

Critical nodes and contemporary reflections on industrial districts: An introduction

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1. PROLOGUE

No matter how much has been written on industrial districts (IDs), they probably remain one of the most relevant socio-economic phenomena of the last decades, and they seem relevant now more than ever, as the disruptive forces of globalisation are uncovering the costs of the disparities between economy and society, and between economy and policy. This volume is meant to represent the main lines of a wide-ranging debate spreading over the last three decades on what IDs have represented in the past, what they are undergoing at the present time, and the challenges and opportunities they will face in a socio-economic context where global and local forces increasingly interact to shape the welfare of societies and the economic performance of firms and places.

Comprising articles written by distinguished international scholars and practitioners, the *Handbook* includes conceptual, critical and forward-looking contributions as well as case studies on Asia, Latin America, Europe and the US. The volume sits within the current revival of socio-economic studies, as it assumes at its core the view that IDs are a clear expression 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.

We start this introduction by recalling a few basic concepts and some of the most significant findings that have emerged from the recent debate on IDs, which in our view will make it easier to understand the overall structure of this *Handbook of Industrial Districts*. We then extract from its rich collection of empirical and theoretical contributions, themes that we think cut across the various sections, and that we see as coinciding with critical nodes on IDs and contemporary reflections on them. Finally, we present an overview of the volume.

2. A HISTORIC OVERVIEW OF BASIC CONCEPTS

The many contributions accumulated on IDs, and more generally on different types of local systems, over the last decades have generated a flourishing of concepts and definitions, which have tended to mirror the variety in the forms of local systems that one can observe. For this reason, we start by drawing the conceptual framework that encases this work, by recalling key concepts and well-accepted findings. The framework is aimed at providing a unified background to the diverse points of view and analyses that emerge in the various chapters of the *Handbook* where a variety of issues are explored more in depth.

A synopsis of the conceptual framework of the ID model is also a declaration of the general interpretative position upon which the editors have built the structure of the volume. We do not claim that each single contributor shares every aspect of this general position, as the reader will easily find out; however, many of them have contributed to its building, with various advancements on the theme, both intellectually challenging and novel.

The key aspects of the conceptual framework comprise three parts: the historical premises; the revival since the 1980s; and some reflections on the prospects for IDs in a fast changing environment.

2.1 Historical premises

Starting with some historical premises, the importance of local roots, and thereby the differences in the industrialisation processes of countries, has been commonly acknowledged in a wealth of historical and geographical accounts that have analysed the waves of industrialisation across Europe (see Sections 1 and 2 of the *Handbook*). However, at the same time, classical and neoclassical economic theories on market structures and capitalism tended to abstract from these variations and to seek the formulation of few ‘presumed’ general and objective laws (see Sections 2 and 3).

Among the great economists, Alfred Marshall assumed a complex position, summarised in the epigraph of his late *Industry and Trade*, that is ‘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* (edited by Whitaker 1975), show the importance of reflections on places characterised by the enduring presence of localised industries of specialised small firms. They were his preferred examples of what in his times were called ‘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 accepted already in his time, because they may be also realised by an appropriate integration of a set of complementary and specialised firms, none of them necessarily large in size (see Section 2 and Bellandi 1989). Here Marshall attained compelling confirmation of the importance of appropriate 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, like a firm's life cycle, the representative firm, and competition over particular markets preceding Chamberlin's monopolistic competition. However, this important conceptual connection was then played down by Marshall in many theoretical constructs of his *Principles of Economics* (Becattini 2003b; 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 to the periphery of academic and political discourse.

2.2 The return of IDs in the second half of the 20th century: the Marshallian industrial district

In the 1970s, as the golden age of mass production was showing signs of weakness, the concept of the ID was resurrected by Becattini (1978 and 1979) to help understand 'unusual' regional paths of industrial takeoff in some Italian regions. His contribution was soon enriched by that of a multidisciplinary 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 a trend was first evident and studied in the central and north-eastern parts of Italy, largely coinciding with the so-called Third Italy (see Sections 1, 2 and 7).

The accumulation of refinements on the characteristics of IDs from empirical studies (see Section 6), and the recovery of both the Marshallian concept of external economies and industrial atmosphere (see Section 2), 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 (see Section 2), 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 1990 and 2004a). 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 a 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 (for example, the 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 decentralisation'). 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 translocal 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 (see, in particular, Sections 2 and 11).

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 reproduction, growth, and variation of the system itself (see in particular Section 4). Such processes of industrial and local development include:

(a) a continuous and fluid rearticulation of the local division of labour, that is the endogenous constitution and flexible reorganisation (integration by open teams, and so on) of the specialised tasks and functions making up the process of value creation; (b) the reproduction and renewal of contextual knowledge, merged with some transferable codified knowledge, and incorporated in specialised capacities for productive and creative purposes; (c) 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; (d) 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 featuring 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 (that is, based on a variety of unrelated businesses); more centralised (that is, dependent on the strategies of very few firms); less endogenous (that is, based on investments and capital controlled by extra-local decision makers, for example some multinational companies), or differently articulated (that is, with a poorly extended local division of labour); at the same time, district processes may be less robust and reproductive. 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.

2.3 Contemporary tendencies and prospects

Localities mirroring the MID model are prototypical examples of the vitality of local socio-cultural and institutional relations which find their way, within national and international contexts, by generating locally-based (but open) industrial clusters (where the cluster coincides with the core of the industrial activities of the district).

Historical IDs in the 19th-century first-moving industrialising countries (first wave of IDs) and IDs reemerging after the mass production golden age (second wave of IDs) were both largely characterised by manufacturing sector specialisation and competencies, and by locally-integrated production processes. In the current context of accelerated and overwhelming globalisation, the opportunities for the creation of new forms of clustering expand. However, such clusters do not necessarily combine with robust district processes, and sometimes the expansion of new clusters contributes to the decline of older IDs. On the other hand, with the fast pace of technological changes, the borders of traditional sectors become blurred, and the distinctions between manufacturing and tertiary sectors, not to speak of the one between low-tech and high-tech sectors, become less and less clear and meaningful. New or regenerated IDs may turn out to be characterised by an 'industrial' specialisation that has lost its traditional (like in the first and second waves) identity as a locally-integrated manufacturing *filière*. This exemplifies what has been already noted, that district systemic processes are being constantly combined with various internal and external factors, that determine opportunities, pose challenges and contribute to shape various types of local paths of development or decline (see Sections 5, 8 and 10).

Public policies and collective actions by private agencies are essential ingredients within specific paths of local development (see Sections 2 and 11). Currently IDs and district-like processes need the support of policy designs and tools, still related to local agencies and institutions, but more deliberate and aligned with an explicit reference to district models and local development approaches. Such interventions should be aimed at providing platforms to integrate highly-skilled and R&D-intensive competencies with traditional sources of local creativity, as well as to manage processes of market and process internationalisation, for instance, by means of new knowledge-intensive services firms. Furthermore, the local resources integrated by such platforms may be complemented through interactions at a regional level, for example among IDs, and between IDs and regional dynamic cities (see Sections 3, 5 and 10).

In the next section we will expand on some themes that we deem to be critical nodes in the current debate and cut across the various sections of the volume.

3. CRITICAL NODES

Within the wealth of contributions gathered in its chapters, in our view some common threads emerge as crucial for a deep understanding of the contemporary trend and conceptualisation of IDs. These are for us critical nodes and will be developed in this section. Drawing on basic concepts, they have to be seen as possible conceptual developments in the light of the advances accumulated with this *Handbook*.

One of our main concerns is the sources of the presence of ID forms and processes over time and across various regions; in other words, the conditions which explain a stronger or weaker presence of IDs, and their socio-economic role within regions and nations.

There are two key trends that, in our view, have 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, first, the expanding 'intrusion' of science-based knowledge in the world of production and, second, 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 reproduce 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 translocal frames of ID policies and political processes.

3.1 Types of knowledge and worlds of production

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 trade and production activities. Various chapters of this *Handbook* illustrate how first- and second-wave IDs have combined, in various ways, such locally-rooted core knowledge with the ideas and innovations coming from external science-based knowledge (see Sections 1, 3, 7 and 8). The fact that knowledge within the worlds of production is increasing 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 (for example, new machineries, software) is affected by points of discontinuity, interrupting its automatic working (for example, starting up, stopping, adaptation to changing external conditions, repairing the breakdowns seemingly related to working conditions, and so on). Here the importance of skilled labour cannot be denied, who have 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 of 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 reemergence 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 multidisciplinary 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 capacity and the capabilities to successfully undertake innovative processes of this sort. This systemic model of innovation fits with ID processes where tacit and practical knowledge interact with technological knowledge in a dynamic and evolutionary manner, as recalled and applied, in particular, in Sections 5 and 10 of the *Handbook*.

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 subcontractors or client firms. In fast-changing and globalised markets, these external forces challenge the established sets of well-absorbed knowledge and practices that steer and operate 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.

This *Handbook* aims to address such challenges and opportunities with a variety of multifaceted contributions.

3.2 The changing patterns of socio-economic networks in an increasingly globalised world

Another powerful tendency, not unrelated to the neo-technological tendency referred to above, has impinged on the socio-territorial dimension of IDs more directly, 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, advocated and illustrated in some contributions of this *Handbook* (see Sections 3, 4 and 10 in particular), 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 the agents’ individuality, but also on their capacity to represent different contexts of local culture, and global networks may be seen, at least in part, as translocal 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 translocal 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 other hand, one of the main features of the modular, multi-plant and multinational 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 the value chain with Fordist-type productions for labour-intensive activities. What is crucial here is the geographical abstraction of such a 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 multinational 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 control the latter with various forms of hierarchical power. Hymer (*ibid.*) also observes that as multinational enterprises sift through places for their location choices, they also consolidate patterns of uneven development.

The literature on global value chains (see the references in the chapters of Section 10 of the *Handbook*) that has flourished in the last few years has explored

these issues in great detail, with particular attention to the impact of the operations and strategies of multinational 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 (see Sections 3 and 10). Some forms of firm cluster that are often seen as successful in the international literature correspond to the dominance of both relatively large firms with local origins and local entities of external multinational corporations, showing an opportunity-seeking attitude to cooperation, and a high degree of openness through channels that accommodate the transfer of people, knowledge and technology, as well as of goods and services. Such clusters are in fact agglomerations of firms that benefit from colocation 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 by it, but they should proceed through different mechanisms from those of the types of clusters referred to above.

To some, the ID model might appear unfit to identify patterns of internationalisation that are compatible with its embedded nature, these including the outsourcing or relocating 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 multinational 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 (see Sections 7, 8 and 10), 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 multinational 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 multinational 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 (see Sections 3 and 4).

Some of the recent debate on the various forms of proximity (De Propriis 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 internationalisation 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.

At the time of writing, the high risks of globalisation borne by localities are becoming more and more real; 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 base, 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 do not have 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 of undermining the reproduction 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 ID processes may be found, for instance, in quarters in large urban areas is not new, as some chapters of the *Handbook* referring to first-wave districts suggest (see Sections 1 and 5). 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 Marshall. Second-wave IDs have typically developed outside large urban areas in some way as an alternative to large firms at the end of the Fordist age (see Section 6). At least those IDs that emerged or reemerged in regions of the Third Italy characterised by the overlapping of small towns with rich rural traditions, showed, as argued by Bagnasco (see Section 4), 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, and the *Handbook* includes contributions along these lines of thought in particular in Sections 7, 8 and 11.

Finally, the considerations just presented may be extended to ID 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, multinational 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 translocal and cross-cluster relationships (see Sections 9 and 11 on this theme).

3.3 Capitalist relations within IDs

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 (see in particular Section 4). 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 a newborn 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, that is, capital invested in fixed assets (for example, machinery) and paid labour. The production of goods, the management of employees, the effects on the environment and on the society, and so on, 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 out 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 to 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, in starting up their own enterprise rather than spending their economic life as employees. Their core being a project of life, they may be named as ‘project firms’. The entrepreneurs invest in the firm not only personal savings and those eventually entrusted to them by the parental and friendship networks, but also and more importantly their reputation in terms of technical and managerial competence, leadership and energy on the job, trade acumen, and so on, that they have been able to build in the course of time within their 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 delocalisation and deindustrialisation in contexts characterised 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 also be related to 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 too strong a loyalty to the place would hinder openness to change and translocal 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 will 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 successful business trajectories, and a combination of particle and project logic, may push in time some district firms to start a metamorphosis causing them to grow in size and become medium–large-sized particle firms, or a hybrid. Mature particles of 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 which is discussed in various ways in the *Handbook*, particularly in Sections 7 and 8: 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 note 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 determining the characters of the socio-economic interaction that shapes 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 ventures 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 a 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, 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-way channels of knowledge, goods and services exchanges for translocal 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 (see in particular Sections 2 and 3). However, the 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 present less firm diversity. This of course depends on regional and sectoral features, as various chapters of the *Handbook* illustrate. 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 a strategy borne by such teams and the related public policy support increases with the coordination problems involved.

3.4 IDs, 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 stakeholders. 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 (for example, firms, policymakers, 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 translocal (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 policymaking explains why the *Handbook* devotes a whole section to it (Section 11), whilst touching on it also in most of the chapters of the other sections.

We defer to such a rich pool of contributions an assessment of the most cutting-edge themes in this respect (see Section 11 in the volume), and we wish here only to present a couple of considerations on the nature of the objectives of ID policies, and on the multi-level geography required for an effective design and implementation of 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, and so on. 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 policy 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 specialised producers and related institutional actors organising 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 up of small specialised firms, in low-medium-tech sectors, and hosted in small-medium-sized towns and their surroundings. This point of view is illustrated in some important contributions within the *Handbook* in Sections 10 and 11.

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 clusters 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 method is 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 colocation of sector specific activities. In the same way, the increasingly important relations between mature IDs and proto or infant IDs are more easily recognised 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 is 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 policymaking relies also on the identification of cases which are not simply industrial clusters, but present 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 policymaking, especially when an ID approach to policy is considered. A local level of policy action is necessary for many reasons recalled in depth in Section 11. 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.

3.5 Capitalism with a human face

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 into 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 purely dominated by selfish footloose capitalist calculus and oligopolistic predatory strategies, whereby the benefit of some coincides with the 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 are 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, those alternative competitive forces incorporate a reputational mechanism that is conducive to maintain the delicate, but crucial, balance with cooperation (see Sections 3 and 4 of the *Handbook*).

Furthermore, the combination of this reputational mechanism with the peculiar promotion of project firms (see above, 3.3) contributes to shaping a socio-economic dynamism whereby many have the opportunity to try to overcome social barriers through hard work and ingenuity. When this can be hoped for 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 (see above, 3.4) 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 (see above, 3.1, 3.2). 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's renaissance when, at the peak of the city's artistic and economic life, citizens meet casually in the street looking at a newly completed statue or frescos, and stop for a moment from their daily businesses to discuss the 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.

A social and economic system where such forces of social mobility and dynamic egalitarianism play a significant role is what has been referred to as a sort of 'capitalism with a human face': a capitalism where, in other words, the 'when', the 'how' and the 'with whom' of production and consumption activities are integral parts of the life of place (see Section 2 of the *Handbook*; Becattini 2004a and 2006). The pride of acknowledging personal and collective achievements with those whose life experiences, motivations and cognitions one shares, and the possibility of a decent work and life where the inequality in the distribution of material and immaterial (cultural) assets is not too large and crystallised, can be a powerful drive to human progress and with this to the prosperity of regions and countries. IDs do not always mirror forms of a capitalism with a human face; however, in our view, when working at their best they 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.

4. AN OVERVIEW OF THIS *HANDBOOK*

This *Handbook* comprises 53 chapters divided into four parts and 11 sections. Part I on the 'Origin and theories of industrial districts' includes three sections and looks at the historical context of the ID, both as a conceptualisation and as an empirical phenomenon. Section 1 on 'early industrial districts' provides an economic historical assessment of IDs: the genesis of the contemporary phenomena cases, ID processes and their relation with regional waves of industrialisation. Section 2 considers IDs 'from their British roots to the Italian revival', tracing an essential history of thought on IDs and touching upon key points in the past

and contemporary debates. Section 3 comprises scholarly views on the IDs as ‘a meeting ground for the social sciences’, including disciplinary approaches, like economics, business science, economic geography and sociology.

Part II on ‘The nature of industrial districts’ is devoted to a more general discussion on the relations between the local forces of trust, entrepreneurship and cognitive proximity, and the district processes of industrial and local development. Section 4 looks at the ‘socio-cultural and institutional aspects’; Section 5 explores the importance of ‘knowledge, learning and creativity’ in the current dynamism of IDs.

Part III on ‘The empirical investigations on industrial districts’ focuses on contemporary empirical investigations on IDs. Section 6, on mapping and measuring the ‘empirical relevance’, presents the methodology to map IDs by means of statistical data, and applications in three European countries. Section 7 concentrates on ‘the Italian experiences’ whilst Section 8 looks at the ‘the experiences in other industrialised countries’, including a survey on the European countries and specific analyses of France, Spain and Scandinavian countries, Japan and the US. The chapters not only provide evidence of the contemporary varieties of IDs and ID processes across developed countries, but also contribute with different interpretative approaches somehow mirroring the empirical differences. Section 9 explores IDs in ‘the experiences in emerging and developing countries’ and presents interesting experiences in countries undergoing a process industrial development and upgrading. This section includes Latin America, China, India and two contributions presenting more general trends and projections.

Part IV on ‘Globalisation and industrial districts’ concludes with contributions devoted to shedding light on the contemporary challenges faced by IDs and the role and dimensions of policy support. Section 10 discusses globalisation, technology, adaptability and institutional responsiveness as the key ‘global challenges’ that IDs have to face. Finally, Section 11 on ‘public policies and industrial development strategies’ addresses the key issue of what role is necessary for public policy to sustain IDs and related forms of local and industrial development.

