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Farmers' motivation and perceived effects of participating in short food supply chains: evidence from a North Italian survey

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Abstract: Local production supports the economies of place and increasingly makes sense as the citizen-consumers increase in number and awareness. Nonetheless, despite the value of the short supply chains, some researchers have reacted sceptically to the irrational optimism around this sales structure. A close relationship with consumers does not imply more profit or exchange fairness by definition. In fact, increasing marketing costs must be considered and there is still information asymmetry, and the profiteering farmers could take advantage of the consumer trust. Through data reduction we explored the farmers' motivation and perceived effects of participating in short food supply chains. We also analysed the location of farms along with their size, production, sale channels and the relative market share, as well as whether they adopted quality certifications. We found that the farmers that work within the short food supply chains opt for a sort of co-certification mechanism based on the consumer/producer relationships rather than opting for the quality certification. Furthermore, the multivariate analysis showed different motivations and perceptions of direct sales among farmers: those that were the largest and farthest from the point of sale, were positive toward the social values of short food supply chains, while the rest seemed less competitive and were more motivated by profit and survival. The results reaffirm that the local production may not be good *per se*, and the presence of profit and surviving-orientation to market should be considered a treat especially for the reputation of the whole system.

Keywords: co-certification, farmers' market, local food, local trap, Short Food Supply Chains

The more the agro-food systems tend to the globalization and de-territorialisation of the raw material production and processing, the less consumers can be considered as active participants in food supply chains. This situation is not necessarily bad in itself. Large manufacturing companies and retailers guarantee a high safety and quality standards at low prices. However, space also needs to increase the short food supply chains (SFSCs), given their ability to respond to the demands of new consumers (Marsden et al. 1999).

Although the vast majority of consumers go to supermarkets for their weekly food shopping, an increasing number of people show an increasing awareness of their role in driving changes in the food sector (Lockie 2009). They are known as the "citizen consumers", and they are pushing for a more ethical and environmental focus in food production (Wilkins 2005). In this sense the SFSCs, which represent an alternative food market that minimizes intermediaries between producers and consumers (Renting et al. 2003) and offer products which embed the localization of economies and social welfare (Marsden et al. 2000), represent one of the best opportunities for the citizen-consumers to "raise their voice" and show to the policymakers and food producers that there is an alternative to globalization and the de-naturalization of agro-food systems.

In the last two decades, there has been an increasing interest in the SFSCs. Many studies have been published, and local governments have promoted specific incentives supporting these food-provision schemes (Bazzani and Canavari 2013; Kneafsey et al. 2013). The SFSCs represent a real opportunity for guaranteeing income from agriculture (Allen et

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al. 2003). Furthermore, they increase the social interaction among farmers, and between farmers and consumers (Brunori et al. 2011; Fondse et al. 2012). However, an expanding market could stimulate new economic actors to participate, thus endangering the value of the original system itself. Even though consumers and producers may have a close relationship, there is still an information asymmetry, and the profiteering farmers could take advantage of the consumer trust. The intervention of large retailers in the SFSCs could also be dangerous; as in the case of organic products, such companies do actually have the resources to introduce local products onto their shelves and thus "globalize the local" (Lockie 2009).

In this context, researchers and policymakers have the delicate role of protecting consumers from fraud and helping honest farmers in defending and developing the value of their produce, which is in part intangible, public, and vulnerable.

The present paper contributes to this issue by analysing the characteristics of the producers participating in the SFSCs. We discuss the case of farmers' markets and local food fairs in Milan (Italy), highlighting the attitudes of farmers and the effects they perceive that the SFSCs have on the farm organization, which can be used to highlight the strengths and weaknesses of this market structure.

THE SUSTAINABILITY OF THE SFSCS: DOES BEING "LOCAL" MEAN BEING SUSTAINABLE?

Many individuals and organizations claim that the SFSCs are a "solution for the globalization" of the agro-food sector. This tends to be the case amongst food activists (Allen 2010; DeLind 2011; Galt 2013), politically-oriented farmer organizations, local governments (DeLind 2011), and consumers (Onozaka et al. 2010). These supporters often consider that local production is more sustainable than the conventional supply chains because of its "alterity", but without making a quantitative assessment of the implications of being "alternative" (Born and Purcell 2006). Aside from the debate around the need to fight globalization in the agro-food sector, accepting some arguments as an absolute truth may clearly have dangerous consequences.

Many researchers have reacted with scepticism to this attitude. Like such researchers, we do not believe that the re-localization of production is or is not by default acceptable, we merely recommend that its limitations just be considered in order to have an exhaustive and objective description of the opportunities and the risks that these alternative strategies present. Evaluating the economic, social and environmental dimensions of the sustainability of the alternative agro-food networks is needed in order to escape the "local trap" and to disclose the real effects of the SFSCs for the agro-food sector (Born and Purcell 2006; Kirwan and Maye 2013).

Economic feasibility of SFSCs

It is widely accepted that buying local products is "good", because it helps to maintain the local agricultural systems. This concept is even stronger in the case of direct sales, which implies the direct support for those producers that would not be able to compete in the global markets (Banterle et al. 2014; Tudisca et al. 2015). Even if we could consider the consumer preferences (Seyfang 2006, 2008) and willingness to pay a premium price for re-localized products (Gafsi et al. 2006; Thilmany et al. 2008; Carpio and Isengildina-Massa 2009) as an opportunity, this assumption reveals that the SFSCs are somehow socially accepted to be economically disadvantageous for the farmers. Indeed, the farmers' income support may be acceptable because of the public goods produced by the local production, nonetheless, a concrete profitability of production and exchange would ensure the maximum resilience and efficiency of the SFSCs at minimum costs for the society. Based on the above rationale, economic sustainability of the SFSCs should be considered as important as (or even more important than) the social and environmental sustainability. Without profit it is unlikely that local production would survive in the long-term. So, it can be held that local producers need to (and should) add a monetary value to the resources they use, and to study if and how this is possible.

Some papers have highlighted the economic threats of being "alternative". Galt (2013) underlines that in the Community Supported Agriculture (CSA) farmers suffer from their own self-exploitation, i.e. they tend to undervalue their own work in the monetary terms and trade profit for the pleasure it procures them to participate in the direct sale scheme and to create social relationship with other producers. Despite this pleasure, the re-localisation of production occurs in a capitalistic market, which imposes competition on farmers. It does not matter whether farmers in the SFSCs demonstrate collaboration strategies. Furthermore, even though

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direct sales guarantee that producers can command higher prices than the conventional retail channels, there is some evidence that such a premium price can be absorbed by the increased marketing costs (Hardesty and Leff 2010). These indirect costs are the most dangerous in terms of economic sustainability, because farmers sometimes do not even realize they are losing money (Ahearn and Stern 2013).

Researchers have already proposed some solutions which generally lie in supporting the strategic intervention for a rational development of the SFSCs (Bowman and Zilberman 2013). Given the costs of being smaller than the agro-food companies, public and private investments should be concentrated in increasing the human capital, capacity-building programs, organizational support and physical infrastructures facilitating partnerships and the localized economies of scale (Thilmany et al. 2013).

Social role of SFSCs

The social pillar seems to be the dimension of sustainability of the SFSCs that researchers agree the most on. Kirwan et al. (2013) note that the re-localizing production is not just a new way to sell products; rather it implies a radical change in farm management and its marketing strategies, which leads to social innovations in agricultural systems. Kneafsey et al. (2013) show that the interaction between consumers and producers, the sense of community, and the increased knowledge and behavioural changes are the three social impacts of the re-localization of agro-food production.

The interaction between consumers and producers, which could be considered to be the very basis of the SFSCs, is always cited by the researchers as valuable. The social benefit of a close relationship between consumer and producers operates in the construction of regard (Offer 1997; Sage 2003), a notion that describes the mutual satisfaction of farmers and consumers in creating a trustworthy relationship. This proximity offers producers an opportunity to explain the value of their products and to maintain under control the quality of production until the exchange occurs. On the other hand, the consumers regain the role of active participants by being in a position to assess the quality of food (Kirwan 2004; Lockie 2009). Seyfang (2006) refers to the economies of place, which educates consumers in understanding what they are eating and the ethics and social consequences of their choices. Nonetheless, the information asymmetry persists and the trust in producers and the self-confidence of consumers could even increase the risk of misjudgements and fraudulent behaviour.

It is also argued that the SFSCs increase knowledge and consequently stimulate behavioural changes in both producers and consumers (Saili et al. 2007; Fonte 2008; Kneafsey et al. 2013). Brunori et al. (2011) state that the farms that participate in the alternative supply chains need to find solutions to new and particular problems, and these circumstances are described as being the cause for the definition of new frames and organizational patterns. Kirwan et al. (2013) go further and refer to the "social niche innovation" describing the prospect of these values spreading from the alternative markets to small communities.

Raising awareness about "rural issues" stems from the different ways the consumers interact with the farmers. The buying local food using box schemes or community-supported agriculture schemes have been proved to facilitate consumers in understanding the characteristics and the quality of the food, stimulating an enhancement in their eating habits (Torjusen et al. 2008). Sims (2009) studied the effects of local food on tourists and found that offering original products improves the sense of engagement with the area the tourists are visiting. However, the consumer's perception of "local food" can be highly interpretative (Smithers et al. 2008) and being local does not always mean that the consumers are prepared to pay a premium-price. Consumers demonstrate positive attitudes towards localisation of production. Country of origin (Gaviglio and Demartini 2009) and denomination of origin (Peniak et al. 2009) are well known drivers of consumers' choices. Nonetheless, this evidence could not be confirmed in specific categories. For instance, Cosmina et al. (2013) and Gaviglio et al. (2014), for example, measured the perception of the traditional small pelagic fish species locally caught in Italy and found that the consumers had a negative attitude to this local fish compared to other fish, demonstrating the need to increase the promotion and the communication skills of producers. Consequently there can be a misrepresentation of information from producers to consumers, so the consumers' increased knowledge should be evaluated in terms of quality.

Environmental assessment of SCFCs

The environmental benefits of the SFSCs are still being debated among the researchers. The differences within farms and production methods make it

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difficult to reach any definite conclusions (Kneafsey et al. 2013). The literature is essentially limited to the greenhouse gas emissions and food miles of the local production (Edward-Jones et al. 2008). In some cases, the SFSCs are considered as not being environmentally friendly, even when the farmers use organic methods (Van Hauwermeiren et al. 2007; Edward-Jones 2008). Obviously, the environmental impact depends on the farm's characteristics and marketing strategies. In a comparison between the box schemes and farmers markets, Coley et al. (2009) calculated that when the consumers drive more than 6.7 km, they are likely to be polluting more than by the home delivery by specialized retailers.

The conventional agriculture is accused of soil and water pollution given its use of pesticides and chemicals, as well as the deforestation, soil erosion and the degradation and destruction of ecosystems (Lal 2009; Stoate et al. 2009), but how the SFSCs could impact the problematic characteristics of the global agro-food sector is still to be examined (Wiskerke 2009). Some studies argue that the organic local products help to improve the biodiversity (Seyfang 2008). In this sense, even if the impact is derived more from the organic techniques than from the re-localization of production, the SFSCs would be very interesting in the agricultural areas that need to regain their ecosystem. Furthermore, local products are sometimes produced using the autochthonous breeds in danger of extinction (Scintu and Piredda 2007; Pirani et al. 2010) and the traditional cultivars (Garcia et al. 2007; Abdelali-Martini et al. 2008).

All things considered, the literature shows that apart from helping the traditional breeds and conserving cultivars, the SFSCs do not necessarily guarantee environmental benefits, as there is no proof of any environmental loss. From this perspective, the environmental sustainability of the local production seems to be somehow counter-productive for the local production, creating competition between the organic and non-organic producers and communicating disvalues to consumers. Further studies are needed in this field in order to investigate this issue more thoroughly.

MATERIALS AND METHODS

Questionnaire and interviewed farmers

The data were collected through a questionnaire with three sections. The first section dealt with the farms: location, size, production, forms of sale and share of sales among different channels and the willingness to use certifications of the production quality. The second and third sections covered the farmers' motivational background and the effects of participation in the SFSCs.

Farmers were asked to rate on a six-point scale their agreement with statements regarding why they had decided to participate in the SFSC schemes and the effect they perceived that these schemes have on the business management. Our aim was to: (1) derive a measurement of how much the farmers share the underlying values of the SFSCs; and, (2) identify any patterns between the motivation and the perceived effects of their participation to the SFSCs, in order to describe the underlying attitudes of farmers towards the alternative agro-food networks.

Exploring farmers attitudes and perception of the SFSCs

As with all entrepreneurs, the local producers' choices are driven by maximization of profits objective. So, the social values the producers share must be considered as a constitutive part of the utility

Table 1. Motivation to participate to the SFSCs and its possible effects on the farm management and relationship with consumers

Market and prices
We cannot compete with traditional producers
We get higher prices
The demand for local products is steadily increasing
We needed to increase our sales
Business management
We are continuously stimulated to enhance our products
We are continuously stimulated to enhance our business management
We have lower marketing costs in terms of unsold or returned products
We have higher marketing costs in terms of logistics and management
Relationship with consumers
We communicate the real value of our products
Consumers' awareness about the quality of our products is increasing
Our products are created following consumers' requests
We create trust and loyalty with our clients
We have a good relationship with our clients outside the market
Consumers substitute the third-party certification bodies
Clients are interested in understanding our methods of production

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consumers pay for when they buy local foods. The cooperation among farmers and the relationship with consumers thus have a market value, then generate profit. Therefore, as interpreted by Fondse et al. (2012) and measured by Wudden et al. (2013), the social dimension of the SFSCs defines particular structures that strongly influence the economic choices of their stakeholders. In order to measure the effects on the farmers' choice, we identified some economic variables that can be connected to the participation in the SFSCs. These variables are listed in Table 1 and are subdivided into three macro-levels: market and prices, business management, and relationships with consumers.

"Market and prices" covers strictly the economical motivations. On the basis that profit is the underlying aim, the choice of SFSCs as a strategy for sale must be market- and price-oriented. We tested the importance of avoiding competition with the traditional agro-food players, the benefit of higher prices, the perception of a growing demand for these products, and the need to find new markets for them.

"Business management" and "Relationships with consumers" derive from Fondse et al. (2012), which offer an interpretation of the economic organizational structure of the SFSCs. The authors use a "marketing interpretation", which describes the interaction between the actors in the SFSCs as a strategic behaviour of certain farmers aimed at enhancing the business performance. The basic idea is that from the collaboration among the farms and the interaction with consumers, farmers gain in terms of human capital and the promotion of their products. We estimated these effects of the SFSCs by asking local producers whether the participating in agro-food networks has a positive impact on the product characteristics or the business management, which could involve lower costs in terms of unsold or returned products or higher costs in logistics. With regard to the consumer importance, we asked whether direct sales enhance the communication regarding the value of a product and increase the consumer awareness of the local products.

Questions also focused on the role of consumers in the farmers' choices in terms of the production and product quality. In fact, the farms could benefit from the consumer trust and loyalty because these create a steady demand; in addition, the consumers may actually replace the need for the third-party certification bodies, as they can inform farmers directly about their needs (e.g. by visiting the farm and exchanging views with the farmer). In this sense, the short food supply chains could include the opportunity for consumers to become the co-certificators and to a certain extent, the co-producers as well as recently described in the case of the alternative labelling programs for organic products in Sacchi et al. (2015).

Farms characteristics

The survey was carried out between April and June 2014 in Milan at one "Local Food" and one "Fair Trade" exhibition, and five weekly Farmers' Markets. Out of a total of 194 questionnaires distributed, 150 (77.3%) were filled in acceptably. Table 2 shows the sample characteristics. Most of the farms (48.7%) had joined the SFSCs more than nine years ago, with 22.7% before 2000, and 32.0% between 2006 and 2010, and 19.3% after 2010. The surveyed farms were small. A total of 67.3% employed no more than three people. Even if the sample is too narrow to be extended to the whole population of the short-chain-food supplier, the products sold represent the heterogeneity of the agro-food sector and are similar to the findings of Kneafsey et al. (2013) for the European Union.

Finally, the farmers were asked about their selling outlets (Figure 1). The most important sales channels were the farmers' markets, where the producers sell

Table 2. Characteristics of the sample

	Frequency No.	%
First year of participation to the SFSCs		
< 2000	34	22.7
2001–2005	39	26.0
2006–2010	48	32.0
> 2010	29	19.3
Employees		
1	45	30.0
2–3	56	37.3
4–5	22	14.7
> 5	27	18.0
Products		
Meats	18	12.0
Cold cuts	6	4.0
Meats and cheese	7	4.7
Cheese and milk	10	6.7
Vegetables and meats	20	13.3
Vegetables and fruit	18	12.0
Cereals and pasta	15	10.0
Wine and alcoholic beverages	21	14.0
Honey	19	12.7
Other products	16	10.7

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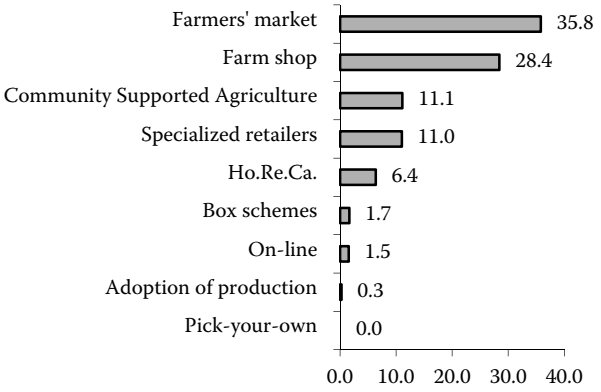

Figure 1. Mean of the share of product sales by channels (%)

in average 35.8% of their products, farm shops 28.4%, selling using the Community Supported Agriculture structures (11.1%), other specialized "local food" shops (11.0%), and Ho.Re.Ca (6.4%). Only 1.7%, 1.5% and 0.3% of the farmers used box schemes, on-line shops and the adoption of production respectively, while none of the farmers got consumers to 'pick their own' produce directly at the farm.

Multivariate statistical analysis

The principal component analysis (PCA – Jolliffe 2005) has been applied using the IBM SPSS 21.0 in order to evaluate the farmers' choices and the effects of the SFSCs that they perceived on their economic organization as Banterle et al. (2006) proposed for a survey on motivation in applying a voluntary traceability standard in the Italian dairy industry. To evaluate the PCA, the Keiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test of sphericity have been used. The first measures whether the partial correlations between variables are high and needs to be greater than 0.5, while the second tests whether the correlation matrix is an identity matrix and requires high χ^2 values and a proved statistical significance. In the present research, the KMO was equal to 0.711, and the Bartlett's χ^2 was equal to 368.9 with $p < 0.000$, which means that the original variables were highly correlated. In order to choose the number of components to be retained for rotation, the Kaiser criterion (Kaiser 1960) suggests that only the components with eigenvalues greater than one should be maintained, which enabled five components to be retained, saving 68.04% of the variance (see next subsections).

Table 3. General survey's results – Food miles and the certification of quality

	Frequency No.	%
Food miles		
< 25 km	22	14.7
26–50 km	33	22.0
51–100 km	41	27.3
> 100 km	54	36.0
Certification of quality		
Organic production label	32	21.3
Denomination of origin	28	18.7
ISO 9001 Quality management	9	6.0
None	61	40.7
Other certifications	20	13.3

RESULTS AND DISCUSSION

Descriptive results

We found that few farmers adopted the third-party certification labels: 21.3% were organic farmers and 18.7% sold products with a certified denomination of origin (Table 3). These percentages are relatively low considering that two of the five farmers' markets claimed to be "organic" and given that we had included wine as well as the PDO (Protected Designation of Origin) and PGI (Protected Geographical Indication) producers. Only eight farms, i.e. 6.0% of the sample, had the ISO 9001 quality certification, which is the most widespread standard for the traditional food producers. Finally, while 40.7% of the farms have no quality certification label, 13.3% of the sample stated that they adopted other types of certifications. These consist of labels linked to the farmers' markets or are a kind of the co-certification procedure, where at the consumer's request, farmers show and explain their methods of production.

We also focused on the "food miles". Assuming the producers use the shortest way, we calculated the distance of each municipality where a farm was located from the farmers markets in Milan using www.viamichelin.com, calculating that 26.0% of the farms sell within 50 km, 28.0% between 51 and 100 km, and the remaining 36.0% more than 100 km from Milan.

Table 4 reports the motivations and perceived effects of the participation in the SFSCs. The farmers interviewed saw the short food supply chains as interesting in the terms of "market and prices". All the variables we investigated have been overcome the middle scale point. Producers seem interested in increasing their

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Table 4. General survey's results – Farmers' motivation and perception about the participation in SFSCs

Variables	Mean	Dev. St.	Low	Medium	High
			No.		
Market and prices					
We cannot compete with the traditional producers	4.15	1.82	52	51	47
We get higher prices	3.98	1.74	51	55	44
The demand for local products is steadily increasing	4.24	1.43	28	54	68
We needed to increase our sales	4.32	1.34	17	72	61
Business management					
We are continuously stimulated to enhance our products	4.94	1.26	10	31	109
We are continuously stimulated to enhance our business management	4.39	1.41	20	64	66
We have lower marketing costs in terms of unsold or returned products	4.14	1.51	28	64	58
We have higher marketing costs in terms of logistics and management	4.14	1.62	37	63	50
Relationship with consumers					
We communicate the real value of our products	5.45	0.96	2	20	128
Consumers' awareness about the quality if our products is increasing	5.13	1.20	8	31	111
Our products are created following consumers' requests	4.70	1.54	18	92	40
We create trust and loyalty with our clients	5.04	1.30	11	29	110
We have a good relationship with our clients outside the market	4.87	1.11	10	33	107
Consumers substitute third-party certification bodies	4.71	1.65	25	33	92
Clients are interested in understanding our methods of production	5.35	0.98	4	20	126

Farmers had to rate in a six-point Likert scale their agreement to these assumption, from: 1 = I completely disagree; to 6 = I completely agree; classification: 1–2 = Low; 3–4 = Medium; 5–6 = High

sales (4.32 ± 1.34) and see the SFSCs as a means to achieve this (4.32 ± 1.34), whereas they would not be able to compete in the traditional markets (4.15 ± 1.82). Interestingly, the least rated variable was "we get higher prices" (3.98 ± 1.74). Although producers might have underestimated the benefit of higher prices, the standard deviation reveals that some of the farmers were not actually gaining any significant premium price from the SFSC-based exchanges.

With regard to their perceptions of the effect on "business management", we found a common agreement with respect to the effect of direct sales particularly on the stimulus for products (4.94 ± 1.26) and the business organization (4.39 ± 1.41) improvement. Less clear, but still shared between the farmers, were the perceptions that the SFSCs involve lower costs in terms of the unsold and returned products (4.14 ± 1.51), suffering a trade-off of higher costs in the logistics and management (4.14 ± 1.62).

The "relationship with consumers" was the factor farmers agreed on the most. In average, the mean values were higher and standard deviations smaller than with the other macro-levels. The surveyed farmers claimed that the direct relationship with consumers enabled them to prove to purchasers the "real value" of their products (5.45 ± 0.96) and to increase the consumer awareness about such products (5.13 ± 1.20. This highlights an increasing interest in the methods of local production (5.35 ± 0.98). Many producers also revealed that they had instilled a sense of loyalty in their consumers (5.04 ± 1.30), which also included a good relationship outside of the market (4.87 ± 1.11). We also measured the level of agreement in terms of how the direct sales can help to engage consumers in the food production. The farmers stated they tried to follow up the consumer requests (4.70 ± 1.54), and that the quality certification involving third-party certification bodies can actually be replaced by the direct assessments by the consumers (4.71 ± 1.65).

Data reduction

Starting with thirteen variables, five components have been extracted and rotated using the Varimax method in order to facilitate the interpretation. The components account for 68.04% of the total variance of the original dataset (Table 5).

The first component represents 17.4% of the variance. Arbitrarily considering all the variables that score more than 0.500 as being relevant for the definition of a component, the first component consists of the following: "We are continuously stimulated to enhance our products" (0.732), "We are continuously stimulated to enhance our business management"

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Table 5. Rotated components matrix

Variables	Components				
	1	2	3	4	5
Market and prices					
We cannot compete with the traditional producers	–0.137	0.386	0.652	0.284	–0.146
We get higher prices	–0.018	0.108	0.722	0.034	0.035
The demand for local products is steadily increasing	–0.020	0.773	0.163	0.086	–0.089
We needed to increase our sales	0.482	–0.305	0.491	0.369	–0.034
Business management					
We are continuously stimulated to enhance our products	0.732	0.217	–0.013	0.294	0.102
We are continuously stimulated to enhance our business management	0.559	0.454	0.034	0.420	0.030
We have lower marketing costs in terms of unsold or returned products	0.189	0.011	0.218	0.832	–0.005
We have higher marketing costs in terms of logistics and management	0.027	–0.133	0.704	–0.226	–0.050
Relationship with consumers					
We communicate the real value of our products	0.526	0.562	–0.151	0.031	0.277
Consumers' awareness about the quality of our products is increasing	0.241	0.841	–0.046	–0.046	0.071
Our products are created following consumers' requests	0.037	0.060	–0.335	0.692	0.171
We create trust and loyalty with our clients	0.877	–0.026	0.050	–0.007	0.062
We have a good relationship with our clients outside the market	0.173	0.140	–0.299	0.128	0.657
Consumers substitute third-party certification bodies	0.059	–0.131	0.188	0.039	0.854
Clients are interested in understanding our methods of production	0.583	0.239	–0.255	–0.071	0.450

Rotation method: Varimax with Kaiser Normalization. Percentage of Variance per Component: 1 = 17.44%; 2 = 14.95%; 3 = 13.92%; 4 = 11.58%; 5 = 10.15%; Cumulative = 68.04%

(0.559), "We communicate the real value of our products" (0.526), "We create trust and loyalty with our clients" (0.877) and "The clients are interested in understanding our methods of production" (0.583). These five variables summarize the *intangible value of being "short"*. When the consumers buy directly from producers, the direct communication between demand and offer creates the customer satisfaction on a small scale, which links the customers' interest in the production methods and stimulates the producers to enhance their products and business management.

Although we did not measure directly the active role of consumers in the farm innovation, the component reveals that the satisfaction and interest of the clients and the choices of producers are related. In fact, Fondse et al. (2012) underlined that the participation in the SFSCs helps the consumers and producers to reciprocally align their utilities. Given that our results confirm Fondse, we believe that this point is key in interpreting direct sales. We also interpret the convergence of these variables in a component as being the confirmation of the construction of regard as proposed by Kirwan (2004), noting that in this case regard is reciprocal: the consumers trust producers, while the producers show interest in responding to the consumer needs.

The most relevant variables in the second component, which accounts for 14.95% of the variance, were: "The demand for local products is steadily increasing" (0.773), "We communicate the real value of our products" (0.562) and "The consumer awareness of the quality of our products is increasing" (0.841). As seen in Table 4, the producers demonstrate good *market expectations* about the local products both in the terms of consumer demands and awareness and in their ability to communicate their products. The link between these variables can still be explained by the proximity between the consumer and producer, which is an integral part of short chains and allows the farmers to promote themselves at a low cost (Mardsen et al. 2000; Kirwan 2004; Saili et al. 2007).

The farmers stated that more and more consumers are asking about the production process. This implies a more conscious involvement in product evaluation than merely an "interest". It also highlights a possible decrease in the information asymmetry, and thus an increase in the consumer awareness of the food quality and safety (Wilcock et al. 2004). This suggests that the farmers should enhance their own and their employees' communication skills in order to be pro-active and anticipate consumer requests. The SFSCs stakeholders should also be aware of the pitfalls involved in such communication. For exam-

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ple, Verbeke (2005) found that the consumers were sometimes confused by the information they were given by the farmers.

The third component covered 13.92% of the variance and included: "We cannot compete with traditional producers" (0.652), "We get higher prices" (0.722) and "We have higher marketing costs in terms of logistics and management" (0.704). The component clearly represents the *economic value of being "short"*. The producers admitted that they cannot compete with the traditional producers, and that the farmers markets offer them the opportunity to command a higher price. This benefit has the costs of the marketing tools used in the direct sale that can derive from the logistic and products management, as studied by Hardesty and Leff (2010).

As already discussed, although this component could be considered as an "opportunistic attitude" of farmers, the economic sustainability should never be excluded from an analysis of the SFSCs. In fact, observing an association between the benefit of the market price and the recognition of higher costs, demonstrate that the farmers somehow recognize the compromises entailed in being 'short', i.e. its *value* and its *disvalue*.

The fourth component accounts for 11.58% of the variance and covers: "We have low costs in terms of unsold or return products" (0.832) and "Our products are created following consumers' requests" (0.692). The cause-effect between the ability of producers to respond to the consumer requests and the benefit of low costs in terms of the returned or unsold products cannot be inferred from the PCA results, but suggests that the SFSCs help farmers to *regain market power*. Such a benefit comes from a shift from the market monopsony, where the farmers would be at a disadvantage due to the economic power of retailers, to a market where there is a perfect competition with some risks for the final consumers. From this point of view, farmers markets are a fair form of exchange, which sustain the local rather than the global production as perceived by some consumers (Seyfang 2006; Hinrichs and Allen 2008). They also offer an opportunity for markets to fail since the consumers have no power when they are dissatisfied.

The fifth and final component has an eigenvalue that is higher or equal to 1. It accounts for 10.15% of the variance and is composed of the two variables "We have a good relationship with our clients outside of the market" (0.657) and "The consumers replace the third-party certification bodies" (0.854). We interpret it as the presence of a *co-certification* mechanism in the SFSCs. The correlation indicates that the consumers and producers have a mutual interest in understanding and explaining the production methods. A direct debate around products may lead to the consumers becoming more satisfied as they become active participants in the quality assessment of food (Kirwan 2004; Sacchi et al. 2014). In addition, the producers save the direct and indirect costs of certification procedures and management. However, the co-certification is not advantageous by definition: the labels of quality certification protect the consumers and honest producers from the fraudulent behaviour in cases of the information asymmetry.

CONCLUSIONS

Due to the increase in local product markets, in the last two decades the researchers and policymakers have become increasingly interested in the Short Food Supply Chains. Many issues have arisen, involving the consumption, business and policy-making issues, and they are mainly correlated to the relationship between the actors involved and the economic structure created. Although the SFSCs have a proven social value, there are some risks in terms of the undue optimism of consumers and the opportunistic behaviour of the producers. In the presented paper, we analysed some characteristics of this niche market in order to describe some of its strength and weaknesses. A total of 150 self-compiled questionnaires were collected from various producers at farmers markets and local food fairs in Milan. Thus, the sample is too small to extend the results of the analysis to the short food supply chains as a sector. Nonetheless, as our findings describe a group of farmers that is similar to the European context as described in Kneafsey et al. (2013) and confirm some trends proved by the previous studies, we are still confident that this empirical research could be considered an original and new contribution to the field, all limitations considered.

In particular, we found a heterogeneous sample in the terms of production, composed of small farms with a relatively low opinion of the advantages of the standard quality certification. More than one third of the people interviewed have farms more than 100 km away from the market place. This results should be discussed considering the European Union political framework for the short agro-food chains. One important European institutional strategies for the

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SFSCs is represented by the Priority number 3 of the Rural Development Plan 2014/2020 which is devoted to supply chains, and directly supports initiatives for the quality management enhancement and promoting the collaboration among farmers. Furthermore, between 2012 and 2013, the Commission conducted a study exploring the case for a local farming and the direct sales labelling scheme (Kneafsey et al. 2013). Interestingly, the European Union has renounced the local labelling scheme, which we believe is the right choice, as a proposal for the local product labelling may even be counterproductive for the SFSC system. Firstly, a disciplinary of production would have implementation costs that may be not affordable for small- and medium-sized enterprises (Quazi and Padibjo 1998; Sacchi et al. 2015), which represent the vast majority of producers participating in the SFSCs. Secondly, it requires skilled managers (Karipidis et al. 2009), and would favour the farmers that have the expertise required against those who produce local products, but who do not have the skills needed to participate in these schemes. Thirdly, the SFSCs are claimed to support farms that cannot compete in the conventional markets through the consumers' recognition of food quality, whereas a European label would be a conventional tool for the quality recognition. Finally, a certification regime is likely to encourage large enterprises to enter the market (Brunori et al. 2011), thereby "globalizing the local".

Note that we do not include the scarce attitude of farmers among the reason of a critical discussion of the local product's label, this because we believe that the quality management tools, not disciplinary of production, would actually improve the whole SFSCs system. This is why the Rural Development Plans need to organize supply chains among the producers and to create the economies of scale in order to balance the costs of the quality certification.

The Principal Component Analysis showed that the producers' motivation and perception of the SFSCs can be described by components including the sharing of intangible values of the local production, market expectations, the economic value of the SFSCs, the ability to regain market power and the co-certification mechanism. These five dimensions are possible points of intervention for both the producers and policy-makers as they highlight the opportunities and risks of the sector. As expected, our results suggest that different farmers' attitudes exist in the SFSCs. In fact, as with all types of business, the farms that operate within the alternative agro-food networks compete to sell their products and try to maximise their profits. Thus, some of the extracted dimensions are linked to the market- and price-oriented variable, which seems to indicate the presence of the opportunistic and surviving motivation also within the "fair" local producers. In this sense, as Born and Purcell (2006) underlined citing the "local trap", being optimistic *per se* about the SFSCs is dangerous, not just for the consumers, but principally in the terms of the real fairness of the local system.

Given the increasing awareness of citizen-consumers about the local production, what would happen if the consumers considered the behaviour of some producers as being "less socially fair" and how might this affect the reputation of the whole SFSC system?

Furthermore, although the presence of farms that seem to survive by using the SFSCs can be considered as vindicating this food market scheme, amongst these farms, there are, nevertheless, weak participants. A future research could thus investigate the boundaries of the "economies of place" in comparison with the economies of scale. Finally, given that the food safety and consumer protection against frauds is absolutely vital, it would be useful if the researchers and policy-makers accurately measured the reliability of the co-certification mechanism between the farmers and consumers.

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