# Social Capital and the Food System: Some Evidences from Empirical Research

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# Social Capital and the Food System: Some Evidences from Empirical Research

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**Abstract**

The paper stresses that in order to understand the current re-organizational processes in the food system, two kinds of social capital should be taken into account, trust and network-based social capital. Stemming from a case study, concerning the Italian processing tomato industry, it demonstrates that while trust seems to enhance social welfare, by reducing transaction costs and promoting cooperative behavior, network-based social capital mainly affects firm competitive behavior, with unpredictable effects on social welfare.

**Keywords:** *social capital, trust, networks*

## Introduction

Social capital is generally deemed to be associated with better economic performance, whether at aggregate level, i.e. with respect to the whole economy of a country, or at a more micro level, i.e. with respect to competitive advantages that firms can attain because of their access to social capital. The most common measures of social capital have been trust and associability. In the paper we stress that these measures alone, while being effective for macro analysis of social capital, are ineffective and somehow misleading when assessing the role of social capital in business performance. In the first section, we give some definitions of social capital and show how they fit important organizational issues in the food system. In the second section, we discuss the role of social capital in the Italian processing tomato industry, explaining how different kinds of social capital account for different strategic patterns followed by the two agro-industrial districts in this industry. Concluding remarks contain suggestions for future theoretical and empirical research.

## 1. Social capital and the food system

The concept of social capital dates back to the early twentieth century and was first used by authors interested in the analysis and assessment of modern western democracies (Putnam, Goss, 2002, pp.3-7). Stemming from the seminal work of Coleman (Coleman, 1988), during the nineties the concept has spread throughout the social sciences, from sociology to economics, anthropology and politics.
While a survey of different concepts and definitions of social capital is beyond the scope of this paper, a clarification must be made in order to distinguish at least between two different strands of literature, that allow for very different ‘discourses’ on the role of social capital in the

food system. The first strand of literature is related to the works of Putnam (1993) and Fukuyama (1995) regarding the role of social capital in improving democracy and economic development. These authors basically view social capital as a kind of impersonal and generalized trust that reinforces social relationships, building up, along with other kinds of social norms, those social networks constituting the structure of civil society (or as in a mirror image social capital is described as social networks and the associated norms of reciprocity). According to this view, social capital fosters democracy and economic development by facilitating social and economic exchanges (reducing monitoring and sanctioning cost) and allowing dilemmas of collective action to be resolved (limiting free-riding and offering cooperative-based solutions to collective action problems). According to this definition, social capital is measured mainly through the dimensions of associability, trust and attention (Offe, Fuchs, 2002). Indirectly related to this strand of literature on social capital are economic theories (Bowles, 2004; Fher, Gachter, 2000; Fher Schmidt, 2001) that stress the role of reciprocal behaviors, social preferences and social norms in solving organizational problems associated with contract incompleteness and in explaining experimental results of bargaining games.

The second strand of literature is related to works by Burt and Lin (Burt, 92, 97; Lin, 99, 01) on social structure. Here social capital is defined as “resources embedded in a social structure that are accessed and/or mobilized in purposive actions” (Lin, 2001, p.29), where the social structure refers to relationships (that are the frame of a network) among social actors. Accordingly, networks are themselves considered a form of social capital. Linkages with other actors constitute the network of an actor, i.e. her social capital, whose value depends on (Burt, 1992, p.12) 1-the structure of the networks, 2- the resources contacts hold (whom the actor reaches), and 3- the nature of relationships (how the actor reaches). Following this definition, social capital is not necessarily associated with cooperative behavior and high level of trust, but rather it nourishes competitive behavior based on the exploitation of information and control opportunities offered to an actor by her endowment of social capital. Related to this strand of literature is the theory of social exchange, and mainly the power-dependence theory both in its strictly-structural (Cook, Emerson, 1978) and structural-strategic (Molm, 1997) version.

Associated with these two general perspectives on social capital are different analytical tools and research styles. The trust-perspective leans on descriptive and historical analysis and has mainly been followed by scholars in politics and functional sociology. Network-perspective makes use of analytical tools from social network analysis and theories of communication networks and has been followed by structural sociologists and scholars in business and management.

Figure 1 summarizes definitions and related bibliographic references of the two social capital perspectives (Coleman, 1990). Note that between the trust and the network perspective lies Coleman’s conceptualization that captures both the functional and the structural aspect of social capital, resulting in a very general but also rigorous definition.

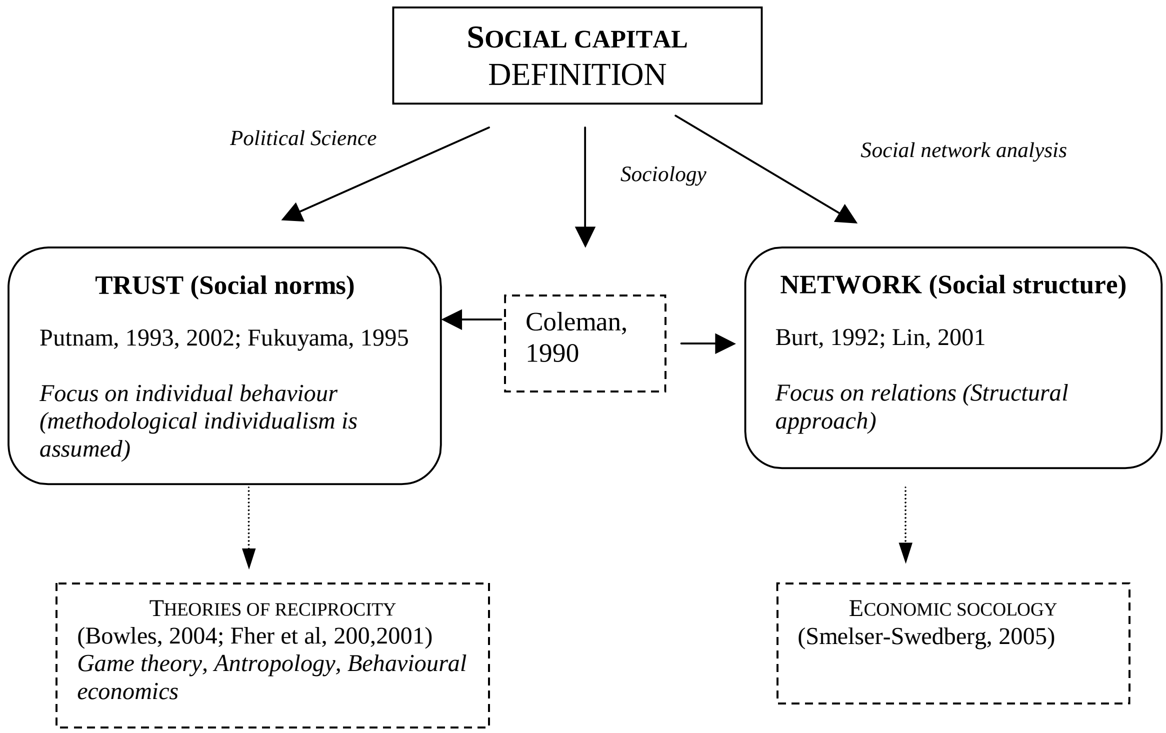


**Figure 1.** Two social capital perspectives

Over the last fifteen years, economic theories have borrowed the concept of social capital from sociology and politics, mainly through the bridges built by economic sociology. Institutional theories have looked at the trust perspective when studying trust and social norms as exchange organizational forms alternative to markets, contracts and hierarchies. Management and industrial organization theories have looked whether at trust, as a lubricant of inter and intra firm relationships, or at network perspective, considering social capital as a source of competitive advantage.
With respect to the food system, the concept of social capital has been mainly used in order to explain at least three strategic and organizational features of the system:

1. The “maintenance” of regional products, as niche markets surviving in the monopolistically competitive fringes of the huge oligopolies leading the system. In that case social capital is involved in the process of construction and enforcement of quality standards used in the definition of origin denomination, and in the process of quality perception (this latter being associated, for these products, with cultural-based credence quality attributes).
2. The success and consolidation of local agro-industrial district. Industrial districts are a special type of inter-organizational form characterized by the presence of a small-firm network with specific territorial boundaries In industrial districts social norms are as important as formal institutions in coordinating actors’ behaviour The literature on industrial districts (Pyke and Sengerberger, 1992; Brusco, 1996; Sodano, 2004) has generally maintained that at the core of the organizational specificity of a district there is the exploitation of some form of social capital embedded in social relations.

3. The emergence in the system of collaborative inter-firm relationships, such as strategic alliances, consortiums and joint ventures (Sporleder, 1994, 2000). These kinds of relationships occur when firms engage in formal or informal agreements to strategically exploit a common advantage associated with the "external synergies" stemming from the relations themselves. For instance, collaborative relationships between retailers and suppliers in the supremacy of the marketing channel (may) create gain opportunity by maximizing consumer satisfaction and minimizing costs

It is worth noticing that in all three cases mentioned social capital is 1- mainly retained in the form suggested by the trust perspective, and 2- is generally deemed to cause welfare enhancement, by fostering organizational efficiency and innovation. On the contrary, few efforts have been made so far in investigating social capital from a network perspective, considering also possible negative welfare effects of social capital exploitation practices. This lack of attention for the "downside" of social capital could lead (as we try to explain below) to somewhat misleading interpretations of the re-organizational processes currently occurring in the food system.

While in the 1960s and 1970s the key players in the world economy were largely vertically integrated, in the 1980s and 1990s "the rising integration of world markets through trade brought with it a disintegration of the production process of multinational firms, since companies found it profitable to outsource (domestically and abroad) an increasing share of their noncore manufacturing and service activities" (Gereffi, 2005, p. 166). As a consequence, the whole production structure in the global economy changed, with the emergence of international trade and production networks. During the last two decades in the food sector many TNCs have progressively reduced their involvement in first-tier processing and have engaged in policies of outsourcing together with high investments in brand equity.

Literature on industrial organization indicates as causes of vertical disintegration, efficiency seeking and market power enhancing behavior. Networks and vertical integration have been compared as alternative supply structures for specialized inputs, with networks turning dedicated into flexible assets (Kranton and Minnehart, 2000). The general wisdom is that flexible assets and networks involve social benefits when there is high demand uncertainty. In the case of the food sector, where inputs generally exhibit a low level of specialization, major causes of disintegration seem to be the possibility of boosting profit through the exercise of high buying power (stemming from the weakness of fragmented suppliers with few exchange alternatives), and the cost saving due to poor labor and environmental regulations (these latter generally occur in developing countries where suppliers are situated). According to this view, firms engaged in outsourcing build their own networks structured in such a way as to maximize the value of their social capital. Networks rich in structural holes and in relations with suppliers characterized by imbalances in bargaining power (such imbalances are associated with asymmetries in exchange opportunities between the counter parties, as predicted by the power-dependence theory) provide these firms with competitive advantages and profit opportunities. Negative welfare effects may derive from an exacerbation of market imperfection at final as well as intermediate markets of the food supply chain, and from inequalities in income distribution among actors in the chain. It is worth noticing that in the framework sketched not only is trust inessential for the accessibility to (this network style) social capital benefit, but it may even be destroyed as a consequence of it. Trust waste can occur either because of the impoverishment and fragmentation of weaker parties in the networks (with less physical and psychological resources left to invest in common activities and associability) or because of deregulation in labor security and environment protection fostered by leading actors (with a generalized loss of confidence in all form of institutions able to supply public goods).

## 2. Social capital and the processed tomato industry

### *2.1. Current structure and strategies*

Italy accounts for about 35% of the whole world supply of processed tomato. The industry exhibits a district-type form of organization, with two districts localized in narrow territories around a central and a southern region, namely Emilia and Campania. These two regions are often mentioned in the literature on social capital, as an example of territories following different development patterns due to just that very different endowment of social capital. In his seminal work on social capital Putnam (1993) argues that the higher economic performance of Emilia, with respect to Campania, during the eighties and the nineties, was due to the greater effectiveness of regional government (introduced in the 1970s), this latter associated with the higher stock of social capital as measured by Putnam's civic community index. Mackie (2001) notices that already Macchiavelli held Emilia up as an example of a high trust society (and hence a perfect candidate for a republican government), in contrast to the case of Campania, a typical example of low-trust society that could be ruled only by a prince. Campania's lack of social capital has also been denounced in wider literature on institutional motivations underlying the chronic underdevelopment of Southern Italy (Mutti, 1998).

As a result of these very different socio-cultural environments, the two processed tomato agro-industrial districts look very different. Considering the three "integrating" factors generally suggested by the literature on industrial districts, -1) economies of scope and localization, 2) network externalities, and 3) local social capital (in terms of trust and associability) endowment-, it can be said that the first factor accounts for the organizational strength of the southern district, while factors 2) and 3) mainly pertain to the northern district.

Such differences are evident looking at the different structural and strategic traits of the industry in the two regions, as summarised in tab. 1.

**Table 1.** Different structural and strategic traits of the industry in the two districts

| Distinctive district traits | Emilia | Campania |
|---|---|---|
| Main product | paste | Peel canned tomato whole peeled |
| Own brand | Seldom used | Often used |
| Grower | Many of small dimension; high cohesion through cooperative and strong collaborative relationships. | Many of small dimension; low cohesion; weak collaborative relationships. |
| Processors | Few of medium dimension | Few of large dimension and many of small dimension |
| Vertical relationships | Collaborative | Competitive |
| Main customers | Big buyers and large retailers (private label) | Own brand processors, large retailers (private label), small-traditional retailers |
| Vertical coordination through cooperatives | High | Absent |
| Transparency and accountability in business conduct | High | Low |
| Weakness | Slow modernization process; Cost disadvantages Organizational rigidities of cooperatives. | Short-period competitive advantages; Fragmented structure Weak infrastructures |
| Strength | Strong relationships with big buyers; High quality (certification, traceability, organic pest control) | Trading skill Knowledge of the market |


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In the 1980s and 1990s the Italian processing tomato industry performed very successfully, mainly because of the demand increase and the EU subsidy regime. This latter particularly boosted the Campania district due to growers' and processors' fraudulent overstatement of tomato purchases, the so-called 'paper' or 'ghost' tomato. At least 15 per cent of southern tomato factories seem to have been involved in such fraud. At the dawn of the new millennium the scenario has changed in a way such as to risk the Italian world leadership and the very survival of part of the industry. The growth rate of demand has declined, the EU subsidies have been reduced, and world supply has been progressively affected by the growing Chinese production. Moreover the more and more aggressive brand policies carried out by large retailers are resulting in a new competitive fight between private labels and manufacturer brands. US industry adapted in two ways to the new market conditions, with some firms specializing in scale production (as in the case of Morning Star which has heavily invested in plant capacity and modernization, in order to achieve higher efficiency and cost advantages) and others specializing in brand equity (as in the case of Heinz, Sara Lee, and Kraft, which have engaged in strategies of vertical disintegration and outsourcing, along with high investment in brand equity, with expertise in brand management rather than production becoming their core source of competitive advantage).

With regard to Italian firms, three strategies are currently viable for coping with the changing competitive scenario: 1) building new relationships with retail organizations, seeking collaborative agreements and softer competition with private labels; 2) innovation at the maturity stage of the life cycle, striving to succeed in differentiation strategies and niche markets; 3) re-positioning own business in the global market, trying to find new places in emerging networks resulting from outsourcing and market globalization. A fourth strategy – – 4) aiming at leading positions in the global market, giving priority either to cost minimizing or brand equity maximizing strategy- seems, on the other hand, not to be viable because of the lack of large corporations (especially after the breakdown of Cirio and Parmalat) and because of the relative high cost due to fragmentation both at agricultural and manufacturer level.

### *2.2 Assessing the role of social capital*

In this section, we illustrate the lack of trust in the southern district, suggesting that differences in trust-based social capital account for different strategies in the two districts. We use results from the initial stage of a research we are currently carrying out on the socially-based determinants of strategies in the industry.

In order to evaluate the statistical situation in the two Italian regions concerned with processed tomatoes, both some official statistics (see tables 5 and 6) and some data gathered during an ongoing survey examining the structure and strategy of tomato processing companies (see tables 2, 3 and 4) have been taken into consideration. The survey in question involved distributing a questionnaire to 29 firms, of which 23 operate in Campania, and the other 6 in Emilia.

**Table 2.** Human capital and level of openness towards the outside

| | *Campania* | *Emilia* |
|---|---|---|
| Managerial staff with a degree | 20% | 56% |
| Reports concerning research | 58% | 100% |
| Business trips abroad | 5 | 10 |
| Training and refresher courses | 1.4 | 2.5 |

*Source. Our own work*

**Table 3.** Percentage of those registered in formal and informal associations

| *Type of association* | *Campania* | *Emilia* |
|---|---|---|
| Trade unions or professional bodies | 45 | 50 |
| Voluntary organisations | 10 | 50 |
| Cultural and recreational organisations | 20 | 35 |
| Humanitarian and religious organisations | 10 | 5 |
| Environmental organisations | 0 | 50 |

*Source: our own work*

**Table 4.**Voluntary organisations in Italy

| | *Campania* | *Emilia* | *Italy* |
|---|---|---|---|
| Volunteers/10.000 inhabitants | 20 | 188 | 84 |
| Organizations/10.000 inhabitants | 0,3 | 2,6 | 1,5 |

*Source: ISTAT*

**Table 5.** High trust in institutions (percentage values)

| *Institution* | *Campania* | *Emilia* |
|---|---|---|
| Law enforcement | 48 | 88 |
| Public health | 17 | 75 |
| Education | 22 | 67 |
| Justice | 39 | 38 |
| Local government | 17 | 88 |
| Central Government | 30 | 67 |

*Source: our own work*

**Table 6.** Rate of criminal and illicit activity

| | *Campania* | *Emilia* | *Italia* |
|---|---|---|---|
| Murders and attempted murders /100.000 inhabitants | 9.8 | 3.6 | 5.1 |
| Robberies/100.000 inhabitants | 205.7 | 59.3 | 80.3 |
| Total/100.000 inhabitants | 6192 | 4153 | 4937 |

*Source: ISTAT*

Altogether the firms interviewed process about 4.6 tons of fresh tomato, representing about 58% of the total amount of tomato processed in Italy. The sample, therefore, despite not being representative or chosen at random, covers a significant part of national production.

The statistical indicators emerging from the field survey are the ones traditionally taken into account by related literature, namely, human capital, associability, trust and criminality (Grootaeri et al., 2004).

The section on human capital has been able to show both the higher level of openness towards the outside and higher quality management structure of the Emilia region. All the companies (see tab. 2), in fact, declare relations with public bodies and associations with the aims of research and counselling, against 58% in the Campania region. As regards business trips abroad, on average the employees of firms in Emilia make about 10 annually, against 5 by employees in Campania. The management structure comprises mostly graduates in the 25 to 40 age range in firms in Emilia, whilst in Campania only 20% are graduates and the average age is mostly over 40.

The level of participation in formal and informal associations enables us to notice further differences. As shown in table 3, relative to the survey carried out with questionnaires, the interviewees from Campania show a preference for trade unions and professional bodies whilst participation in voluntary, environmental or recreational organisations is all but non-existent. In Emilia, on the other hand, the percentage of interviewees belonging to such organisations is much higher, with the single exception of religious based ones.

The analysis of the principal data relative to the two Regions also shows major differences. In tab. 4 we show data published by two ISTAT surveys relative to the importance of voluntary organisations and criminal activity carried out in Italy and in the two Regions being examined. The consistency of voluntary activity in Campania is well under the national average, and occupies, with only 0.3 organisations per 10,000 inhabitants, the last place amongst the Italian regions whilst Emilia, placed at sixth in the list, comes out as one of the Italian regions with the highest density of organisations and number of volunteers.

Regarding trust indicators, in both groups about 50% of interviewees trust both their neighbours and most of the people they know, so showing a substantial similarity. However, the perception of trust and confidence in the main institutions appears highly dissimilar and systematically greater in Emilia, as clearly shown in table 5. In particular behaviour towards central and local government should be noted.

The criminality indicator also makes apparent profound differences between the two regions. In Emilia all interviewees declare as negligible the influence of criminality on either their firm's activity or that of the territory, whilst in Campania 39% of firms interviewed maintain that their own economic activity is prejudiced by criminal systems and an even higher percentage maintain that the territory's economy is jeopardised by such organisations.

This data brought out by the questionnaire survey is confirmed also by official statistics regarding illicit and criminal activity and crime. In this case the comparison between Campania and Emilia is synthesised in table 6. With respect to the three categories contained in the table, Campania seems afflicted by social problems to a far greater extent than is observed in either Emilia or Italy as a whole.

In conclusion, both official statistics and indicators emerging from the informative survey make apparent substantial differences between the two regions. In particular the 4 categories of indicator considered let one suppose a different composition and quality of social capital, which could be useful in explaining the different organisation of the two regions and their differences in terms of economic performance.

The different endowment of social capital gives northern and southern firms different chances to succeed in the three strategies mentioned previously. The first strategy (building new relationships with retail organizations) demands high trust, in that collaborative vertical relationships aimed at optimising logistic and information flows and seeking common marketing goals, require loyalty and a cooperative outlook. It therefore mainly fits Emilian district. The second strategy (innovation) also seems more viable for the Emilian district, mostly because whatever the product innovation may be, its success will require strict retailer collaboration (i.e. trust), for the launch and the subsequent promotional activities. Conversely, the third strategy really seems tailored to the southern business style and the ability to build and exploit a network-type social capital.

During the last three decades southern firms have acted as central nodes in the intra-industry trade within the industry. They have traditionally imported considerable quantities of paste from Greece and from non-EU sources, for re-processing and re-export. Recently, China has become their first supplier. Imported Chinese tomato maybe exceeds formally registered flows, with some manufacturers having been alleged to use Chinese raw product to can “bogus Italian branded” tomatoes. In the future it is likely that major southern firms will focus on trading activities more than on production, while small firms being forced to exit the market under the pressure of lower cost foreign producers. With the core business shifting to trading expertise, the sort of social capital made of networks allowing for the exploitation of business opportunities and bargaining advantages associated with structural holes and hub positions, is likely to become the main source of competitive advantage in the southern district.

## Concluding remarks

Social capital can play a key role in current restructuring processes of the food system. Trust-based social capital promotes collaborative agreements, reducing transaction costs and allowing cooperative solutions in “prisoner dilemma type” games. Network-based social capital gives central actors in the competitive arena more opportunities to exploit diverse sources of competitive advantage. Empirical evidence from the processing tomato industry suggest that different endowments of social capital can account for very different company strategies and business styles. High levels of trust are leading emilian firms to improve quality and seek cooperative agreement with large local retailers. Low level of trust and a traditional attitude towards exploiting network forms of social capital (also through quasi-illegal opportunistic behavior) are driving southern firms towards the new food system global networking game, with unforeseeable competitive and welfare consequences. On theoretical grounds the main suggestion of the paper is that network based social capital, along with trust, greatly affect the food system and that a major effort is required in order to measure it.

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