

Critical nodes and contemporary reflections on industrial districts

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Abstract: This paper aims at presenting the main lines of a wide-ranging debate spreading over the last decades on what industrial districts have represented in the past, what they are undergoing at the present time, and the challenges and opportunities they are facing in a socio-economic context where global and local forces increasingly interact. We start by recalling a few basic concepts and some of the most significant findings that have emerged from the recent debate, on industrial districts. We then extract from a rich collection of empirical and theoretical contributions shown in a recent publication, themes that we think cut across various streams of thinking, and that we see as coinciding with critical nodes on industrial districts and on contemporary reflections on them.

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1. Introduction

No matter how much has been written on industrial districts (IDs), it probably remains one of the most relevant socio-economic phenomena of the last decades, and it seems relevant now more than ever, as the disruptive forces of globalisation are uncovering the costs of the dis-joint between economy and society, and between economy and policy. In this contribution, IDs are the socio-economic expressions of local societies finding their way in the national and international division of labour through the constitution and elaboration of productive specialisations congenial to the attitudes and preferences of their people. Drawing upon the recent publication of *A Handbook of Industrial Districts* (edited by us and published by Edward Elgar), this paper¹ presents the main lines of a wide-ranging debate spreading over the last decades on: a) what IDs have represented in the past, b) what they are undergoing at the present time, and c) what challenges and opportunities they are facing in a socio-economic context where global and local forces increasingly interact. Secondly, the paper discusses in depth some of IDs' contemporary tendencies, as well as prospects, new challenges and opportunities. Key concerns of a reflection on such topics are reviewed and given an interrelated frame of interpretation.

2. Historical premises

The importance of the local roots and thereby of the differences in the industrialisation processes across countries has been well understood and has been documented by a wealth of historical and geographical accounts that have analysed and explained the various waves of industrialisation across Europe. At the same time, however, classical and neo-classical economics theorised on markets and capitalism in abstract terms, seeking to formulate few 'presumed' general and objective laws.

In this context, Alfred Marshall assumed a complex position, summarised in the epigraph of his late *Industry and Trade*, i.e. "the many in the one, and the one in the many". In particular, it has been argued that Marshall's early studies on the IDs of his time profoundly, and persistently, shaped not only his views on industrial organisation, but more generally his conception of capitalism and market mechanisms. In particular, significant passages in his early writings, like the *Economics of Industry* and several fragments of essays included in his *Early Economic Writings*, discuss the importance of places and the enduring presence of localised industries of specialised small firms. The latter were what Marshall referred to as *industrial districts*, and led him later to conceptualise the distinction between internal and external economies. The economies of the division of labour cannot always be explained in terms of the control of a large firm over the value chain, contrary to what was increasingly already accepted in his time, since they may be also realised by the appropriate integration of a set of complementary and specialised firms, none of them necessarily

¹ The paper reproduces some parts of the Introduction to Becattini et al. (2009) by the same authors. We refer to that original version for all the internal references to chapters and sections of the same volume.

large in size. From his studies Marshall attained a compelling confirmation of the importance of specific contexts for sharing social experiences, moral values, and productive knowledge.

Marshall recognised that IDs characterised by specialised firms were an ideal context for the emergence of entrepreneurial energies and for the increase of the social mobility that was argued to be able to blur the divide between employers and employees in a certain community. In this context, the distinction between external and internal economies went together with the formulation of other important concepts, such as firm's life cycle, the idealisation of a representative firm, and his idea of firms' competition over particular markets which he formulated well before Chamberlin's monopolistic competition. This important conceptual connections just mentioned were however played down by Marshall himself in the theoretical constructs of his *Principles of Economics* (Raffaelli, *et al.* 2006).

After Marshall's death, the attention increasingly shifted on mass production and mass marketing. At the time when the US and Europe were undergoing steady and fast growth, which spanned from the late 1940s to the 1960s, IDs, and more generally any clustering of specialised small firms, were pushed at the periphery of academic and political discourse.

3. The return of IDs in the second half of XX century

In the 1970s, as the golden age of mass production was showing signs of weakness, the concept of the ID was resurrected by Becattini (1979) to help understand 'unusual' regional paths of industrial take-off in some Italian regions. His contribution was soon enriched by that of a multi-disciplinary group of scholars, first within Italian academic circles then through widening international networks. The focus was on regional paths of industrial development characterised by bursts of local entrepreneurship and the proliferation of populations of specialised small to medium sized enterprises (SMEs). Such trend was first evident and studied in the central and north-east eastern parts of Italy, largely coinciding with the so-called Third Italy.

The accumulation of refinements on the characteristics of IDs from empirical studies, and the recovery of both the Marshallian concept of external economies and industrial atmosphere, were the twin pillars supporting the construction of the ID model, building on, but going well beyond, what Marshall himself expressed. The so-called "Marshallian industrial district" (MID), in the version developed within the Italian literature, is a model of a naturally and/or historically bounded place characterised by the presence and interpenetration of a community of people, and a production apparatus (Becattini, 1979, 2004). The population of firms and the related market institutions are only one, though central, part of it.

The definition above goes together with a set of structural and evolutionary features for which the MID can be considered as an ideal-typical model of local productive system, where a localised industry is embedded in a community of people. A local productive system has an economic and social identity shaped by an *industrial atmosphere*; the latter coinciding with a set of shared cognitive, moral and behavioural attitudes drawing on locally dense cultural interactions, and which orientate technical, human and relational investments towards forms consistent with local accumulation. The terms "productive" or "industrial" qualify a set of activities whose outcome is the production of a range of goods or services with markets progressively and largely external to the

locality of industry, and based on the systematic and professional activity of competent producers helped by various forms of capital and relations.

The industrial structure of a MID is characterised by a certain degree of local economic dominance of an industry (*local specialisation*). This main industry includes a mix of horizontal (competitive), vertical (input-output), and diagonal (related services and instruments) specialised activities. Together with the main industry, other secondary industrial activities may be localised in the district, more or less related to the main one, as a result of various evolutionary adjustments and developments (e.g. nuclei of new industries, or the remains of old declining industries). Several specialised firms, generally small to medium-sized and independent, engage in similar or complementary activities, exchanging intermediate resources and outputs through local markets, as well as within formal or informal business teams supported by personal trust and knowledge (*production de-centralisation*). A decisive (if not exclusive) role in private and public investments to technical, human and relational capital is played by locally embedded centres of strategy and decision-making (*endogeneity*). The effective functioning of this systemic organisation requires its incorporation into historically evolving conditions including technology, material needs, culture, policy and public administration, and characterised by a positive interaction of local forces with trans-local and global forces. The integrated system propels the realisation of economies (reduction of costs, increase of revenues) which are “external” to the firm but “internal” to the district, which in part depend on the size of the resources organised within the single firms, but (more importantly) on the access of the firm (through local markets, team relations, specific public goods) to the pools of specialised resources integrated within the system.

Seen in evolutionary terms, the MID is a socio-territorial entity following an ideal-typical path of local development, included in a sheaf of alternatives consistent with its historically defined socio-economic structural features, and characterised by processes of re-production, growth, and variation of the system itself. Such processes of industrial and local development include: (1) a continuous and fluid re-articulation of the local division of labour, i.e. the endogenous constitution and flexible re-organisation (integration by open teams, etc.) of the specialised tasks and functions making up the process of value creation; (2) the reproduction and renewal of contextual knowledge, merged with some transferable codified knowledge, and incorporated in specialised capacities for productive and creative purposes; (3) the preservation of common motivational tracts, such as a bent towards trust and cooperation in reciprocal exchanges, an attitude towards entrepreneurship and innovation, the open participation of workers on the job, and the engagement of citizens in community life; (4) finally, social and economic mobility and a thick fabric of social interactions which create an environment where entrepreneurship and innovation flourish, and one that is in several ways and degrees conducive to social cohesiveness as well as consistent with the preservation of a local identity and an industrial atmosphere.

The main localised industry and the industries which are complementary to the main one can be seen as corresponding to an ideal-type of local industrial cluster; more precisely, the cluster at the core of the industrial component of a MID is seen as featured by systemic properties coming from stable relations both between producers and between them and the local socio-cultural and institutional context. Industrial clusters outside district conditions may have a different nature, as we will recall in what follows.

Outside ideal-typical MID conditions, local development may be more generic (i.e. based on a variety of unrelated businesses); more centralised (i.e. depending on the strategies of very few firms); less endogenous (i.e. based on investments and capital controlled by extra-local decision-makers, e.g. some multinational companies), or differently articulated (i.e. with a poorly extended local division of labour); at the same time, district processes may be less robust and re-productive. Variety within local economic life is useful and even necessary in the face of unexpected changes and discontinuities in external market conditions, technology, institutional infrastructure, and cultural contexts. However, beyond certain thresholds of sector dispersion across the agglomerated activities, of dependency of economic decision on external strategic control, and of business concentration, industrial clustering and economic development no longer mirror a MID. At the other extreme places become merely the stage for the variable location choices of more or less dis-anchored companies, as is the case with many industrial clusters (Becattini et al. 2003).

4. Critical nodes: types of knowledge and worlds of production

IDs are currently facing major challenges especially in relation to globalisation, technological changes, and the multi-scalar nature of policy support. There are two key trends that are, in our view, having a major impact on the capacity of IDs to contribute dynamically to the economic performance of the regions and countries where they are located, as well as to the welfare of their communities. These are, one, the expanding ‘intrusion’ of science-based knowledge in the world of production and, the other, the nature, intensity and scale of the increasingly global networks that IDs have to engage with for knowledge, goods/services and labour exchanges. These issues underlie critical nodes in the evolution of IDs, as their capacity and capability to re-produce themselves according to endogenous mechanisms are threatened by conditions that alter their compass, and thereby their way of finding a desirable direction for their sustainable development. Related to the above points, key concerns become: (a) the governance of firms and of the capitalist process within IDs; (b) the centralisation and decentralisation of strategic decision-making; (c) the changing patterns of industrial clustering and (d) the trans-local frames of IDs policies and political processes.

We start by looking at how the worlds of production are being reshaped by the ‘intrusion’ of science-based knowledge and the impact that this is having on IDs. The dynamic factors driving the development of IDs are related to the generation, application, and variation of practical and often tacit knowledge that coincides with specialised know-how and diffused creativity, intersecting with knowledge coming from a set of related trades and productions activities. Second-wave IDs have combined, in various ways, such locally rooted core knowledge with the ideas and innovations coming from external science-based knowledge. The fact that knowledge within the worlds of production is increasingly dominated by the latter is a challenge to many IDs. An extreme approach, which has been called “neo-Fordist”, posits a deterministic tendency towards a complete dominance of science-based knowledge in the conception, design, management, and functioning of automated and flexible production processes throughout sets of integrated hardware and software just assisted by the ancillary services of labour according to predetermined routines. This model would seriously undermine the survival of IDs.

In reality, every new technology (e.g. new machineries, software) is affected by points of discontinuity, interrupting its automatic working (e.g. starting up, stopping, adaptation to changing external conditions, repairing in face of breakdowns seemingly related to working conditions, etc.). Here it cannot be denied the importance of skilled labour who has tacit, practical and first-hand knowledge of the technology and its functioning beyond strict predetermined routines. The acknowledgement of this relation changes the model of innovation that underpins technological progress.

A linear and determinist model of innovation is replaced by one where tacit and practical knowledge influences not only the adoption of science-based applications to production processes and systems, but also their success and development, especially in a volatile and uncertain environment.

The success of second wave IDs was related to the responsiveness of a neo-artisan model of production to a new demand for differentiated products in the international markets, against the success in the 1950s and 1960s (the Golden Age) of large multi-divisional vertically integrated firms with their substantial internal investments in R&D, mass production and mass marketing. At the end of the 1960s, a growing mass of customised goods started to be demanded in industrialised countries, where consumers had already saturated their basic needs and had purchasing power in excess. The volatility and diversity of demand's needs forced the end a factory-based capitalist production, and the 'return' to a form of production that was disseminated across a number of laboratories or workshops within an economically active society. This took the form of artisanship and the customised production of goods and services, tied with historical and cultural sources of locally embedded production activities. The tendency of economic activities to permeate the social life of a place in its totality (at the level of individuals and community) and their combination with the cultural and institutional specificity of the place is what has propelled this re-emergence of ID processes.

Currently, increasing investment in science-based knowledge and its impact on production generate conditions which effectively diverge from the neo-Fordist vision. The possibility and importance of innovation processes where an open set of various and traditionally separate disciplines combine and interact have expanded. This multi-disciplinary approach to innovation is consistent with knowledge becoming more complex and integrated across disciplinary fields. However, it is also a continuous source of queries and unexpected problems which necessarily require a combination of various types of codified and practical knowledge across a set of disciplines, as well as the interface of science and technology with communities of users and producers.

One of the more recent developments in the debate on the sources of value creation in a knowledge economy has been to consider the cultural, creative and also symbolic or artistic contribution to production. In this context, innovation is no longer dependent on hard inputs and is no longer science or technology bound; on the contrary, innovation is driven by soft and immaterial factors. A consideration of the importance of the creative and cultural content of innovation for products and processes implies innovation processes based on a form of knowledge that is tacit, cumulative and embedded in a locality, whilst being able to combine systemically manufacturing and more service functions. We would argue that, since IDs are familiar with such a form of knowledge creation and diffusion, they have the capabilities to successfully undertake innovative

processes of this sort. This systemic model of innovation fits with IDs processes where tacit and practical knowledge interact with technological knowledge in a dynamic and evolutionary manner.

However, recently some contradictory forces are also in motion which should not be underestimated. Firstly, the local and systemic innovation process characterising the creation and diffusion of practical knowledge in IDs requires important adaptations as it faces stronger and more frequent influences from external information and parties. External influences are coming from relations with the national University system, with international networks of innovation-related actors, as well as international sub-contractors or client firms. In fast changing and globalised markets, these external forces challenge the established set of well-absorbed knowledge and practises that steers and operates innovation and production processes in IDs. It is becoming crucially important that new channels and new actors are activated to enable the absorption, translation and combination of the incoming knowledge. Secondly, as investment in R&D is becoming increasingly important against a traditional innovation process based on incremental and learning-by-doing innovations, the need to appropriate the returns on such investment are reducing firms' willingness to cooperate and exchange ideas within IDs. This is altering not only the delicate balance between scientific and 'practical/tacit' knowledge, but also the delicate balance between cooperation and competition that drives IDs' vitality and dynamism. Finally, older and more traditional IDs need to adapt not only to a different industrial specialisation, but to quite different sets of organisational, social and institutional norms. Even if mature IDs have the opportunity to embark on new paths and jump technologic trajectories, the discontinuous and systemic nature of the transition may trap them in a condition of economic stagnation and social decline. The leadership and vision of public or private actors can therefore be necessary for the leap to take place.

5. The changing patterns of socio-economic networks in a globalised world

Another powerful tendency, not unrelated with the neo-technological tendency referred just above, has been more directly impinging on the socio-territorial dimension of IDs especially since the 1990s. Globalisation has coincided with the ever increasing flows of goods, services, knowledge and people along what appear to be global networks that span across an increasing number of regions and countries.

According to the *hyperglobalist* position, globalisation has created a borderless and "global village", where socio-economic territorial models converge to a "virtual" international community defined by a set of linkages among footloose and thereby locally un-embedded agents. According to another view, successful "global" networks are made of linkages among agents who are embedded in different places. Their exposure and engagement in "global" networking depend on both their experiences of local networking, and the attitude and capability of some local actors to combine locally embedded relationships with more open, and risky external relationships.

In this view, success in global networking depends not only on the excellence of their individuality, but also on their capacity to represent different contexts of local culture, and global networks may be seen, at least in part, as trans-local or cross-cluster networks. In other words, only

deeply rooted local systems can not only branch out, but more importantly stand firm in the strong winds of trans-local mobility.

Some would argue that the world has always been interconnected through trade exchanges and migrations, and that globalisation is nothing new; however, what is true is that, although there was already a separation between places of production and places of consumption, the former represented the economic expression of a community of people. On the contrary, one of the main features of the modular, multi-plant and multi-national organisation of production that has emerged with the global conglomerates, is that places become the functional inputs of the economic design/expression of a third party/private interest. Scholte (2000) argues that globalisation is indeed a new and distinctive phenomenon to the extent that it has '*de-territorialised*' production activities. Indeed the globalisation of production activities coincides with an organisation of production that mirrors a network of a mix of market and ownership relations that combines flexible specialisation throughout value chain with Fordist-type productions for labour intensive activities. Crucial here is the geographical abstraction of such network, whereby the location decisions of the various production or service facilities are motivated by the contribution that the different 'places' can make to the overall division of labour. This means reliance on low labour cost 'places' to carry out labour intensive and large scale tasks, and control over core high value-added functions. Hymer (1972) observes that the multi-national enterprise is the antithesis of the 'Marshallian entrepreneur', in that the head, the arms and the legs are not part of the same body, albeit the former controlling the latter with various forms of hierarchical power. Hymer (1972) also observes that as multi-national enterprises sift through places for their location choices, they also consolidate patterns of uneven development.

The literature on global value chains that has flourished in the last few years has explored these issues in great details, with particular attention to the impact of the operations and strategies of multi-national enterprises on places and their development. It is in this context that firm clustering, both in developed and developing or emerging economies, has entered the debate on globalisation: the patterns of development of firm clustering within global value chains are mirroring the developing opportunities of localities.

Different forms of firm clustering respond differently to the challenges of globalisation. Some forms of firm cluster that are often seen as successful in the international literature corresponds to the dominance of both relatively large firms with local origins and local entities of external multi-national corporations, showing an opportunity-seeking attitude to cooperation, and a high degree of openness through channels that accommodate the transfer of people, knowledge, technology, as well as of goods and services. Such clusters are in fact agglomeration of firms that benefit from co-location at various levels, but they are not in symbiosis with the space they occupy, and are able to seize the opportunities of globalisation by trans-nationalising their activities to their advantage.

Also IDs and the clusters embedded in district processes may benefit from globalisation, rather than be threatened only by it, but they should proceed through different mechanisms from those of the types of clusters recalled above.

To some, the ID model might appear unfit to identify patterns of internationalisation that are compatible with its embedded nature, these including the out-sourcing or re-locating abroad of some production functions. These concerns arise from the fact that processes of innovation, learning and value creation in a district take place at all stages of production, making it difficult to split up

'the head from the arms'. The concept of global value chain is underpinned by the hypothesis that production stages can be separated and value creation is strictly controlled by the multi-national parent company. In contrast, in a district, value creation infuses the entire circuits of knowledge and runs in parallel to the value chain.

Indeed, there is ample evidence that IDs, for instance in Italy, Spain or Portugal are shifting some functions abroad, or engaging in international joint ventures or hosting foreign capital, in search of efficiency, new knowledge or markets. What is interesting about this phenomenon is that it has been gradual and coinciding with a process of learning and adapting not of a single firm but of the system of firms.

If the 'know-how' was the key discriminating factor for competitive firms and places in the so-called knowledge economy, globalisation and the functioning of multi-national enterprises have highlighted that more important than the 'know-how' is the 'know-where'. Knowing where to locate which functions has become one of the fundamental sources of competitiveness for globalised production organisations, like multi-national enterprises as well as districts. This is not reduced to cost-saving location choices, but also includes knowledge sourcing and market positioning choices. Instead, what seems to drive the internationalisation strategies of IDs is actually the 'know-who' and 'know-with whom', whereby internationalisation is experienced as a collective process, which include a learning process, mechanisms of information and risk sharing.

Some of the recent debate on the various forms of proximity (De Propris *et al* 2008) can help understand that district firms will not choose to embark in footloose international operations, but instead they would prefer to develop and strengthen common patterns of behaviour, common practices and routines together with informal communications. Benefits from internationalization would come from an ID being able to maintain a critical mass of its embedded know-how, together with 'bridging' actors (rather than gatekeepers) able to search, read, understand, translate and finally integrate external knowledge inside the framework of the local know-how.

The risks posed by globalisation to localities have becoming more and more real in the last few years; like a castle of cards, global value chains have created a form of inter-connectivity between places that is not aimed at their mutual development. Some places are indeed at the top of a very unstable castle, and their fall will possibly lighten the weight borne by some localities at the basis, while engendering high costs of transition and adaptation for all. The well embedded firms in IDs are likely to be better able to weather the storm, thanks to their ability still to produce and innovate away from international value chains, and in some cases, also with the support of strong and committed international relationships.

Globalisation is also having an impact on the territorial scale of IDs' socio-economic context, thereby reshaping the limit of the proximity that underpins its socio-economic fabric. On the one side, the progress in metropolitan transport systems tends to enlarge the area of daily job and civic experiences; furthermore, the needs of international mobility and the facilities needed for research and knowledge services increase the strength of metropolitan economies. Small localities become parts of strongly interconnected metropolitan areas or regions, and this complex local architecture may be seen as the prevalent form of contemporary successful local systems as clots of business and social contexts. However, in this context, each small locality becomes more socially diverse and possibly less socially bounded; at the same time, larger areas have not the same capacity to produce common experiences and shared values as the smaller ones when more self-contained in terms of

daily social and labour exchanges. As diversity increases, the opportunities to generate novel ideas multiply, but the risk to undermine the re-production of shared attitudes emerges as well. There are somewhat defined thresholds, in size and multiplicity, beyond which district processes of reproduction and change become weaker and weaker.

The fact that IDs processes may be found, for instance, in quarters in large urban areas is not new. However, first-wave IDs were generally found around large cities where capital accumulation drove growth, as well as spread around large industrial regions, such as the Black Country or Lancashire, as mentioned by the same Marshall. Second-wave IDs have typically developed outside large urban areas in some way in alternative to large firms at the end of the Fordist age. At least those IDs that emerged or re-emerged in regions of the Third Italy characterised by the overlapping of small towns with rich rural traditions, showed, as argued by Bagnasco (2003), the possibility of an effective restoration or preservation of a correspondence between the organisation of production and the reproduction of related social resources. More recently, large urban systems characterised by a more fractious and conflicting dynamism have tried to recover from social and economic decline by means of strategic planning combined with leadership, participation and democratic legitimacy. Or, as in some American regions, solutions have been found by mobilising entrepreneurial, as well as local and sectoral resources. These are lessons which contemporary IDs need to learn.

Finally, the considerations just presented may be extended to IDs processes and forms in emerging and developing economies. Firstly, the rapid and often painful urbanisation processes in the industrialising regions of these countries coincided with a drastic break up from the rural economies and 'way of life' and with the emergence of an urban socio-economic context that is socially divided and economically separated from any endowed skill. Secondly, the opportunity and the trajectory of a transition from a 'low' road to a 'higher' road of local development are crucially supported by an endogenous mobilisation of science-based factors, integrating strictly economic and production activities with social services and infrastructure. Thirdly, the emergence of ID processes in these countries tends to be driven by their immediate participation in global nets of value creation which can be governed in different ways. As mentioned above, the hubs in the global value chains include industrial clusters, multi-national corporations and forms of IDs in old or post-industrial countries. The high roads of local development for emerging and developing countries in this globalised context should be shaped also by equity, trust, and reciprocal empowerment in international trans-local and cross-cluster relationships.

6. Capitalist relations within industrial districts

Increasing evidence is showing that both changes in the technological paradigm and the sweeping forces of globalisation influence the nature and mix of capitalist relations within IDs. This occurs along two lines: one concerns the local embeddedness of entrepreneurial firms in the district milieu; and the other the possible role of a more concentrated ownership within IDs' decentralised industrial structure.

In relation to the nature of entrepreneurship in IDs, we would suggest that that a new born firm may originate from two very different geneses. A first type is the firm born out of the strategy of a

capitalist entrepreneur for whom the new firm is an opportunity for a return on investment that is higher than the one coming from lending the same resources to a financial agent or to the state. The core existence of this first type of firm is to be a sort of particle of capital, which grows by assuming the form of one or more plants, i.e. capital invested in fixed assets (e.g. machineries) and paid labour. The production of goods, the management of employees, the effects on the environment and on the society, etc. have here just an instrumental value, the final and essential aim being the financial returns which increase the size of the capital. If the expected financial returns turn to be not enough against alternative uses, the capital is disinvested and the firm closes down. Those firms whose life is characterised by such a capitalist core are referred here as ‘particle firms’.

The second type of firm, often neglected, is one which is founded by members of a community, who see themselves as owning human and relational capitals which may be used, with higher economic and social returns, starting-up their own enterprise, more than spending the economic life as employees. Their core being a project of life, they may be named as ‘project firms’. The entrepreneur invests in the firm not only her/his personal savings and those eventually entrusted to her/him by the parental and friendship networks, but also and more her/his reputation in terms of technical and managerial competence, leadership and energy on the job, trade acumen, etc. who s/he has been able to build in the course of time within her/his community of life. This human and relational capital is much less transferable to different contexts than the financial capital at the core of the particle firm. Also the returns are measured not only in economic terms, but also in terms of the realisation of a life project, or of some revision of it. This adds to the local stickiness of such firms, even against conditions in which the pure financial calculus would suggest disinvestment and possible transfer of the financial capital to other contexts. Contexts characterised by project firms are more sustainable over time thanks to adjustments against crises which would instead bring about sudden de-localisation and de-industrialisation in contexts characterized by particle firms.

A lively ID, hosting a healthy interaction between district structures and processes, is an ideal context for project firms. This point may be also related to the Marshall’s idea of new entrepreneurship coming from the ranks of the working class, especially in industries characterised by small firms as in the case of many IDs. In the face of globalisation and neo-technological tendencies, this helps the preservation of local embeddedness, but a too strong stickiness to the place would hinder openness to change and trans-local relations. At the same time, plurality in the nature of the firms nurturing IDs is essential. Along their life cycle, IDs will not only incubate project firms, but would also attract particle firms. At some stage, persistently successful project firms have the possibility to strengthen and absorb the life projects of a larger network of people. Indeed, the growth of an ID corresponds also to this expansion stage, which does not necessarily mean a growth in the size of firms. Here also particle firms are attracted to a district by the expectation of market growth and profits.

The combination of project and particle firms underpins business diversity and contributes to the vitality of an ID. Financial requirements for supporting successfully business trajectories, and a combination of particle and project logic, may push in time some district firms to start a metamorphosis taking them to grow also in size and become medium-to-large sized particle firms, or a hybrid. Grown-up particle or hybrid district firms are expected to stay anchored to the original ID when they find that this still provides benefits in the form of ID external economies.

More recently, changes in the technological platforms and the international scale of demand and production have increased the opportunities for those paths of strengthening of business structures operating within IDs. This begs an important question: how can an ID with its population of small project firms react to changes in the technological paradigm and to globalisation? What is the contribution of larger, medium sized district firms in this respect? This is an intra-district variation on the old theme of the asymmetry principle of Joseph Steindl (1945).

Here we only recall that the fact that opportunities emerging from global value creation require resources which are more easily managed by larger –medium sized firms does not imply necessarily that the access to such opportunities needs the overall concentration of the ID industrial structure into a few large firms, with their ring of dependent smaller firms.

Indeed, beyond basic collective conditions, the core competencies of a portion of project firms are also crucial against contemporary challenges. Both medium sized particle or hybrid firms and project firms contribute to determine the characters of the socio-economic interaction that shape the functioning of cooperative behaviours in self-organised internal and external teams. Part of the answer comes from the role that social and labour mobility plays in enabling the realisation of life projects through entrepreneurial venture that combine innovation, flexibility, creativity and quality. Indeed, a fabric of project firms contributes in specific ways to an extensive presence of workers' participation to entrepreneurial projects and self-determination. Firstly, such fabric is a natural incubator of new projects of life coming from the experiences and energies of the ID working class, or at least of the more skilled and active part of it. Secondly, the prospect for employees to climb the economic ladder and become employers (and set-up a project firm) is a strong motivation to learning and developing entrepreneurial attitudes on the job. Thirdly, what is the “doing” in such “learning-by-doing” is precisely active participation in the more engaging business projects of the employer. Finally, with their active participation as employees, and with some of them setting up project firms themselves, the entire IDs benefit from the most dynamic entrepreneurial energies which, in a world of capitalist relations and particle firms, would otherwise remain hidden and unfulfilled.

Medium sized firms, and especially those grown out of particle firms, do not easily benefit from these advantages. But they need them, and if committed and significantly embedded in a district, they can gain some access to the same pools of energies, innovations and entrepreneurial dynamism. The diversity of firm forms in a dynamic ID is a crucial condition for its ability to adapt and adjust to external changes in ways that guarantee its reproducibility. In this context, medium sized firms can become sensors of external changes and trends, as well as bridges connecting external actors with the more internal and ID locally-bound firms. They become therefore two-ways channels of knowledge, goods and services exchanges for trans-local cross-cluster activities. Actually, the collective exploitation of resources provided by sets of private firms is what is usually meant with the realisation of ID external economies. However, trajectories by which medium sized firms predate the resources and opportunities of small project firms are also possible, with the fabric of smaller firms becoming dependent on the local strategies of a few centres of capital, and the engine of ID external economies weakening irreversibly.

Finally, it is not to be excluded that in reality some IDs are endowed with medium sized particle, hybrid and metamorphic firms, whilst other IDs can present less firm diversity. This of course depends on various regional and sector features. Even without medium sized firms, sensor

and bridging functions could be played by the more dynamic and open teams (formal and informal business groups) of small firms. This is not only possible but desirable, although the burden of such strategy born by such teams and the related public policy support increases with the coordination problems involved.

7. Industrial districts, clusters and policies

We come to some considerations on the role and objectives of public policy for IDs as engines of local development. According to the localist and anti-statalist approaches, IDs are essentially the result of bottom-up and endogenous processes driven by the entrepreneurial spirit of small enterprises and by market exchanges. On the other side, the critics of IDs have repeatedly pointed to a key factor that explains, in their view, the fundamental weakness of IDs, that is the lack of access to the indivisible industrial, trade and research facilities needed to face the market and technological challenges of the time. However, IDs are also innervated by political processes necessarily emerging from their nature, as small scale but complex human societies. Decision-making processes within IDs tend to produce, more or less deliberately, policies that combine the strategies of a set of public and private district stake-holders. They contribute to the systemic nature and to the infrastructure underpinning economies which are partly external to each individual organisation and firm, but internal to the networks of agents (e.g. firms, policy-makers, trade associations) more or less embedded within the same ID. The success of such strategies depends on the conditions in which they are implemented by agents who move tentatively within sets of reciprocal and evolutionary constraints and opportunities; with such sets being characterised by strong local roots coupled with a web of trans-local (national and international) relations.

The crucial role that public policy for and within IDs has played in the academic debate and in the practice of policy-making (Brusco, 1982, 1999) is touched upon here with a couple of considerations on the nature of the objectives of IDs policies, and on the multi-level geography required for an effective design and implementation to such policies.

Policies are the results of political processes shaped by the underlying administrative structures which are almost always defined along sectoral lines. Quite naturally public policies for IDs fall under the remit of departments (at various levels of local, regional, state, and federal/union government) which have economic targets and competencies, and that are separate from those working on welfare, culture, environment, etc. Furthermore within IDs, employers associations and trade unions tend to be the most active private agencies able to contribute to the delivery of collective actions together with public policies initiatives. Finally, many among the consultants advising both public and actors in IDs are industrial or management economists. All this tends to influence the way IDs stop being considered a small scale complex society, and start being looked at as a particular form of industrial organisation, that is an industrial cluster. The problem with the latter is that the ID is reduced to its production and economic features (the set of specialized producers and related institutional actors organizing the realisation of the main products and services) neglecting the socio-cultural and institutional relations that crucially define it.

Furthermore, given the difficulties in understanding the variety of the nexus between industrial clusters and local societies in hugely different worlds, the focus on industrial clusters, and within

them on selected networks of business and related institutional actors, has represented a practical solution for accumulating experiments and comparing results on the field. Cluster policies and initiatives are nowadays a large and expanding discipline, subsuming, in the view of many of its proponents and practitioners, policies and initiatives for IDs (see for example, Karlsson 2008). Concurrently IDs have come to be seen in those academic and practitioner quarters just as particular cases of clusters; that is, as in the Italian post Second World War experience, those made of small specialized firms, in low to medium tech sectors, and hosted in small to medium sized towns and their surroundings.

In our view the diffused interest on cluster policies and initiatives may have beneficial effects also for the support to political processes innervating the local societies where industrial cluster are rooted, and for orientating the resulting application of public and collective resources towards specific systemic conditions helping industrial and human development. Still more, policy interest may avoid the trap of targeting only the formally recognised cases of IDs in a region/country/federation. Whatever is the method adopted to identify IDs, their socio-economic complexity and their evolutionary forces always tend to make it hard for them to be formally identified. Instead, a looser definition of the object of policy initiative which coincides with the emergent production core of a firm clustering can be more easily recognised. This explains why clusters have been used as an umbrella term that in reality encompasses a broad range of firm clustering, all nevertheless having in common the co-location of sector specific activities. In the same way, the increasingly important relations between mature IDs and proto or infant IDs are more easily recognized in terms of possible cross-cluster relations.

This approach has, however, also some drawbacks which should not be ignored. The first and probably most relevant one is the strictly economic focus of policy intervention; the second one comes from a lack of appreciation of the distinction between clusters characterised by a good balance of project and particle firms, and clusters just dominated by particle firms. In the worlds of global financial and industrial oligopolies the second type of clusters are an important phenomenon related, as recalled previously, to the need of the big concentrations of capital to tap the local bases of human and natural resources. Policies supporting them may have the effect of both transferring public resources and helping the extraction of surplus from the original localities to the benefit of the capitalist centres.

A genuine ID approach to public policy would enable cluster policies to distinguish and define selective mechanisms targeting the embeddedness of business strategies in processes which contribute to human and industrial development in the localities. An appreciation of the importance of an ID approach to policy-making relies also on the identification of cases which are not simply industrial clusters, but presents themselves as local societies with an embedded industrial (clustered) specialisation that expresses itself through an agglomeration of small firms.

We come finally, and shortly, to consider the importance of multi-level policy-making, especially when an ID approach to policy is considered. Local level of policy action is necessary for many reasons. It is worth reminding us that local policy must not be driven by narrow localist interests, nor by strictly economic concerns. The sense of local belonging and identity may give to a small informal community of individuals – “*a nation within a nation*” in Marshall’s words–, or even to the disoriented individual consciences of the contemporary liquid modernity, a place to practise civic virtues and responsibility, contributing individually and collectively to a good out-of-

the factory life and to the cohesive bases of participation on the job. Competition among localities may have the nature of civil emulation, being gauged in terms of indexes of standard of living or “happiness” (Bruni and Porta, 2007). IDs, when lively and vibrant, tend to reproduce such attitudes, but of course the success of such reproductive processes, and their extension to other localities, depend heavily on the broader regional and national conditions and policies. In particular, national governments should support and orientate their effort towards strengthening the most dynamic and open component of the local forces, against the dismantling social effects of global finance and capitalist accumulation. Instead, if national policies prefer a more *laissez-faire* approach, whereby forms of social and market competition prevail over forms of cooperation and participation, then the centres of global capitalist accumulation would dwarf local forces of economic development like IDs.

8. Some conclusions

IDs following a high road of local development have been and are a laboratory for testing and reflecting on the conditions that determine the evolution of market economies and of capitalist forms of industrial societies. The often overcrowded debate on the future of IDs should be understood in this type of scenario. Many IDs, as they appear to us today, are changing or will change and transform in something seemingly or effectively different as we write. However, what is crucial is that both the old IDs that succeed in preserving their vitality and the new generation ones continue to be living evidence of a form of capitalism that is different from the one dominated by selfish foot-loose capitalist calculus and oligopolistic predatory strategies, whereby the benefit of some coincides with loss of others, or in any case where social inequalities are prone to grow.

ID processes exemplify the presence and action of competitive forces that Marshall would have called ‘chivalrous’, and that are not dominated only by opportunism, shirking or pure cut-throat rivalry, but rather infused also with rules that reward fair, open and trustworthy behaviours and punish – often tacitly and informally, albeit effectively – cheating or breaching. In other words, beside the legal framework that encases more generally all economic and civil activities, alternative competitive forces incorporate a reputational mechanism that is conducive to maintain the delicate, but crucial, balance with cooperation.

Furthermore, the combination of this reputational mechanism with the peculiar promotion of project firms contributes to shape a socio-economic dynamism whereby many have the opportunity to try and to overcome social barriers through hard work and ingenuity. When this can be hoped and tried by a relatively high number of members of the local working community, a diffused reproduction of entrepreneurial energy, plasticity and skills can be propelled from the bottom up.

Finally, the combination of social mobility with local policies oriented towards rewarding civic virtues and civil emulation gauged by personal and social happiness may allow the preservation of a certain degree of social cohesion, collective participation and conversation, and local identity in a context still open to internal and external change. A local life so characterised may be imagined as made of occasions of social interaction intersecting private business and public focal points. A metaphor of this could be an image taken from the history of Florence renaissance when, at the peak of the city artistic and economic life, citizens meet casually in the street looking at a newly

completed statue or frescos, and stop for a moment their daily businesses to discuss merits and relative flaws of the latest great artist's work in comparison with the accomplishments of other artists.

No formal institution dedicated to economic education, business promotion, and welfare support would be able alone, in the world as it is now, to trigger such processes, which are rather sparked and cultivated by the intersection of individuals' ambitions with collective advances. This is why the social and economic system needs rich contexts whereby the realisation of peoples' capabilities and goals concur to a collective benefit, whilst rewarding the person not only in monetary terms but more importantly in terms of social recognition and ascent. IDs, in our view, when working at their best, remain both a possible source of inspiration with respect to what path of socio-economic development would be desirable and a warning against other powerful capitalist forces that can lead to more destructive outcomes.

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