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Territorial policies for industrial renaissance and innovation

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Industrial districts, cities, and other local reproductive systems should be considered still as a fundamental structure of multi-scale policies of industrial development in contemporary Italy. However the challenges brought about by the present phase of globalization, multiplied by the effects of the last international economic crisis and the following recession, give to the prospects of industrial development a more dramatic meaning, which is referred here as the need of industrial renaissance. Discontinuities in local innovation and internationalization processes should be managed, and new and traditional production systems helped to find a lease of good life in Italy. In this context the local level of the industrial economies and policies, though fundamental, becomes clearly more dependent on processes which take place on larger territorial scales. The paper tries to illustrate what are some of the requisites for effective combinations of different scales of industrial processes and policies in contemporary Italy, focussing in particular to the national level.

1. Introduction

The present contribution¹ draws on a tradition of studies on industrial districts (Becattini *et al.*, 2009) which recognizes the role and the importance played by various forms of industrial organization, and focuses on some issues:

- a. the weak response of Italy to the global crisis started in 2008 is not caused by the weakness of its SMEs. Even before the crisis, the territorial systems characterized by the presence of large enterprises were declining, while many of the industrial districts and the medium-sized firms with local roots and international activities were stable or growing (Coltorti, 2012);
- b. both in the pre-crisis period, in the core of the crisis, and in the recent period of great uncertainty, different districts have shown different reactions. The variety of reactions widens when we consider also other types of systems, such as: innovation poles led by multinational enterprises (be they Italian or foreign enterprises), tourism and agro-food systems located in rural areas;
- c. given the current trends of the international division of labor –accelerated innovation dynamics, pervasiveness of scientific research, joint development of manufacturing and service functions, fragmentation of the manufacturing production– a crucial role is (and will be) played by highly dynamic production systems with socially sustainable local roots, embedded within metropolitan, regional, national, continental areas (Ramella and Trigilia, 2010; Lombardi and Macchi, 2012);
- d. in the complex scenario characterized by the trends mentioned before, there is room for the development of a variety of organizational and territorial solutions: not only for those that are locally rooted, but also for those that are integrated into larger territories, international supply chains, virtual communities of practice, cross-sectoral and cross-cutting technologies;
- e. there is a need of system-based national policies, aimed at enhancing the richness and variety of skills that are rooted in the territories and in some larger firms, and at promoting public and private strategies of territorial cohesion, innovation and internationalization. Policy debates based on simplistic oppositions (SMEs versus large enterprises; SMEs versus enterprise networks; industrial districts versus large cities) are obsolete, and should be abandoned;
- f. without such policies, the recovery of employment opportunities for skilled jobs within the typical Italian industries (mechanical, fashion, home, food) as well as in new industries more or

¹ The original Italian version has been prepared for and published in Cappellin *et al.* (2014). I gratefully acknowledge the help given by Dr. Annalisa Caloffi (University of Padua) on this English version.

less linked to the former, is highly uncertain, although several areas and industrial systems will continue to have success in terms of presence on international markets.

Let us consider an expression that is spreading in debates in the EU and US: *Industrial Renaissance* (ec.europa.eu /enterprise /policies /industrial- competitiveness /industrial-policy / key- challenges /; Andreoni and Gregory 2013). With this expression, we refer here to the fact that Italy needs to address the challenges brought by the current phase of globalization and by the crisis of capitalism (Becattini, 2011), as well as by the Italian recession, by mobilizing new industrial capabilities in the various regions of the country. We cannot assume that isolated elements of industrial excellence inherited from the past and surviving to the weakness of the “Italian system” are sufficient to deal with the recent crisis. Industrial policies are needed (Bianchi and Labory 2011; Stiglitz et al., 2013) to support high quality, innovation and internationalization evolutionary paths. These policies are inserted within broader public policies that must comply with the national and continental strategies (e.g.: EU “Industrial Compact”), and support the renewal of strong and widespread private investment (Cappellin, 2014).

In section 2, we start with some stylized facts on the recent evolution of Italian (manufacturing) industries. On the one hand, these facts suggest that, in Italy, the systems of SMEs still have a relative strength, even during the recession started in 2008. On the other hand, the observation of the stylized facts suggests that there are structural difficulties, which include the decline of large firm systems in terms of balance sheet or industrial employment. These stylized facts also provide a starting point for some reflections on industrial policies. These policies often focus on the defense of the elements of industrial excellence inherited from the past, which is quite important indeed. However, as recalled before, the current challenges require something more than that. A strong jump towards innovation and internationalization is needed, which can hardly be stimulated by policies supporting individual firms (even when they are large firms) or individual systems of SMEs (even when they are lively systems). This suggests that a more complex conceptual framework of policies is needed, which tries to address the processes and strategies developing at various territorial and organizational scale, including the national one. This framework should include a national strategy of industrial renaissance. In section 3 we recall some theoretical bases upon which the policy framework could be developed. The section presents a recent analysis of the different scales –be they spatial (local, regional, national, international) or organizational (business size, network strategies)– of the external economies and of the public goods that are specific to the industrial leadership of the nations. The creation of specific public goods is the primary –although not exclusive– object of public policies, and of industrial policies in particular. By adopting the perspective of specific public goods, we try to develop a conceptual framework which focuses on the different territorial scales for industrial renaissance. In section 4 such framework is applied to the Italian industries. In particular, we try to analyze some stylized facts and other empirical materials about the Italian industries in the light of the conceptual framework we have developed in the previous sections. Section 5 tries to put forward some policy implications for industrial renaissance. This type of policy should have a systemic nature and should focus on the creation of public goods for innovation and internationalization, which are specific to the different varieties of organizational and territorial forms of Italian industries. The presence of a national-level strategy could facilitate the expansion of the scale of collaborations. Section 6 hosts some conclusions.

2. Stylized facts on the recent evolution of Italian industries

Up to 2007 (i.e. a pre- crisis period), the Italian manufacture has kept pace with its direct competitors (France, Germany, United Kingdom) in terms of export (Coltorti, 2012). On the contrary, the Italian manufacturing employment was already declining in the pre-crisis period

(Bellandi and Coltorti, 2014), and this decline has strongly accelerated in 2009. Also in the Italian industrial districts the employment has decreased. However, especially in those district areas with an important presence of medium sized companies, the decline in employment is quite limited. On the other hand, again in most of the district areas the employment decreases sharply during all the period 2001-2011 in the specialization sector of the district, much more than the total manufacturing employment of the area. If the service sector is considered, the total employment of district areas is in average stable if not growing slightly. The total picture is consistent with the following interpretation. During the crisis, the specialization sector loses importance in favor of new industrial and service activities, possibly as a result of the consolidation or the extension of supply chains outside of the boundaries of the districts. With regard to the import-export balance, we note that industrial districts produce large surpluses, while the large firm areas generate deficits. The best-performing (or less-worse performing) districts (in terms of export and employment) are quite often those which are specialized in the mechanics-electronics, and which are characterized by the presence of medium-sized firms. From 2007 to 2011, the large majority of industrial districts specialized in the products for the person and for the house have very negative performances, both in terms of job losses and in terms of export.

A recent analysis (Intesa, 2013) shows that in the second quarter of 2013 the export of the industrial districts has increased by 4% compared to the same period in 2012. In the same period, the Italian export of manufactured goods has been stationary, while the German manufacturing sector have decreased by 2%. Focusing on the specialization sectors of the Italian districts, the authors note that the districts show a better performance than the German industrial sectors. In the observed period, also Italian high-tech poles (typically dominated by large firms) exhibits a good export performance. On the other hand, the authorized hours of wages guarantee fund (in Italian: Cassa Integrazione Guadagni) in the first eight months of 2013, in all the sectors of the districts analyzed, increased by 2% compared to the same period of 2012.

The few data mentioned here support the idea that the industrial districts are still important for the Italian manufacturing industry, while the role of the large firms continue to decline. However, as shown by Bellandi and Coltorti (2014), there are many differences within the industrial districts which have to be highlighted. The differences among the performances of the districts in times of crisis may be due to the presence of pre-existing differences in the structural features of the districts. These differences can have an influence not only on the reaction to the crisis, but also on the possibilities of future recovery.

Drawing on Bellandi and Coltorti (2014), we recall the main processes that have brought some challenges to the industrial districts in the last decades. In short:

Intense and widespread incorporation of new scientific and technical inputs in the traditional production cycles. Many research centers and universities have developed new knowledge transfer functions that can be used by firms in order to innovate;

Increasing fragmentation of the production cycles, combined with processes of international specialization, integration and reorganization of services at global scale. Firms activate a variety of local and trans-local relations for realizing their production processes;

Increasing competition among regions. These regions are characterized by a dynamic core of service-manufacturing activity, and include complex combinations of different sectors (not only manufacturing sectors);

Growth of migration flows, and creation of trans-local and trans-national entrepreneurial ethnic networks.

In order to react to these challenges, industrial districts need to implement new internationalization and innovation strategies, which operate not only at the level of the individual firms, but also at the system level. In particular, industrial districts need to implement a strategic repositioning. However, such repositioning can be difficult due to two main factors. First, the presence of the challenges mentioned above may discourage district

entrepreneurs to continue to invest in a manufacturing firm. They can divert their investments to real estate, finance or tourism business. Second, the district can be trapped in a cognitive lock-in, brought about both by the firms' corporate culture, and the local architecture of specific public goods. The former type of source of lock-ins is manifested by the enduring presence of the model of the firm centered cognitively on the exclusive role of the entrepreneur who is also manager and owner; while the model of the entrepreneur integrator of technological teams and self-organized businesses would better able to meet the current challenges (Best, 2009). The second source has to do with the fact that the change in innovation and internationalization strategies that is required by the current competitive scenario can hardly be achieved, at least in a systematic way, without renewing the architecture of specific public goods which supports external economies within the districts, and this is made difficult by the multiplicity of actors and coordination equilibria involved in any such architecture.

Analyzing the pre-crisis period, Bellandi and Coltorti (2014) identify different trajectories of the Italian industrial districts. The great crisis has an impact on these trajectories. It provides a negative push to the worse trajectories and reduces the room for recovery and development trajectories. The district policies, viewed from the bottom-up perspective recalled before, have to deal with this variety. In particular, a distinction has to be made between areas that have lost both the density of the district relationships and an important part of the production capacity and manufacturing employment, and areas where such manufacturing capacity, albeit reduced, is still in place and based on local factors. As for the first case, an industrial turn-around is needed, with a strong intervention on the cognitive, social and urban features of the areas. As for the second case, it is still necessary to distinguish between trajectories showing different features (Bellandi et al., 2010):

- i. Consolidation of the medium-sized firms: the growth of such type of firms counterbalance the decline of the other types of district firms. Medium-sized firms increase their foreign direct investment. As a result, the district may experience a reduction in exports.
- ii. "Classic" district: the high-end products manufactured by highly specialized small firms and handicrafts are able to meet a demand for highly customized and handicraft goods coming from the international market. The production of these goods does not require strong private investments in innovation or marketing channels.
- iii. General development: all types of district firms grow, and the range of products manufactured in the district widens. The medium-sized firms of the district contribute to the development of innovation and internationalization in the district.
- iv. Restructuring: the relations developing among district firms shrink, and the manufacturing capacity of local small firms is reduced. In some cases, a number of medium-sized firms can maintain a local productive strength. The area is at a crossroad: it can either decline or take a new development trajectory, depending on random factors or on the presence of public policies and private strategies.

A map of district industrial policies could be drawn on the basis of the afore-mentioned district trajectories. This map should include a menu of options – actions that can be chosen by policy-makers operating at different levels. Such interventions should be focused on the adaptation or on the recovery of the architecture of public goods that are specific to the district. Among them we recall in particular (see e.g. Mastromarino, 2012, pp. 136-146): support to the development of new forms of intra-firm relations, such as the enterprise network contracts or the network bonds; support to workers buy-out; upgrading and updating of the vocational training programs, support to the investment in the development and engineering of new products and services, in R&D and in internationalization; consolidation of university-industry relations; bureaucratic simplification and the reduction of uncertainty in the legal framework.

However, the map of industrial policies would be incomplete and partial if not placed in a wider framework. It would be incomplete, because it would not consider the local production systems that are localized in metropolitan or in rural areas, or in high-tech sectors (Ramella

and Trigilia, 2010) such as design, multi-media, cultural tourism, agribusiness, agro-tourism, etc. The map would be partial, since the creation of specific public goods is not only influenced by the local fabric of relations, but also by trans-local and extra-local relations (be they regional, national and international). Moreover, this fabric is not only influenced by the relations among SMEs, but also by the relations between large and small firms. This is certainly not an original discovery, but the idea underlying many debates is that there are a number of insurmountable dichotomies between SMEs and largest firms; between district and metropolitan areas, etc. In the following section, we present a multi-territorial and multi-organizational conceptual framework as a guide for analyzing the integrations of various levels.

3. The territorial and organizational scale of external/internal economies and specific public goods

Drawing on Bellandi (2011), we focus here on the multiplicity of territorial scales for external economies that are discussed in Alfred Marshall's *Industry and Trade*.

The framework develops around the Marshallian reflection on the sources of the industrial leadership of a country, a concept which is close to the Porterian competitive advantage of nations (Porter, 2000). These sources depend by two fundamental factors: a) the national spirit, which allows a national community to share and reward the achievements of its leading industries; b) the accumulation of technical and human capital ("resources and faculties"), which supports the development of the leading industries. The national spirit, that is also the sense of belonging and trust both in a network of individual relations and in the overall organization of the society and the State, may be seen as a national social capital. In particular, social capital ties together and increases the productivity of the technical and human capital of the people. The national social capital and the embedded technical and human capital define a composite national capital, which connotes both the stature and the types of industrial leadership of a country. Therefore, the industrial leadership derives from a number of conditions that are not "fully individual", or, in other words, which are external economies. The advantages arising from the industrial leadership can be achieved on the external markets. Firms benefiting from these advantages can then nurture the composite national capital with appropriate investments that are directed by the national spirit. In so doing, national firms help reproduce and broaden the base of the external economies. This type of dynamics could be represented today with the help of either endogenous growth models or regional development models (Cappellin and Wink, 2009).

In this interpretation, the relationship with the national composite capital is the basis for understanding the possibility of external economies beyond the local level, or the industrial district level. The premise, however, is the enduring importance of the local level. Manufacturing towns and cities and compact industrial districts, within the narrow boundaries of which groups of skilled workers and entrepreneurs gather and share a large amount of daily life are, even after the spread of modern means of distant communication, places of overlapping social and industrial experiences, motives and ideas. This constant overlapping, when coupled with some specific original factor of geographic or historic nature, gives strength to the accumulation and re-investment of (technical, human, and social) capital in the place; this capital possibly supplements the enlargement of the advantages of localized industries, i.e. of the district external economies. When they do not coincide with a country and its state organization, as it is often the case in Marshall's and in present times, those compact centers of industry may be still seen as (let's say) "local" economic nations (Becattini, 2006). Of course, the virtuous cycle of the reproduction of external economies can be interrupted or harmed by various internal and external processes and accidental events, as

also Marshall explicitly recognizes. Many places –be they specific places or entire countries– have a low degree of national spirit, because they are characterized by partial, interrupted, or weakened social functions, and, therefore, they cannot sustain the accumulation of (and the re-investment in) technical, human and social locally-specific capital.

In fact the strength of local virtuous circles, when they work, suggests to Marshall that, seen in evolutionary terms, the constitution of larger nations has its root precisely at the local level. The “forerunners of national trade”, according to Marshall were particular localities, that is, the great (European) industrial cities of the Middle Ages. The progress of communication systems and the development of trade and cultural intercourse beyond the local level allow the spread of national spirit and composite capital at larger territorial scales, in some cases overlapping with the constitution and strengthening of a state organization at the level of more or less extended countries. What are the sources and the specific content of external economies that are rooted in the most compact and large centers of industry, or in contexts that span over distant locations? After some premises in his early writings and in the *Economics of Industry*, Marshall concentrates in the late *Industry and Trade* a wealth of suggestions and exemplifications on the point.

a) An industrial region (or a great metropolitan area) generates external economies related to intra-regional district specialization in related products. The relations between cities and districts may be both vertical and horizontal. The economies concern both marketing and “production as distinguished from marketing”. In the great city or cities at the economic core of the region, all sorts of specialized services grow-up in support of such trading activities and increase the role of cities and regions within their economic, social and political international networks. Regarding the regional external economies of production, the basic principle is still that of specialization: i) the specialization in the manufacture of “various types within the same class of products” favors economies of variety, especially those related to the production of highly specialized instruments that benefit from large domestic markets for the first testing of new products and materials, the possibility of comparison with the demand and the ease of constant intercommunication of ideas between nearby industries; ii) the presence of a broad social differentiation within the large cities favors, both for the demand of goods and for the supply of skills, the development of products and services that are highly personalized and of great value, which add value to the image and the innovative potential of the industrial region; iii) when two (or more) important industries are located in the region, and have different job requirements and different end-markets, they may offer alternative employment opportunities both to different classes of workers, and to the same class at different times. The enlargement of the composite capital to the region (or to the outskirts of a big city) is helped by the re-location of industrial factories (from the congested core cities to “surrounding rural districts and small towns” of the region), and the development of specialized services and products of higher grade (still related to the re-localized businesses) within the core cities strengthen the presence of a relatively close network of communications and interests among the members of various industrial groups localized in the region. Of course, the formation of industrial regions that are economic nations in a “high degree” is far from an obvious result, and in any case the regional processes of accumulation of the composite capital of national type may take different forms, contents, and intensities.

b) A nation state offers diversified economies for district firms that are embedded in it. This is in part related to the same economies that we have already mentioned with reference to the industrial region. The public basis is given by the fact that the population of the nation (that is, of the many regions that belong to the nation) shares the same language, habits, commercial law, and “social credit”, that is trust in personal relationships, as well as confidence in the system of the country’s institutions (public health, security, currency, etc.). The access to the public or shared components (“collective ownership”) of the specific

national capital (technical, human, social capital) facilitates the realization of external economies at the national level. However, a large array of small firms and new entrepreneurs emerging from the working class find it difficult to have a direct access to that capital. The compact centers of industry, which can be considered as small economic nations, can operate as brokers and, in so doing, ease the access to the national capital. At the same time, they contribute to the accumulation of such equipment. It follows that a large nation state represents an extended and reliable field for the insertion and the development of complex architectures of division of labor. However, the differences in both the intensity of these features and the way in which they combine with specific geographical, cultural and institutional context have an influence on the support provided by the national context to the industrial districts. A nation is stronger the more interconnected its national composite capital is, or the more its capital is similar to that of a compact industrial region.

c) National but non locally-embedded structures may still offer advantages to large internationalized companies which maintain or develop a national anchor for the purpose of increasing their international competitiveness. Marshall recalls, for example, the advantages that the German industry has enjoyed in having an easy access to an advanced and well-connected system of training and university research. In addition, the social and territorial effects of a growth process driven by large companies that have lost their local roots can be negative, and generate the need for specific welfare policies that try to reduce these effects.

d) Finally, at the level of cosmopolitan relations, except for cases of trans-national networks between multinational companies, big capitalists and traders, the sources of national leadership include trans-local relations that combine advantages coming from distant locations. A good example is represented by the migrations that can fertilize a place with industrial skills and attitudes coming from another place. This means that distant places can exhibit non-random genetic links between their technical, human and social capitals.

So the composite national capital in its various configurations and territorial organization is the general factor of the industrial leadership of a country. It emerges from the wealth of the local, regional, and national relationships, and it enhances the productivity of such relationships by integrating private resources with specific public goods such as transports and communication networks or other socio-cultural and institutional infrastructures. The effects are external economies that support the competitiveness of the leading industries of the country on the world markets. These leading industries are embedded in the national context thanks to their organizational features, which can be represented either by the typical district of small and medium-sized specialized firms or by large multi-national company exhibiting some national roots. System-based public or private strategies influence the composite national capital. However, these strategies do not mechanically determine the sources and the effects of such capital. The public strategies are implemented through various types of public policies, primarily, but not exclusively, industrial policies that aim to affect the structure and the strategies of the industrial systems through the creation or the promotion of sets of specific public goods.

The nation state strategies directly contribute to the second and third type of economies that we have mentioned in the classification above, and indirectly to the other types too. They are not strictly necessary, but they favor a more conscious and complete expression of the sources of productivity that are rooted in a country (Rodrik, 2012). In a competitive international market, their contribution is crucial in particular in those phases in which the local and regional sources of productivity depend on the continuous adaptation of a set of trans-local and extra-local specific public goods.

In the next section we will resume the discourse on the Italian industry with the help of the multi-scale framework just discussed.

4. Districts and cities, firms and networks in contemporary Italian industries

Talking about national spirit and national leadership in the contemporary Italy may seem at odd with the long institutional crisis and the weakening of the confidence of Italians in the State and its organizations (Corò and Gurisatti, 2013).

However, a territorial-based –but not localistic– approach should recognize that urban systems have played an important role both as leading centers of systems of high technology and high culture, and as organizational centers of regional “magic circles” of typical leading industries (Dunford and Greek, 2005). Let us consider, for instance, the presence of cities in regions where there is a high intensity of industrial districts. This is the case of Milan in Lombardy region, Bologna in Emilia-Romagna region, Florence in Tuscany region, Verona and Padua in Veneto region and others. By looking at these cities, we see that they are characterized by particular combinations of urban functions of high-order, nuclei of local factors that are similar to those of the districts, an accumulation of historical and cultural heritage as well as of craftsmanship traditions. On the one hand, these cities are (or have been in the last few decades) the preferred location for international buyers of *haute couture*, for many fairs or events of the “made in Italy”, for branches of multinationals operating in the fashion sectors, for design centers or for large universities. On the other hand, without the growth of sets of industrial clusters specialized in various parts of the “made in Italy”, which cannot be explained as a simple effect of the economy of the city, the same cities would not have developed such capabilities. Together with Venice, Rome, Naples (but also Genoa, Turin, Bari, Palermo, etc.), the afore-mentioned cities are global catalysts that support the association between the Italian creativity, taste, and (sometimes) good living, with the made in Italy productions (Bellandi and Caloffi, 2006).

In “place-blind” interpretations of policies for the Italian industry (Barca et al., 2012), the territorial wealth of made in Italy is ignored. The focus is on providing support to high-tech, high culture and creativity, high finance functions (all “high”, “advanced”, “smart”), which are localized in major Italian cities only because the latter are characterized by an adequate size and an adequate level of concentration of international hubs of communication and business. This type of interpretations tends to oppose cities to industrial districts, and to analyze them as separate entities. We think that this contrast is misleading, precisely because it hides crucial sources of Italian industrial leadership of the recent past, and at the same time it does not help us in identifying the actions that should be accomplished in order to renew these sources, and to upgrade the national position in the global scenario or, in other words, to support the industrial revival. These sources are localized in contexts in which the specialized functions of production and service that are carried out in districts and cities (or in rural systems with a high density of natural heritage) are integrated at regional or interregional level. Some of these contexts can be managed within the regional boundaries, while others require coordination and transcend inter-regional and national levels.

Building on the themes that have been discussed in the previous section 2, we summarize the main areas where the functions of the multi-territorial Italian wealth should be strengthened or renewed, as follows.

a. The support to innovation processes, and in particular to the promotion of a more systematic relationship between the world of research and that of industry, may be directed to promoting a more intense introduction of scientific-technological inputs within the productive processes. This could be considered as wishful thinking in Italy. However, there are a number of factors that make possible the set-up of these upgrading processes. First, the districts often include a number of medium-sized enterprises which have some connections with universities. Second, several Italian universities (and public research organizations) have

developed the activities of their third mission and therefore they are more likely to establish relationships with firms. Third, also large firms are changing:

Coltorti and Venanzi (2014) argue that the Italian medium-sized firms find the most suitable environment in industrial districts. However, the medium-sized firms which are located in urban areas are likely to be smaller but more productive and more innovative. This is presumably because these firms operate in high value-added activities, and exploit the skills and capacities that are localized instead in the industrial districts.

The third mission of universities is evolving. Universities are moving from the promotion of the single functions of technology transfer, to the implementation of system-based actions that are supported by institutions and organizations specialized in the exchange of knowledge, and in job placement activities. These activities are place-specific, that is they are consistent with the specificities of the local industry (see Patton and Kenney, 2009, for the concept of university research centric industrial district) and they try to spread from campuses to the surrounding areas (Ramella and Triglia 2010).

Also large firms are changing. They are increasingly adopting open innovation models, which imply a systematic scouting of the available sources of invention and of existing capabilities to co-development at universities, start small, innovative companies (that can be acquired), as well as the collaboration with networks of small independent firms in pre-competitive innovation projects (Sterlacchini 2014), possibly taking advantage of incentives for network contracts (Cafaggi, 2012).

b. As for the promotion of internationalization, the domains for cosmopolitan Marshallian external economies now include projects of trans-local production, innovation and commercialization among agents that play a bridging role between different places (Bellandi, 2006; Tattara et al., 2006). These projects are supported by the growing ease of international communications, sometimes reinforced by ties, maintained by the communities of migrants, between the old and the new home, according either to the logic of ethno-industrialization (Barberis et al., 2012), or to the working of international research and training networks. Moreover, as argued by Corò and Gurisatti (2013), “the contemporary productive territories are those that promote a reinterpretation of local and global narrative structures involved in the production of scaffolds [social and cognitive networks] of supra-national and supra-regional scale. (...) In the enlarged context of the global economy, our communities and institutions must learn to invest in global public goods for competitiveness, which are just as important as the local public goods...” (p. 31). It is no longer a matter of organizing international trade fairs, but it is important to be promoters and to participate in the construction of social and cognitive networks that are potentially global, and which are connected with manufacturing expertise and local resources. Among the latter, we also find symbolic resources, which on one side make the place a global reference point (a capital) for the exchange of ideas on professional and socio-cultural issues, and on the other side lead the coalescence of new senses of belonging to the community.

c. With regard to the interaction between the district composite capital and the trans-local and extra-local networks, we recall here two aspects that are particularly important for the renaissance of Italian industry: cultural and natural heritage, and welfare processes. As for the first aspect, it is obviously to be considered the great density of the Italian cultural and natural heritage. The presence of such a rich heritage represents a commitment to the world in terms of conservation. However, it also represents a general opportunity for development, and not just for developing tourism flows and business, be them more or less sustainable and conscious. The development of this heritage may also come from the integration of cultural and landscape heritage within systems of industrial and social relations, and it can support a variety of results: both the development of cultural and creative activities, which generate a strong sense of belonging, the emergence of new production systems, and the renewal of traditional craft clusters (Lazzeretti, 2012). As for the second aspect, it has been argued that when welfare is not simply a mechanism to cover and protect against market risks, but it is a social investment aimed at improving the working and living conditions of individuals and their ability to learn, then it becomes a mechanism that influences the accumulation and the

action of the social capital and, therefore, the local development processes (Pavolini, 2012). On the one hand, the welfare is influenced by regional and national regulatory and fiscal frameworks; on the other hand it is home for a number of production, technology development, and symbols generation processes that, in some cases, can contribute, together with the cultural and natural heritage, to the development of new innovation platforms related to places and regions.

d. These and other innovation platforms are based on the integration and variety of different specializations: in manufacturing skills, services, environment, culture. The platforms recombine and potentially multiply many supply chains (not just the industrial ones), around “driving ideas” on new ways of understanding life and work (Rullani et al. 2012). These platforms can be geographically and sectorally focused on the combination between networks of knowledge-intensive services in the “post- industrial” city (Cappellin, 2012) and a variety of social experiences and handicraft, agricultural and manufacturing traditions that are rooted in small towns, districts or rural systems. The platforms emerge from the wealth of local inter-industrial and social relationships, as it was in the case of the magic circles of the made in Italy, but they are catalyzed by agents or communication facilities of trans-local or global scale (Rullani 2014). They have different functionality depending on the type of industries and territories in which they are based (Cappellin, Wink 2009), and they should be managed by a “political platform” (regional, inter-regional or national), which then becomes a “platform of policies” (Asheim et al., 2011) within the framework of EU policies (<http://cordis.europa.eu/technology-platforms/>). In the next section we analyze the implications in terms of policies for the industrial revival.

5. System-based policies for the industrial revival

Feasible, “realistic”, policies of industrial renaissance in Italy should display a set of features. First, they should be experimental, and find specific technology and organizational solutions for stable innovation partnerships (Hausmann et al., 2008; Rullani 2014). Second, they should be system-based, that is based on the construction of public goods specific to the development of (new or mature) production systems with an extended division of labor (Labory, 2012). Third, they should be place-based, that is rooted in the territories in which technical, human, social capital is accumulated and there is a “national” identity. Fourth, they must have a multi-scale governance, between cities and districts, regional innovation systems, national and European contexts.

Drawing on the discussion developed in the previous sections, we consider a number of interventions having nation state scope and which could share at some extent the above mentioned features.

In Italy, the room for the implementation of interventions with a national scope is currently reduced by the action of the European Union and the devolution of powers to the regional level. A number of old interventions that were designed to stimulate investments in individual firms are still in place. However, since the 1980s, the territorial policies began to incorporate more and more directly the concepts of local production system and industrial district, and to define strategies for providing support to the innovative processes rooted at the local level. In chronological order, we remember, in particular (Bellandi, Caloffi, 2006): i) the creation of business development service centers and the promotion of consortia among district firms (1980s); ii) the national law on industrial districts and the definition of regional laws for the identification of the territorial boundaries of such districts (1990s); iii) the national support to local development initiatives (e.g. territorial pacts, late 1990s - early 2000s); iv) the promotion of “technological districts” (2000s). Among the most recent interventions we recall, in particular: v) the promotion of network contracts and of innovative start-ups (plus other supporting actions to the activity of SMEs on the basis of the SBA Directive at national

and regional level), and the national technology clusters - CTN (since the beginning of 2010s).

The interventions of type iv) are characterizing more and more (albeit with different intensity) the industrial, innovation and territorial policies also in the other European countries. An example is represented by the *poles de compétitivité* in France, or by the skills centers in Germany. They aim concentrating public and private resources in particular sectoral and territorial contexts where there is a strong growth potential, and where the more dynamic areas are an important driving force for the regions and countries in which they are rooted. Although technology district in Italy have generally originated from initiatives at the local and regional level, in many cases the central government has entered the game, in the form for example of memoranda of understanding between the Ministry of Research and the Regional governments involved, identifying priorities of action and funds to carry out the actions. Among the most recent interventions, we recall the national technology clusters, which were identified and then selected for funding by the Ministry of Research with a top-down approach, aimed at stimulating aggregation between large firms, SMEs, universities and research organizations operating at the national scale (or in large territorial areas such as the competitiveness regions or the convergence regions). These clusters must operate in particular sectors, such as aerospace, agri-business, green chemistry, energy, intelligent transport and mobility systems, life sciences, home automation, technologies for smart communities. Technological districts (defined at regional level) and technology clusters (defined at national level) are examples of interventions that aim to promoting or strengthening the creation of inter-organizational and inter-institutional networks in interrelated technological and market fields (Cappellin and Wink, 2009).

The promotion of networks of SMEs, or of networks between SMEs and large firms (e.g. through the law on network contracts, or regional incentives), and the support to innovative start-ups (e.g. recent regulations implemented by the Ministry of Economy) are other examples of these interventions. In addition, the Ministry of Labor has recently tried to improve regulatory conditions in the labor markets and to promote action at the local level to facilitate the alternation between work and study, job placement, apprenticeship, and self-employment, also in collaboration with universities. There are many types of European funds that support actions on these fronts.

On the one hand, we have a number of policies that are based on the idea that larger firms should play a leading role. The Italian Cassa Depositi e Prestiti, which invests in strategic (large) firms, or in firms that could become national champions, is seen as a financial vehicle that should play an important role in strengthening this type of firms. On the other hand, there are territorial policies implemented by the Ministry of Social Cohesion (most recently integrated within the Presidency of Government) which promote innovation and sustainability. In these policies, the leading role should be played by cities (and districts), inner areas, and the Mezzogiorno (that is, the Southern regions of Italy) (MICT, 2012). Moreover, even the Cassa Depositi e Prestiti should perform some “territorial” tasks. Besides providing support to the creation of technological and social infrastructures, the Cassa should co-financing the territorial pacts (“patti territoriali”) and the “contratti d’area”. The Italian Ministry of Research and the Italian Ministry of Economy, together with regional governments, universities, technological districts and technology clusters, define smart specializations connected with the new framework of European funding.

The policy document “Destinazione Italia” (Destination Italy) launched by the Italian government in 2013 (PCM, 2013) takes into account many of these interventions and others, with 50 measures aimed at reforming a broad spectrum of sectors, from taxes to jobs, and from justice to research and FDI. The document seems to aim and promote a recovery from the recent crisis and to strengthen, renew or establish sources of national industrial leadership.

The point is: is this a good example of a national strategy for the industrial revival? The increasingly institutional uncertainty of the last few years weakens the national-state foundation of such a strategy. Obviously, in the case of experimental interventions the risk of failure is always present. However, the possibility of success is increased when these interventions are long-lasting and intelligent (i.e. when they are characterized by understanding, assessment of merit, liability and compensation).

What guarantees persistence and intelligence? Of course a definite answer is not available. However, considering the district evolutionary trajectories that have been recalled in section 2, the notion of composite national capital presented in section 3, and the rich territorial basis of the Made in Italy (section 4), we assume that the interventions have fragile bases if:

- a. they ignore the composite capital accumulated at local and regional level when at the same time a strong national spirit is lacking;
- b. they are captured by distributional coalitions (for the allocation of public or monopolistic rents), trying to avoid competition and reduce the room for specialization, merit and targeting of investments.

Conversely, persistence and intelligence are probably increased if the interventions are designed to (directly or indirectly):

- c. contributing to well-defined innovation platforms (i.e.: platforms for the integration and variation of related specialization) in manufacture, services, localized on the appropriate national or regional scales;
- d. strengthening the trajectories of new or renewed industries or of cutting-edge industries at international level (nurtured by the platforms), and enlarge the basis for high-quality jobs.

The bases for development are constituted by architectures of public goods that are specific to the enhancement of the “driving ideas” of the platforms for innovation and industrial renaissance, and which vary according to the type of trajectories, and to their organizational and territorial features. The reflection on the trajectories of the Italian districts highlights the importance of two types of bases. The first type refers to the reproduction of the fundamental factors of the local composite capital, which include the training of professional skills and entrepreneurship and a shared sense of belonging. This latter can lead the collective action towards constructive directions. The second type of basis refers to the dissemination and the sharing of knowledge and attitudes that promote the upgrading of the innovation and internationalization strategies.

Several interventions are useful in order to strengthen and to renew the local composite capital and to promote the upgrading of the innovation and internationalization strategies. They can be summarized as follows.

- e. In order to strengthen and to renew the local composite capital, it is important to:
 - facilitate the emergence of structured relationships between universities (and schools) and firms. These relationships can help design better training or placement activities. Moreover, they can provide support to young entrepreneurs and innovative academic spin-offs in the fields of specialization spanned by innovation platforms;
 - support the reproduction of basic local skills, entrepreneurship, trust, through the investment in appropriate training courses and in the relationships between school (university) and firms;
 - support the emergence of symbolic structures and social and cognitive networks (scaffold) through which the place can assert both its traditions and identity, and its novelty (possibly associated with the activities of the innovation platforms).
- f. In order to promote the upgrading of the innovation and internationalization strategies, it is important to:
 - provide support to the universities’ third mission in a “university research centric industrial district” perspective, and to the strengthening of an open networking culture between small and medium-sized firms;
 - disseminate good practices in innovation funds, supporting the selection of good industrial investment projects (also network projects) and focusing on new specializations;
 - strengthen structures and capacities for international mobility and digital communication, also with the help of agents who have several homelands, and whose identity is naturally global.

6. Concluding remarks

The main characters of the policies on the platforms for innovation and industrial revival (section 5) can vary, even within the world of industrial districts, depending on the trajectories that the latter have followed (section 2). In general, the districts that have undergone a structural crisis urgently need a policy intervention on the basic factors of the local composite capital (section 3). In the case of districts that are increasingly driven by larger companies, policies should try to strengthen the local anchoring of the latter (Crevoisier and Camagni, 2001). In the traditional (typical) district development trajectories, as well as in the district driven by medium-sized firms of the “fourth capitalism” (Coltorti and Varaldo, 2013) the strategies designed and implemented by a collective action are the most important. In any case, local interventions contribute to the national industrial renaissance when they are placed in the context of innovation platforms, and of persistent and intelligent national interventions (section 5).

The rationale of the policies on the industrial districts applies, albeit with adaptations, to a wide variety of organizational and territorial forms that are characterized by the reproduction and combination of inter-industrial and social relationships within well-defined territories. Cluster characterized by the presence of craftsmanship traditions, industrial clusters, clusters of urban services, rural systems, agro-food and agro-tourism systems, or high-tech technology centers are all examples of these organizational and territorial forms (Burroni, Trigilia, 2011; Belussi, Sammarra, 2010; Becattini et al. 2009). The similarities and complementarities between these latter forms and the industrial districts could facilitate a collaboration between the two types within industrial regions and national contexts (section 3). This is what happened in the past, in the largely unplanned magic circles of the made in Italy. This could happen again, possibly with the support of specific innovation platforms (section 4).

Large firms can enter these games by playing either predatory or collaborative strategies. The latter, for example, can result in the creation of partnerships with systems of SMEs and universities on large projects for innovation and internationalization (section 5). The presence of such type of collaborations would certainly support the renewal of Italian industrial leadership. However, as mentioned in the context of the multi-scale Marshallian framework presented in the previous section 3 the positive anchoring of cosmopolitan actors requires the presence of mechanisms that are able to contrast opportunistic rent-seeking behaviors, and the availability of advantages (external economies for the development of internal economies) that are linked to the presence of the national composite capital, that is to technological, cultural, civil national infrastructures that give stability to long-term investments. This is a difficult, but probably unavoidable step towards the emergence and the consolidation of a true national strategy for the industrial renaissance, within a larger integrated array of macro-economic, financial, and infrastructural policies supporting a new wave of public and private investments.

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