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LOCAL CLUSTERS IN GLOBAL VALUE CHAINS

LINKING ACTORS AND TERRITORIES THROUGH MANUFACTURING AND INNOVATION

Edited by
Valentina De Marchi, Eleonora Di Maria and Gary Gereffi



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2 Italian industrial districts today

Between decline and openness to global value chains

Elisa Giuliani and Roberta Rabellotti

Introduction

In 1979, Giacomo Becattini resuscitated the Marshallian industrial district (ID) concept[1] to explain the rapid process of industrialization during the 1970s in the central and north-eastern parts of Italy. In these areas, numerous spatial agglomerations of small and medium-sized enterprises (SMEs), specialized in different phases of the same production process, had achieved economies of scale comparable to those enjoyed by large firms. In particular, Becattini emphasized the social dimension of the ID, stressing the co-existence of populations of firms and the local community of people, and a shared homogenous system of values and norms, which was the ground for trustful interactions.

During the 1980s, the Italian industrial growth model based on IDs was widely celebrated in the international literature, and was often presented as an answer to the crisis in the capitalist system based on large companies (Piore and Sabel, 1984). IDs or as the international literature describes them, industrial clusters,[2] proliferated also outside of Italy, with many agglomerations of small, specialized firms being established around the world.[3] The concept rapidly became relevant for policy, and in the early 1990s several programs were initiated across Europe, mainly in Italy, Spain and Denmark, alongside some examples in the USA, to facilitate the emergence and sustain the development of clusters (OECD, 2007).

Up to the early 1990s, Italian IDs displayed remarkable economic dynamism in sales, exports, employees and profits, and certainly played a central role in the growth of the domestic manufacturing system (Signorini, 2000; Brusco and Paba, 1997). However, in the succeeding years, which coincided with a general downturn in the Italian economy, IDs have been at the centre of a lively economic and political debate in which the widespread enthusiasm of the past was replaced by increasing and diffused criticism (OECD, 2014). According to many scholars, districts are one of the main culprits of Italy's industrial decline, unfitted to face the challenges of globalization and the information and communication technology (ICT) revolution, due mainly to the *dwarfism* of their manufacturing firms, and their specialization in traditional industries (among others see Onida, 2004; Nardozzi, 2004; Ramazzotti, 2010).

The debate on the contribution of IDs to the most recent downward trends in the Italian economic system has been fuelled by a rich empirical literature, which explores the many structural changes occurring in the districts. In this context, Rabellotti et al. (2009) argue that currently, Italian IDs are undergoing radical transformations, and are evolving towards new industrial organization forms: some districts are experiencing deep crisis, while others are successfully facing globalization and increased international competition.

The aim of this chapter is to document these changes by surveying the numerous empirical studies in the literature, and by discussing the challenges that Italian IDs must overcome to

survive and prosper in a highly competitive global market. Based on the available evidence, this chapter discusses how the emergence of aggressive international competitors in low-cost countries, the stagnation of "traditional" target markets (i.e. the domestic and EU markets), the growing demand from emerging countries, rising technological complexity, and the increasing organization of production along global value chains (GVC) are influencing Italian IDs' strategies and outcomes.

The fading of the district effect

Several empirical studies confirm the existence of a district effect tied to the presence of ID-level external economies and spillovers, and consisting of superior local availability of knowledge, technology, skilled labour, specialized suppliers and other resources (Fabiani et al., 2000; Cainelli and De Liso, 2005). Thus, most research on IDs conducted before and/or during the 1990s suggests that district firms outperform non-district firms in terms of returns on investment and equity, value added per worker and propensity for product and process innovation.

However, some recent studies find that this difference in the performance of district and non-district firms holds (Foresti et al., 2008) only in the case of urban clusters whose firms still appear to benefit from a *district effect* (Di Giacinto et al., 2014).[4] Di Giacinto and colleagues show that Italian districts generate local productivity advantages which are appropriated more effectively by less efficient firms, while the externalities arising in cities are exploited better by more efficient enterprises. In the same vein, Iuzzolino and Menon (2011) study clusters located in the Northeast of Italy, and test for the existence of two different types of *district effects*. For 1993 to 2006, they find a slightly positive agglomeration effect for quality of infrastructures, business services and human capital across all cluster firms, and over the whole period 1993–08, a negative specialization effect for knowledge spillovers, specialized labour pool and availability of high-quality inputs exploitable only by firms in the main sector of cluster specialization. After this, from 2006 the effect becomes zero or slightly negative. A consequence of this finding of decreasing importance of the district effect is increased diversity of performance (i.e. employment and firm profitability) both within and between clusters. This diversity is the focus of the next section.

Diversity within and between districts

Diversity among district firms

Firms in Italian districts have proven to be far more heterogeneous – in terms of both size and performance – than conventionally is envisaged (Bronzini et al., 2013). Compared to larger firms, small firms (with turnover of less than EUR 10 million) are more fragile and less capable of coping with globalization and innovation challenges (Intesa Sanpaolo, 2013; Bronzini et al., 2013). Many of these firms have been unable to survive in the new highly competitive global context, which is confirmed by their recent massive exit from the market. According to Confindustria (2013), in Italy 55,000 manufacturing companies closed between 2009 and 2012, with small enterprises in the Northeast where many districts are located being the most affected in the country. Among sectors, the worst affected were pharmaceuticals, textiles and clothing, and leather. Empirical analysis confirms that in the north-eastern districts medium-large firms (with turnover greater than EUR 50 million) are faring better than smaller firms (Iuzzolino and Menon, 2011). The increasing importance of medium-large firms is also made evident by the

emergence of leading firms in some districts, such as Tod's in the footwear sector, Luxottica in the optical industry, Zegna in the luxury wool sector and Riello, which is specialized in heating equipment. Many of these firms are still family-run and find IDs to be a natural environment for their development (Colli, 2005).

Business groups, which are groups of firms with the same ownership but which are legally independent, often populate districts (Iacobucci and Rosa, 2005). Apart from minimizing transaction costs (Williamson, 1979), in Italian districts the creation of business groups often is motivated by the need to resolve conflicts within families arising from generational changes, and a desire to absorb new human resources without losing ownership control. This results in new linked enterprises, often owned by former employees of the group's leader (Cainelli et al., 2006). Groups can be created also to reduce transparency, often for fiscal reasons because complex groups are more likely to be involved in tax evasion. Cainelli et al. (2006) show empirically that groups are more widespread in district than in non-district areas, and can be considered an organizational strategy adopted by many enterprises to grow, expand and diversify their economic activities. The increasing number of business groups is forcing a reconsideration of the average dimension of Italian firms. According to Cainelli and Iacobucci (2005), if business group is the economic unit of analysis, this increases the average size of Italian firms from 43 to 156 employees. Thus, the available empirical evidence shows there is wide diversity among cluster firms depending on their size, performance and patterns of local and global involvement described in detail below, which has consequences for the distribution of capital, knowledge and market power in the district.

Diversity among districts

District-level performance varies widely across industries: mechanical IDs have been one of the best performers with steady positive trends in employment over the period 1993–2008; in contrast "Made in Italy" IDs specialized in the production of clothing and shoes, have registered more negative trends, especially in employment (Accetturo et al., 2013).

There has been a tendency also for IDs to change their specialization over time. There is increasing systematic evidence that countries and regions are more likely to diversify into sectors that are closely related to their traditional activities (Hidalgo et al., 2007). Diversification in related sectors is often a path-dependent process, arising from the re-use and adaptation of existing technological, knowledge, organizational and commercial capabilities and assets. This movement of firms and clusters into new but often related industries is described in the GVC literature as chain upgrading (Gereffi et al., 2005).

In response to the widening of market opportunities to include new countries, a number of Italian districts have experienced a spontaneous shift in specialization from final goods such as clothing and shoes, which often are characterized by cost-based competition, to capital goods such as clothing and footwear industry machinery. In this case, technological capabilities provide competitive advantage over competitors in emerging markets. Between 1991 and 2001, 21 Italian IDs changed their industry specialization with one-third moving into the mechanical industry (Rabellotti et al., 2009). Diversification in a related field is common. Some examples of specialization shifts include Schio and San Bonifacio (Veneto) previously specialized in textiles are now producers of textiles machinery, and Canelli which is located in the core wine region of Piedmont is now a centre for the production of machinery for the wine industry, while Mirandola (Emilia-Romagna) has shifted from textiles to the mechanical and biomedical industries.

The internationalization of IDs and their connections to global value chains

IDs and exports

Clusters traditionally have been important contributors to Italy's international trade performance. In industries such as jewellery, glass and musical instruments, IDs account for more than 90% of Italian exports, and in the textile, clothing and leather sector they account for more than 80% of exports (ISTAT, 2015). Overall, Italian ID firms' exports account for approximately 30% of total national manufacturing exports (ISTAT, 2015) with certain IDs accounting for very significant world market shares, for example Sassuolo with 27% of world exports in ceramic tiles, Prato with 4% of world textile exports and Arezzo which contributes 3.5% to world jewellery sales (Fortis and Carminati, 2009).

Since the 1990s, IDs exporting firms have progressively upgraded the quality of their products in an effort to avoid direct competition with emerging market production. Initially, this strategy was successful, and firms were able to apply mark ups to the marginal costs of many products and in many destination markets (Monti, 2005). The Biella cluster is an example here. Following a severe crisis characterized by the exit of a high number of small firms, a few local companies assumed leading roles in the GVCs coordinating local and external suppliers. They then reoriented their production towards very high-quality luxury fabrics such as cashmere, alpaca and vicuna, and increased their investments in marketing and branding.

However, a study by Giovannetti et al. (2013) shows that China is challenging Italy even in its prime market segments. The Italian IDs most at risk though, are those specialized in low-tech, traditional goods whose quality differs very little from the offers from low-cost competing countries such as China. Since patterns of national export specialization tend to change slowly over time, Italy's vulnerability to China appears unlikely to diminish in the near future. Bugamelli et al. (2010) show that the pressure of Chinese competition is stronger in low-skill sectors such as textile, apparel, leather goods and furniture, and is highly heterogeneous across firms depending on their productivity levels. The competition is more severe for less productive firms, which presumably, are less capable of responding to this pressure by applying product upgrading and specialization strategies. At the same time, China has been pursuing a strategy of upgrading in order to produce higher quality items for export, which makes it an even tougher competitor for Italy. Thus, the challenge is to do more than quality up-scaling.

IDs involvement in global value chains

For district firms, connection to GVCs can be a viable strategy to revamp districts, and avoid their slow down. As discussed in the Introduction to this book, production increasingly is organized along value chains, which cross countries. One or more lead firms, typically multinationals corporations with considerable market power, usually coordinate these GVCs. IDs' involvement in GVCs is a relatively new phenomenon; the economic success of Italian IDs originally was based on deep specialization along a value chain confined predominantly within a geographically bounded area. However, in the current global competition landscape, many firms have extended their supply chains beyond district borders (Belussi and Sammarra, 2010; Chiarvesio et al., 2010; De Marchi et al., 2014; Rabellotti, 2004).

The involvement in GVCs of Italian clusters differs depending on the characteristics of their firms, and their competitiveness strategies. Based on these differences, we propose

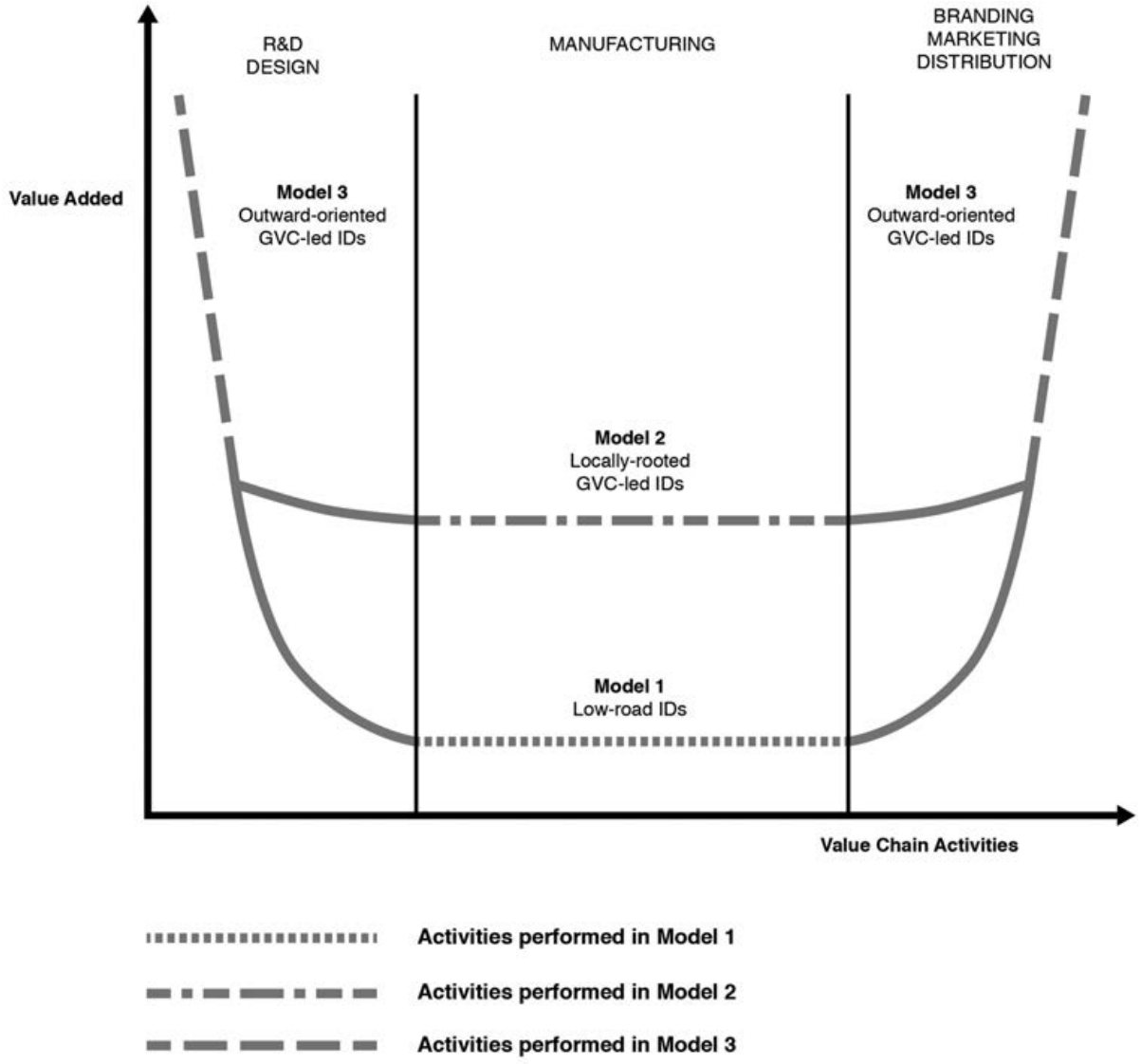


Figure 2.1 Stylized models of ID-GVC involvement in Italy
Source: Authors.

three stylized models of ID-GVC involvement which we consider to characterize Italian IDs: (1) *Low-road IDs*, (2) *Locally rooted GVC-led IDs*, and (3) *Outward-oriented GVC-led IDs* (see Figure 2.1). We discuss these models in the context of the value chain activities performed within the IDs, and in terms of the value-added generated at district level. We conjecture that the relationships between these factors take the form of the Stan Shi's smiling curve. In what follows, we describe the three models and their characteristics.

Model 1: low-road IDs

Low-road IDs models include districts characterized by a predominance of small and rather inefficient firms, mainly undertaking low-value added manufacturing that the literature suggests has been negatively affected by the fading of the *district effect*. Firms in low-road IDs have reacted to international pressures mainly by outsourcing large parts of their production

to countries with comparative advantage in labour costs (Humphrey and Schmitz, 2002). For instance, Amighini and Rabellotti (2006) found that some footwear districts in the south of Italy, specialized in low-price market segments, had outsourced a large proportion of their intermediate production abroad. This left very few production activities within the district, and few possibilities for adding value due to the very low investments in branding and design by district firms. The pressure of cost-based international competition has caused these districts to suffer a general decline the numbers of both employees and firms. In some cases, this has resulted in a crisis that has threatened the survival of the district. For instance in Barletta (Apulia) domestic production has been dismantled and transferred to lower labour cost countries on the other side of the Adriatic Sea.

In a comparative analysis of three jewellery clusters, De Marchi et al. (2014) describe Vicenza as a district competing mainly on cost: "the majority of firms [in Vicenza] are still unbranded subcontractors, which are very hard hit by the crisis. These firms based their competitive advantage on economies of scale, rather than product differentiation" (p. 871). De Marchi et al. (pp. 879–80) say also that:

> there is evidence that during the recession, some firms reacted by "downgrading" their production – e.g. substituting silver for gold (not always successfully because this shift requires new and different competences than the use of gold) – while others engaged in partial upgrading, improving their products and processes but not performing higher value-added activities like design, marketing and retail.

In general, involvement in GVCs by low-road clusters has been less than successful, and resulted only in specialization in low value-added manufacturing (see Figure 2.1). Also, due to the strong cost competition from suppliers located in developing countries, in some cases this has resulted in reduced domestic production. Thus, in this type of district, GVCs have had a negative impact on the ability of district firms to capture value-added, and has favoured lower cost competitors.

Model 2: Locally rooted GVC-led IDs

This model is characterized by a concentration of medium to large-sized firms, which are highly embedded in their districts via backward and forward linkages with other local firms and organizations. These companies consider the local supply chain as key to their business success because it facilitates quality, lead times and easy monitoring and control, none of which can be guaranteed by distant suppliers (Buciuni and Pisano, 2015; Capasso et al., 2013). However, several local ID firms have ceased to undertake high value-added activities related to design/product development, or branding and marketing (or both), and have opted to become manufacturing suppliers to larger Italian and/or international luxury brands which retain most of these high value-added activities (Rabellotti, 2004).

An example here is Riviera del Brenta district where several local companies have become subcontractors of Italian and international luxury brands that offer a relatively safe high-end final market for these district firms (Rabellotti, 2004). However, Riviera del Brenta is not just a supplier to international firms; some have invested in the district by setting up new production facilities or acquiring incumbent firms. The first of these investments involved Louis Vuitton Moët Hennessy (LVMH) which acquired Rossimoda, a local flagship company. Next, Chanel, Yves Saint Laurent, and Dior established headquarters for shoe production in the area. Through their activity in high-end markets, many Riviera del Brenta firms have maintained

most of their supply relations within the district which has allowed them to monitor quality and lead times – key competitive factors in the context of luxury goods and other high-end products. Riviera del Brenta is considered an interesting location for GVC lead firms because the local system has proven capable of improving its production capabilities, dealing with challenging requests from global designers and leveraging local ecosystem in order to compete.

The Livenza furniture district cluster, which is located in the Northeast of Italy, has adopted a similar model. The Livenza district includes the largest IKEA supplier in Europe (Buciuni and Pisano, 2015). This company is supported by a large network of local suppliers, and is responsible for connecting global design knowledge to local sources of manufacturing and technical production know-how. Another interesting case is the hosiery district of Castel Goffredo (Capasso and Morrison, 2013) where ID firms' involvement in GVCs has resulted in improved production capabilities, and higher product quality, which has allowed local firms to enter new and more demanding global markets.

Compared to *Low-road IDs*, this model currently generates more value added at district level (see Figure 2.1). However, whether this strategy of maintaining only manufacturing and giving up higher value-added activities will endanger the survival of these districts over the longer term, it remains to be seen since other countries are rapidly acquiring highly skilled production capacity at lower costs.

Model 3: outward-oriented GVC-led IDs

This model of ID-GVC connection is characterized mainly by the presence of medium to large-sized firms, which are strongly outward-oriented. These firms privilege international or otherwise extra-ID commercial, supply, and knowledge linkages, over local linkages with other district firms and/or organizations. Some of these firms have grown by establishing business groups; others have been acquired by foreign multinational enterprises and/or are strongly embedded in GVCs.

In these types of districts, firms compete in high-end, specialized, or niche markets, they globally outsource most of their manufacturing activities but they keep the high value-added activities such as R&D, product development, design, branding and marketing within the district boundary. Their outward connections are oriented towards efficiency-seeking on the production side (see Figure 2.1). Given that not all the firms in IDs are capable of becoming prominent actors, this model risks generating a disconnection between the largest ID firms and the local ecosystem (De Marchi and Grandinetti, 2014).

A case that nicely describes this model is Montebelluna (Veneto), a district focusing on production of sportswear including ski boots. The largest firms offshore production to lower cost countries, and focus their district activities on R&D, marketing and distribution. Sammarra and Belussi (2006, pp. 556–557) emphasize the relevance of external knowledge transfer through the multinational enterprises in Montebelluna:

> a fundamental mechanism that fostered the process of acquisition of external knowledge is related to the entry of foreign multinationals in the Montebelluna district through the acquisition of district companies . . . [because multinationals] are generally prone to facilitate knowledge transfer within their own network of foreign subsidiaries, fostering their functional upgrading through the transfer of product, process and management skills and innovations between the units of their transnational network.

Similarly, the Belluno eyewear district includes Luxottica which has become the world's largest eyewear group, and a few other business groups that are vertically integrated or

connected to an international network of suppliers (De Marchi and Grandinetti, 2014). De Marchi et al. (2014) identify a similar pattern of GVC involvement in the jewellery industry in Arezzo (Tuscany). The cluster survived a major crisis following the decision of the district lead firm to delocalize a considerable part of its manufacturing activities and its supply chain to Jordan and other developing countries.

In these types of districts, the challenge clearly is maintaining and sustaining local engagement to avoid the risk of local firms and GVC lead companies progressively relocating their business activities, and separating from and negatively affecting the ID. Empirical evidence in McCaffrey (2013) on textile and clothing Italian IDs shows that in some cases, leading companies have reduced their local subcontracting arrangements and their engagement with local organizations, and increasingly are relying on external links to access knowledge.

To sum up, these three models of ID-GVC connection include *low-road IDs* mainly specialized in low value-added manufacturing activities; *locally rooted GVC-led IDs* focusing on higher value-added manufacturing and *outward-oriented GVC-led IDs* concentrating in R&D, design, marketing, branding and distribution phases. We note, first, that the global dispersion of activities is not always accompanied by higher value added at district level as shown by *low-road IDs*, which have outsourced manufacturing without being able to move up the value chain towards design or marketing. Second, to achieve higher value-added requires district firms to make the right strategic choices about markets and the potential for generating value-added. Escaping the low cost-low value-added trap seems to be one reason for exploiting GVC connections in order to achieve long-term development.

Conclusions and policy recommendations

The empirical evidence on recent developments in Italian IDs shows that they have reorganized their activities strategically and in different ways. They are very different from the 1970s and1980s IDs. Our analysis (see Figure 2.1) shows that not all ID models are equally successful. That is, the global dispersion of activities does not result in higher value-added production at the district level. Many districts have chosen the route of downgrading of their activities and searching for ways to reduce costs. However, these strategies are unlikely to be successful since the global competition scenario is becoming stronger.

The strategy of escaping the low cost-low value-added trap seems a more promising development strategy, and firms in outward-oriented GVC-led IDs are exploiting their GVC connections to favour their long-term development. These types of firms are more strategic and more forward-looking, and have invested rather than divested, even during crises. They have responded to the uncertainty of a rapidly changing global production and innovation landscape, by devoting resources to activities – such as R&D, or design – which rarely yield immediate results, and need constant, steady firm-level commitment. They have challenged the dwarfism characterizing ID firms, and have grown, in some cases – for example Luxottica; they have become the international leader in their industry. This is clearly the right direction; however, lack of or badly designed policies are not supporting these firms and these IDs. This might be the reason why many IDs chose the easy route and have become low-road IDs, or locally rooted GVC-led IDs.

There are several implications for policy that can be derived from this chapter. First, IDs are changing; they are complex adaptive systems made up of different components with evolving functions and interrelationships. The population of the firms in a district is likely to change further due to high entry and exit dynamics. Martin and Sunley (2011, p. 1300) point out that: "[districts] come and go; they emerge, grow, may change in complexion and

orientation, may undergo reinvention and transformation, and may eventually decline and even disappear. In short, they evolve." Policy-makers need to be aware of and take account of these changes. They must abandon any romantic notions of Italian IDs, and avoid designing policies inspired by earlier Marshallian ID models. These former ID models and the macro-economic conditions that prevailed in the 1970s and 1980s no longer exist. Italian IDs can no longer compete on costs, this is not viable and will result only in a race to the bottom, which the experience of many developing countries shows is not conducive to a sustainable economic development process.

Policy-makers should design long-term industrial policies; these have been lacking in Italy for at least two decades (De Blasio and Lotti, 2008, Onida and Viesti, 2016). These policies should identify potential development paths for IDs that recognize and enable transformations to industry specializations, and facilitate internationalization and GVC involvement. These efforts must be coordinated by national government, which must participate directly in an overall, country-level industry strategy. Policy-makers need to be better informed about strategic industries, and districts that are in need of support or incentives. This would be in the spirit of mission-oriented policy making. However, it will require policy-makers to have adequate levels of knowledge and skills, and in Italy, this cannot be taken for granted. A recent Bank of Italy study states that:

> policy-makers have limited information about the development potential of industries and other economic activities, and moreover, they often follow the specific interests of corporative groups, thereby biasing the allocation of public funds. By so doing, they run the risk of taking decisions that might hamper rather than promote economic growth.
>
> (Accetturo et al., 2013, p. 30, our translation)

Finally, although this Chapter has focused on Italian IDs and their evolution towards connection to GVCs, we believe that this discussion and the proposed ID organizational models could apply to other European countries facing similar challenges, which includes most of continental and Southern European countries. Given the decline suffered by most of these economies, policies able to support and promote the co-evolution of districts and GVCs are strongly needed. The objective could be to design policies that would strengthen IDs' external connections (including across different clusters worldwide) and sustaining local firms' insertion in GVCs. This would increase SMEs' market shares in international markets, and foster their (often too weak) levels of internationalization. To achieve this will require the development of programs that would help local firms to meet quality standards, and certification requirements, which often are essential for connection to GVCs, and help to identify new market opportunities and new market segments. Support for domestic medium and large firms to move to the head of GVCs in order to capture the highest value segments is crucial. Gereffi and Sturgeon (2013, p. 355) conclude that: "GVC-oriented industrialization and GVC-oriented industrial policies appear to be elements of the current industrial landscape that are here to stay."

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Notes

1 Recall that in the late 19th century in England, Alfred Marshall (1920, p. 221) was the first to introduce the concept of industrial district defined as a "concentrations of small businesses of a similar character in particular localities", taking advantage of external economies and industrial atmosphere.
2 In this chapter, the terms cluster and district are used interchangeably.
3 Pyke and Sengenberger (1992) present a collection of empirical studies on clusters in Denmark, Germany, Spain and Canada, among others. For empirical cases in developing countries, see van Dijk and Rabellotti (1996). Becattini et al. (2009) provide a recent survey of empirical studies on clusters within and outside Europe.
4 A possible reason why district effects have faded recently might be related to Audretsch and Feldman's (1996) intuition that local knowledge spillovers matter most during the early stages of an industry development cycle, and less so for mature clusters when technology is consolidated and there is less scope for innovation.

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