

# Institutional Embeddedness in Organic Farming Systems<sup>1</sup>

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## Abstract

The aim of this contribution is to put some evidence on the influence of external factors in the farm decision making, often crucial in leading technical and commercial development and in fostering the expression of social and environmental sensitivity. This paper explores the concept of “embeddedness” focusing on the institutional domain that should affect market strategies. By studying the market orientation of 53 organic farms selected in two Italian regions (Emilia Romagna and Marche), the relation between regional origins and business strategies were analysed with the purpose to indirectly assess the role of institutions in promoting the development of Alternative Food Networks.

## 1 Introduction

The term Alternative Food Networks refers to both pre-capitalist remnants, which can be ascribed to semi-natural<sup>2</sup> economies, and post-productivist<sup>3</sup> phenomena developing in particular territorial integration frameworks where social proximity relations encourage the development of new food systems (Renting and Wiskerke, 2010), in which the direct contact with consumers catalyses diversification processes as well as processes aimed at disseminating sustainable production methods (Norberg-Hodge, 2005).

Regardless of the different origins they may refer to, alternative food networks express the ability to preserve or the attempt to restore local governance structures as opposed to the territorial and economic centralisation of industrial monopolies. But which are the conditions underlying the development of production systems that can replace *agribusiness*<sup>4</sup>? Are there any connections between farmers’ business strategies and market and governance rules that allow identifying which types of vertical and horizontal structures constrain or foster the development of alternative food networks, and from a wider point of view, the sustainable development of rural areas?

AFNs scholars see in the concept of embeddedness a useful notion for distinguishing alternative food networks from conventional chains (Sonnino and Marsden, 2006) or, from a wider

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<sup>2</sup> By natural economies, in his treaty *Primitive, archaic and modern economies*, Karl Polanyi meant forms of exchange governed by primitive and tribal societies, in which the concept of redistribution and mutual interdependence took on a fundamental role in guaranteeing the governance of irregular exchanges of products made by whole communities.

<sup>3</sup> The concept of post-productivism was originally used in the 90ies in contrast to the concept of productivism to recall the passage from an approach based on agricultural product maximisation to a multifunctional approach. The meaning of the term is still controversial (Mather et al., 2006).

<sup>4</sup> The whole system of companies and businesses as well as industrial production monopolies and the industry providing agriculture with production means make up together with the agriculture credit and financing system and the sphere of distribution and services what we presently call the agribusiness system (Lisovskij, 1968).

perspective, endogenous development forms from exogenous development forms. This concept embraces the cultural, social and political dimension in which production systems take shape. As suggested by Sonnino and Marsden (2006), we can distinguish two aspects that are strongly intertwined between them, which make it possible to analyse the concept of embeddedness. A horizontal level, which concerns the interpenetration of social and cultural domains, and a vertical level regarding hierarchical connections between local actors, whether individual or collective, and the social, economic and political system they belong to.

In this paper, the concept of embeddedness is analysed from an institutional point of view (*Institutional Embeddedness*), which allowed sociologists to analyse the organisational forms underlying supply systems in the various countries, studying their interconnections with the relevant institutional framework (DiMaggio and Powell, 1983; Fombrun, 1986, 1988). The standards, rules, convention, habits and values of a society are at the root of institutions as they play a fundamental role in influencing the history of countries and their production systems following a path-dependency process (Hollingsworth and Boyer, 1997; Hollingsworth, Müller, and Hollingsworth, 2002). Societies develop a number of institutional arrangements (governance), such as the State, Communities, Markets, Hierarchies, Networks, etc. (Campbell *et al.*, 1991: ch. 1), with the purpose to coordinate the various actors forming part of them.

Instituzionalised social rules and the values internalised by economic actors guide the development of organisations (Boisot, 1986; Hamilton, Zeile and Kim, 1990). For this reason, it is necessary to understand in which institutional framework economic transactions take place, both at a micro level (exploring the exchange patterns and organisational structures, both as to supply and demand) and at macro-level (exploring the institutional arrangements within which transactions take place - States, Regions, Provinces, Communities, Ethnic Groups, etc.).

For this purpose, this paper explores the market strategies adopted by some farms selected in administrative areas (regional areas) characterised by extremely different historic roots and social structures, which are supposed to strongly affect transactional patterns.

Therefore, assumption on the relation between regional origins, seen as a particular form of Institutional Embeddedness, and market orientation, as an expression of transactional patterns based on extremely different social and instrumental balances, have been explored with the purpose to assess the consistency of the above-mentioned concepts.

## 2 Methodology

Involving some experts in the regional organic sector from Emilia Romagna and the Marche into the project this paper refers to, helped us find 53 organic farms, respectively 33 in Emilia Romagna (**ER**) and 20 in the Marche (**M**). Farm differences can be explained by production size and is proportioned to the number of provinces existing in each institutional area.

Once the farms have been contacted, some direct interviews have been carried out with the purpose to identify structural, agronomic, organisational and market aspects. For these aspects, some open questions have been asked in order to get to know the different types of trading partners and their relevant commercial weight.

Afterwards, the commercial trends of interviewees have been grouped into in-farm direct selling, participatory transactions (farmer's markets, box schemes), short supply chain (Shops, Restaurants, Canteens), indirect selling (industries, wholesalers, large cooperatives) following the scheme reported in table 1.

**Table 1.** Transaction rules on Exchange patterns

Exchange Patterns	Transaction Rules	Actors Behavior
Participatory Transactions (PT)	Cooperation	Collective
In Farm Direct Selling (DS)	Competition trough Advantageous Position	Collective/Individual
Short Supply Chain (SC)	Competition trough Market	
Indirect Selling (IS)	Hierarchy	Individual

The grouping method follows the transaction rules that were thought to have greater influence on exchange patterns and on the behaviour of economic actors.

The percentage of sold production for each transactional group was reduced with a binary form with the purpose to facilitate a hierarchical cluster analysis based on place of origin (Emilia Romagna/ Marche) and market trends (Participatory transactions, Short Supply Chain, Indirect selling, In Farm Direct Selling).

The prevalence condition was required for all transactional groups reporting values above 20% of the maximum value they reached<sup>5</sup> according to the following scheme:

$$\forall j \text{ if } EP_i \geq EP_{max} - 20 \text{ then } 1, \text{ otherwise, } 0$$

where j is the j-th observation (with j varying from 1 to 53), EP<sub>i</sub> represents the value assumed by the i-th transactional group (with i varying from 1 to 4) and EP<sub>max</sub> the maximum value registered in the four exchange categories.

The Cluster Analysis was performed considering the *B-Shape* index to measure intra-cluster similarity distances and the complete linkage method to measure inter-clusters distances. After that, a One Way Anova Test and an homogeneity of variance test (based on Levene Statistic distribution) were carried out to assess the significance of differences between clusters.

Once the groups of farms were defined according to exchange methods and place of origin, the average values of other information collected for each cluster were analysed.

<sup>5</sup> The introduction of an arbitrary tolerance threshold allows to intercept more transactional groups for each case, allowing to highlight whether multiple sale strategies exist or not .

### 3 Results

Cluster Analysis results reveal a strong relation between geographical origins and market strategies (Table 2). Test results show highly significant differences between the values assumed by the variables considered for each cluster (table 3).

As shown in table 2, Emilia Romagna better represents producers' market opportunities. The percentage of farms for each cluster never goes below 10%. In particular, unlike what happens in the Marche, many cases in Emilia Romagna report selling through farmers' markets and box schemes. On the other hand, many farms in the Marche are connected with short supply chain channels, most likely restaurants, school canteens and specialised shops. These commercial outlets scarcely exist in Emilia Romagna. Compared with in-farm direct selling and conventional channels (Industries, Wholesalers, large Cooperatives) no significant differences were found. Therefore, in these circumstances, there does not seem to be any connection between administrative origins and market trends.

**Table 2.** Observations as to geographical origins and market profiles

Clusters	Number of cases	% from ER	% from M	PT	DS	SC	IS
1	14	27	25	17	7	2	75
2	13	12	45	17	18	62	3
3	12	21	25	6	78	7	8
4	14	39	5	75	19	5	0

**Table 3.** Tests on the significance of differences between groups

Variables	Homogeneity of Variance Test (Levene Statistic)	One Way Anova Test (F statistic)
ER/M	12.547	4.361
Binary - PT	9.090	17.458
Binary - DS	13.304	33.165
Binary - SC	5.559	175.296
Binary - IS	5.559	167.228

**Table 4.** Some Information on production size

Clusters	Harvested Area (range 0 - 4*)	Owner Age (range 0 - 2**)	Labour (n. of .....)	Total HP	Obsolescence (Average Year)
1	2.2	1.2	1.6	249	2000
2	1.3	1.1	1.5	165	1991
3	1.8	0.9	1.7	186	1991
4	1.1	0.9	1.2	204	1984

\* 0 - <5 ha; 1 - from 5 to 10 ha; 2 - from 10 to 15 ha; 3 - from 15 to 20 ha; 4 - >20 ha

\*\* 0 - <40 year; 1 - from 40 to 50 year; 2 - >50 year

Looking at production size, the largest farms with good mechanical equipment are usually connected with industries, wholesalers and cooperatives (Table 4). On the other hand, smaller businesses, which mainly market through the participatory form, reveal the presence of oversized and obsolete machinery. However, producers opting for alternative markets require a higher amount of work compared to companies selling through indirect channels. In addition, business

strategies also seem to influence production methods by affecting the adoption of good agricultural practices (use of green manure and compost) (Table 5). Holiday farmhouses are more widespread within larger businesses, which are connected with both industry and short supply chain (Table 6). However, the various forms of direct selling seem to foster cultural and educational activities (Teaching Farm, Open Farm, etc.), which does not seem to happen with conventional selling channels.

**Table 5.** Some information on good agricultural practices (%)

Clusters	Hold Cultivars	Green Manure	Manure/Compost
1	50	40	60
2	62	60	80
3	42	50	80
4	50	60	90

**Table 6.** Satisfaction levels for some specific aspects (range 0 - 3\*)

Clusters	Costumers	Price	Personal
1	2.5	2.0	2.2
2	2.4	2.3	2.8
3	2.5	2.3	2.3
4	2.4	2.2	2.4

\* 0 - “totally unsatisfied”; 1 - “unsatisfied”; 2 - “satisfied”; 3 - “very satisfied”

Looking at producers’ general satisfaction level (Table 6), the farms that feel most gratified by their business mainly adopt direct selling systems and particularly opt for short supply chain and participatory transactions.

#### 4 Discussions

The classification of the various farmer's business strategies according to the exchange groups reported in table 1 was made on the basis of assumed social and instrumental balances governing transactions. Indirect exchange forms are supposed to be governed exclusively by opportunistic behaviours. Such attitude does not always prevail in other transactional groups, so much so that it even turns out to be counterproductive in participatory transaction forms. In this connection, depending on the case, local institutions and formal or informal groups of consumers take on the governance of exchange initiatives, setting the rules and often taking upon themselves the costs and coordination of business relations. Therefore, such a well-defined market lacks the distinction between production and consumption, as consumers are also a co-producers, meaning that they help establishing the rules for the production and sale of goods.

However, in general, the farms opting for short supply chain are not coordinated nor governed by a single type of institutional arrangement. As reported in recent studies on Alternative Food Networks (Murdoch and Miele, 1999; Straete and Marsden, 2003; Guthman, 2004), often times

antithetical market forces coexist within the farm. As a result, for a part of their production, farmers are subdued to industrial control, favoured by previous specific investments, and for the remaining part they acquire greater autonomy, which may result in the direct control of market outlets, perhaps making the most of particularly advantageous positions (in-farm direct selling). This consideration is confirmed in the empiric analysis described in this paper. The prevalence of particular production trends for the clusters identified in table 1 is always accompanied by the coexistence of other market forms. This is particularly evident in the group of farms from the Marche, where the connection with canteens, restaurants and specialised shops reveals the existence of a diffuse economy rooted in the region's rural structure, which justifies the self-preservation of local exchange networks. From a competitive point of view, such a well-structured form of exchange favours the acquisition of decision-making autonomy, setting the farm free from its complete dependance on industry. Free from position constraints, as it does not depend on the existence of special social environments and requires a relatively simple commercial organisation, the short supply chain seems to have higher development potential compared with other forms of alternative markets.

Nevertheless, looking at the figures reported in this paper, institutional boundaries seem to affect its dissemination, strongly dampening the potential shown by Alternative Food Networks in opposing the centralising force (Gellner, 1999).

Because of the above-mentioned features, the Marche is a region in which multiple institutional environments coexist, governing specific organisational functions according to very different patterns (Friedland and Alford, 1991; Townley, 1997). On the other hand, Emilia Romagna is characterised by more uniform institutional standards, habits and rules, with smaller changes in businesses' structure and culture, which equals to reduced autonomy in pursuing independent strategies and targets.

Practically, compared with the Marche, the institutional system of Emilia Romagna reflects what DiMaggio and Powell defined as "*Organisational Isomorphism*" (DiMaggio and Powell, 1983) which allows farms to choose between the "*authority of competition*" existing in the market and "*authority of command*" within the enterprise (Pagano, 1992)<sup>6</sup>.

This is because, unlike what happened in the Marche, in modern times Emilia Romagna was the protagonist of strong industrial development, which had significant social repercussions, leading to the development of many consumption cooperatives created with the purpose to give back to citizens the political identity they had been deprived of (Baravelli, 2008) and which seems to have been lost again<sup>7</sup>. Still, the political culture characterising the social system of Emilia Romagna, keeps alive the principles of mutualism and democracy, encouraging the creation of new tacit forms of exchange (fourth cluster in table 2). In Emilia Romagna, informal economy became a way to rework social organisation aspects and lifestyles whose spreading is fostered by the survival or creation of community relations<sup>8</sup> that develop in the progressive dissemination of Farmer's

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<sup>6</sup> In 1992 in "*Authority, Coordination and Disequilibrium: An explanation of the coexistence of markets and firms*", Pagano reinterprets the transaction costs theory through the concepts "*authority of command*" and "*authority of competition*" defined by Marx in 1967.

<sup>7</sup> The new figure of financing partner, the definition of traditional cooperative societies (*a mutualità prevalente*) and cooperatives open to financial investors (*non a mutualità prevalente*), the new rules on the distribution of profits and the expansion of capitalisation, are the changes established by the latest national laws (from law 59/92 to legislative decree 6/03) with the purpose to modify the original ideals of cooperative movements and encourage industrial monopolies.

<sup>8</sup> The concept of community is meant to recall the rights of man challenged by large organisations, the issues of identity and power control. The community is a means for fostering the birth of new values and new social relationships (Busino, 1978).

### Markets and Box Schemes<sup>9</sup>.

The structural dualism that has on the one hand farms subdued to industrial monopolies and on the other farms that are able to create value on the significance of products at the time of the exchange, is confirmed by the results reported in table 4. The wide use of obsolete equipment by smaller businesses, generally adopted in joint ownership, should not be seen as a lack of technical efficiency, but rather as an adaptation strategy aiming at reducing financial dependence risks, which is endemic in larger farms<sup>10</sup>.

In general, short supply chains trigger the adoption of sustainable production methods, little used in farms opting for conventional channels (Table 5). Said results strengthen Guthman's thesis (2004), who maintained that involving organic farms in the agribusiness system demotivates producers from adopting sustainable cultivation practices, triggering organic world "conventionalisation" processes. This proves that when concepts like "intensification" and "specialisation", that are typical of industrial capitalism, are incorporated into the value of land, farmers risk to become insensitive to any type of innovation connected with sustainable farming practices.

Production diversification, which can be observed in the execution of services supporting the agricultural activity (Table 6), also reveals wider use of cultural and educational initiatives among the farms opting for short supply chain. On the other hand, farmhouse activities are most widespread in larger businesses adopting indirect selling strategies. This is because the availability of capital is a determinant factor in affecting differentiation processes. Farms with greater economic power invest in capital, while those characterised by poor financial ability invest in work (Reardon et al., 2006).

The level of personal satisfaction stated by the producers interviewed in this survey, shows that farms opting for alternative selling channels (Table 6) feel the most gratified. This is particularly evident in farms from the Marche interfacing with Canteens, Restaurants and local Shops. As specified above, these farms work in a diffuse economy environment, strongly integrated with the local area, where various institutional arrangements coexist and foster the development of competitive markets, in which competitiveness relies on the ability to establish long-term transactional connections. Decision-making autonomy, partly inhibited in participatory transaction forms to the point of being even compromised in indirect channels, is thought to affect producers' emotional state more than any other aspect.

## 5 Conclusions

The considerations made this far lead to identify in the short supply chain transactional patterns leaning on very heterogeneous social and instrumental balances. In case of prevalence of functional aspects in the promotion of products (both as to demand and supply), the study of the short supply chain is favoured by the use of analytic instruments based on regulatory approaches in which producers and consumers make their choices on the basis of economic evaluations. On the other hand, the prevalence of social aspects leads to the creation of new market forms, giving space to farms that would not be able to survive otherwise. In that case, fiduciary approaches alter the judgements of economic actors, thwarting traditional analysis schemes that do not take

<sup>9</sup> The first organisations to support Italian producers were founded at the end of the 90ies with *Coordinamento per la Sovranità Alimentare* in Bologna and the first *Gruppo di Acquisto Solidale* in Fidenza (PR). Community development initiatives, beginning from agriculture, have increased exponentially even in the last few years, regardless of the new financial crisis that destabilised the world's economic balance.

<sup>10</sup> Farms are often trapped in what Cochrane (1958) defined as a "technological treadmill", i.e. a process of continuous technological run that turns into growing financial exposure for meeting the investments required for staying in the business.

into account actors' relational structures<sup>11</sup>.

However, regardless of the prevalence of fiduciary approaches or economic judgements, the short supply chain expresses a diffuse economy opposing capitalist centralisation to the advantage of local societies.

The institutional environment, here identified as regional administrative areas, strongly affects farms' market trends. Still, direct selling models also established themselves in regions contaminated by so-called organisational isomorphism, such as Emilia Romagna. In this regard, transaction systems that can replace conventional channels are based on social standards and rules disregarding the dominant models identified in community relations.

Thus, as participatory approaches, alternative food networks represent the latent power of consumers revival attempting to reconfigure local structure of governance and so contrasting the economic and spatial power concentrated in the leading food manufacturers and retailers. From this point of view, AFNs encounter wider Rural Development Program targets based on "partnership", "community based initiative" and "capacity building" (Ray, 2000; Buller, 2000; Shortall, 2008) suggesting a policy of consumption such to recognize the importance of consumer-producer alliance in ensuring the economic viability of New forms of Food Networks. Unfortunately, in many cases political structures are insufficiently open to allow for participation excluding strategic key actors in development initiative. So far the question is, how can governmental actions foster participation and social capital in endogenous development (Shortall 2008)?

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<sup>11</sup> In accordance with these final notes, Powell in 1990 in "*Neither Market or Hierarchy: Network forms of Organization.*" suggests that, depending on the case, the transaction may take place through impersonal relations, as in the market, or establishing long-lasting bonds allowing to create strong social relations between the parties involved in the exchange. Similarly, Block (1990) maintains that the term "market" should be used exclusively when independent actors meet with the purpose to execute short transactions. It can be deduced that the structure and the quality of exchange relations moulds actors' expectations and opportunities.



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