur (1993: 497) "resources appear only at the moment when strategies combine to solve a new problem".[1] The concept of "strategy" implies the intentionality of the actor's interactions.

While the intentionality is inherent in the processes of resources' identification and their implementation their genesis can be non-intentional or intentional. Thus, we propose to distinguish two types of resources: *intentional resources and non-intentional resources* (diasporas, pre-existent local networks, cultural heritage favorable to the innovation) with regard to the type of their genesis.[2] Almost the same reasoning was developed by Schmitz (1999) with the notion of collective efficiency. According to Schmitz (1999: 473), collective efficiency is "the competitive advantage derived from external economies and joined action". Thus, the competitiveness of the territories is explained by "planned" and "unplanned collective efficiency"[3], or in another words through *collective efficiency derived from intentional resource* and *collective efficiency derived from non-intentional resources*.

Therefore, the territorial resource is considered as the result of intentional and non-intentional human activity that may be used as an input in the production process. As for territorial *assets*, they result only from the intentional activity and represent an output of the actors' strategies. "In the state of virtuality, everything can potentially serve as a resource, but everything cannot automatically become an asset since the conditions of the transformation are not in the relation object/resource, but in the strategies of actors in the production process" (Colletis, Pecqueur, 2004: 8).[4]

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[1] « Les ressources n'apparaissent qu'au moment des combinaisons des stratégies pour résoudre un problème inédit» (authors' translation)

[2] Billaudot (2004) also distinguishes the resources according to their origin: natural resource, externality-resource and product-resource. While he proposes a general theoretical framework of territorial resources including given and built resources, our purpose is to refine the analysis of the built ones.

[3] Nadvi (1996) rather prefers to speak of active and passive collective efficiency.

[4] « Au stade de la virtualité, tout peut potentiellement faire ressource mais tout ne peut devenir mécaniquement un actif puisque les conditions de la métamorphose ne sont pas l'objet/ressource mais dans les stratégies d'acteurs au sein du processus de production » (authors' translation)

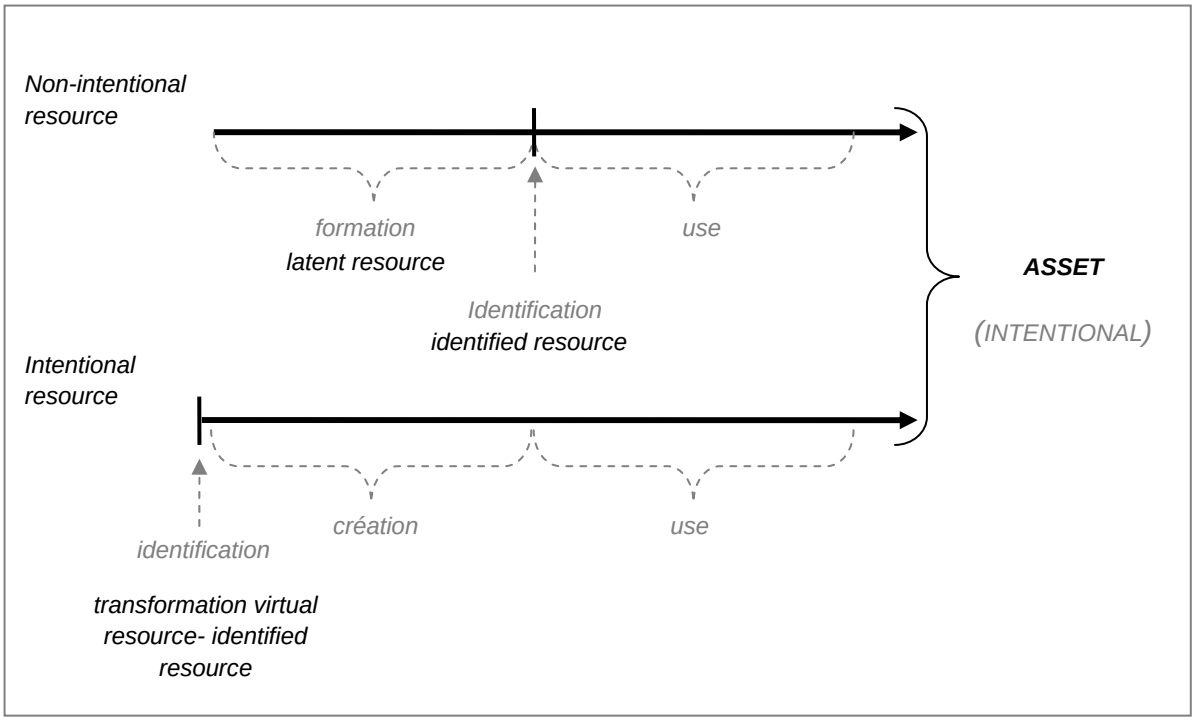


Figure 1: Intentional resources vs. non-intentional resources: resource-asset transformation

We will illustrate the difference between intentional and non-intentional resources via the process of the transformation of resource into asset (see Chart 1). It is necessary to distinguish the identification of the resource and its implementation. While intentional resource origins from an intentional human activity in order to be subsequently implemented in the production of goods and services, its transformation from resource to asset is made through the processes of *identification*, *creation* and *use* of resources. For example, we need specific competences (*identification*): at this stage, the resources cease being *virtual (latent)* and become *identified.* We create them (*creation*) and then we use them in productive activities as soon as they are available (*use*). As for non-intentional resources, which result from non-intentional processes, their transformation from resources to assets represents a different sequencing: they may exist as *latent* and *non-identified* resources during certain time (*formation*) until the moment of their "discovery" (*identification*) and their *use.* For intentional resources, the transformation from latent resource to identified resource is almost automatic.

Billaudot (2004) proposes the notion of *resources-externalities* which is close to our definition of non-intentional resources. According to Billaudot (2004) it is only external positive effect placing something at the disposal of another activity which is at the origin of a resource-externality. "This potentiality becomes effective when the existence of the positive externality is perceived, recognized as a resource. (…) Nevertheless, in this field as in the others, much of positive externalities remain latent (…). That does not mean that they do not have an influence. Even if it is not perceived,

their beneficial effect appears, but not necessarily with the same intensity" (Billaudot, 2004: 9-10).[5]

This distinction also enables us to reconsider the concept of resources with regard to Marshallian theory of agglomeration. While according to Colletis and Pecqueur (1993) Marshall's intuitive conclusions do not abandon the reasoning in terms of resource allocation, for us, with the distinction between intentional and non-intentional resources, the analysis of Marshall surpasses to a certain extent the logic of given resources by taking into consideration the non-intentional territorial resources which are "in the air".

1.2. New insights on the actors' role

The analysis of the territorial dynamics strengthens the role of actors in the resources creation. Thus, it is not possible to conceive the resources without actors who take part in their genesis and their use. The conceptual ambiguity with regard to the notion of the actor is highly present in the regional economics, starting with a firm approach and eventually integrating local populations into the analysis (Pecqueur and Ternaux, 2006).

The distinction between intentional and non-intentional resources gives new insights on the role of the local actors. By local actors we understand the actors who take part intentionally or non-intentionally in the resources' genesis, their use and renewal. This distinction is important with regard to public policy of regional planning, because it supposes as a sine qua non condition the conjunction of two types of resources. Up to what extent can we build the resources? Thanks to the proposed typology we can distinguish three types of approaches of the resources' genesis (see Table 1):

- ***Passive approach*** supposes a presence of territorial resources resulting solely from the externalities of agglomeration, based on the geographical proximity and the similarity of the actors – belonging to the same culture (institutional proximity). Thus, for example, the Marshallian approach of resources can be classified as a passive approach, as being based on given and non-intentional resources.
- ***Voluntaristic approach*** is a typical example of the a-territorial top-down policy (e.g., Sophia Antipolis before 1995) with the idea of the possibility of construction of territorial resources only thanks to the political goodwill; they rely on the combination of the geographical and organisational proximities.
- ***Active approach*** represents a compromise between the first two approaches and refers to an active participation of the territorial actors (the local population and the actors directly involved in the production process of the territory). In other words, it is the situation described as the "perfect osmosis between local community and

[5] « Cette potentialité devient effective lorsque l'existence de l'externalité positive et perçue, reconnue et qu'elle est constituée en ressource. (…) Il n'en reste pas moins que, en ce domaine comme dans les autres, beaucoup d'externalités positives demeurent latentes (…). Cela ne veut pas dire qu'elles ne jouent pas. Même s'il n'est pas perçu, leur effet bénéfique se manifeste, mais pas nécessairement avec la même intensité » (authors' translation).

enterprises" according to Becattini's (1992) expression[6]. There is a symbiosis of three proximities, geographical, institutional and organisational ones.

Table 1: The approaches of the genesis of resources

	PASSIVE APPROACHE	***VOLUNTARY APPROACH***	***ACTIVE APPROACH***
Dominant type of resource	Non-intentional resources + Given resources	Intentional resources	Combination of resources (non-intentional and intentional)
Actors	Local population, actors directly involved in the production process	Actors directly involved in the production process	Local population, actors directly involved in the production process
Type of participation	Passive	Active	Active
Type of proximity	Geographical, institutional	Geographical, organisational	Geographical, institutional, organisational
Coordination	Absence of the actors' coordination	Coordination of the actors directly implied in the production process	"perfect osmosis between local community and entreprises" (Becattini, 1992)

Another conclusion that can be drawn from this table is the possibility of reproduction of resources out of a given territory. While intentional resources are sometimes a-territorial, the non-intentional ones are extremely anchored within a territory. The situation of a territorial specification can result only from the combination of two resources. Thus, we propose a *new definition of specific resources*, which for us gathers the characteristics of intentional and non-intentional resources.

Do built resources and specific resources reflect the same reality? This proposed definition of specific resources leads to distinguishing built resources in general from specific built resources, which are anchored, non-transferable and non-reproducible elsewhere (Colletis and Pecqueur, 1993, 2004). While the first ones can sometimes be a-territorial, the second are deeply territorial and embedded in the territory. This new definition of specific resources makes it possible to reconsider the three modes of territorial development (agglomeration-specialisation-specification). Contrary to Zimmermann & *alii*. (1998), for us all the three types of development are based on built resources, whereas specific resources appear only in the phase of specification of the territory. While for Zimmermann & alii. (1998) the dynamics of specialisation also involves specific resources, it is more exact to speak of built resources.

In spite of the conceptual interest of the distinction between the intentional and non-intentional resources, it is not their opposition that represents the greatest interest, but their combined effects as they are generally intricated and do not exist per se. Thus, the

[6] «osmose parfaite entre communauté locale et entreprises » (authors' translation)

specification of the territory goes along with the creation of a joint project reconciling the history and the future of the territory and with an active participation of a wide community of actors.

2. Territorial resources in the knowledge economy

The approach in terms of territorial resources has been of a great interest to the scientific community and various concepts were proposed to refine the analysis (Billaudot, 2004; Ternaux and Samson, 2004; Peyrache-Gadeau and Pecqueur, 2004, etc). We will contribute to these debates by proposing the typology of resources in the knowledge economy.

2.1. Territories in the knowledge economy

The information and communication technologies led many researchers to reconsider the sources of economic development. While some proclaimed the arrival of the fifth Kondratieff wave, the others prefer to speak of the increased role of knowledge in the modern economies. The various concepts were proposed starting with “information economy” and ending with “weightless economy”. One of the characteristics of the knowledge economy consists in the double nature of knowledge, which at the same time acts as a product and as an input (resource). Thus, we entered the intangible or immaterial economy where the principal resources are also immaterial and intangible. The most frequent illustration in this respect is the software sector. More generally, the ICT which are supposed to be disrespectful of physical distance and geographical barriers according to followers' of the thesis of “the death of distance” (Cairncross, 1997) are on the contrary very geographically concentrated (ICT clusters) and strengthen the position of the most developed cities and regions. These clusters follow the logic of the knowledge economy and are mainly based on immaterial resources.

It should be stressed that the role of the territory is also changing and becomes the place of the creation of knowledge. The context of the knowledge economy brings the following additional elements (Carluer, 2003):

- knowledge as a resource produces powerful and cumulative externalities related to economies of scale: these cumulative effects accelerate the *differentiation of territories*;
- the circulation of knowledge and the characteristics of ICT place the *network externalities* at the centre of the knowledge economy;
- human resources become specific through the acquired competences, trainings and strategic partnerships established in the process of localization: it is a “*learning by networking*” which corresponds to a process of interactive learning within a strategic network.

The knowledge economy influences the localisation of activities and the creation of resources in three ways:

- as in case traditional sectors of activities where agglomeration externalities generate strong increasing returns, the knowledge intensive activities that are also characterized by important increasing returns experience strong clustering effects;
- the territories are the locus of important innovation potentials as long as they enable the exchanges of tacit knowledge (knowledge spill-over) which generate the innovations. When knowledge is mainly tacit its dissemination takes place on a local basis;
- the cumulative nature of knowledge produces a geographical lock-in, as the production of new knowledge represents an expensive and long process of individual and/or collective training;

Thus, with the notion of the knowledge economy we have a dynamic vision of economy, which involves an innovative capacity of the territory through the processes of creation, use and transmission of knowledge.

2.2. Territorial resources in the knowledge economy

In the knowledge economy, the territory participates in the production of resources in three ways:

- As a place of tacit knowledge diffusion and interactive learning;
- As a place of interaction of the actors and the formation of the collective actor;
- As a frame and a source of the actors' representations.

A particular type of resources corresponds to each of the above dimensions of the territory, i.e. cognitive, relational and symbolic resources.

A. Cognitive resources

With the ***cognitive resources*** of the territory we understand the whole set of knowledge which serves as an input in a productive process. The word "cognitive" appears most suitable to us, as it expresses at the same time the idea of knowledge and the mental structure which serves as "cognitive filter". The notion of the cognitive filter involves an idea of situated rationality and the embeddedness of territorial actors.

The notion of the cognitive resource emerges from the conception of the innovation as a socially and territorially embedded process. Many concepts were proposed for better understanding of the agglomeration of innovations: *learning region*, *National and Regional Systems of Innovation*, *technopoles*, *technological district*, etc. It should be mentioned that we don't limit our analysis to the knowledge historically built on the territory, but we also include external knowledge which can be used on a given territory. It deals especially with developing countries whose integration in the knowledge economy is based mainly on *external* cognitive resources.

In the knowledge economy, the innovation is considered as the source of sustainable competitiveness of the territories and the nations (Porter, 1990). Thus, the major question is: in what extent can we produce cognitive resources? A double answer is possible. On the one hand, cognitive resources may be produced intentionally, but on the other hand, non-intentional processes can result in the creation of these resources. It

should be stressed that non-intentional and intentional cognitive resources represent interdependent and non-contradictory phenomena. According to the type of cognitive resource the need for proximity changes. While for the intentional resources we can rely on an organisational proximity, non-intentional resources are territorially anchored and require a strong geographical proximity.

Table 2: Typology of territorial cognitive resources

	Intentional cognitive resources *(based on intentional relational resources)*	***Non-intentional cognitive resources*** *(based on non-intentional relational resources)*
Resources incorporated in a practice	***TACIT ARTICULATABLE KNOWLEDGE***	
	Know-how resulting from the strategy	Know-how resulting from the belonging
Transferred resources	***CODIFIED KNOWLEDGE***	***TACIT NON-ARTICULATABLE KNOWLEDGE***
	Education	Culture

The detailed analysis of the cognitive resources leads to a double conclusion related to the transmission of cognitive resources:

- The transmission of intentional and non-intentional cognitive resources is based respectively on the intentional and non-intentional relational resources[7];
- Secondly, our analysis must be refined with regard to the mode of knowledge transmission (Table 2), which refers to the `knowledge as a possession' and `knowing as a practice' (possessed vs practicised knowledge).

Non-intentional and intentional cognitive resources, which are transmitted through a practice refer to procedural knowledge[8] and require the geographical proximity. It is necessary to distinguish two types of know-how according to type of interactive learning[9]:

- ***Know-how resulting from the strategy***. The intentional resources incorporated in a practice refer to "learning by networking", which suppose that actors being conscious of the effects of knowledge externalities gather within the trade associations and the Chambers of commerce to benefit from knowledge spill-over.
- ***Know-how resulting from the belonging*** to a social group or a milieu corresponds to the situation described by (Marshall, 1890), when « the mysteries of the trade

[7] See *below* Part B for the more detailed discussion of relational resources

[8] Johnson & Lundvall (1994) distinguish between declarative knowledge (which refers to know-what) and procedural knowledge (which refers to know-how).

[9] Technical dimension of tacit knowledge according to M. Polanyi (1966)

become no mysteries; but are as it were in the air, and children learn many of them unconsciously ».

With this distinction of cognitive resources we re-discover the distinction between tacit and codified knowledge proposed by Polanyi (1966). By tacit knowledge we understand not easily transferable knowledge that can be either *articulatable*, i.e. which can exist independently of its holder under condition of investment in its articulation in formal language, or *non-articulatable* knowledge that cannot exist independently of its holder and despite the will of its holder (Mangolte, 1997). It means that with dramatic acceleration of the change in the knowledge economy, some knowledge may remain not articulated just by lack of time. While a local culture[10] refers to a cognitive dimension of tacit knowledge (Polanyi, 1966) and a non-articulatable knowledge, the know-how is an example of articulatable knowledge, which can be more easily transferred.

For example, while the formalised knowledge is the easiest to transfer; culture, at the opposite, is not transferable from one person to another and requires a lot of time like between husband and wife. However, if you consider parents and children or the local population in general, you have an inter-generational transfer of culture.

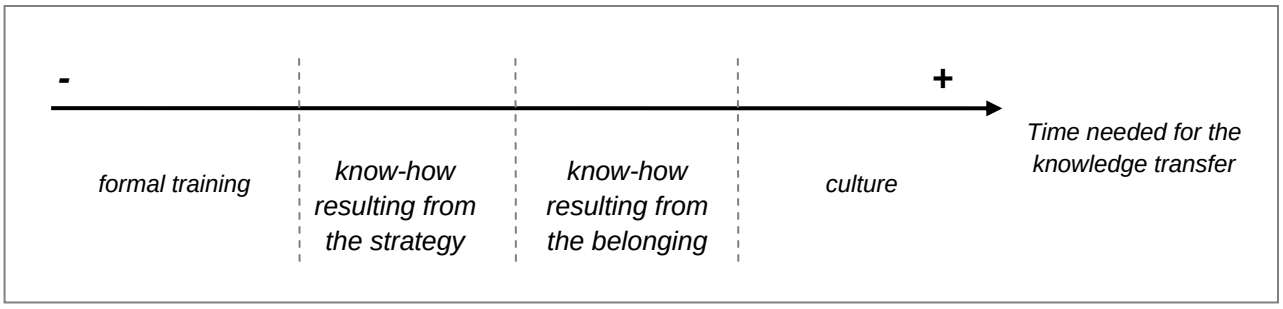


Figure 2: Cognitive resources and time needed for the knowledge transfer

Thanks to these typologies of cognitive resources we come to the above mentioned conclusion about the complementarity of intentional and non-intentional resources. We also join the criticism of the opposition of tacit and codified knowledge which represent two sides of the same coin.

The interactive learning analysis leads us to explore another type of resources, i.e. the relational resources through which the knowledge is created and transmitted.

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[10] Culture can participate in the production process in two ways: by contributing to the creation of a climate of trust by the distinction of cultures more or less inclined to cooperate (Fukuyama, 1995); and by distinguishing more or less innovative countries.(Fukuyama, Francis. 1995. Trust: The Social Virtues and the Creation of Prosperity. New York: Free Press.)

B. Relational resources

With the ***relational resources*** we understand the set of local and global social networks. These social networks facilitate directly and indirectly the genesis and the transmission of knowledge and ensure the activation of the cognitive resources within a given territory.

The taking into account of the actors has become a leitmotiv of the regional science since the 90's. Different approaches were proposed (approach of proximities, collective efficiency, social embeddedness, territorial social capital, etc) aiming at reconsidering the territory as "*a collective construction, at the same time a product and a condition of production of specific resources*" (Courlet, 2001).[11]

It is especially the GREMI's[12] concept of the *innovative milieu* which emphasizes the idea of territorial and social embeddedness of innovation. Here we also find the double nature of these resources with a distinction of intentional and non-intentional resources. While the first corresponds to the deliberately built networks and represent the result of the actors' strategies, the second refers to the notion of the belonging to a particular social group (neighbourhood, friendship, family, classmates etc.).

In addition to the distinction between intentional and non-intentional resources, it is necessary to reconsider the differences between local and global networks (see Table 3). In this respect, our approach is broader than that of GREMI, because we take into account not only the local relational resources, but also the global ones, which play an import role in the transmission of knowledge and in the dynamics of interactive learning in the global knowledge economy.

Table 3: Typology of territorial relational resources

	Intentional relational resources	***Non-intentional relational resources***
Local resources	Associations, Chambers of commerce	Neighbourhood networks, friendship networks, etc.
Global resources	Transnational corporations Network-firm	Diaspora networks

The two types of the global relational resources enable us to reconsider the inscription in the global economy not only through the branch offices of the multinational firms, but also through the mobility of the local population.

According to Veltz (2005), we moved from the traditional "centre-periphery" model towards the "territory-network" model, where "the poles represent the nodes of

[11] « construction collective, à la fois produit et condition de processus de production de ressources spécifiques » (authors' translation)

[12] Groupe de Recherche Européen sur les Milieux Innovateurs (European Research Group on Innovative Milieus)

these networks" (Veltz, 2005: 69). Contrary to Veltz (2005) for whom the concept of pole refers only to the metropolises, by pole we understand more generally *knowledge based clusters*. Among the properties of the "territory-network" model, Veltz (2005) distinguishes:

- The prevalence of the horizontal relations (pole-pole) over the vertical ones (pole-hinterland);
- A grid structure of the network (by contrast with pyramidal or arborescent network).

We want to insist on the fact that cognitive and relational resources should not be understood as autonomous and independent. The durable differentiation of the territory is always built on the combination of both. According to Burt (1995: 601) the social capital is "the contextual complement to human capital". Thus, "while human capital is surely necessary to success, it is useless without the social capital of opportunities in which to apply it" (Burt, 1997: 339).

The relational resources produce strong external economies we may call *relational externalities*. These externalities combine the well-know network externalities, which refer to the change in the benefits that an agent derives from a good or service provided by a network, and the *multiplier effect of social capital in the knowledge genesis and transmission*. These properties of the relational resources increase the differentiation of the territories and contribute to the process of locking into external relational networks. Thus, the geographical lock-in is reinforced by the effects of relational lock-in and could be a source both of stability and of inertias of a cluster. However, this network embeddedness is a condition for the economic development of a territory in the knowledge economy and the development potential of relational resources becomes higher when global networks are involved.

C. Symbolic resources

In the search of territories' competitiveness a new factor has appeared: we refer especially to the symbolic resources. The taking into account of symbolic resources by the economic geography appears emblematic for the knowledge economy. By ***symbolic resources*** we understand the whole set of identifications and images which define the territory and distinguish it with regards to the others. The choice of the localisation of economic activities is never only a rational choice and it may be influenced by symbolic factors, which refer to images, values and everything that brings a peculiar *significance*.

Thus, in the knowledge economy, we move from the strategy of the product differentiation towards the territory differentiation. This differentiation can be of two types:

- validated differentiation (non-intentional symbolic resources)
- projected differentiation (intentional symbolic resources)

While the validated differentiation is based on the real advantages and the non-intentional symbolic resources (shared representation of the territory) the projected differentiation functions through territorial marketing (intentional resources). Among the examples of the differentiation based on the non-intentional resources we can quote the

technopole's movement as “cities of future” reconciling high technology and nature (parks, proximity of the sea bay, etc.). This differentiation through image creation is supposed to attract the branch offices of multinational companies and the FDI. Porter (1999: 226) with regard to territorial marketing stresses the possibility to reinforce the reputation of a place in a particular field, which increases the probability that the name of a firm located there will be associated with an image of a place. For example, the Italian shoe makers benefits from the Italian reputation in fashion. This reputation represents a type of public good for all the Italian companies related to the fashion.

Table 4: Typology of territorial symbolic resources

	Intentional symbolic resources	***Non-intentional symbolic resources***
Internal resources	Promoted representations of the territory	Shared representations of the territory (identity)
External resources	Brand	Reputation

As in case of cognitive resources, the symbolic ones do not exist independently from relational resources. Thus, while the intentional symbolic resources are created and transferred through the intentional relational resources, the non-intentional symbolic resources use respectively the non-intentional relational resources.

The symbolic resources refer also to the opposition of the global and local dimensions of the territory. Contrary to the above two types of resources symbolic resources must be accepted by the external agents of the territory (example, Grasse as a globally recognized centre of perfumery). We should also qualify these resources as multidimensional, because they suppose the plurality of the territory images according to the considered type of actors and their belonging of the territory in question (internal/external actors). The table 4 presents the various forms of symbolic resources.
There is a strong interconnection between the sub-types of symbolic resources. We will illustrate it through the example of Watch Valley project[13]. The Watch Valley project as a symbolic resource has 4 sub-levels:

- The reputation of Switzerland in the watch making – ***non-intentional external resource***;
- The word “Watch Valley” is a brand created to attract tourists to the region - ***intentional external resource***;

[13] Watch Valley project is a project of promotion of the Suisse Jurassic Arc as a tourist destination structured around Swiss watch-making industry

- This label was not very well accepted by the local population because of its disconnection with local reality and entered in a conflict with the representation of the place by the inhabitants –conflict with the ***non-intentional internal resource***;
- The above situation forced to complete the slogan "Watch Valley: le pays de la precision " to gain the acceptance of the local population[14] - ***intentional internal resource.***

Symbolic resources are peculiar compare to the two above resources: they rely on them and play a role of a signal. For example, while the reputation is a kind of signal based on the quality of cognitive and relational resources (reputation of Silicon Valley), the brand is an example of deliberately created signal, whose connections with the quality of the cognitive and relational resources are weaker of even absent.

Conclusion

In the knowledge economy, the innovation is considered as an answer to the instability in a context of exacerbated competition. Nevertheless, the innovating capacity of the territory does not depend solely on knowledge. What are the resources in the knowledge economy? To what extent can the creation of these resources be managed? To answer these questions, first of all, we showed the different approaches of the resources' construction which led us to distinguish the intentional and non-intentional resources and different types of actors. Besides the actors directly involved in the production process we also integrate the local population. In spite of the fact the local population has been already considered as an actor, we propose a more advanced integration starting with the purely local consequences of this participation and ending with the consequences at a global level (diaspora as a resource). This taking into account of the local population underlines the plurality of the territories of actions in the global economy. According to Rallet (1999) we think in terms of situated agents who "are at the same time here and there".

Secondly, we proposed 3 types of resources in the knowledge economy. The arrival of the knowledge or weightless economy makes knowledge not only a product, but also a resource, which marked the passage towards the immaterial economy based on the immaterial resources. The two types of resources (cognitive and symbolic) represent factors with a cognitive nature. Pecqueur (2005) stresses that the process of construction of the cognitive resources takes a dominating place in a global economy. Nevertheless, in spite of the immaterial character of the economy, we would like to underline that we are not in an unreal world: these immaterial resources (except perhaps symbolic resources) are quite real and visible, in the sense that they can be measured and identified and more generally refer to the service economy. The detailed analysis resulted in a finer typology of three resources representing a complex and multidimensional phenomena. This complex reality explains the difficulty of the creation of the "learning territory" and the

[14] Based on the study of L. Kébir (2004)

possible diversity of territorial dynamics with the different combinations of resources. Thus, we define the “learning territory” as a collective actor with a proper innovative dynamics based on the accumulation of three types of resources. The notion of the “learning territory” represents one of the consequences of the spreading knowledge economy.

Another peculiarity of the resources in the knowledge economy refers to the characteristics of the knowledge as an economic good. According to the definition, knowledge has three major properties: uncontrollability, non-rivalry and cumulativeness. All these effects become possible when cognitive and symbolic resources come in interaction with relational ones. Cognitive and symbolic resources belong to knowledge in three ways:

- ***Uncontrollability***. Cognitive and symbolic resources are non-excludable. It means that it is difficult to make exclusive or controlled privately, and this generates spill-over. Thus, the whole territory could benefit from it.
- ***Non-rivalry***. Cognitive and symbolic resources represent a particular kind of resources which grow with their use and can be characterized by their inexhaustibility.
- ***Cumulativeness***. Cognitive and symbolic resources are cumulative and progressive. Thus, they represent a principal element in the production of new cognitive and symbolic resources.

We can find the same features into relational resources, however to a lesser extent. Their social dimension makes them bring some constraints to the movement of knowledge. On the other side, they appear as the main *structure* of the knowledge resources, having thus an important function of capturing the knowledge and organising the territory.

Another peculiarity of the resources in the knowledge economy is that they do not imply a single use: at the contrary they are multi-purpose, which reinforces their cumulative character. Thus, for example, the hardware competences can be used in the software field, the image of Paris can be simultaneously used in fashion, tourism and science. Relational resources are even more multi-purpose and can be used in all the branches of economy (we refer in particularly to the non-intentional relational resources). All these factors reinforce the innovative capacity of the territory, which helps to resist to external shocks. They are also a major reason of strong geographical lock-in with a creation of knowledge-based clusters.

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