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Heterogeneous Social Capitals:

A New Window of Opportunity for Local Economies

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Abstract

In this paper we analyze the relationship between hot topics in economic development such as global knowledge pipelines (GKP), tacit knowledge (TK) and social capital (SC). In particular, echoing the work of Gertler (2003) and Bathelt et al. (2004) we stress that GKPs are important not only as conveyors of codified knowledge, but also of TK. In this paper, we make two additional operations; the first is extending the concept of TK to include systematically the concept of SC. Traditionally, TK tends to be conceived as individual experiential knowledge based on practice, in a way part of the human capital embodied in the highly-skilled individual expert. We'd rather include here also collective pools of social knowledge otherwise called SC since TK can be created and later transferred by wider communities. In this operation we benefit from Blacklers (2002) typology of knowledge that appropriately includes aspects of localized SC in the form of 'encultured' and 'embedded knowledge'. In the second operation we extend Williams argument (2007) on the richness of migrants' codified and tacit knowledge; in fact, we assert that TK flows do not rely only upon highly knowledgeable economic agents such as scientists, engineers and top managers, but on a broader spectrum of individual and collective agents that are and/or can be part of competitive GVC/GPN/GKP. This discussion has special importance for local production systems (LPS) such as clusters and districts, where TK flows and SC are transforming dramatically, thus need more thorough theoretical frameworks to represent these changing socioeconomic scenarios, as well as their real constraints and opportunities.

Resumen

En este trabajo se analizan las relaciones entre temas candentes para el desarrollo económico como son los conductos globales de conocimiento (GKP), el conocimiento tácito (TK) y el capital social (SC). En particular, sobre la base del trabajo de Gertler (2003) y Bathelt et al. (2004), se remarca que los GKP son importantes no solamente como catalizadores de conocimiento codificado, sino también de TK. En este documento de trabajo se realizan dos operaciones adicionales; la primera permite extender el concepto de TK para incluir sistemáticamente el concepto de SC. Tradicionalmente, TK se concibe como conocimiento individual basado en la experiencia, lo que es parte del capital humano personificado en individuos altamente cualificados. Aquí se prefiere ampliar el concepto para incluir también una reserva colectiva de conocimiento social llamada SC ya que el TK puede crearse y sucesivamente trasladarse a través de amplias comunidades. En esta operación se cuenta con la tipología de conocimientos propuesta por Blacklers (2002) que incluye aspectos de SC localizado en la forma de conocimiento 'enculturalizado' y 'arraigado'. En la segunda operación se propone extender el argumento de Williams (2007) sobre la riqueza de los flujos de conocimiento codificados y tácitos relacionados con los migrantes; en efecto, se considera que los flujos de TK no dependen únicamente de agentes económicos altamente cualificados como son científicos, ingenieros y altos gerentes, sino de un más amplio espectro de agentes individuales y colectivos que son y/o pueden ser parte de GVC/GPN/GKP competitivas. Esta discusión tiene una importancia especial para los sistemas locales de producción (LPS) como son los clústeres y distritos, en los cuales los flujos de TK y SC se están transformando de forma dramática, por lo que se necesitan enfoques y modelos teóricos más completos que representen estos escenarios socioeconómicos de cambio, así como sus vínculos y oportunidades reales.

Laburpena

Lan honetan hazkunde ekonomikorako gai oso esanguratsuen arteko harremanak aztertzen dira, besteak beste, jakintzaren bide globalak (GKP), jakintza tazitua (TK) eta gizarte kapitala (SC). Bereziki, Gertler-en (2003) eta Bathelt et al.en (2004) lanetan oinarrituta, azpimarratzen da jakintzaren bide globalak garrantzitsuak direla jakintza kodetua katalizatzeko ez ezik, baita jakintza tazitua katalizatzeko ere. Lan agiri honetan beste bi eragiketa ere egiten dira; lehenengoak aukera ematen du jakintza tazituaren kontzeptua hedatzeko, gizarte kapitalaren kontzeptua modu sistematikoan barne hartzeko. Jakintza tazitua esperientzian oinarritzen den banakako jakintza dela ulertu izan da, giza kapitalaren zati, kualifikazio handiko gizabanakoetan. Hemen nahiago izan dugu kontzeptua hedatzea, gizarte jakintzaren erreserba kolektiboa, gizarte kapitala deitutakoa, ere barne hartzeko. Izan ere, gure iritziz, jakintza tazitua sortu daiteke eta erkidego zabaletan hedatu. Eragiketa horretan Blacklers-ek (2002) proposatutako jakiteen tipologiaz baliatu gara, eta horrek barne hartzen ditu gizarte kapitalaren alderdi lokalizatuak, "kulturan barneratutako" eta "sustraitutako" jakintza, besteren artean. Bigarren eragiketan Williams-ek (2007) migratzaileekin lotutako jakintza kodetuen eta tazituen fluxuen aberastasunari buruz proposatutako argudioa hedatzea dugu xede. Hain zuzen ere, uste dugu jakintza tazitua ez dela soilik kualifikazio handiko eragileen araberakoa, esate baterako, zientzialariak, ingeniariak edo goi mailako gerenteak, baizik eta banakako eta talde eragile oso zabalak ere badu zeresanik, GVC/GPN/GKP lehiakorretako kide izan baitira eta/edo izan baitaitezke. Eztabaida horrek garrantzi berezia du tokiko ekoizpen sistemetan, horien artean, klusterrak eta barrutiak. Izan ere, tokiko ekoizpen sistemetan jakintza tazituaren eta gizarte kapitalaren fluxuak errotik ari dira aldatzen eta horregatik, ikuspegi eta eredu teoriko osatuagoak behar dira, aldaketaren ingurune sozio-ekonomiko horiek eta horien barneko loturak eta benetako aukerak irudikatzeko.

1. Introduction

In this paper we build on the seminal work of Bathelt et al. (2004) who suggest that the frequently used concept of global knowledge pipelines embodies not only the concept of codified knowledge flow, but also of tacit knowledge flow. In particular, we add two main propositions: the first is about the relation between tacit knowledge (TK) flow and social capital (SC); the first is not only about individual technical and experiential knowledge transfers but also about collective values, norms and attitudes of the people and workers that compose the local production system. In this sense, we benefit from the knowledge typology developed by Blackler (2002) that introduce the concepts of 'encultured knowledge' and 'embedded knowledge' to express these aspects of collective knowledge bases. Our second argument is that these strengths can be reaped not only from highly-skilled human capital (i.e. scientists and engineers), but also from a broader spectrum of workers some of which belong to the local production system whereas others migrate from other contexts.

As a consequence, in our view global knowledge pipelines (GKP) bring in TK flows **that modify former social homogeneity (Becattini, 1990; Maillat, 1995), breaking common values and understanding though also offering new opportunities** to enrich the local buzz through new sources of external knowledge. This process is facilitated with the inflow of both skilled and unskilled people on a temporary and permanent basis. This opportunity needs to be explored in detail, which is our attempt in this exploratory paper.

2. The context: local production systems and their global chains/networks

The basic subject of our analysis refers to local production systems (LPS) such as clusters and industrial districts. It is thirty years at least that they are recognized as fundamental collective agents of local and, in some case, national development. The literature on industrial districts (Piore and Sabel, 1984; Becattini, 1990, among others) and on clusters (Porter, 1990; Schmitz, 1995) has displayed the immense advantages of being part of dynamic clusters for social, institutional and economic development (e.g. reaping benefits from cooperation and external economies). However, it is about ten

years that some academics and specialists realized the limitation of the analysis of LPS such as districts and clusters once it is clear that they are part of everyday more globalized markets (Humphrey and Schmitz, 2004). A broader perspective needs to be taken on board as development dynamics are strongly influenced by the participation and position that these LPS play in global markets. In fact, the most novel relevant knowledge is not all contained in the locality; it is rather produced in several locations, thus local agents have to be open to absorb it wherever it is produced (Bathelt et al., 2004; Isaksen, 2010). In addition, the LPS and its firms are not always market leaders; they may assume different positions in the global market and/or the global production network (Ernst and Kim, 2002), they may be specialized suppliers, or satellite platforms (Markusen, 1996; Guerrieri and Pietrobelli, 2004) or even marginal actors such as survival clusters (Altenburg and Meyer-Stamer, 1999; Parrilli, 2007). This is why a number of academics studied these relations and developed new economic concepts, such as that of global value chains – GVC- (Humphrey and Schmitz, 2004; Gereffi and Korzeniewicz, 1994; Kaplinksy and Readman, 2001) or that of global production network –GPN- (Ernst and Kim, 2002; Yeung, 2009) with the specific objective, among others, of capturing the participation and potential development trajectory of LPS within such broader economic frameworks/landscapes.

Now, each of the above-mentioned concepts have their specific rationale; the first concepts of the French 'filiere' (ADEFI, 1985) or the American 'sub-sectors' (Mead et al., 1992) were still rather focused on the inward-oriented production chain, with little focus on their foreign linkages. The objective was to analyze what actors participate in the chain, their capacity to add value across phases, and what actors have the leading role within it. The subsequent formulation of the global commodity chains and the global value chains put a strong emphasis on the international linkage to final markets and strong players within such markets such as multinational companies and/or hub industries (Gereffi and Korzeniewicz, 1994; Schmitz, 2004). Within this approach the governance of the system is very important because it determines the room for development and/or upgrading that local players (e.g. clusters) can play in such global value/commodity chains. The characterization of the global production network goes beyond the conceptualization of adding and controlling value across the chain; it prefers emphasizing the changing geography of production across the world, the different bits and pieces of the international landscape, their substitutability, and the new dynamics taking place in it (Coe et al., 2008; Yeung, 2009).

The latter concept (GVC/GPN) proved to be a quite flexible concept, which offered the opportunity to go beyond production and trade exchanges, but also knowledge flows. From the Nordic literature on innovation, the importance of these concepts was associated to that of 'global knowledge pipelines' (GKP) as conveyors of knowledge that enrich the local production and innovation dynamics, which may otherwise get too inward-oriented and stagnant, i.e. locked-in (Saxenian, 2002; Bathelt et al., 2004; Lundvall, 2007; 2010). We consider that the contribution of GKP needs to be enlarged in order to approach the wider dynamics that operate in GVC/GPN. Many authors, especially those linked to the industrial district literature, stress the importance to absorb scientific and/or technical knowledge abroad, in all cases codified knowledge, whereas tacit knowledge being stickier is available *in-situ* (e.g. Becattini, 1990; Guerrieri and Pietrobelli, 2004). Following Bathelt et al. (2004), we propose that also tacit knowledge (TK) can be conveyed through global knowledge pipelines and, even more, that this knowledge can have important effects on local economies. These aspects also raise issues and challenges for the sustainability of localized pools of TK and the related SC. **But in a way we suggest to broaden the spectrum of the relevant TK flows across countries and systems.** If the definition of TK includes a set of experiential knowledge that are not automatically transferable from one person to another since these have to be seen, practiced, discussed and improved little by little through further practice (Polanyi, 1966), and SC includes experience-based values, traditions, norms, routines, practices that are socialized across agents and people in a specific environment and that set the frame for trust and cooperation that may help deliver economic transactions in an efficient way (Putnam, 1993), the connection between the two concepts is in our view evident. Both concepts reflect experiential knowledge based on practice; the difference can be found in the individual vs. collective capability of the two; this is why we suggest to considering SC as a very meaningful part of TK, the collective and interactive part of TK (Lundvall, 1992, Lundvall et al., 2002), and we want to discuss whether and how this part of knowledge can be constructively transferred across GKP.

In Bathelt et al. (2004), TK exchanges across knowledgeable agents are the ones that matter; in their view, "the processes behind the establishment and maintenance of global pipelines must be predesigned and planned in advance, and they require specific investments. This involves a complex and costly process. One of the first decisions to be made here is the selection of external partners" (Ibid, 2004: 43). In our view, this

approach represents both a selective and an elitist view of TK flows (see also Gertler, 2003:81). In our view instead, most agents, including blue-collar workers and ethnic minorities that are part of the LPS, have the capacity to participate in GKP in a way that enriches the related TK flows and capital. In this regard Gertler's proposition seems to be quite adequate (2003:82): "the ability to appropriate tacit knowledge in the workplace depends on the social relations surrounding production", which stress the suggested, implicit connection between SC and TK.

With this project in mind we thus propose a view to connect TK with SC and its changing conditions in the current global economy. In some way, this approach helps us extend the concept that we tend to have of the knowledge economy as an economy that involves not only scientific knowledge roots, but also tacit knowledge bases that change over time, and that need to be taken into account to plan further developments of the global society.

3. Tacit knowledge flows and changing social capital

Contemporary studies that are focused on the springing knowledge economy complement former analyses that were developed within streams of development economics (Gereffi and Korzeniewicz, 1994; Kaplinsky and Readman, 2001; Humphrey and Schmitz, 2004). These new contributions (Asheim and Isaksen, 2002; Saxenian, 2002; Bathelt et al., 2004; Asheim and Coenen, 2005) present the importance of **'global pipelines' as conveyors of key knowledge inputs, often codified – though not only –, analytical knowledge inputs** that represent a means to increase the capacity of local economies to produce higher value added products, designs, brands, competitive processes and organizational forms. In their view, if the local buzz "generates opportunities for a variety of spontaneous and unanticipated situations where firms interact and form interpretative communities (Nonaka, 1995). The advantages of global pipelines are instead associated with the integration of multiple selection environments that open different potentialities and feed local interpretation and usage of knowledge hitherto residing elsewhere" (Bathelt et al, 2004: 42). They emphasize the importance to find a right balance between working through 'local buzz' and 'global pipelines' because both of these knowledge pools can be part of a "trade-off

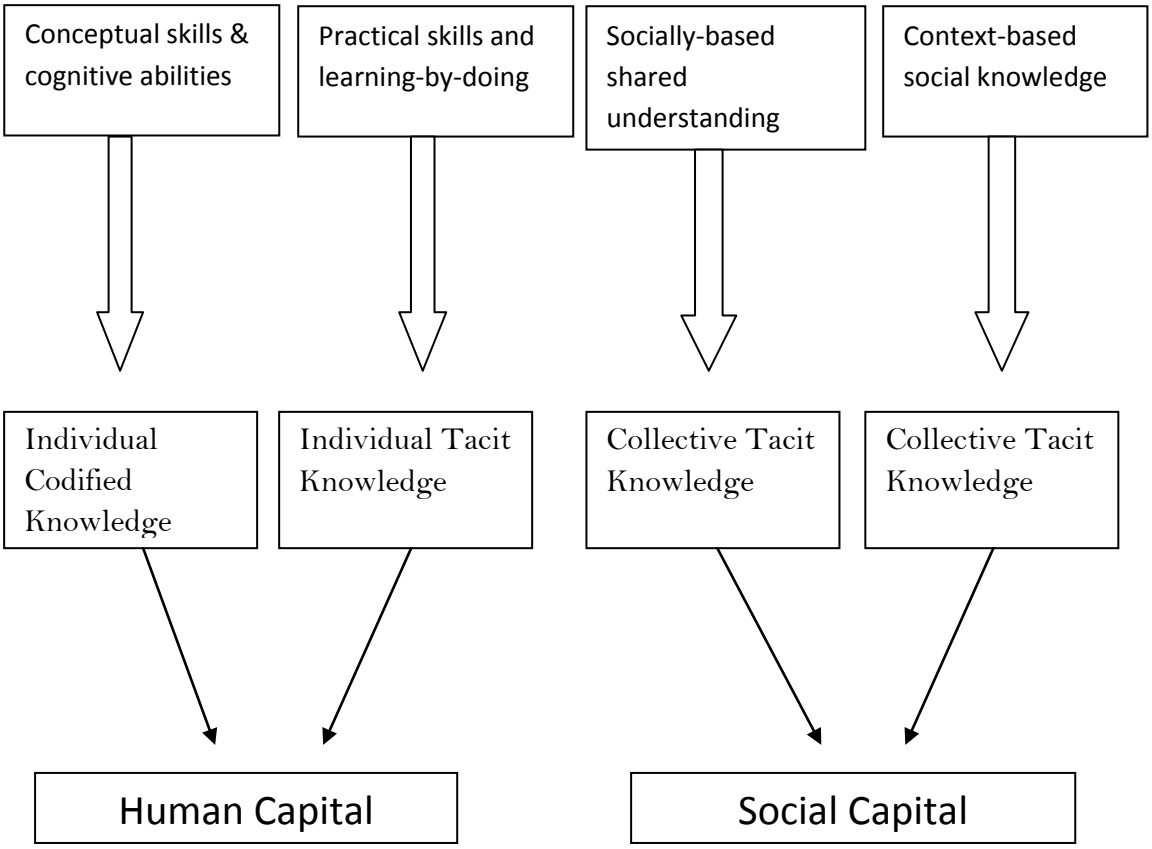
between a too much inward-looking and a too much outward-looking organizational structure. In the first case, knowledge is easily transmitted throughout the firm, but the new external sources can be difficult to comprehend" (2004: 46). Overall, an approach that pulls them adequately together is thought to maintain and even sustain the regional competitive advantage based upon specific competences and capabilities developed in the local production sectors and/or clusters (Cooke, 2006; Asheim et al., 2008).

Within this framework, relatively little attention has been given to the flow of people that embody knowledge, both codified and tacit. In a restrictive sense, knowledge is codified and technical knowledge based on scientific, technological and personal competences. However, knowledge is much more than this. As Lundvall and others showed in several respects (Johnson and Lundvall, 1994; Lundvall et al., 2002; Jensen et al., 2007), there is a whole part of TK that is hardly reducible to scientific and technological knowledge, since it entails not only principles and technicalities, but also social capabilities, trust and/or social capital (i.e. org-ware and soc-ware in Lundvall, 2007). The latter include constructive values, norms, and attitudes as well as the capacity (of the local people) to trust each other, and to work together to achieve common objectives and goals. Thus TK is not only about technical knowledge (i.e. know-how) incorporated through learning-by-doing and by-using practices, and it is not only accumulated individual knowledge, but it is also very much social knowledge, social embeddedness and social relations (the 'know-who' part of knowledge, and the 'collective pool of experiential knowledge') that may also help producers to design collective development projects at the micro, meso and macro level.

In a way, it is very relevant the typology of knowledge developed by Blackler (2002) who distinguishes between embrained, embodied, embedded and encultured knowledge. Within this conceptualization embrained and embodied knowledge tend to be individual types of knowledge bases, the first being based on conceptual skills and cognitive abilities, and the second on practical thinking based, among others, on learning-by-doing; **encultured and embedded knowledge** tend to be collective pools of knowledge being based the first on shared understanding arising from socialization and the second bounded to contextual factors, thus highly local-specific. In a way, if embrained knowledge responds to the definition of codified knowledge, the other three types are more in line with the definition of TK. Two of these meanings focus and stress collective aspects of TK (**strictly connected to the definition of SC**) that are

hardly taken into account in the conceptualization of TK flows across GKP (Bathelt et a., 2004).

Graphic 1: Codified and Tacit Knowledge Flows as part of Human and Social Capital Pools



Source: Own elaboration.

The question that we want to address is related to the change of social capital in the context of globalized markets and global value chains. Local production systems are no more islands, they are production systems inserted in wider contexts, in wide global production networks where they compete with many other production systems and (large) firms to maintain or to improve their position from the satellite, substitutable third- or fourth-tier supplier (i.e. satellite platforms in Markusen 1996) to

that of specialized suppliers and up to that of market leaders. The global market is changing everyday; relations are less stable than expected on the basis of traditional production. These changes affect the same social bases, since human resources are moving, thus **introduce significant variations in the original homogeneous social fabric** (Parrilli, 2009). Social atmosphere is nowadays more heterogeneous since important waves of migration take place and introduce new cultures and new production modes in former homogeneous environments. People from China, India, Eastern Europe, Northern Africa, Latin America and people from the same Europe are modifying the European social fabric on the whole as well as in the specific local production system. The famous district of Prato has already embodied 30,000 citizens from China and 1000 firms owned by Chinese citizens (Smyth and French, 2009). Is it the same Prato as before? Can we talk again about trust and low transaction costs, verbal contracts and so on, or shall we accept the challenge of living within new social environments that need new kinds of 'social contracts', new values, new attitudes and new forms of co-existence in order to recreate the conditions for a constructive interaction across the local and global agents that participate in the production of this local system and, with this, in the production developed across GVC/GPN to which clusters and districts participate?

As said above, TK and SC are strictly interconnected since SC is both TK capital and the fluid that helps knowledge assets to flow and work more effectively and efficiently. Most analyses on knowledge flows across GKP seem to stress the importance to absorb individual codified and tacit knowledge as this enriches the local knowledge pool and helps the local system to upgrade its capabilities (Bathelt et al., 2004; Giuliani, 2005). In contrast, heterogeneous **social fabric is politically and popularly considered a threat for local systems that might need to be limited through a number of local, regional, national laws and barriers that reduce this possibility** (Alesina and La Ferrara, 1999; Lodigiani et al., 2003). However, this increasingly heterogeneous social fabric involves two aspects that have to be taken into account: 1) inevitability of change; 2) collective TK flows and capital. First, the changes that are taking place in western countries insofar as in the global environment are inevitable. Too many global and local imbalances have been magnified by the increasing globalization of information and communication about lifestyles, welfare, market opportunities, which attract/catalyze important flows of population from poor countries to rich countries. Thresholds and control are being significantly enhanced

with the involuntary effect of increasing the interest that various 'lobbies' have in the traffic of clandestine migrants that will be later exploited within different 'industries' that include drug-trafficking, prostitution, as well as exploited labor in traditional manufacturing, e.g. textiles, furniture, etc. The second aspect refers to a more thorough concept of knowledge. The heterogeneity of the (local) social fabric involves a component of tacit knowledge in terms of values, norms, attitudes, aptitudes, traditions and routines that may also offer new opportunities to local communities through the SC enrichment of the local system inserted in specific GVC/GPN and GKP. An adequate reflection is needed on this aspect, which is too easily dismissed by many, and in general not analyzed in depth.

Currently, these flows of **people from different countries, cultures and social capitals are allowed with increasing intolerance in most western countries**. These people tend to create their own communities that limit interaction with local people to the minimum in order to avoid social problems, fulfill current regulations, produce and sell their goods, and/or to obtain advantages from a better knowledge of the services that these societies offer to both incumbents and latecomers. In some cases, this poor interaction may even resemble the situation of closed communities. In the most advanced case, the new international mobility of human resources is analyzed from the perspective of the 'quantity' of 'human resources' that are needed to substitute the elderly that are retiring from the labor market making the pension system still sustainable in the future (Razin and Sadka, 2000) or that might be accepted to cover gaps in the labour market (e.g. unpleasant jobs such as cleaners, elderly-carers and construction workers). Is it the whole opportunity offered by the exchange of human and social capital in globalized markets? Probably not; this is why we address this aspect in this discussion paper.

4. Tacit knowledge flows and social capital: a framework for analysis

The literature on GKP is discussed and merged with the conceptualization of TK flows. The literature on SC and social embeddedness is discussed as a new relevant bit within this discussion; in particular we stress the importance to analyze SC not only as a basis for trust and cooperation, but also as a means to convey more easily codified

and tacit knowledge across global value chains and within the local production systems. In this paper we merge this discussion with the need of local economies for a broader flow of workers and human capital that is today analyzed from two limited perspective: 1) the skilled human capital needed to increase the codified knowledge inputs into the local economies as a means to enrich the local innovation dynamics (Saxenian, 2002; Williams, 2007); 2) the young workforce needed to substitute the elderly that are retiring at higher rate and that are jeopardizing the sustainability of the social security system for the elderly and the system as a whole (Razin and Sadka, 2000). Little attention is instead paid to 3) **the heterogeneous social capital as a 'potential' catalyst of TK flows and, as a consequence, of change and innovation**.

Instead of being perceived as a threat to the local tradition and social homogeneity (see for example Alesina and La Ferrara interpretation of heterogeneity and income inequality as barriers to participate in social activities), a richer, multifaceted SC could be perceived as a catalyst of change that needs to be understood, discussed, integrated and put in prospect as an opportunity for the local economy to introduce new wealth, rich features of different traditions that can be integrated only in specific social atmosphere or '**creative knowledge environments' based on tolerance as well as on valuing diversity and connectivity as assets** rather than threats (Asheim, 2010). The local production system (e.g. the typical industrial district) is wrongly perceived as the basis of positive social capital only, i.e. trust and cooperation among local socially homogeneous agents (Putnam, 1993; Lodigiani et al., 2003), whereas it should be conceived and analyzed more thoroughly on the basis of the balance of positive and negative forces, since some of them represent a positive oil/fluid that eases transactions, while others represent a negative/sticky glue that impedes wider exchanges and cooperation (Anderson and Jack, 2002). *This aspect is particularly relevant in many local production systems across western countries that do not tend to recognize the limitations implied by the excessive homogeneity of social capital that excludes heterogeneous sources and that may lead to the lock-in of the local system.*

In this sense it may be useful to adopt **Krugman's framework regarding centripetal and centrifugal forces** (1998) and apply these to understand what forces strengthen the process of knowledge absorption and what forces weaken it. In terms of 'centripetal forces', the flow of knowledge, both codified and tacit, goes in tandem with the flow of people from other countries (both on a temporary and a permanent basis) may introduce a number of potential benefits such as: a) new consumers (with the

related push on demand); **b) different though enriching cultural values (e.g. southern Europeans and Latin American bring in a stronger appreciation of social meetings, dance and the likes that open up new markets for leisure and services, North Americans introduce a stronger attitude to risk bearing and entrepreneurship**; Scandinavians bring in a deeper sense/capacity of collective responsibility that mirrors positive effects on the management of public resources, Chinese and Japanese show a stronger attitude to collective work for a common aim such as the development of infant industries or the reconversion of declining industries); c) new social institutions that may contribute to build up a richer pool of collective knowledge, e.g. the strength of the cooperative system in the rural environment in several Latin American countries, the capillarity of non-conventional credit institutions in some Asian and Latin American countries, the historic development of North African and Middle-East trading practices turn around bazaars and the likes. In terms of 'centrifugal forces', this flow can also introduce: e) high remittances abroad with lower local consumption pattern (however, it could be good in global terms as it reduces the poverty that promotes migrations), **f) disrespect for local values that may lead to both inefficient economic practices (e.g. when delivery times are not respected) and elevate the risk of social clashes,** g) destructive competition inside among incumbent firms and newcomers with losses of jobs in the local youth population; h) overutilization and/or improper use of public services, as social security is exploited without any correspondent contribution.

Blackler cognitive, 'embrained knowledge' (2002) is possessed at a higher extent by highly skilled workers (e.g. scientists, engineers and managers) that are in the top priorities of many public programs and private corporations (e.g. 'brains return' programs) to promote their own scientific and technological upgrading. However, forms of 'encultured and embedded knowledge' are carried not only by these highly-skilled workers; in contrast, these forces/knowledge are carried and transferred also by more 'normal' workers involved in ordinary jobs. This happens because TK and SC are a wide, extended repository of collective knowledge that benefit also from a larger public of agents (and people) involved in day-to-day interactions and transactions. For example the well-known carnival of Notting Hill Gate in London takes place because of the presence of large international communities of Caribbeans, Latin Americans, Africans, among others. A market for goods and services can develop on this basis,

whereas it could never grow on the basis of the presence of a few high-talented individuals from those regions.

This Krugman-type of approach helps us moving away from a simplistic interpretation of falling social capital in western local production systems and to undertake a more complex, thorough and dynamic analysis of what may develop in such contexts. In fact, the overall outcome of the assessment process cannot be taken for granted; in contrast it needs to be properly evaluated instead of following inappropriate judgment criteria (e.g. racism, nationalism, opportunism, power control, etc.). This assessment may be a partial instrument as it describes the situation as it is, in a static form, rather than presenting possible development scenarios, which represent a more dynamic view of the balance between centrifugal and centripetal forces. **A development approach needs to take on the challenge and study the ways in which some centripetal forces more than offset the centrifugal forces.**

5. **Heterogeneous Social Capitals**: a Window of Opportunity

The case of two local (and global) production systems can help us apply more concretely these concepts and the related development opportunities: Silicon Valley in the US and Prato in Italy. The multiples studies of Saxenian (1994; 2002) and Dei Ottati (1994; 2004) produce the reference material that help us drawing some factual considerations on the importance to pull together 'heterogeneous social capitals' in specific local production systems. Some analyses of Saxenian (2002) show the importance of the migrant force of skilled human capital as a driver of the local entrepreneurial spirit of Silicon Valley. What is most interesting in her analysis is that although she focuses on the importance of codified and tacit knowledge flows coming with the skilled international experts, she also describes in great detail the relevance of specific communities of skilled experts in the region, i.e. Chinese and Indians, who compose more than 50% of total entrepreneurs in Silicon Valley (p…). In her recount of such contribution by these communities, Saxenian stresses that it does not come by skilled individuals alone; in contrast she identifies a set of important business, ethnic and cultural associations as a means to coagulate the forces of dispersed Chinese and/or Indians and to deliver them not only with further technical services (e.g. information, training, finance, etc.), but also with a moment for inter-ethnic meeting

that help these people feel part of a bigger cohesive community in a sometimes threatening, unknown world (p…). This kind of social meeting point adds the strength of the collective power and sense of belonging to that of the important individual codified and tacit knowledge bases. In spite of discussing development in the American soil, traditionally and even more recently alien to considerations related to the value of social capital for economic development (Putnam, 2000), the latter becomes part of the game and a key driver for local growth. What is more important in this argument is that the introduction of this element through the collective, institutional work of key communities such as the Indian and the Chinese (in addition to other minority groups in the region) adds an insightful element in the discussion on the contribution of social capital to economic development. The heterogeneity of such groups points at the heterogeneity of their social capitals. The indirect impact of such heterogeneity seems to be quite positive as all these groups and their social capitals did contribute to the continuous development of Silicon Valley over time. In a sense this constitutes a revolution in the economic thinking of the value of social capital in local production systems. For many years, the experts indicated the homogeneity of social capital as a key asset for local communities (Becattini, 1990; Lorenz, 1992; Fukuyama, 1995); here we see that the homogeneity of social capital may be less important than the heterogeneity of social capital, which is to be taken as a means to intensify the sources of both creativity (Florida, 2002) as well as collective strength, endeavor, and social absorptive capacity; of course, this does not reject the need to identify to what extent, and under what conditions, heterogeneous social capitals can contribute to development, instead of becoming an obstacle via little mutual understanding of economic agents and excess transaction costs.

The second case may help us focus on the situation of several hundred local production systems that feel threatened today by the increasing waves of migration but that, for this reason, do not benefit yet from such forces as those that we have just highlighted in the context of Silicon Valley. The case of Prato is very special in this regard. In fact, as Smyth and French (2009) indicate, as in many other Italian industrial districts, the workforce as well as the entrepreneurial class has changed as a result of the important wave of migration from China. Today, 30,000 Chinese laborers are currently occupied in about 1,000 local Chinese-owned firms and in another ten thousands of local small and medium firms in a town that account for about 170,000 inhabitants. This means that the former homogeneous social capital has changed. Former trustful relationships

across local producers and workers are probably less common both for the worldwide competition that local Tuscan producers have been facing since the early 1990s, and for the new competitors that settled in their own locality, introducing new values, practices, firms and competition inside the district. At a larger extent it represents a process that can be observed in several other districts (e.g. Parrilli, 2009) that relied upon the importance of homogeneous social capital for local development for many years, although the situation has currently changed in a way that rather seems to jeopardize the economic prospects of the locality. Many local agents are not happy with the situation since these newcomers represent low-road type of competitors who jeopardize their sustainability (French and Smyth, 2009; Dei Ottati, 2004…). Is it the best approach to the sustainable competitiveness of this and other local production systems?

Going back to the US Silicon Valley case, we could take a rather different approach and start considering the newcomers as a force rather than as a threat, and to take this approach not on narrow economic bases, which already offer some opportunities (e.g. new firms that may open distant markets such as China itself), but by recognizing the relevance of taking a wider socio-economic approach that recognize that the current higher heterogeneity of social capital may add value, richness, capacity to introduce new ideas, as well as new communities in the discussion, planning and endeavoring for local development and growth.

Some may counter-argue that in the Silicon Valley a large number of skilled workers (engineers, scientists, computer experts, etc.) came together and that it is for this reason that the local system succeeded in such astonishing way; this is certainly true, but what happens in Prato may not be structurally different, as not only unskilled workers moved there from their rural underdeveloped areas, but also several rather skilled workers and entrepreneurs that have been able to set up several hundred workshops and factories in which they compete by means of imitation, cheap work, as well as continuous quality upgrading and productivity growth (Smyth and French, 2009). Japan taught that imitation was a golden path to learn new practices and internalize new capabilities insofar as they are now the leading companies to register patents in the US patent office (Carlton and Perloff, 2005), and China and India are likely to follow a similar path, and start already to invest significant finance in new technologies, with or without western partners (World Investment Report….). These are indications that need to be thoroughly and prospectively considered in order to

take a more modern, flexible, absorptive approach to global dynamics and local development.

6. New issues for policy

In this sense the whole discussion on urban economies promoted by Jacobs (1964), and later by Krugman, (1998), Scott (1998), Florida (2002), Johnson (2010), among others, need to be considered as they focus on a subject, **the urban agglomeration, that it is itself a centre of diversity and, potentially, of connectivity**. In our view, in the context of the current debate, this subject can be extended to include – as a counterpart - the case of regions, and especially of regions that display characteristics and traditions based on a significant internal homogeneity that require identifying particular objectives and challenges. It is the case of particular regional economies in the EU such as the Flanders in Belgium, Trentino-Alto Adige, Val d'Aosta and at a different extent Lombardy in Italy, Bayern in Germany, Catalonia and the Basque Country in Spain, Wales and Scotland in the UK, and many others that could follow suit once the way has been dashed by the former regions.

In the current context of economic crisis, strong pressures are rising to assume a protectionist approach towards immigrants in order to protect the wealth that has been produced over the past few decades and that is tied to the collective work of homogeneous social fabric and SC, i.e. common forms, attitudes, routines of work and management of the wealth for the sake of everyone. What is not fully recognized is that in many of these regions the migration of different and heterogeneous populations is not lost in history, but very close in time. For example, in the case of Lombardy and Piedmont several hundred thousand workers moved up from southern regions up to the 1970s to work in large industries, in a trend that was supported by national policies focused on subsidies and fiscal incentives to industry, the creation of infrastructures, etc. Similar situations may be found in Flanders, the Basque Country, and the West-Midlands, among others, which industrialized and attracted several workers from neighboring regions and/or countries. **The wealth and the creativity of these regions owe a lot not only to the low cost of this workforce (Sassen,**

1988), but also to the implicit, TK flow and social capital brought in these regions from distant communities (Portes, 1995).

The current protectionist approach in search for a narrower identification of homogeneous local populations, however comprehensible, limits enormously the possibility to open the local system to a wider and thicker interaction that arises not only on the bases of the attracted talents and codified knowledge flows, but also of the flow of TK and the enrichment of SC that come when larger groups of heterogeneous social groups approach a locality; this phenomenon, often catalyzed by migration waves, may promote noticeably the local innovation forces, effort and insights. Within this approach, some may think to protect the wealth accumulated in specific countries and regions by means of 'closing' more or less explicitly the borders of that country (i.e. protectionism vs. trade, capitals and other factors of production); however, the problem is hardly going to be solved in this way. It is quite clear that in the past twenty years the market quota of several countries and regions shrunk due to the incursion of China and other Asian countries in the global (and the western) market (World Bank, 2010), and that this trend is possibly one of the main causes of the current economic crisis, which is not going to end up quite soon. Notwithstanding this problem, closing national and/or local markets is not an option in a globalized market for several reasons, among which: 1) production is organized in global networks, and any strong local firm searches for cheaper locations for production and other supply and service operations (Yeung, 2009); 2) key agents such as commercial and investment banks and other financial institutions operate on a global scale in search for higher returns and benefit from such an 'open' approach; 3) less developed countries will always search for new options and markets for their products; 4) poor people will always search for better opportunities for them and their families. In this sense, the solution requires more originality and creativity, and, perhaps, the working of several groups of people (communities, regions and/or countries) together in order to identify new equilibriums worldwide.

This argument does not pretend to exhaust the hole problematic of balanced global development; macroeconomic analyses and macro global policies (e.g. for the implementation of worldwide recognized standards on the environment, social security, and health of the people), but of course this complementary discussion goes far beyond the scope of the present paper. The only objective of this work is to stress the relevance of opening the discussion on the importance of recognizing the existence

of new heterogeneous sources of social capital within local (and global) production systems, which demands **a more shared strategy to help countries and regions to benefit from the whole richness of GKP, including its TK and SC parts that migrant populations, both skilled and unskilled workers, bring in western LPS**.

Bibliography

Alesina A. and La Ferrara E. (1999), Participation in heterogeneous communities, NBER Working Papers no. 7155, National Bureau of Economic Research.

Altenburg T. and Meyer-Stamer J. (1999), How to promote clusters: policy experiences from Latin America, *World Development*, Vol. 27 (9).

Anderson A. and Jack S. (2002), the articulation of social capital in entrepreneurial networks: a glue or a lubricant, *Entrepreneurship and Regional Development*, Vol.14, pp.193-210.

Arundel A., Lorenz E., Lundvall B.A. & Valeyre F. (2007), How Europe's economies learn: a comparison of work organization and innovation modes for the EU-15, *Industrial and Corporate Change*, Vol.16 (6), pp.1175-1210.

Asheim B. (2010), Next generation innovation policy: how to combine science and user-driven approaches, in Parrilli MD, Innovation and Learning between codified and tacit knowledge flows, Orkestra-Innobasque, S. Sebastian & Bilbao.

Asheim B., Boschma R. & Cooke P. (2008), Constructing regional advantage: Platform policies based on related variety and differentiated knowledge bases, *Papers in Evolutionary Economic Geography*, Utrecht University.

Asheim, B. T. and Coenen, L. (2005): Knowledge Bases and Regional Innovation Systems: Comparing Nordic Clusters. *Research Policy*, 34 (8), 1173-1190.

Asheim B. y Isaksen A. (2002), Regional innovation systems: the integration of local sticky and global ubiquitous knowledge, *Journal of Technology Transfer*, Vol. 27, pp.77-86.

Bathelt H., Malmberg A. & Maskell P. (2004), Clusters and knowledge: local buzz, global pipelines and the process of knowledge creation, *Progress in Human Geography*, Vol. 28 (1), pp.31-56.

Bathelt H. (2005), Geographies of production: growth regimes in spatial perspective: knowledge creation and growth in clusters, *Progress in Human Geography*, Vol. 29, pp.204-216.

Becattini G. (1990), The Marshallian industrial district as a socio-economic notion, in Pyke F., Becattini G. & Sengenberger W., Industrial districts and inter-firm cooperation, ILO, Geneva.

Boomgard J., Davies S., Haggblade S, & Mead D. (1992), A subsector approach to small enterprise promotion& research, *World Development*, Vol. 20(2), 199-212.

Camagni R. (1991), Innovation networks: spatial perspectives, London, Belhaven.

Coe N., Dicken P. and Hess M. (2008), Global production networks: realizing the potential, *Journal of Economic Geography*, Vol. 8, pp.271-295.

Coe N. and Bunnell T. (2001), Spatializing knowledge communities, *Global Networks*, Vol.3, pp. 437-456.

Cohen & Levinthal (1989), Innovation and learning: the two faces of R&D, *Economic Journal*, Vol.99, pp.569-596.

Cooke P. (2006), Reflections on the research and conclusions for policy, in Cooke P., De Laurentis C., Todtling F. & Trippl M., *Regional Knowledge Economies*, Elgar.

Florida R. (2002), Bohemia and Economic Geography, *Journal of Economic Geography*, Vol.2, pp.55-71.

Gereffi G. and Korzeniewicz M. (1994), Commodity Chains and Global Capitalism, Greenwood Press, Westport Connecticut.

Giuliani E. (2005), Cluster absorptive capacity: why do some cluster forge ahead and others lag behind? *European Urban and Regional Studies*, Vol.12, pp.269-288.

Greunz L. (2005), Intra- and inter-regional knowledge spillovers: Evidence from European regions, *European Planning Studies*, Vol.13(3), pp. 449-473.

Griliches Z. (1979), Issues in Assessing the Contribution of Research and Development to Productivity Growth, *Bell Journal of Economics*, Vol. 10(1), pp. 92-116.

Guerrieri P. and Pietrobelli C. (2004), Industrial districts' evolution and technological regimes: Italy and Taiwan, *Technovation*, Elsevier, Vol.17 (11).

Humphrey, J. and H. Schmitz. 2004. Chain governance and upgrading. In *Local enterprises in the global economy: issues of governance and upgrading*, ed. Schmitz H., *349-381*, *Cheltenham*, Elgar.

Jensen M., Johnson B., Lorenz E. & Lundvall B.A. (2007), Forms of knowledge and modes of innovation, *Research Policy*, Vol.36, pp.680-693.

Johnson B. & Lundvall B.A. (1994), The learning economy, *Journal of Industry Studies*, Vol.1 (2), pp.23-42.

Kaplinsky R. and Readman J. (2001), Integrating SMEs in global value chains: spreading the gains from globalisation, *IDS Bulletin*, Vol.32 (3).

Krugman P. (1998), What's new about the new economic geography?, *Oxford Review of Economic Policy*, Vol.14(2).

Laranja M. (2009), The development of technology infrastructure in Portugal and the need to pull innovation using proactive intermediation policies, *Technovation*, Vol.29(1), pp.23-34.

Lodigiani E., Missaglia M. and Targetti R. (2003), Social capital, individual social capital and sustainable growth in the industrial districts, 3rd Conference on the Capability Approach, University of Pavia, 7-9 September.

Lundvall B.A. (1992), National systems of innovation, Pinter, London.

Lundvall B.A., Johnson B, Andersen S. & Dalum B. (2002), National systems of production, innovation and competence building, *Research Policy*, 31, pp.213-231.

Lundvall B.A. (2007), National systems of innovation: analytical concept and development tool, *Industry and Innovation*, Vol.14, pp.95-119.

Lundvall B.A. & Lorenz E. (2010), Innovation and competence building in the learning economy: implications for innovation policy, in Parrilli MD, Innovation and Learning: lessons for policy-making, Orkestra-Innobasque, San Sebastian.

Maillat D. (1995), Territorial dynamic, innovative milieu and regional policy, *Entrepreneurship and Regional Development*, Vol. 7 , pp. 157-165.

Markusen A. (1996), Sticky places in slippery space: a typology of industrial districts, Economic Geography, Vol.72, Clark University.

Olarazan M, Albizu E. & Otero B (2009),Technology transfer between technology centres and SMEs, *European Planning Studies*, Vol. 17(3), pp.345-363.

Parrilli M.D. (2007), SME cluster development, Palgrave-Macmillan, Basingstoke.

Parrilli M.D: (2009), Collective efficiency, policy inducement and social embeddedness: drivers for ID development, Entrepreneurship and Regional Development, Vol.20, pp.1-24.

Piore M. and Sabel C. (1984), The second industrial divide, Basic Books, New York.

Polanyi M. (1966), The tacit dimension, Routledge, London.

Porter M. (1990), *The competitive advantage of nations*, Free Press, New York.

Porter, M. (1998): "Clusters and the New Economics of Competition". *Harvard Business Review*, Nov.-Dec., pp. 77-90.

Portes A. Ed. (1995), The economic sociology of immigration, Russel Sage Foundation, New York.

Putnam R. (1993), Making democracy work, New York.

Pyke F. And Sengenberger W. (1992), Introduction, in Pyke F and Sengenberger W, *Industrial districts and local economic regeneration*, ILO, Geneva.

Romer P. (1994), The origins of endogenous growth, *Journals of Economic Perspectives*, Vol.8 (1), pp.3-22.

Sassen S. (1988), The mobility of labor and capital, Cambridge University Press.

Saxenian A.L. (2002), Silicon Valley's new immigrant high-growth entrepreneurs, *Economic Development Quarterly*, Vol. 16, pp.20-31.

Schmitz H. (1995), Collective efficiency: growth path for small-scale industry, *Journal of Development Studies*, Vol.31.

Scott A.J. (1998), The regions in the world economy, Oxford University Press.

Smyth G. and French R. (2009), Living outside the walls: the Chinese in Prato, Cambridge Scholars Publishing, Newcastle.

Williams A. (2007), Listen to me, learn with me: international migration and knowledge transfer, *British Journal of Industrial Relations*, Vol.45, pp.361-382.

Williams A., Balaz V. and Wallace C. (2004), International labour mobility and uneven development in Europe, *European Urban and Regional Studies*, Vol. 11, pp.27-46.

World Bank (2010), World Bank Indicators, www.worldbank.org.

Yeung H.W. (2009), Regional development and the competitive dynamics of global production networks, *Regional Studies*, Vol. 43, pp.325-351.

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