Localised Agri-food Systems in Italy:
strategies for competitiveness and role of institutional factors

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Summary

*Provide here a summary of your paper no longer than **300 words**. (Times New Roman, 10, italic)*

This paper focuses on the notion of localised agricultural and agro-food system as unit of analysis (LAFS). LAFSs appear to be as quite resilient and dynamic systems. As we will see, the analysis of exports in the last years can provide enough evidence of their strong resilience and capability to respond to economic crisis. This dynamics does not seem understandable by only using either classical variables (size of farm holdings, intensity of capital investment, human capital, rate of technological progress, etc.) or geographical factors (soil fertility, irrigation, plain versus mountain location, etc.). Organisation is a key variable to explain their diverse economic performances. Between the market and the hierarchic structure there are so many possible types of organisational modes, which strictly depend from the strategies set up by economic agents.

The analysis provides evidence of diffused dynamism of these systems, both in terms of demographic characteristics, labour productivity and exports in international markets. Relevant differences among these local systems can be explained by geographical location (especially between North and South Italy) and infrastructural endowments. But relevant differences, according to recent studies on governance of rural areas, are also as far as cooperation and integration variables are concerned.

To explore the nature of these variables, a parallel survey was implemented in 20 Italian areas to identify and reconstruct the institutional maps of the food chain supply (farming system, food industry, type of distribution and market channels), the main actors working in it and the main forms of vertical and horizontal integration/cooperation. This allowed to understand the structure of the food chain supply and which kind of governance is characterising agriculture and agro-food sector in these rural areas.

The survey allows conceptualising four possible modes of rural integration/cooperation, depending from the organisation that has been set up within the single LAFS: 1) LAFSs with lack of governance; 2) LAFSs with contractual arrangements dominated by the processing industry and/or by the large-scale retail; 3) LAFSs with contractual arrangements involving effective cooperative structures and/or producers organisations; d) LAFSs where Consortia of cooperatives and/or producers Organisations were able to bring in innovative forms in marketing phase..

Keywords: Rural development, Agro-food systems, Governance

JEL Classification codes: Agricultural policies – Food Policies Q18, Regional development Planning and Policy R58

Localised Agri-food Systems in Italy: strategies for competitiveness and role of institutional factors

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1. INTRODUCTION: OBJECTIVES AND BACKGROUND

The debate on rural development has frequently undervalued the role of agriculture and agro-industry: agriculture has been widely considered as a declining sector in modern economies (De Janvry, 2010). This study is focused on rural areas characterised by localised agricultural and agro-food production, strong linkages to local industrial sector, historical traditions and local identity. They are also defined as localised agri-food systems (LAFSs), on which a conspicuous theoretical and empirical part of economic literature has been developed in the last two decades (Courlet, 2002).

Local systems have been relevantly studied in Italy, where there is a long and consolidated tradition in the definition and analysis of local development processes (Trigilia, 2005). Local agricultural and agri-food systems belong to this tradition, although they have been identified for a long period with the Industrial District (ID) model (Beccattini et al, 2003). It must be said actually that only few LAFS fulfil all those characteristics mentioned in the conceptualisation of classical IDs: first, the strong interdependence between different firms within the district (due to the labour division between firms) and, second, the “cooperative climate” among the different actors and institutions which facilitate the reproduction of the local system over the time. This climate is strengthened by a set of shared values at local level, the production of a specific good and mainly by the existence of external agglomeration economies. Relationships among firms and economic actors are underpinned by formal and especially informal rules and norms which has been consolidated over time. These features of the ID model can strongly differ in intensity from a local system to another, but they only characterise some of the most mature agro-food systems in Northern Italy.

The notion of LAFS encompasses four different components: geographic concentration and specialization, more or less complex relations between the different production phases, technologies and transfer of knowledge, cultural assets. The first concerns the identification of a space of limited size with a big number of firms/farms running specialised and interlinked activities (Courlet, 2002). In LAFS the single farm performance never depends exclusively on the behaviour of the individual farmer, but on some informal/formal organisation governing relationships among different actors: farming, processing firms, suppliers of goods and services, food distribution, catering, consumers and institutions governing the agri-food system. Informal/formal organisation can be represented by different types of cooperation between actors (Bosworth and Rosenfeld, 1993). The third component concerns the system of common technologies and knowledge transfer: the proximity of actors within the same space foster the transmission of information, the exchange of technological knowledge and sharing of local know-how (Courlet, 2002). Finally, cultural assets are linked to typical or specialty agricultural products for the specific nature of resources, the history and tradition of production and the above mentioned shared local know-how.

Focusing the research on LAFS means emphasizing that the territory is the main unit of analysis (Sforzi and Mancini, 2012). It also means including in the conceptual frame: a) the notion of specialty food, which involves the specifically local nature of resources, the history and traditions as part of local identity, the collective dimension of knowledge shared locally; b) the economic linkages between agri-food and resources and activities outside the agricultural sector; c) the governance of the agro-food system which influence the economic performance and the development pattern at the local level (under the form of cooperation among the various actors and/or some leadership taken over by specific actors or groups).

LAFSs appear to be as quite resilient and dynamic systems. As we will see, the analysis of exports in the last years can provide enough evidence of their strong resilience and capability to respond to economic crisis. This dynamics does not seem understandable by only using either classical variables (size of farm holdings, intensity of capital investment, human capital, rate of technological progress, etc.) or geographical factors (soil fertility, irrigation, plain versus mountain location, etc.). Organisation is a key variable to explain their diverse economic performances. Between the market and the hierarchic structure there are so many possible types of organisational modes, which strictly depend from the strategies set up by economic agents (Courlet, 2002). Even what we identify as peculiar resources and assets of each LAFSs is produced over time by economic agents, as Courlet outlines: « Les SPL [Systèmes Productifs Localisés] ayant des succès sont ceux qui possèdent un ensemble de savoir-faire et de compétences avancés liés à un domaine industriel ou tertiaire dont la constitution et la mise en oeuvre créent des différences avec d'autres territoires. L'existence de ces « spécificités territoriales» se fonde sur des savoirs non reproductibles, c'est-à-dire non susceptible d'exister ailleurs ou d'être dupliqués. Ces savoirs sont ainsi uniques et échappent partiellement à une concurrence par le marché. La reproduction et le redéploiement de ces ressources spécifiques n'est pas spontanée, ni automatique ; ils sont, le plus souvent, liés à des expériences antérieures de coordination réussies qui fondent une connaissance réciproque et une confiance entre acteur. Plus généralement, le processus de spécification s'appuie sur une densité institutionnelle forte au plan territorial qui autorise l'émergence de tels dispositifs de coordination et favorise leur bon fonctionnement (Colletis et al, 1999)» (Courlet, 2002 : 38).

This paper intend to provide some evidences on how the organisation of LAFSs at the level of each rural areas (and not at the level of single farm/firm unit) could be decisive to affect the economic performance. This aim is methodologically pursued in three ways:

- Identification of the local agro-food system as unit of analysis. To do this we have examined 20 agricultural and agro-food local systems in Italy, considered as territorial units encompassing several municipalities where a specialized production has taken place over time not only as result of economic, social and geographical factors, but also of local history, traditions and culture. In one word, local systems considered in this study are part of the regional identity and are recognized as such by people living in the area;

- Analysis of the characteristics of these systems and their export performance on international markets in the last years;
- Analysis of the role of food-chain organisation and main actors in explaining the different performances.

This analysis has been carried out by calculating the volume of agricultural and food exports for each local system in the last four years (2010-2013), on the basis of the recent breakdown by province (NUTS 3 level of the European nomenclature) and by type of product provided by the Central Statistics Institute (ISTAT) in Italy. This operation allowed to identify a good proxy of the export performance at local level. A parallel survey was implemented in these study areas to identify and reconstruct the institutional maps of the food chain supply (farming system, food industry, type of distribution and market channels), the main actors working inside the food chain and the main forms of vertical and horizontal integration/cooperation. This allowed to understand the structure of the food chain supply and which kind of governance is characterising agriculture and agro-food sector in these rural areas.

2. LOCALISED AGRICULTURE AND AGRO-FOOD SYSTEMS IN ITALY: THE STUDY AREAS.

This study focuses on 20 agricultural and agro-food systems, which were chosen on the basis of strong linkages with territories, the presence of typical and high quality products (either agricultural or processed food products) and finally the identification with the most relevant Mediterranean products (olive oil, wine, fruit and vegetable, typical cheese). The common feature of these products is some form of Denomination of Origin (PDO, GDI, etc.). A balanced distribution across North, centre and South was also considered, as it appears from the table 1. They encompass 721 municipalities which are included in provincial boundaries, but often overcome these administrative limitations.

The 20 local systems are quite dynamic areas under the demographic profile: on the whole they represent about 10% of Italian population, with positive rate of population growth (+5,5%) during the period 2000-2011 (table 1). These changes are quite heterogeneous from area to area: the range is between a minimum of -18% in S. Daniele area producing prosciutto in Udine province to a maximum of +60 % in Alto Adige province specialized in the apple production. These areas, in any case, share common positive rate of immigration (table 1), showing that the local economy is able to draw population from other areas of either the same region or other regions. Twelve of these areas present higher rates of immigration than the regional average, emphasizing their role as employment basins. Some of these areas loose population due to the negative birth rate, following a more general demographic trend. The process of population ageing also seems lower than the rest of the regional territory, so as the population profile is not jeopardised, as it happens in the most remote areas. In conclusion, these data give us some evidence on the fact that when agro-food local systems are a structural component of the local economy, then rural areas present quite peculiar demographic characteristics when compared to the usual declining tendencies.

Table 1 – Demographic variables of cases studies (local agri-food systems)

Local agri-food system	Administrative Region *	No. Of municipalities	Population 2011 (hinabitants)	Population Rate of change 2011-2000 (%)	Migration balance 2011 (% population)	Difference between migration balance of the area and regional	Ageing Index	Ageing index of the area/regional ageing index
Fruit-vegetables Metapontino	**Basilicata S**	12	89.301	-0,6	0,20	0,16	27,1	0,88
Wine Vulture	**Basilicata S**	15	85.994	-4,0	0,11	0,07	28,8	0,93
Parmisan	**Emilia-Romagna**	47	421.000	7,3	0,63	0,04	35,5	0,98
Tomato industry North	**Emilia-Romagna and Lombardy NW**	37	488.768	9,4	0,75	0,15	35,6	0,99
Prosciutto S. Daniele	**Friuli NE**	7	20.876	-18,4	0,10	-0,16	38,1	1,01
Wine Friuli	**Friuli NE**	15	69.236	-0,1	0,11	-0,15	36,8	0,97
Wine Marche	**Marche C**	33	215.338	-8,0	0,08	-0,19	36,6	1,02
Fruits Cuneo	**Piedmont NW**	10	124.651	4,7	0,55	0,58	35,9	1,25
Beef meat Cuneo	**Piedmont NW**	40	281.138	-4,3	0,43	0,12	34,6	0,93
Wine Langhe	**Piedmont NW**	94	198.446	16,6	0,32	0,02	35,1	0,95
Grapes Bari-Taranto	**Apulia S**	10	178.726	-4,3	0,25	0,28	26,5	0,92
Durum Wheat Foggia	**Apulia S**	61	654.141	0,5	-0,07	-0,04	29,4	1,02
Olive oil Bari	**Apulia S**	41	1.250.493	2,7	0,03	0,06	27,6	0,96
Pecorino Oristano	**Sardinia S**	88	206.172	22,3	0,01	-0,09	34,9	1,18
Vegetables South-West Sicily	**Sicily S**	14	422.464	-6,0	0,22	0,19	27,1	0,95
Wine North-West Sicily	**Sicily S**	37	567.768	-6,0	0,11	0,08	30,7	1,08
Nursery gardening Pistoia	**Tuscany C**	5	130.533	-7,7	0,30	-0,20	37,5	1,00
Pecorino South Tuscany	**Tuscany C**	28	250.266	18,5	0,63	0,13	37,4	1,00
Apples Trentino	**Trentino NE**	55	61.576	13,8	0,29	-0,15	31,4	1,07
Apples Alto Adige	**Trentino NE**	72	554.932	60,2	0,40	-0,04	30,4	1,04
Total		**721**	6.271.819	5,5	0,25			

*** NE= North-East, NW= North-West, C=Centre, S=South**

Source: our elaboration of data from the Central Statistical Institute (ISTAT)

These study areas are quite heterogeneous under the technological level and the related farm efficiency (figure 1). The natural and socio-economic context where these productive systems can operate generally allow them getting good economic performances: the labour productivity (measured as agricultural added value per labour unit) is mostly higher than the national average. Focusing on the labour productivity and its dynamics (during the 2008-2011 period), we can observe that highly productive and dynamic local systems are only located in Northern Italy. At the opposite side of the graph, there is a group of local systems with lower productivity and slower dynamics than in Southern areas. This highlights that economic efficiency at farm level is more dependent from the territorial context than from the type of productive specialization (farming system): Southern local economies are negatively influenced by external diseconomies implying higher production costs for farm holdings.

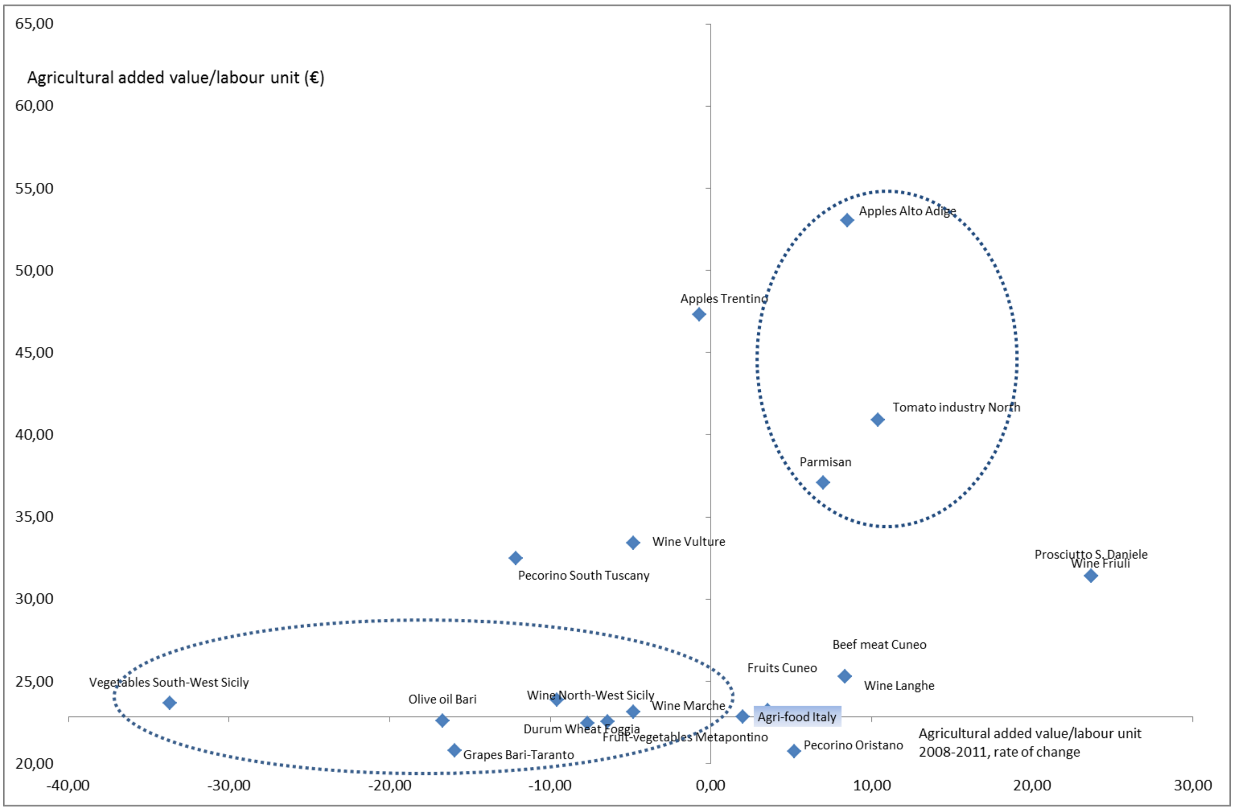

Figure 1- Agricultural productivity (added value per labour unit) in the different local agro-food systems and its dynamics over 2008-2011 period.

Source: our elaboration from Central Statistical Institute (ISTAT) and Tagliacarne Institute

Among the so-called external economies, the presence and the quality of infrastructures might play a crucial role. When measured at the provincial level by an indicator of infrastructure endowments (for years 2001 and 2012), infrastructures show a significant deficit (less than 70% of the national average) just in Southern Italy and even in some small local system of central Italy (wine in Marche and pecorino cheese in Tuscany). At the opposite side, the local systems showing the highest productivity and productivity dynamics are in those provinces with better infrastructures. It must be said, however, that infrastructures cannot be considered the only explanatory factor of farming competitiveness, given that even some Southern system with low and declining productivity does not seem to benefit from good infrastructures (see for example the case of olive oil and grapes systems in Apulia).

Labour productivity is only a partial indicator of economic performance, especially when we look at the territorial system as a whole. In the most recent years there are evidences showing the positive and anti-cyclical performance of agriculture in times of crisis. Some author outlines the increasing role of Italian agricultural and food systems as the only economic districts contributing to the growth of national exports (both in absolute and relative terms) just in the recession years (Romano, 2012). This seems particularly true for most of food systems (wine, dairy and meat) and also for some agricultural system (apples in Alto Adige and nursery gardening in Liguria). Particularly relevant is the amount of export growth in emerging markets (from 13% in 2006 to 18,3% in 2011; Romano, 2012). The market share of Italian exports during the last decades was quite constant, due to the quality of products which represent the most relevant share of exports (De Filippis, 2012).

These works confirmed the anti-cyclical nature of the agro-food sector, either by creating new job opportunities or maintaining its labour force in a period when unemployment grows in most sectors, at rapid rates. The most recent data on exports confirm that Italian agribusiness sector assumed a positive role in the commercial trade just in the most critical period for Italian economy (table 2): more than 33 billion €, about 9% of total exports in 2013. Between 2010 and 2013 agricultural and agro-food exports grew at 20% rate, with a greater intensity in North-East and Central Italy and vice versa the usual slow path in Mezzogiorno taken as a whole. Here, as we have already pointed out, labour productivity on the farming side and infrastructure endowment on the context side have hampered the performances of local systems. This picture, however, is quite variable according to the region and the farming system. In North of Italy four regions (Emilia-Romagna, Lombardy, Veneto, Piedmont) give the lion share of agro-food exports (more than 60%). In the Mezzogiorno there are relevant differences between some declining region (Calabria) and static regions (Basilicata, Sicily, and Campania), on one side, and a small group of very dynamic regions as Sardinia and Apulia, on the other side.

Table 2 – Agricultural and food exports from Italy during the last four years, by region (€)

Region	2010	2011	2012	2013	Change % 2013-2010
Abruzzo	426.553.110	481.124.883	487.558.632	508.443.694	19,2
Basilicata	73.305.973	75.871.503	72.256.389	73.954.647	0,9
Calabria	181.778.615	170.753.919	179.452.906	176.181.654	-3,1
Campania	2.404.721.101	2.446.692.110	2.533.210.736	2.667.497.956	10,9
Emilia Romagna	4.437.705.715	4.898.380.553	5.193.213.448	5.471.415.495	23,3
Friuli V. G.	599.811.284	672.850.514	722.255.258	703.694.534	17,3
Lazio	709.963.016	753.309.160	799.356.995	803.266.855	13,1
Liguria	677.551.857	659.668.724	643.857.291	655.095.374	-3,3
Lombardia	4.578.784.204	4.855.781.150	5.120.650.012	5.353.813.412	16,9
Marche	245.737.947	276.539.128	324.320.108	329.628.627	34,1
Molise	47.443.037	52.094.686	62.297.466	63.222.658	33,3
Piemonte	3.635.064.282	4.084.191.113	4.305.880.322	4.531.479.708	24,7
Puglia	1.176.958.559	1.307.576.912	1.354.499.553	1.400.990.160	19,0
Sardegna	125.236.178	130.016.830	160.109.386	176.125.371	40,6
Sicilia	981.030.149	1.055.596.518	982.972.465	1.021.051.510	4,1
Toscana	1.672.329.917	1.803.671.874	1.917.974.121	2.053.486.152	22,8
Trentino	1.657.661.726	1.844.623.669	1.896.776.106	1.946.938.421	17,5
Umbria	374.051.168	436.871.688	489.023.158	584.369.200	56,2
V.d'Aosta	53.525.877	48.554.849	63.075.209	54.769.367	2,3
Veneto	3.973.549.541	4.427.477.542	4.778.384.775	5.073.651.524	27,7
Total	28.032.763.256	30.481.647.325	32.087.124.336	33.649.076.319	20,0
North-East	10.668.728.266	11.843.332.278	12.590.629.587	13.195.699.974	23,7
North-West	8.944.926.220	9.648.195.836	10.133.462.834	10.595.157.861	18,4
Center	3.002.082.048	3.270.391.850	3.530.674.382	3.770.750.834	25,6
Mezzogiorno	5.417.026.722	5.719.727.361	5.832.357.533	6.087.467.650	12,4

Source: our elaboration from Central Statistics Institute (ISTAT)

Total exports coming from 20 agricultural and agro-food systems is something more than 3 billion € (about 9% of Italian agro-food exports) (table 3). The role and dynamics of different local systems is quite variable. There is a first group of well-known and consolidated specialty products whose the absolute share of exports is really relevant (more than 400 million € per year) showing very high rate of growth or at least comparable with the national average (wine from Langhe area, apples from Alto Adige). Common success factors in these systems are as follow: a) presence of denomination of origin; b) good productivity of labour, due especially to the quality and the capability to differentiate the production; c) existence of consolidated demand and market relations with European and also extra-European markets; d) good level of local governance in terms of cooperative attitude among the local actors.

Table 3 – Agricultural and food exports from the 20 local agro-food systems during the last four years (€)

Agro-food local system	2013	% of total	Change % 2013-2010	Annual % change 2013-2010	% Share of sectoral export in Italy
Wine Langhe	620.350.573	20,6	21,2	7,1	12,1
Apples Alto Adige	527.992.093	17,5	24,6	8,2	20,8
Grapes Bari -Taranto	393.596.833	13,1	9,8	3,3	15,9
Tomato industry North	286.135.843	9,5	6,8	2,3	13,7
Fruits Cuneo	240.762.513	8,0	16,3	5,4	6,4
Nursery gardening Pistoia	215.860.239	7,2	1,1	0,4	32,8
Parmisan	208.062.110	6,9	49,4	16,5	6,9
Vegetables South-West Sicily	116.921.228	3,9	-14,2	-4,7	10,5
Olive oil Bari	88.958.340	3,0	80,8	26,9	3,7
Apples Trentino	70.158.467	2,3	31,8	10,6	2,6
Wine North-West Sicily	60.455.838	2,0	-3,3	-1,1	1,3
Beef meat Cuneo	45.439.193	1,5	11,9	4,0	4,1
Fruit-vegetables Metapontino	41.610.318	1,4	26,1	8,7	1,0
Wine Friuli	29.378.059	1,0	11,7	3,9	0,6
Durum Wheat Foggia	22.400.106	0,7	-9,9	-3,3	0,5
Prosciutto S. Daniele	15.206.019	0,5	-0,1	0,0	1,1
Wine Marche	13.258.002	0,4	58,7	19,6	0,2
Pecorino Oristano	8.363.219	0,3	242,6	80,9	0,2
Wine Vulture	2.265.262	0,1	54,7	18,2	0,0
Pecorino South Tuscany	1.705.022	0,1	31,5	10,5	0,1
Total	**3.008.879.277**	100,0	16,8	5,6	

Source: our elaboration from Central Statistics Institute (ISTAT)

The second group shows a different capability of export (between 200 and 400 million € per year) and export dynamics is close to the national average for most of local systems: it includes agricultural (fruit and vegetables in Cuneo province, grapes in Bari-Taranto provinces, and nursery gardening in Pistoia) and two agro-food products in Emilia Romagna (processing tomato and Parmisan cheese). The share of these local systems is quite interesting in terms of their respective national sector (see for example the case of nursery gardening in Pistoia (Tuscany), representing almost 1/3 of the sector national exports). Parmisan area is the most dynamic of this group (+16,5% per year).

A third group is represented by local systems with lower capability of export (not more than 100 million € per year), due to either the small volume of the production or the recent access to international markets. In this group exports have been promoted and developed by farmers cooperatives or even by single entrepreneurs. The small size of the local system, on one side, and the strong specialty and quality of the product have ensured those conditions to exploit international markets. Finally, there is a fourth group with declining capability to export in recent years. These local systems are mainly localised in Southern Italy.

3. ORGANISATION AS A KEY VARIABLE FOR UNDERSTANDING SUCCESS OR FAILURE

As we have said previously, organisation is a key variable to explain the diverse economic performance of LAFSs. The main question, in this regard, is how to appreciate organisation as more effectively as possible. In our analysis two main dimensions could describe organisation:

- forms of vertical integration/cooperation along the agro-food supply chain;
- forms of horizontal integration/cooperation, both in the production phase and in processing and commercial phase.

These forms are fostered by the creation of institutional arrangements under the form of consortia, inter-branch contracts, etc. within the agri-food sector. They are in any case driven by either coalitions of actors or single local actors which are able to take the local leadership and act as innovators. These actors can be the crucial variable in catalysing the setting up of new governance within the agro-food system and the local economy as a whole. Each dimension could be greatly variable in intensity: from low levels of integration and cooperation to advanced forms of vertical integration and diffused cooperation within food chain components. Cases can be summarised by four possible types of organisational models (as illustrated in table 4).

Table 4 – Different organisational types deriving from vertical integration and horizontal cooperation

Intensity of vertical integration	Intensity of horizontal cooperation	
	Weak cooperation	Cooperation within each food chain component (producers and processing industries)
Weak integration	Lack of governance	
Intermediate forms (quasi-integration)	Contractual arrangements dominated by processing industry and/or large-scale retail	Contractual arrangements involving cooperatives and/or Producers organisations
Advanced forms of integration		Higher level of organisation in marketing (including consortia of cooperatives and producers organisations)

The first type is characterised by both low vertical integration and lack of cooperation, implying the presence of LAFSs with weak governance: this frequently happens when the bargaining power and the distribution of rural resources are concentrated in few hands setting the strategy for the whole area. Consequently, there is low predisposition toward forms of horizontal cooperation both within the agro-food sector and outside of it, with other sectors and local communities and public bodies. This also happens when there is lack/incapability of collective action by coalitions of local actors. The second and third types involve contractual arrangements among the main food chain components: one is dominated by the strongest components, usually the processing industry or the large-scale retail; in the other, there is a more balanced bargaining power, thanks to the presence of cooperative forms within the production and the processing phases and more organised and structured forms of contracting as in the case of inter-branch organisations. The fourth type presents more advanced forms of cooperation as Consortia grouping cooperatives and/or Producers Organisations in the crucial field of marketing and direct sales in international markets.

The third and the fourth types, based on horizontal integration/cooperation, do not include few leader industries but a whole set of actors, within the agro-food chain, whose strategy is primarily to promote strong coalitions and networks to increase the bargaining power of agriculture and to reduce conflicts within the agro-food chain between farmers and agro-industrial firms. This is possible because some intermediate institutions are capable to mediate between the different interests on the field. The role intermediate institutions is emphasized, under the theoretical point of view, by a school of thought in institutional economics. M. Porter (1990, 2004) call these "Institutions for collaboration" and identify them with trade associations, entrepreneurs networks, standard setting agencies, quality centers, technologic networks, etc. Their role is essential in promoting competitive regions, connecting development factors, and fostering efficient collective activities in both advanced and developing countries. Also Arrighetti and Serravalli (1999) develop a very similar concept and identify a broader range of institutions which encompasses sector organizations, local governments, consortia, associations, local development agencies, peripheral offices of national administrations, etc. The presence of intermediate institutions greatly contributes to reduce coordination costs related with agro-food contractual arrangements in rural areas, being such costs unsustainable for the single private or public local operator.

The analysis of characteristics of 20 Italian LAFSs and the structure of the food chain components and main actors allows us to classify them according to this conceptual frame. The main results of four organisation modes are illustrated in the table 5, including also the distribution of 20 LAFSs in the four groups.

Table 5 – Characteristics and performances of the four organisational types

Typologies of integration/cooperation	Localised Agro-food systems	Exports (2013, 000€)	Exports (2010, 000€)	Exports' rate of change, % (2010-13)	Population (000)	Exports/population (€)	Exports' LAFS/regional exports (%)
Lack of governance	Vegetables South-West Sicily Wine North-West Sicily Beef meat Cuneo Nursery gardening Pistoia Wine Friuli	468.055	479.307	-2,35	1.471	318	6,6
Contractual arrangements dominated by processing industry and/or large-scale retail	Grapes Bari-Taranto Olive oil Bari Durum Wheat Foggia Wine Vulture Prosciutto S. Daniele	522.427	449.166	16,31	2.190	239	8,3
Contractual arrangements involving Cooperatives and/or Producers organisations	Fruit-vegetables Metapontino Pecorino Oristano Pecorino South Tuscany Tomato industry North Parmisan Wine Marche Wine Langhe	1.179.485	964.013	22,35	1.869	631	12,5
Higher level of organisation in marketing (including consortia of cooperatives and producers organisations)	Fruits Cuneo Apples Trentino Apples Alto Adige	838.913	683.929	22,66	741	1.132	12,0

The first group of LAFSs, characterised by lack of governance, has not a regional specificity and includes five cases in different Italian regions. This is the less export-oriented group: it represents about 15% of total exports and the rate of exports tends to decrease over the 2010-1013 period. Moreover, these LAFSs tend also to play a secondary role in the regional economies, where the relative importance of agri-food exports is not more than about 7%. Agri-food productions are generally characterised by good quality and high potentials, but market relations have mainly a local/regional or at best national dimension. The lack of governance here depends essentially from the incapability of setting up some collective strategy to improve the competitiveness of the whole local system.

The second group, instead, includes other five LAFSs mainly in Southern Italy, where traditionally the scarce diffusion of cooperation in agricultural sector has implied a stronger bargaining power in the hands of the processing industry and the large scale retail trade. The export performances are slightly better than in the previous group and can be explained by individual entrepreneurial capabilities of selling in international markets, which have been acquired over time by single farm managers or local agri-food industries. The denomination of origin of most of these products has certainly facilitated these performances, especially for those with high quality traditions as in the case of olive oil in Apulia (whose exports increased of 80%) and the wine in the Vulture area (+54%).

The third group includes seven cases. They provide evidences about the fact that contractual arrangements, in a context where the bargaining power is more balanced, can bring about a better economic performances of the local system. This group counts for about 40% of total exports, which increased at the rate of about 22% in four years. On the average, the LAFSs of this group represent a relevant share of regional exports. These performances can be explained by the better governance of the local system, fostered by the cooperation in the production phase and/or in the processing industry. An example of efficient contractual arrangements in a context of cooperation among producers (Producers Organisations), led by intermediate institutions, is the case of processed tomato system in Parma and Piacenza provinces (Emilia-Romagna, North-West). Here the role of food-processing industry is crucial in the local system. Conflicts within the agro-food system, especially between tomato producers associations and processing industry, can be very strong in times of market overproduction. But it is worth noting that a crucial role in governing inter-branch conflicts is played by the processed tomato District of Northern Italy, acting as a sort of independent agency whose aims are promoting a better governance of the local productive system, through fair inter-branch contracts, the enhancement of quality product, and better services for producers and processing industries (research, technological innovation transfer, technical advice). This District, in other words, is a local intermediate institution ensuring the provision of club goods for all economic actors belonging to the agro-food system. The economic competitiveness of tomato industry in this area is strongly relying on this form of well-balanced governance ensuring the appropriate climate and trust between main actors and stimulating innovation, quality improvement and productivity growth. Another interesting case, much smaller in terms of economic size of production, is the wine LAFS of Marche region, where the greatest part of wine production (PDO) is processed and marketed by local cooperatives.

The last group of LAFSs is that where organisation implies significant improvements in the market strategies. It includes only three cases, but the importance of exports is similar on the whole to the previous group, much more conspicuous in terms of cases. Dynamics of exports are significant and their importance for the local economy, represented by the ratio exports/population, is considerably higher than in other group. This is the case of the apple local system in Alto Adige (Bolzano province in North-East), which has been able to combine horizontal cooperation with a strong vertical integration within a complex pyramidal setting: 27 cooperatives grouping many producers, four main Producers’ Organisations grouping cooperatives and lastly one export consortium grouping Producers’ Organisations operating in two provinces of Trentino-Alto Adige. This well-integrated setting allows producers to increase the bargaining power especially in international markets.

4. CONCLUSIONS

This paper has focused on the notion of agricultural and agro-food system as unit of analysis. The analysis provides evidence of diffused dynamism of these systems, both in terms of demographic characteristics, labour productivity and exports in international markets. Relevant differences among these LAFS can be explained by geographical location (especially between North and South Italy) and infrastructural endowments. But relevant differences are also in inner LAFS organisation.

To explore the nature of these organisational variables, a parallel survey was implemented in 20 areas to identify and reconstruct the institutional maps of the food chain supply (farming system, food industry, type of distribution and market channels), the main actors working in it and the main forms of vertical and horizontal integration/cooperation. This allowed to understand the structure of the food chain supply and which kind of governance is characterising agriculture and agro-food sector in these rural areas.

Moving from the agri-business notion to the LAFS concept implies including in the conceptual frame: a) the notion of specialty food, which involves the specifically local nature of resources, the history and traditions as part of local identity, the collective dimension of knowledge shared locally; b) the economic linkages between agri-food and resources and activities outside the agricultural sector; c) the governance of the agro-food system which influence the economic performance and the development pattern at the local level (under the form of cooperation among the various actors and/or some leadership taken over by specific actors or groups).

The survey allows conceptualising four possible modes of rural integration/cooperation, depending from the organisation that has been set up within the single LAFS: 1) LAFSs with lack of governance; 2) LAFSs with contractual arrangements dominated by the processing industry and/or by the large-scale retail; 3) LAFSs with contractual arrangements involving effective cooperative structures and/or producers organisations; d) LAFSs where Consortia of cooperatives and/or producers Organisations were able to bring in innovative forms in marketing phase. The analysis of these study cases brings about important implications in terms of rethinking rural development policies. The first implication is refocusing the role of the regional identity and the local agricultural and agro-food systems: agriculture represents the largest user and manager of the land in rural areas and local productions have a significant relations and influence on the identity of a specific area (Mettepenningen et al, 2012). This means that agriculture is not only production but it is also part of traditions, local history and culture. The second relevant implication concerns the role of governance variables in explaining the success or failure of rural development initiatives and policies: far from being a simple result of the relation between the producer and the market, the process of rural development is strongly affected by the type of actors, their relations and strategies in each local system. The same local system can be defined as a combination of economic and social relations, including the cooperative or conflicting relations among main actors. Understanding what type of cooperation and integration it is set up in the local system is crucial for the competitiveness and the economic survival of the system over time. And it is also crucial for the design and the implementation of appropriate and targeted policies at territorial level. The third implication derives from considering the organisation of agri-food production within a given territory as a key need to inspire the design of rural development programmes and instruments, with particular regard to those instruments targeted to foster innovation in the local partnership and in incentivising more cooperative attitudes in the food chain (see for example the article 35 of the new Regulation UE no. 1305/2013).

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