

Full Research Article

Organisation as a key factor in Localised Agri-Food Systems (LAFS)

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Abstract. Most studies of Localised Agri-Food Systems (LAFS) focus on the localised concentration of members and firms, and pay less attention to organisational factors, particularly those of an exogenous nature. This paper focuses on the role of organisation in a LAFS, assessing the efficacy of EU organisational measures aimed at strengthening the concentration of supply from the recent CAP reform 2014-2020. The paper has three sections. Part One describes the evolution of the concept of LAFS. Part Two examines the leading role played by institutions in organising relationships between firms in a LAFS. The example provided is that of the measures affecting the organisation of supply introduced by the recent CAP reform, 2014-2020. It makes particular reference to the *Distretto del pomodoro da industria - Nord Italia* ('Industrial Tomato District - Northern Italy'). Part Three describes how organisational factors can lead to the creation of a LAFS, while the criterion of proximity is necessary but not sufficient.

Keywords. Agricultural policy, organisation, contractualisation, agri-food, place.

JEL codes. Q18, L23, O18

1. Introduction

Various concepts can be used to interpret the economic development of a specific area. These include: Marshall industrial districts, localised production systems (LPS) and clusters. These three models have three common characteristics:

1. external economies; these are determined by the proximity of players in the production system;
2. knowledge, in other words, the skills and know-how of individuals and firms, is not transferred outside;
3. cooperative relationships exist between firms and the market.

The concept of 'industrial district' was introduced in the 19th century by Marshall (1890), who analysed the advantages of external economies for small enterprises localised

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in a specific area. He found that external economies are generated by the local concentration of small firms and by the presence of a plurality of actors linked through production and trade, and thus recognised the role of the social and institutional environment of the firm (Cresta 2008). Marshall's work resulted in the creation of a new scenario for local development policies, which can be used to create favourable conditions for local firms. External economies, in fact, result from industrial and organisational resources in a given area, as well as intangible variables relating to un-codified innovation and the quality of social capital. Mutual trust between clients and suppliers of semi-finished goods, worker know-how and lower informational asymmetry between supply and demand are all inherent elements. Building on Marshall's work, Becattini (1989) more recently defined an industrial district as "*a socio-economic entity characterised by the joint presence in a circumscribed area, set by nature and history, of a community of people and population of firms*"¹. Accordingly, for both Marshall and Becattini, the local factors underpin historical relationships that assist in the development of external economies that lead to a positive environment which strengthens the competitive capacity of firms, mostly small, and system.

The second concept, Localised production systems (LPS) (Courlet and Pecquer 1992; Courlet *et al.* 1993; Courlet 2002), is widely agreed to be somewhat similar to Marshall's districts. LPS can be defined as a set of firms, sufficiently near to each other and reciprocally linked, which produce goods directly or indirectly for the same end market. LPS are characterised by the geographical and/or organisational proximity of member firms and by a common historical or cultural link. This affects the role of firm activity and resources in the production system, and in part explains the strength of the ties and trade between internal activities and resources and their reproduction and evolution over time.

The concept of cluster is also widely considered to be a reworking of industrial districts. Porter (1990) finds that the competitive advantage of an area lies in the close link between area and economy, and thus the presence of a cluster of firms localised in a restricted area. Porter identifies clusters as "*geographic concentrations of interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition.*"

These three approaches have all been used in agri-food economics to describe and classify the production dynamics of the territorial groups of small agricultural and food firms².

An example is the concept of localised agri-food systems (LAFS), which appeared in French literature in 1996 as SYAL, or *Systèmes agro-alimentaires localisés*. These systems are defined as "*production and service organisations (agricultural and agri-food production units, marketing, services and gastronomic enterprises, etc.) linked by their characteristics and operational ways to a specific territory. The environment, products, people and their institutions, know-how, feeding behaviour and relationship networks combine within a territory to produce a type of agricultural and food organisation in a given spatial scale*" (CIRAD-SAR 1996; Muchnik and Sautier 1998). The key words in this definition are 'organisation' and 'specific territory'.

¹ The recent volume edited by Becattini, Bellandi and De Propris (2009) contains a series of studies on the evolution of the concept of industrial district and is of particular interest.

² There is a great deal of Italian literature on agricultural and agri-food districts, including Iacoponi (1990); Favia (1992); Cecchi (1992); Becattini (2000); Sassi (2009); Brasili and Marchese (2012).

Ten years later, Muchnik (2006) updated the definition of LAFS describing them as “*models of agri-food development based on the valorisation of local resources, more respectful of the environment, more respectful of diversity and agri-food product quality, more respectful of dynamics of local development and today’s challenges in the countryside*”. The two definitions, ten years apart, highlight the evolution in the concept of LAFS, resulting from attempts to theorize values expressed in the contexts in which LAFS operate (Courlet 2002; Requier-Desjardins *et al.* 2003; Correa *et al.* 2006; Boucher 2007; Perrier-Cornet 2009; Muchnik 2010; Requier-Desjardins and Colin 2010; Fournier and Muchnik 2010; Sforzi and Mancini 2012; Torres Salcido and Muchnick 2012). Initially, by focusing on spatial proximity of players in the production model, LAFS production paradigm was similar to cluster theory (Fournier and Muchnik 2010). But more recently, the concept has been more closely linked to the local characteristics of products, people, institutions and social relationships that connect food and place. This research focused on the relationship between LAFS and the qualification of local products, where collective action often seeks the Designations of Origin (DO). LAFS is also a model that is capable of evolving according to the emergence of new requirements for rural development, such as sustainability, multifunctionality and product quality etc. LAFS is thus also “*a process under construction, a spatial area comprising relationships between players sharing interests in one or more rural agri-food sectors*” (Boucher 2007). This definition, among other things, also helps to explain why the concept of LAFS has a dual interpretation. On one hand, a LAFS is a physical object; a group of agri-food activities with a local collocation. At the same time, it also constitutes an approach or method of analysis of development processes for local resources that is useful for the formulation of development policy (Muchnik *et al.* 2008; Muchnik 2009; Fournier and Muchnik 2010; Fourcade *et al.* 2010).

The state and other institutions play a key role in development processes and can offer incentives for firm aggregation in several ways. They can provide infrastructure for connections to markets and promote and regulate types of organisation through which firms can interact formally or informally within the system. In some cases, institutions are so deeply involved in the functioning and organization of LAFS that they constitute the very “matrix” (Courlet *et al.* 1993; Aubert *et al.* 2001).

Interventions on the part of the European Union (EU) are particularly relevant. Since the early 2000s, the EU has regulated supply and distributed support to various supply chains such as tomatoes, oilseeds, fruit, vegetables and oil. This has impacted on local areas, where producers are encouraged to organise. Today, support is given to all sectors, as border protection and price support is no longer available, and competition is a global phenomenon. Today’s competition plays out between production systems, rather than between firms, as was the case in the past. The models in the recent reform of Common Agricultural Policy 2014-2020³ are contract systems, Producer Organisations (PO) and Interbranch Organisations (IBO). These organisations enhance a sense of belonging to area and have a clear impact at the local level as they tend to act in the joint interests of their members. Consequently, this paper analyses the role of public and private institutions in the formation of a LAFS. In fact, the interfirm organisation underpinning the creation and develop-

³ See Regulation (EU) N. 1308/2013 of the European Parliament and the Council of 17 December 2013 establishing a common organisation of the markets in agricultural products and repealing Council Regulations (EEC) N. 922/72, (EEC) N. 234/79, (EC) N. 1037/2001 and (EC) N. 1234/2007.

ment of a LAFS requires governance to be able to lead member firms to establish reciprocal relationships in the space where they are located (Benko and Lipietz 1992).

The paper is divided into three sections. Part One describes the evolution of the concept of LAFS. Part Two examines the leading role played by institutions in organising relationships between firms in a LAFS. The example provided is that of the measures affecting the organisation of supply introduced by the recent CAP reform. It makes particular reference to the *Distretto del pomodoro da industria – Nord Italia* ('Industrial Tomato District – Northern Italy'). Part Three describes how organisational factors are a key determinant, whereas the proximity factor is a necessary but not sufficient condition.

2. Area and organisation in the formation of LAFS

A good number of the many success stories of localised agri-food systems concern concentrations of small agri-food firms that process local agri-food products in limited areas (Perrier-Cornet 2009). The key dimension of the system is always the 'area', or the fact that the firms are physically close to one another, and this is what allows for the development of positive externalities thanks to the synergies of joint interest and information flows between firms (Requier-Desjardins and Colin 2010).

In comparison with other production sectors, agri-food systems present unusual characteristics that affect both product characteristics and the aggregation of firms. Raw materials, whether they are vegetable or animal, are living organisms which closely reflect the natural resources present in their production area and, in general, wherever they are found. The French term *terroir* is particularly useful to express the idea of place in agri-food economics. *Terroir* includes cultural and social aspects along with natural resources which affect the end agri-food products. A key aspect is *savoir faire*, or the knowledge and skills belonging to human resources in the area, as well as the synergy derived from sharing these. Through these interconnections, the characteristics, the history and the name of the agri-food product are closely linked to the place, and make up the reputation of the product as well as the place. The cultural and social value of local production and the role of collectivity in production know-how have given rise to a rich field of research in France. Since the 1980s, researchers (Sylvander and Lassaut 1994; Bérard and Marchenay 1995; Letablier and Delfosse 1995; Torre 2002) have studied the influence of place on agri-food products and especially typical or specialty products. Typical products feature three types of characteristic; the specific nature of local resources; the history and tradition of production and the collective dimension with the presence of shared local knowledge (Sylvander 1995; De Sainte Maire *et al.* 1995; Bérard and Marchenay 1995; Allaire and Sylvander 1997; Barjolle *et al.* 1998; Casabianca *et al.* 2005). In this light, place is the explanatory variable of the production model of a geographically concentrated set of firms.

LAFS success stories in underdeveloped and developing countries (Latin America and Africa) also tend to focus on the link between firms within a given area. In this case, the perspective is production models for local development policy (Bom-Konde *et al.* 1995; Cerdan and Sautier 1998; Boucher and Requier-Desjardins 2005a; Boucher and Requier-Desjardins 2005b; Requier-Desjardins *et al.* 2003; Mancini 2013).

Muchnik, Cañada and Torres Salcido (2008) widen the approach with their suggestion that the geographical area of a LAFS is not necessarily one continuous geographi-

cally bounded space⁴. It can also be an ideal reference area that is not spatially continuous, but divided, but which still constitutes a single entity on the basis of common identity reference points (Bonnemaison *et al.* 1999). This is important given that that production activities are often spread over different areas and the ‘localness’ of a LAFS is provided by a sense of belonging and the shared nature of interests of those taking part in social networks and economic organisations, which do not necessarily coincide with geographical boundaries. According to this approach, LAFS depends not on an area but rather on the system of relationships between firms, which may not lie within a single area.

Geographical proximity is a potential advantage of local concentration, but it is organisational proximity which gives a LAFS the dynamism necessary to meet global challenges (Rallet and Torre 2004; Torre 2000). This organisational proximity is enhanced by a sense of belonging and the common nature of interests. The LAFS can, in fact, be analysed as the outcome of cooperation between firms having common interests, localised in one area, which are organised and which agree on production and sales standards in order to gain market advantage over other producers who may or may not be in the same area and who do not follow the rules of the LAFS.

Geographical proximity is central to the coordination of members, and may or may not have local boundaries. It is necessary to establish the extent to which geographical limitations can be overcome without jeopardising the very foundations of the system, the sense of belonging and the common nature of interests (Rallet 2002)⁵.

Institutions play a key role as they can provide incentives for horizontal (locally-based) development by providing the regulatory framework which legitimises behaviours and choices. These horizontal relationships constitute the “organisation capital” of the LAFS, which gradually grows along with relationships between firms, with institutions taking an active role in their development (Aubert *et al.* 2001)⁶.

The set of regulations, the collaboration between LAFS members and the legal framework underwritten by local authorities, form the basis of the formal and/or informal governance of the LAFS, which is almost always informal, in relation to its aim (Torre 2000).

3. EU policy for the aggregation of agri-food firms

Direct EU intervention in farm prices was halted in 2003 by the Fischler Reform, (Johan and Swinnen 2008). In the reform of agricultural policy, 2014-2020, the novelty is that the responsibility for the support and stabilisation of agricultural income is given to three tools. These tools are in existence for some time: on the supply side, there are PO in all sectors and IBO which regulate relationships within the chain. The third tool is that of contract systems, namely the formalisation of trade negotiations and the regulation of relationships within the chain covering all affected parties. State intervention extends

⁴ See Fournier and Muchnik (2010) who write: “geographical proximity (“concentration”) is not a *sine qua non* for the development of a SYAL”; although they refer to different geographical scales for possible development later in the work, they do not consider a scale larger than a region.

⁵ The use of ITC has increased the area and changes the geographical form of organisation of firms (Cappellin 2000).

⁶ Examples of public institutional intervention include codes of specifications and the recognition of DO products. See also Menard (2000).

these contracts to all interested operators when signed by POs and IBOs representing the majority of operators in an area (Danel *et al.* 2012).

These innovative measures, which will strengthen the contractual position of farmers, are contained in CAP 2014/2020 and from Article 152 onwards in Regulation 1308/2013, 'Single CMO'. This alters the position of the EC with respect to supply aggregation, previously promoted and supported within the tight limits of certain CMO (hops, tomatoes, oilseeds, fruits and vegetables, and oil) in compliance with monopoly legislation. Today, POs and IBOs are extended to all sectors and are no longer primarily a tool for the distribution of aid, as they have been to date for most Member States. The clearest example are the Operational Programmes of the Fruit and Vegetable POs. From now on, POs and IBOs are to become a tool for organising supply, regulating the market and increasing the contractual power of farmers.

A report by the French Agriculture Ministry (Malpel *et al.* 2012) states that POs are associations of farm producers who come together to organise the trade of their produce, to obtain technical assistance, and constitute structures providing storage and processing, and supporting product promotion and enhancement.

Rio and Nefussi (2001) identify certain necessary conditions for setting up and developing IBO. These include the presence of operators active in the same product, or family of similar products, supply chain, in a defined region or country, who draw up a joint strategy on the basis of democratic decisions, hence benefitting from a broad delegation of power by public authorities.

Coronel and Liagre (2006) define an IBO as a private organisation recognised by the state which groups together upstream and downstream operators of the same supply chain. The aim is to make contractual policy choices that develop chain performance and protect its interests, while at the same time ensuring equality between members.

The definition by Rio and Nefussi includes an interesting aspect not mentioned by Coronel and Liagre in that it specifies that area is an essential factor for an IBO. This is necessary for a public authority to delegate power. Indeed, it is what makes it possible for the IBO to extend the contractual rules stipulated by the IBO to non-members of the same area. The IBO translates the strategy agreed upon by various supply chain actors into collective contracts regulating behaviour within firms and in the market. Such agreements form the guidelines for supply chain relationships and impose a hierarchical order, which is subordinated to the collective agreements expressed in contracts (Coronel and Liagre 2006).

Perrier-Cornet and Sylvander (2000) write that DO chains⁷ can be analysed as processes of economic cooperation in a given place, between operators organised amongst themselves by way of shared rules, leading to a collective comparative advantage⁸ from which each individual benefits. In this light it is clear why the success stories involving LAFS concern DOs and/or specialty products and why the entrepreneurs in these chains are often organised as IBOs. Such products can only be managed collectively, and the IBO is the most useful type of organisational structure for this (Giacomini *et al.* 2012). The

⁷ This is true of all typical products.

⁸ Torre (2000) notes that PDO producers who commit to meeting the standards imposed by a code of specifications are helping to build a localised system based on cooperative relationships and a joint strategy for product enhancement. For the link between *système localisé de production et d'innovation* and quality food production, see also Allaire and Sylvander (1997).

function of protecting the collective ownership of the food product by all members of the chain is often realised by an IBO constructing 'entry barriers'⁹. This can lead to a quasi-monopoly rent¹⁰, in the Marshall sense of the term in that supply chain operators share profits according to interbranch agreements.

Describing DO product supply chains (PDO, PGI, etc.) from the point of view of organisational structures along the lines of Williamson (1991), Perrier-Cornet and Sylvander (2000) classify them as a hybrid form¹¹. The chains are based on cooperation between members, and defined by long-term contractual relationships that do not affect their autonomy or ownership rights. Williamson finds that in hybrid forms relationships between parties are regulated, or rather governed, by principles of authority, and some decision making powers are transferred to third party institutions¹². In short, hybrid forms have the function of mediating between the market and entrepreneurs who have entrusted to themselves the governance of the collective interest resulting from the relationships developed in the relevant area.

Perrier-Cornet and Sylvander note that for DO products, and in general for all LAFS where there is governance capable of promoting and defending collective interests, the third party institution to which power is entrusted could be the IBO. The institution is, in fact, required to mediate between operators in the various phases and also directs planning of output in terms of quality and quantity; it produces information on company behaviour within the chain and on market trends, promotes trading partnerships and protects chain interests with regard to public institutions and competitors. It can also activate entry barrier mechanisms.

Accordingly, in this scenario, the relationships along the chain are concretised in contractual relationships underpinned and mediated by interbranch agreements. These are the main functions of the IBO which, ultimately, act as collective contracts that can intervene in numerous areas: adapting supply to demand, fixing sales terms through example contracts, developing criteria and quality control procedures, gathering and transferring information on market trends, and promoting and valorising products.

Trading relationships between firms are regulated by formal or informal contracts, but the collective interests implicit in the chain relationships, especially where strengthened by the physical proximity of firms, encourage the chains to organise and adopt rules imposed on its individual links through some sort of hybrid organisation, such as an IBO.

For example, by way of Reg. No. 261/2012¹³, the EC recently intervened to prevent a milk crisis like the one experienced in 2009. This states that formal written contracts strengthen the responsibility of chain operators and raise awareness of the importance of market signals, improve price transmission and match supply to demand, as well as pre-

⁹ Reputation or name is the real common good of PDO products, and belongs to the collectivity.

¹⁰ For PDO products this can be seen as profit from local quality and as additional income from the local 'anchoring' of production (Perrier-Cornet and Sylvander 2000).

¹¹ Hybrid structures are between the market and an organisation (Williamson 1991) and consist of 'governance structures' which manage transactions. They are characterised by being able to exploit goods owned by autonomous members, without this leading to a single integrated firm (Menard 1997).

¹² See Menard (1997), and for governance of 'hybrid organisations' of DO supply chains see Raynaud and Sauvée (2000).

¹³ Regulation (EU) n. 261/2012 of the European Parliament and of the Council of 14 March 2012 amending regulation (EC) n. 1234/2007 of the Council as regards contractual relations in the milk and dairy products.

venting unfair competition. In order to ensure a fair standard of living for milk producers through strengthened contractual power, the EC assigns POs the task of negotiating terms, including prices, with dairies, whilst IBOs are given the responsibility of regulating the supply of PDO and PGI cheeses. The EC also emphasises that IBOs ‘*can play a useful role in facilitating dialogue among the various stakeholders in the supply chain and in promoting best practice and market transparency*’, and encourages Member States to encourage all interested parties to become members of an IBO.

4. The Role of EU Policy and the *Distretto del pomodoro da industria – Nord Italia*¹⁴

Industrial tomato production and processing have been carried out in the provinces of Parma and Piacenza¹⁵ in Northern Italy for over a hundred years. Indeed, this activity has been rooted in agricultural and industrial innovation and widespread dissemination and training since the early years of the 20th century. In these two provinces, and nearby areas of the Po plain, a scientific approach to farming was popularised among farmers, and training and services to farmers were promoted by local institutions. A noteworthy example is that of¹⁶ the *Stazione Sperimentale delle Conserve Alimentari* (SSICA) (<http://www.sica.it>), a State-funded research centre founded in Parma in 1922 for the development of the food industry. From that time it has been an important element in the continuity and expansion of agri-food in the area, which is known as the ‘Italian food valley’ thanks to the presence of numerous specialty products, including *Parmigiano-Reggiano* cheese and *Prosciutto di Parma* ham¹⁷.

History and the accumulation over time of collective elements have always characterised the tomato processing industry in Parma and Piacenza. The local identity of the area has always been strong, and has been the premise for external economies for firms involved in the dissemination of innovation, trade partnerships and joint cultural growth etc. This has increased the competitive advantage of the area compared with the tomato industry in southern Italy, which is markedly less advanced. It is, however, to be noted that towards the end of the 1970s the local proximity of the different phases proved to be insufficient and Parma and Piacenza were unable to set up and maintain a system that could be used by all individual farms and companies for a collective goal.

¹⁴ The *Distretto del pomodoro da industria – Nord Italia* was analysed in a qualitative-quantitative study. The historical evolution from birth to today was studied qualitatively and data 2006-2012 was used to show current quantitative dimensions of the system.

¹⁵ At the end of the 1990s, surface area given over to industrial tomato growing in the two provinces accounted for almost 15% of the entire surface in Italy, and 65% of that in the Region of Emilia-Romagna.

¹⁶ Only in the early years did the tomato processing industry in Parma and Piacenza have the characteristics of a rural agro-industry as described by Requier-Desjardins (2002), in other words carry out post harvest activities serving local farms which were mainly household units. But it very quickly took on the characteristics of industrial activity requiring significant capital endowment, and produce was sold on Italian markets and overseas.

¹⁷ The area of *Distretto del pomodoro da industria – Nord Italia* includes the *Distretto del Prosciutto di Parma DOP* (PDO Parma Ham District) (Mora and Mori 1995; Giacomini *et al.* 2010) and the LAFS of the cheese *Formaggio Parmigiano Reggiano DOP* (Giacomini *et al.* 2012). Apart from the distinction between LAFS and District in terms of the characteristics outlined in the Introduction, the two localised systems differ significantly from *Distretto del pomodoro da industria – Nord Italia* as they cover a smaller area, especially the PDO Parma Ham District, and in that the products are typical specialities. But in both of these localised systems, the organization of inter-firm relationships promoted by the Consortium and its governance is a key factor.

As a result of repeated market crises from over-production, the EC introduced Reg. No 1151/78, providing aid per tonne for fresh tomatoes destined for processing. The aid is based on contracts signed between tomato producers and processors, or between their associations. The contracts fixed amounts, times and prices, for which a minimum level was fixed by the EC each season.

At first, this regulation ushered in a period of stability, but producers soon began to apply for increasing levels of aid, and output shot up. Accordingly, the EC introduced fixed production quotas for each processing plant. For the purposes of the present discussion, one of the most interesting innovations was that support was given only to those processing firms that had signed contracts with POs¹⁸, and also paid the minimum price for produce within the allowed quota. Hence, the POs benefited directly from the aid and received the payments which were passed on to their producer members.

This EC's intervention followed on from direct action by the Italian Ministry of Agriculture to encourage production aggregation. It encouraged producers in Parma and Piacenza, and nearby areas, to form POs and at the same time persuaded the Parma and Piacenza processing industry to reduce its number and increase the size of the existing processing plants. Some of the biggest plants were, and are today, owned by cooperatives recognised as POs¹⁹.

This agricultural policy and legislative framework underpins the growth of a PO system which, in Northern Italy, has developed with relative efficiency. It is based on large firms specialised in tomato production and processing, and encourages the creation of better more efficacious relationships between different phases of the supply chain. The aggregation of supply in the POs and the rationalisation of the processing industry in Northern Italy, centred on the production basin of Parma and Piacenza, made it clear to farmers and processors that market equilibrium was in the best interests of all parties. Consequently, in the early 2000s, representative farmer and industry organisations reached interbranch agreements for industrial tomatoes for all of Northern Italy, fixing the quantities that factories would buy, as well as prices and quality characteristics.

The reform of the Fruit and Vegetable CMO of 2007 (Reg. No. 1182/2007) brought about a fundamental change in public interventions aimed at industrial tomato production, as well as other processed fruits and vegetables. Aid was no longer provided, even under quota limits by volume of output processed, and payments were decoupled as per the Fischer reform of 2003 for all other sectors. However, given that about 50% of earnings from tomato production is derived from EU support, the new regulation allowed Member States the option of reaching complete decoupling gradually, in order to prevent abrupt changes from destabilizing the entire system. Through the new regulation, coupled support at 50% could be maintained for three years until the 2010/2011 production season, which was opted for by Italy.

Clearly, decoupling could have removed the motivation for industrial tomato producers and processors to draw up interbranch agreements, which were mainly reached to qualify for financial support. Instead, decoupling allowed the industry to count on low-

¹⁸ Between about 1985 and 1995 industrial tomato producers and other Fruit and Vegetable producers formed producers associations which were similar in form and function to PO. It was with Reg. No. 2200/96, the new Fruit and Vegetable CMO, that the associations became PO.

¹⁹ An example is COPADOR, a cooperative and PO in the province of Parma. It is the largest in the province and one of the largest in Europe. In 1999 it already had a capacity of over 250 thousand tonnes of fresh tomato (Giacomini and Mancini 2000).

er fresh tomato prices, and producers to accept lower prices. This led firms and POs to strengthen the existing organisational structures across Northern Italy and particularly in Parma and Piacenza (Arfini *et al.* 2007).

A preliminary series of meetings in 2007 led to the setting up of an association called *Distretto del pomodoro da industria – Nord Italia*²⁰. Members were POs and processing firms from Parma, Piacenza and the neighbouring province of Cremona.

Between 2007 and 2011 this association was active in gathering and disseminating production and processing data to members. It also provided opportunities for technical and commercial contact between members and operators in other areas of Northern Italy. The *Distretto* was originally based in Parma and covered three provinces: Parma, Piacenza and Cremona. Subsequently it expanded to include the whole of Northern Italy, thus including POs and processing firms in the regions of Emilia-Romagna, Lombardy, Veneto and Piedmont (Table 1).

Table 1. Industrial tomato cultivation area of members of the *Distretto del pomodoro da industria – Nord Italia*.

Year	Area	Tomato surface (ha)
2007	Parma, Piacenza and Cremona Provinces	15,173
2008	Parma, Piacenza and Cremona Provinces	16,530
2009	Parma, Piacenza, Cremona and Mantova Provinces	21,410
2010	Emilia-Romagna, Lombardy, Veneto and Piedmont Regions	37,944
2011	Emilia-Romagna, Lombardy, Veneto and Piedmont Regions	34,784
2012	Emilia-Romagna, Lombardy, Veneto and Piedmont Regions	32,472
2013	Emilia-Romagna, Lombardy, Veneto and Piedmont Regions	29,175

Source: authors' elaboration on *Distretto del pomodoro da industria – Nord Italia* data (www.distrettopomodoro.it)

This expansion was one of the reasons for the *Distretto* becoming an inter-regional Interbranch Organisation in 2011, which was formally recognised by the Region of Emilia-Romagna and subsequently by the EC (www.distrettopomodoro.it).

In 2013 the IBO *Distretto del pomodoro da industria – Nord Italia* had the following members: Eighteen POs, 10 of which account for most of the fresh tomato output (95%) in the area and 6 of which own their own processing plant, processing over 40% of the tomatoes of the district; twenty-one processing firms, many with a turnover exceeding 100 million Euro and in no case under 20 million Euro; representative organisations of farmers and industry; and, lastly, local authorities with advisory functions and Chambers of Commerce of provinces involved and research bodies. In 2013 the *Distretto* processors received about 2 million tonnes of fresh tomatoes, constituting 98% of the industrial

²⁰ The term *Distretto* was not used in the same sense as Becattini (1987). Here the term expresses the wish that the organisation might constitute an instrument to help local economic development.

tomatoes produced in Northern Italy and over 50% of the pan-Italian total production. This represents, almost entirely, tomatoes from PO members.

Accordingly, the high level of POs and processor representation means the *Distretto* is a key component of the interbranch agreement. To date, the agreement has been signed outside the context of the IBO²¹ but by the same parties. It sets the reference price for the season for industrial tomatoes grown in Northern Italy, as well as quality standards and coefficients for calculating the final price, the amounts of fresh tomatoes to be grown and supplied to firms represented by their branch associations.

The *Distretto*, in its role as IBO, makes use of model supply contracts to be used by each PO and processor in order to close sales to processors. For combined grower-processor cooperatives, a supply commitment is made and the price is not fixed beforehand. The example contract contains a series of rules approved by the *Distretto* whereby signatories are required to ensure the traceability of tomato batches and to label the end product as 'Made in Italy'. They are also required to inform the PO, and thus the IBO, of the amounts delivered to each factory every day and of payments. If payment is not made, the *Distretto* can halt supply to the firm and exclude it from the next season's negotiations until the debt is paid; or, where established in the interbranch agreement and in the example contract, sanctions can be imposed.

The steady nature of supply in terms of quantity and quality, and the IBO behaviour regulations, have had a significant impact on production choices. More than 50% of tomato production is used for higher value added products such as pulps, juices, sauces and cubed tomatoes, which has increased the reputation of outputs from the area. The area also has a good reputation for customer service among Italian and international supermarket chain buyers and the multinational firms that use tomato concentrate in their products. Almost 75% of the PO members' growing area, and the biggest processors in Emilia-Romagna, are located within the *Distretto*, and exports of processed tomatoes from Emilia-Romagna reached 330 million Euro in 2011 (Canali 2012).

The "organisational capital" of the LAFS *Distretto del pomodoro da industria - Nord Italia* consists of rules drawn up by the *Distretto* on the basis of EU policy. The *Distretto* itself, acting in its role as IBO, governs the collective interest of member firms (Courlet *et al.* 1993; Courlet 2002; Aubert *et al.* 2001). Hence, the factor that aggregates the LAFS *Distretto del pomodoro da industria - Nord Italia* is not so much the geographical proximity of the firms scattered across Northern Italy, but rather the organisational proximity, which is supported by a common historical and cultural background, particularly in the provinces of Parma and Piacenza.

5. Concluding remarks

Unlike many LAFS described in the literature, the *Distretto del pomodoro da industria - Nord Italia* covers a large area, which is also highly developed. It includes nearly all of

²¹ Up until now, the price of fresh tomatoes for a current season in Northern Italy has been set without input from the IBOs, and only by the POs and the processing industry, represented by its own professional organisation. Due to monopoly legislation, current CMO regulations on fruits and vegetables (Reg. n.1182/2007) prohibit IBOs from setting prices, particularly where the organisations are dominant in the area.

the regions comprising the Po plain and is one of the most industrialised areas of Europe. The product is something of a commodity; moreover tomatoes are hardly a characteristic specialty of Northern Italy. On world markets, in fact, tomato products (paste, pulp, sauces etc.) tend to invoke the image of southern Italy.

Yet the economies of the provinces of Parma and Piacenza are characterised by the food industry²², and the local history of cultural and social development has played a key role in the formation of the *Distretto*. In its current form, the factor which aggregates the LAFS *Distretto del pomodoro da industria – Nord Italia* is not geographical proximity of firms scattered all around Northern Italy, but is the result of the organisational background previously developed in response to EU agricultural policy rather than geographical proximity of different players in the chain (Rallet and Torre 2004; Torre 2000). It is significant that in Emilia-Romagna, the region where most of the firms in the *Distretto* are concentrated, the cooperative movement has been historically strong in farming sectors such as dairy, pig farming and tomatoes. EU tomato support was thus absorbed by a chain which was already familiar with some type of organisation. About 40% of output was already processed by cooperative owned plants, forcing non-cooperatives to rationalise and increase in size and decrease their numbers to better absorb the concentrated supply from growers.

The tomato industry LAFS in Northern Italy was formed thanks to a common culture based on the farming industry and the cooperative approach to farm management, accompanied by its efficient institutional structure. The same cannot be said for the other half of Italy's tomato output, (concentrate, canned tomatoes, pulp and sauces) from the south of Italy²³, which is subject to EU intervention and policy in the same way as the north. In southern Italy the absence of an industrial tomato LAFS has prevented the formation of external economies generated by cooperative relationships between firms and the spread of innovation. The result has been little rationalisation, and yet there is still a high number of firms (100 in 2011). There is, therefore, fierce competition and fresh tomato prices are lower. Indeed, there have been cases in the past where the EC minimum price was not respected²⁴. In the *Distretto del pomodoro da industria – Nord Italia* on the other hand, price stability and stable IBO agreements between farmers and the industry have allowed bigger firms to focus on value added and brand promotion and enhancement. The *Distretto del pomodoro da industria-Nord Italia* is thus a different type of LAFS from those based on typical specialty products from restricted areas or those arising in limited rural areas of developing countries. Its key characteristic is the horizontal structure of relationships between firms, enabled not so much by geographical proximity, as by the intervention of institutions, particularly the *Distretto*, in its role as IBO.

²² The two provinces were home to agri-food industries from the early years of the 20th Century. Many firms were cooperatives. Particularly important were the dairy industry (*Parmigiano Reggiano*, *Grana Padano* and other cheeses), preserved pork products (*Prosciutto di Parma ham*, sausages and salami), pasta and baked goods (notably *Barilla*) and tomato and sugar beet processing.

²³ The south of Italy is unfortunately often hostage to organised crime, which is an important factor in slowing development.

²⁴ In northern Italy, the reference price for industrial tomato is fixed by an interbranch agreement. In the south however such agreements have never been reached, in spite of various attempts, and the price is usually lower. During the period when EU support was given on condition of a minimum price for fixed quotas, firms in southern Italy bought a significant portion of tomato outside the quotas at prices lower than the minimum.

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