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Back to the Future? Understanding Change in Food Habits of Farmers' Market Customers

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Abstract

This study analyses how attending farmers markets may affect consumers' willingness to change food habits toward high-quality products. A discrete choice model was applied using data collected through an extensive field survey in 2009, which involved 400 consumers in 12 different farmers' markets in Italy. Changing consumption habits was examined taking into account attendees' personal profile, motivations, the main features of the farmers' markets, as well as the local social context. Attendees reported an increased consumption of organic products, and fresh vegetables. Motivation seems to play an important role as a driver of change. Results also indicate that consumers sensitive to environmental issues related to their consumption choices, are more likely to change food habits in favor of high-quality foods as well as consumers who are looking for fresh products. Based on these findings, possible interventions are explored to further develop farmers' markets and promote high-quality consumption.

Keywords: farmers' markets, food habits, Italy

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Introduction

Enhancing high quality food systems is one current priority of the European Union. Indeed, the European Commission is strongly supporting policies aimed at reducing environmental impact and enhancing positive socio-economic externalities of food systems, as well as strategies to improve health, food-chain safety, consumer protection, and animal welfare. Consumption habits related to high quality food products are understood to be a key-element of policy actions in the domain of Public Health. Health is a fundamental human right, but it is also central to EU competitiveness. The EU spends 8% of GDP on health, yet loses over 100 billion euro costs related to lung disease, 135 billion to cardiovascular disease, 3% of GDP, and 500 million lost work days in work-related health problems and accidents (EU Commission 2010). When more sustainable practices in food producing and delivering are adopted, food habits might also change in a way that sustainability of the food system improves. Therefore, it seems that the impact of a change in food habits is twofold as it may affect both the health of the consumer and the sustainability of the whole food system. Social scientists and policy-makers concerned with public health have found the challenge of changing food habits to be very difficult and extremely costly in terms of social and private efforts. Moreover this mechanism is not completely understood.

This paper explores this gap in order to better understand the mechanism of food habit changes. More specifically, we analyse whether or not increasing consumer exposure to direct and personal relationships with sellers (i.e. farmers) increases consumer willingness to change their food habits. Following this line of thought, our research hypothesis is based on the idea that consumers participating in farmers' markets are more likely to change their food buying habits regarding high quality products such as fresh, organic, and local-made fruits and vegetables than consumers who are not attending them. Moreover we use this analysis to propose the implementation of innovative marketing and management models of high quality food transactions, which may even be internalized into mainstream retailing.

Food Community Networks: State of the Art

Alternative food supply systems, such as direct sales at farms, farmers' markets, box-schemes, community supported agriculture, and food stores run by cooperatives of producers have recently been defined as Food Community Networks (FCN) (Pascucci 2010). FCN can be conceptualized as an alternative form of distribution which originally arise in contrast to the mainstream food supply systems based on large-scale production and standardization (Higgins et al. 2008). FCN are based on completely opposite concepts like the relational (often local-based) dimension of production and consumption processes, and the absence of intermediaries between farmers and consumers. Ideally, FCN combine both of these characteristics (Renting et al. 2003; Pascucci 2010). FCN are recently becoming more and more popular, both among farmers, and society. This is often viewed as a reaction to the problems and contradictions related to the mainstream systems of food distribution (Ilbery and Maye 2005). In a given local context, shortening the supply chain may be achieved through various forms of distribution that, in different ways, bring producers into direct contact with consumers. The adherence to these forms of marketing, although it remains very limited if compared to physical and economical sizes of the mainstream distribution systems, has been experiencing a period of growth in recent years, which has also encouraged the proliferation of studies on this phenomenon (Wilkinson 2002; Lamine 2005). An

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example is given by the development and diffusion of farmers' markets both in Europe and North America. In the next sections we will first discuss some of the broad issues raised by recent international literature on farmers' markets, and then we will focus on the relationship between farmers' markets and food habit change.

Development and Diffusion of Farmers' Markets

The research on farmers' markets dates far back in history. The first contributions were made in the 1940s. Brown (2002) identifies three main issues central to farmers' markets in her review of the literature: the type of producers and consumers which are more likely to join farmers' markets; the economic impact; and the socio-political impact of such markets. Brown concludes that the start-up and spread of farmers' markets during the 20th century has been mainly motivated by economic factors; namely the farmers' need for diversified sources of income. Various non-economic factors have also been recognized to play a very important role in the development of farmers' markets: the increase in the number of jobs (Curry and Oland, 1998), the development of informal economy and trust (Hilchey et al. 1995; Lyson et al. 1995; Morales et al. 1995), the preservation of open space (Hilchey et al. 1995), and the positive atmosphere of farmers' markets (defined as "happier markets" by Sommer, 1981).

In the following researches, the socio-political issues of farmers' markets, as well as their positive impact on the local communities, have been investigated more deeply. In a subsequent review, Brown and Miller (2008) stress the impact of farmers' markets at the community level. Following Oberholtzer and Grow (2003), such impacts often relate to "making a place for social activity and promoting a sense of community, in addition to providing fresh food for consumers and positive economic impacts for local businesses". This means that economic issues, although they can still be very important, are part of a wider range of farmers' markets impacts on the whole community.

Under these premises, farmers' markets, settled both in rural and urban areas, can represent the "keystones" for rebuilding local food systems (Gillespie et al. 2007). On one side income and human capital are likely to improve (Brown and Miller 2008), while on the other side customers are educated to seasonal limits of local food by making it more visible in public spaces (Gillespie et al. 2007). Hence, it is very difficult, and probably incorrect, to separate social and economic issues when an analysis of local food production and consumption is carried out (Hinrichs, 1998). This is especially true when the economic exchange incorporates wider shared value acts (Fieldhouse 1996), as it happens to be like for farmers' markets and other forms of FCN.

Farmers' Markets and Consumer Behavior

Another part of the literature on farmers' markets focuses more specifically on consumers' attitudes and behaviors. These studies mainly aim at the identification of a typical profile of the farmers' market attendants, in terms of demographic features, motivation to attend the market, and appreciation of local products. Most of these studies agree in identifying the average customers in women (McGarry Wolf et al. 2005), aged 51 to 65 (Varner and Otto 2008), with a post graduate education (McGarry Wolf et al. 2005). A primary reason for them to attend farmers' markets is high-quality products (McGarry Wolf et al. 2005; Lyon et al. 2009; Holloway and

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Kneafsey 2000). Other motivations may also be important, such as freshness and local origin (Archer et al. 2003), direct dealing with producers (Lyon et al. 2009), better taste of products (Teng et al. 2004), and specific quality features such as additive-free, free-range, home-made, and organic (Holloway and Kneafsey 2000). A fair price-quality ratio is also often mentioned (Lyon et al. 2009). There is evidence that the high quality of local products is even more important for consumers because of the its contrast to the beliefs they have regarding the food bought in supermarkets, which are seen as risky and of low quality (Holloway and Kneafsey 2000). Thus there is evidence of an element of risk-avoidance in the choice of buying at farmers' markets, as buying direct and local is for consumers a guarantee of quality, freshness, and safety (even though for the latter, contrasting evidence has been found; Archer et al. 2003); in this context, the direct relationship with farmers acts as a tangible quality assurance (Lyon et al. 2009; Shapiro 1983).

Consumers seem to highly appreciate farmers' markets and the majority are willing to visit the market again (La Trobe 2001; Archer et al. 2003). Regardless, it is not clear whether they are also willing to pay for local-based products. Carpio and Isengildina-Massa (2009) report a high willingness-to-pay (23 to 27% more than normal price), which may exceed the willingness-to-pay for organic products (Louriero and Hine 2002). This is consistent with other evidence about the positive correlation between income and consumers purchasing attitudes who are willing to spend more money to obtain farmers' market products (Varner and Otto 2008). On the contrary, other studies conducted in Europe (Weatherell et al. 2003) show a rather small quota of people willing to pay a premium for local products.

This suggests that while for some buyers "local" equates to a higher quality standard of purchases, embedded with a socio-cultural perception of food (Bell and Valentine 1997; Hunt 2007) for which they are willing to pay more, this is not the case for other people. Indeed, many consumers are not looking for "something different" in their purchase, thus expecting local foods to accord with their usual shopping habits, retail outlets, and end-product formats (Weatherell et al. 2003).

Therefore, while the initial researches about farmers' markets put a lot of emphasis on economic issues, the start-up of the first experiences mostly shifted the focus from producers to consumers. Attention was paid to the identification of latent consumer's attitudes towards food purchases, namely to the analysis of those which are likely to be expressed only at farmers' markets, but not in large retailer environments. As it might be expected, following the evidence that consumer spending decisions are socially embedded, most of these "new" attitudes are related to social issues, (Hunt 2007), which is also consistent with research on social capital theory (Frentzen and Davis 1990; Flora 1998).

For the purpose of this paper, a little insight in such issues may be useful. Social embeddedness of purchase decisions may be favored by many features of the farmers' markets buying environment. First of all, producers and consumers attending farmers' markets can talk to each other, and they usually do, as reported by Hunt (2007); 94% of consumers talk with vendors, and 81% meet people they know at the market. Such interactions suggest that farmers' market are more likely to be perceived as a social event than a food store (Hunt 2007).

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Consumers' buying behavior, as well as meaning and value attributed to products, are also highly influenced by the areas and sites where consumption occurs (Gregson and Crewe 1997; Abram 1996). The farmers' market context may then lead to distinctive types of producer-consumer relationships and to the construction of certain meanings and ideologies around the products on sale (Holloway and Kneafsey 2000). According to Hunt (2007) this could turn into increased consumer spending, as well as changes in producers and consumers behavior as a consequence of their mutual interaction.

Participation in Farmers' Markets and Change in Food Habits

But why is it so difficult to move to high-quality food habits? And why can motivations for attending farmers' markets, lead to this type of habit change? One of the basic elements is that in order to move into the direction of high-quality food habits, consumers require to "take care" of the way foods are produced. There is evidence that farmers' markets are more likely to sell environmentally friendly (Bullock, 2000) and socially responsible products (Sivini 2007). Such foods correspond to the notion of credence products firstly introduced by Darby and Karni (1973). According to their classification a credence characteristic (or attribute)[1] emerges when the good or service quality can be detected only with high ex-ante and ex-post transaction costs (Andersen and Philipsen 1998). It means that even after consumption, the quality attributes cannot be verified without costs (Vetter and Karantininis 2002). Therefore, high-quality foods (e.g. local-produced, organic, animal-welfare oriented, fair trade, etc.) belong to the category of credence products because producers (sellers) have to provide sufficient and reliable information to the consumers about the production and distribution process to the consumers (buyers). This is costly and risky for both parties, and it is a first barrier to change because it leads to cause that high-quality foods become also more expensive. Thus, only consumers with fewer budget constraints can afford to buy high-quality foods. In other words low income consumers are less likely to move into high-quality consumption habits.

These barriers may be partly overcome by the direct interaction between producers and consumers, which acts as an informal assurance of quality, with reduced costs with respect to formal certification (Hinrichs 2000). Therefore we expect a food habit change in the direction of high-quality consumption only if the overall benefits overcome associated costs. In other words we expect that consumers oriented on high-quality products have a structure of preferences (i.e. food habits or values) which justify the higher costs of such products.

In this perspective, FCN represents a new frontier for increasing sensitiveness towards quality and sustainable food products, with farmers' markets being a possible example. As explained in the previous section, the mechanism at the base of whatever FCN, is that producers (sellers) strongly integrate their functions with consumers (buyers) via social interactions (networks). This mechanism produces two desirable outcomes: (i) integration reduces the transaction costs associated to food purchases; and (ii) interaction is able to stimulate changes in consumer preferences, and contribute to switching different consumption patterns. This is a way for considerably expanding the market of foods with high-quality attributes.

[1]In this paper we use the terms "characteristic" and "attribute" as a synonymous even if we are aware of different definitions in economic psychology and marketing where they are mainly consider separately. For a detailed discussion on this issue, readers can refer to Andersen (1994) and Andersen and Philipsen (1998).

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(i) Let's first motivate transaction cost reduction via integration and interaction. In a process of consumer-producer (buyer-seller) integration the transaction mechanism is based on the principle of sharing and pooling resources which are specific for the two parties. Consumers (buyers) provide resources such as time, information, and knowledge about their preferences. They decrease the costs of monitoring, and experience leisure. On the other side producers (sellers) also reduce transaction costs (i.e. certification costs), together with uncertainty of specific investments and income instability. They also provide time, information, and knowledge to consumers. The next key element in this mechanism is that consumers increase their benefits not only via consumption of more quality foods, but also via the social interactions with producers (sellers). This is consistent with a model of consumption in which both goods and leisure time contribute to enhance consumer's wellbeing (Becker, 1965). Therefore the time spent by consumers in social interactions is assumed to be leisure time. It is not a cost. This time is also used to monitor, build up trust, and therefore reduce the risk of producer (seller) moral hazard. Producers may also reduce their transaction costs by decreasing the cost of "formal labelling/certification" based on the involvement of a third party. This mechanism is very close to the one described in relational contracting (Karantininis and Graversen, 2008). If the reduction of monitoring costs and the increase of consumers' wellbeing (due to the leisure time allocation) compensate the increased organizational and opportunity costs, then FCN may be a "competitive" mechanism for marketing more sustainable foods. This "competitiveness" with respect to mainstream food supply systems could be increased by considering aspects other than time allocation: for example knowledge and information sharing, and financial investment participation. The interaction between consumers and producers within the developing process of the FCN may also be based on sharing strategic information and knowledge between members (Pascucci, 2010).

(ii) A further effect produced by social interactions is to facilitate involvement and sensitiveness towards high-quality consumption and to overcome the problem of habit formation and the relative endowment effect. Behavioral economics strongly underlines the importance to consider several aspects of the individual decision-making process such as individual ability (knowledge, education, intelligence, etc.), motivation (impulsivity, involvement, etc.), opportunity (i.e. time pressure, repetition, cognitive load), and the presence of mental dual processing (Kahneman et al., 1982; Kahneman, 2003). Oskam (2009) recently connected the endowment effect to the resistance of economic agents (i.e. consumers or farmers) to change their status quo (i.e. the consumption habits or policy preferences) due to "hidden" transaction costs (Oskam, 2009). These transaction costs are higher if the change in the status quo implies losses rather than gains (Kahneman, 2003). Within the FCN mechanism, the involvement in social interactions acts as a stimulus for consumers to switch from mainstream food retail to other types of markets, i.e. farmers' markets. This change in shopping habits might also facilitate other types of changes more specifically related to food purchases, i.e. stimulating consumers to switch their food purchases towards foods of higher quality. Indeed, the "hidden" or "psychological" transaction costs related to these changes may be reduced by the involvement in social interaction and the motivational effect that consumers experience in FCN.

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Both transaction cost reduction, and motivational and psychological factors seem to be a crucial point when analyzing attendants' behavior at farmers' markets and their impact on changing food habits. In this paper we focus our attention on the latter while postponing the analysis of the role of the transaction costs to future research. In the empirical analysis reported in the following section of this paper we analyze motivations and psychological factors related to consumers' decision of participating in farmers markets, and changing their food habits as a main component of this participation process.

Empirical Analysis

Farmers' Markets in Italy

The development of alternative food supply systems in North-Western Europe has been much faster than in Italy. In France, in 2007, direct selling was well established and covered 15% of food products purchased by consumers, leading to 20-30% savings in food purchases (www.helpconsumatori.it). In the UK there are over 500 farmers' markets, frequented by 15 million consumers a year; together, they represent a business of 166 million pounds (www.farma.org.uk). Currently in Germany there are more than 5,000 active farmers' markets (www.farmersmarkets.net).

In Italy the phenomenon of direct sales has grown with some delay (Aguglia 2009), and it is still a marginal reality in the distribution organization (Lazzarin and Gardini 2007).

The first impetus in the development of Italian farmers' markets dates back to 2007, which is when the Finance Act (article 1, paragraph 1065) set a policy for farmers' markets mandating municipalities to take charge of their promotion. In the meantime, regional administrations also increased their interest in farmers' markets, which they started to support through Rural Development Programs 2007-2013 (Aguglia 2009). This effort in the policies is mainly driven by economic concerns: the farmers' market is seen as a means of reducing the gap between the price of the product in the early stages of the supply chain and the price for final consumers (Galisai et al. 2009). Nevertheless, policies also aim at the preservation of the viability of farming, which is severely threatened in a lot of Italian rural areas. Indeed, farmers' market may then act as a promoter of local products and a driver for rural development, also improving the vitality and the quality of life in rural areas (Galisai et al. 2009).

Thanks to these incentives, a lot of farmers' markets have started up throughout Italy in recent years. In 2009, Coldiretti, the largest Italian farmers' association, reported 500 farmers' markets with a total estimated value of trade of 3 billion euro (Coldiretti 2009).

In Italy there are 63,600 farms that sell directly (Coldiretti 2009); most of them located in the north and centre of the country. Tuscany is the region with the highest number of sales at the farm level, with Lombardy and Piedmont being the main followers (Aguglia 2009). Farms mostly sell fresh fruit and vegetables, and/or processed products (wine, olive oil, canned vegetables or fruit). The latter are particularly suited to be marketed through direct channels, because the value added through processing is recognized and, furthermore, their shelf-life allows for greater flexibility in the timing of placing the product on the market (Cicatiello 2008). However, only 8% of

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the farms that sell directly to consumers are participating in farmers' markets: the great majority wait for customers to come to the farm (Coldiretti 2009). In general, an incentive for participation in the farmers' market is the supply of typical, regional products. This trend may lead to an increase in local tourism (Aguglia 2009), but may also represent a limitation to the development of farmers' markets as an everyday supply channel for consumers living in the area. It is perhaps for this reason that, according to some authors, the phenomenon of farmers' markets will remain marginal in terms of quantity (Raffaelli et al. 2009) and therefore cannot be considered by producers as a main outlet channel (Santucci 2009, with regard to organic products).

It is true that in general the products sold at the farmers' market are valued as "local". As highlighted by Grando (2009), this feature is relevant in itself, but it is also considered to be as a condition that guarantees or influences other dimensions of quality: freshness (linked to location and season), the peculiar organoleptic characteristics, and reliability.

The relationship between producers and consumers also plays a cultural role, strengthening urban-rural relationships (Graziano 2008), and turning the experience of buying food into a pleasant and sociable activity (Grando 2009). The adherence to short supply chains may then act as a stimulus to change consumer habits, namely to a change in the type of products consumed and in the expenditure for food, as verified in the case of raw milk sold at farmers' markets (Fantuzzi and Brugnoli 2009; Bettocchi 2003).

Survey Methodology

The survey on attendants of farmers' markets is part of a broader research project funded by the Italian Ministry of Agriculture, and executed by CURSA (University Consortium for Socioeconomic Research and Environment) to analyze the influence of alternative food supply systems on local sustainability, and to develop convenient strategies for their promotion. This project included, among other activities, a survey on producers, consumers and administrators of 12 farmers' markets located in different Italian cities. The geographical distribution of surveyed markets is shown in Figure 1, while the related table reports the main features of the surveyed markets.

Farmers' markets included in the survey have been selected based on several factors. First, we tried to maintain a degree of territorial differentiation, by not including several markets located in the same city (the only exception was made for the city of Rome). The farmers' markets selected represent different sizes and organizational arrangements as truly found in Italy.

Eight out of these twelve markets, are supported by Coldiretti, as part of the CampagnaAmica project. This project aims to increase the direct sale of agricultural products by farmers to consumers by supporting farmers' markets, and namely (i) to sustain the promotion of cooperation between farmers willing to open a new market; (ii) to improve the control on compliance with a set of requirements, including self-production of the food sold by farmers at the market; (iii) to promote a strong marketing strategy based primarily on price competition. In these markets a 30% discount with respect to traditional food stores is claimed. This form of organization is currently the most widespread among Italian farmers' markets.

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Farmers' Market	Region	Freq.	Surveyed Consumers
	CampagnaAmica		271
Torino	Piemonte	daily	31
Milano	Lombardia	biweekly	42
San Giovanni	Toscana	weekly	33
Vetralla	Lazio	weekly	19
Roma Circo M.	Lazio	biweekly	42
Roma Testaccio	Lazio	biweekly	35
Bari	Puglia	daily	37
Taranto	Puglia	daily	32
	Municipal Markets		120
Padova	Veneto	weekly	32
Montevarchi	Toscana	daily	57
Pontecagnano	Campania	-	31
	Slow Food		39
Bologna	Emilia Romagna	weekly	39

Figure 1. Location and features of the Italian FMs in the survey
Source: Own elaboration on data from the field survey

One of the farmers' markets involved (marked blue in figure 1) is related to the initiative of Mercati della Terra by Slow Food, an association founded in 1989 with the aim to counter the culture of fast food and fast life, as well as to preserve local food traditions. Thus, the structure and scope of this market is pretty different, as it focuses mainly on local products, and it also includes, besides product sales, areas intended for meal consumption, exchanging information, and cultural events.

The remaining markets (marked red in Figure 1) take place because of the initiative of the municipalities that have made available to farmers dedicated areas for marketing their products. Thus, their rules may largely vary from place to place.

The interviews were conducted in September and October 2010. The questionnaire used for consumers' interviews consists of 13 closed-ended questions, divided into three sections:

- reasons and motivations for going to the farmers' market;
- purchasing behavior and related issues (expenditure, other shops used for food purchases, changing in food habits, social meaning of the market); and
- personal data (gender, age, composition of the household, job, education).

For the purpose of the study, eight questions were considered. They are listed in Table 1.

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Table 1. Selected questions from the questionnaire

Question code	Question type *	Question text	List of answers
Q1	MCo	How often do you shop at this farmers' market?	Every time it is open; more than once a month; once a month; less than once a month; it's the first time.
Q4	MCm	Why are you shopping at this farmers' market?	To save money; to buy local products, to preserve the environment; to buy quality food; proximity of the market; to buy fresh products.
Q5	MCm	Besides this market, where do you usually buy similar products?	This FM only; supermarkets; small grocery shops; discount; street markets.
Q6	MCm	Did you change your food habits since you started shopping at the farmers' market?	No; I eat more organic food; I eat more fruit and vegetables; I eat a greater variety of foods; I eat less ready-to-eat meals; I eat more local products.
Q9	MCo	How often do you meet acquaintances or friends at the farmers' market?	Seldom; sometimes; often.
Q10	OP	How much did you spend at the farmers' market today?	-
Q11	OP	How much do you usually spend at the farmers' market?	-
Q12.1	OP	How old are you?	-
Q12.2	MCo	Gender	Male; female.
Q12.3	MCo	Do you live in this town?	Yes; no.
Q12.4	OP	What is your education?	-
Q12.5	OP	Do you have a job?	-
Q12.6	OP	How many people live in your family?	-
Q12.7	OP	How many children live in your family?	-

* MCo: multiple choice, one answer; MCm: multiple choice, multiple answer; OP: open question

Consumers were approached at the exit of the market, after completing their purchases. A non-probability sampling was adopted, as respondents were casually selected among the customers going out of the market. It is therefore likely that the samples are not representative of the population of customers of the single markets, although the total sample of respondents involved in the survey is large enough to allow the drawing of inferences from the data recorded. The interviews had an average duration of five minutes. In total, 430 interviews were completed. The number of respondents per market varies from 19 (Vetralla), to 57 (Montevarchi), with an average of 35.

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Description of the Sample

As a first step of the empirical analysis the basic characteristics of the sample are investigated. For this purpose, some demographic and behavioral variables are analyzed.

As it concerns the demographic profile of the surveyed consumers, age, gender, level of education, employment, composition of the households, and residence are considered.

The age of respondents ranges from a minimum of 19 to a maximum of 89 years, with an average of 55 and a median of 57 (Figure 2). It is therefore a set of mature consumers, whose distribution with respect to age classes is shown in the figure below. The gender distribution is quite skewed towards women, who account for two thirds of respondents. Age and gender of the average consumer surveyed in the farmers' market are consistent with other findings in literature, although the large majority of female respondents might also be due to local social rules and habitudes. Indeed, women's competence in the household food shopping is still the rule in most Italian families. A Eurostat study carried out in 2008 proves that Italian women have a very high commitment to housework activities, on average three times larger than men. This imbalance is among the highest in Europe (Eurostat 2008).

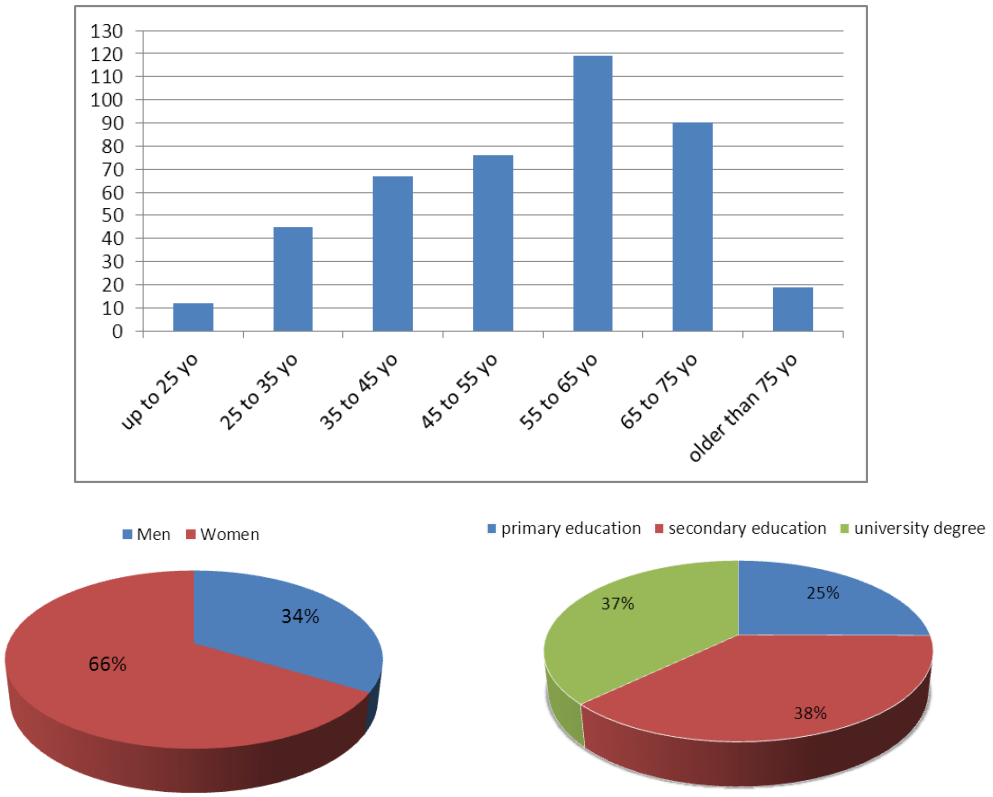

Figure 2. Sample Characteristics
Source: Own elaboration on data from the field survey

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Regarding education, a relatively high proportion of graduates (37%) is found, well above the Italian average of 10% reported in the last census of 2001 (ISTAT, 2005). This result confirms that in Italy, as well as in other countries, the average customer of farmers' market is high educated. Only half of surveyed consumers have a job; the other half includes housewives, retired people, students, and the unemployed. Gender distribution can explain the high number of housewives, while age-related data probably affect the proportion of retired people. The latter also influences the composition of the household. Average respondent's family is made up of 2.7 elements, but the presence of children is rather rare (only 19% of households). Hence, this seems not to be a major driving factor to stimulate the attendance of a farmers' market, as is the case for, for example, the purchase of organic products (Thompson, 1998; Wier and Calverley, 2002). The vast majority (85%) comes from the municipality in which the market is held. The location is therefore a key factor in determining which consumers attend the market. In fact, precisely because they are local, farmers' markets tend to attract mainly people who live nearby (La Trobe, 2001).

The next step regarding sample description is the analysis on consumers' attitudes towards farmers' markets. Surveyed consumers are mostly regulars of the market: only 11% is joining the market for the first time, while 25% usually attends the market regularly at every opening. Moreover, the expenditure recorded on the day of the interview (on average €17.36) slightly differs from the average expenditure at the market as it was estimated by the respondents themselves (on average €19.63), revealing the stable nature of the relationship between these consumers and the farmers' market they go to. Among the reasons that lead consumers to attend the farmers' markets, those related to the availability of local goods and quality attributes of the products stand out (figure 3). They are mentioned by more than half of the respondents among the top three determinants of their presence in the market. Perhaps it is surprising that only 24% of respondents cited economics as one of the decisive factors, since the price is often thought to be one of the major drivers that influence purchase decisions of food (Weatherell et al., 2003). Indeed, other studies on this topic (i.e. Hunt, 2007) suggest the key role of the social outcomes in the customer decision to visit farmers' markets.

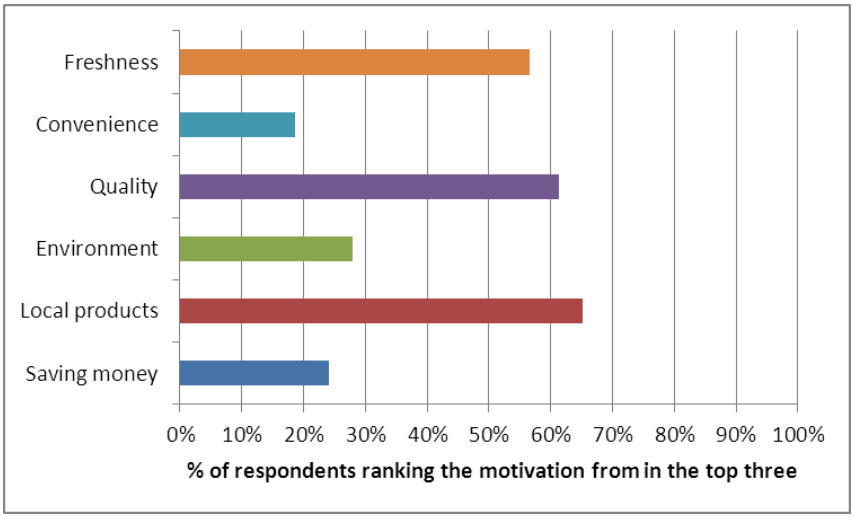

Figure 3. Consumers' Motivations
Source: Own elaboration on data from the field survey

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Other behavioral characteristics of the sample lead us to believe that participating in a farmers' market can somehow help to bring out a different approach to the purchase and consumption of food. More specifically, it is significant that these consumers seem more likely to integrate shopping at the farmers' market with the purchase of food from other street markets, while very few of them go to discount stores. On the other hand, the supermarket remains the benchmark for food purchases for more than 60% of respondents. Another typical feature of farmers' markets, as seen in the literature analysis, is the development of a socially vibrant environment. During this survey, a surprising 69% of respondents said they usually meet friends or acquaintances at the market, which seems to turn the act of food purchasing more and more to a social dimension.
Actual and potential changes in attitudes and behaviors represent the central element of this paper. They have been the focus of investigation in the survey, asking consumers whether they had changed their food consumption habits as a consequence of participating in the farmers' markets (Figure 4). 17% of respondents said they had changed their eating habits as a result of attending the farmers' market. As shown in the figure, the changes are mostly related to more consumption of vegetables, and organic products.

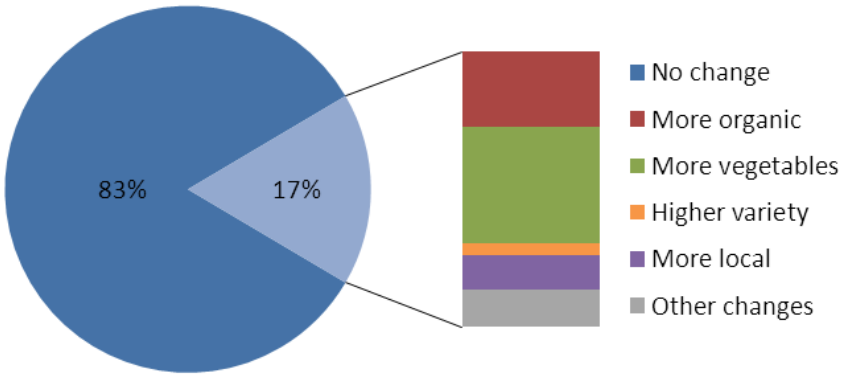

Figure 4. Consumers' change in food consumption habits
Source: Own elaboration on data from the field survey

The following sections of the paper will then attempt to explain attendants' attitude to change with respect to the demographic, behavioural, and environmental variables, which have been illustrated so far, with the final aim of understanding the determinants that significantly influence such changes.

Characteristics Associated with Food Habit Change

In this section we analyze the likelihood of observing a change in food habits toward high-quality products in association with a set of characteristics related to both farmers' markets and attendant characteristics. Therefore the evaluation concerns the analysis of respondents' decision to change their food habits as a consequence of shopping at the farmers' market. The change in food habits is explained with respect to different issues, related both to the features of the market

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in which the respondent was surveyed, as well as the personal and behavioural characteristics of the consumer.

The Model to Analyze Habit Change

For this purpose a discrete choice modeling appears to be the most appropriate approach to use. In this model the presence of a choice (change in food habits) is related to the variables representing the driving factors. This evaluation model is based on the idea that the decision making unit (farmers' market attendant) can choose one of the two alternatives represented by modality 0 (non-change) and modality 1 (change) of the dependent variable, related to a series of features representing the model's explanatory variables (or driving factors). If we know these features we can estimate an equation which enables us to predict the choice. The aim is to determine how likely it is for a certain participant to prefer an option over another.

$$(1) \qquad y_i^* = \beta' x_i + u_i$$

*yi** is not observable. The observable variable is represented by a dichotomy that takes the followings values:

$$(2) \qquad \begin{array}{ll} y = 1 & \text{if } yi^* > 0 \\ y = 0 & \text{elsewhere} \end{array}$$

In this model $\beta' x_i$ equals E(yi* |xi). Followinf this, it is possible to state that:

$$(3) \qquad \text{Prob } (y_i=1) = \text{Prob}\,(u_i > -\beta' x_i) = 1 - \text{F}(-\beta' x_i)$$

Where F is the distribution function of *u*, and x_i is the independent variable vector. The functional form for F will depend on the assumption made for u_i. When it is supposed to be logistic, a logit model will be determined:

$$(4) \qquad \text{F}(-\beta' x_i) = \frac{\exp(-\beta' x_i)}{1+\exp(-\beta' x_i)} = \frac{1}{1+\exp(\beta' x_i)}$$

$$1 - \text{F}(-\beta' x_i) = \frac{\exp(\beta' x_i)}{1+\exp(\beta' x_i)}$$

The empirical model can be formalized in this way:

$$(5) \text{ Prob } (y_i = 1) = \text{F } (\beta'_{FM}\,\text{FM} + \beta'_{CF}\,\text{CF} + \beta'_{MO}\,\text{MO} + \beta'_{OR}\,\text{OR} + \beta'_{EX}\,\text{EX}) \,,$$

$$i = 1, 2, \ldots n$$

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where FM refers to the set of variables related to farmers' market features, CF to the variables related to consumer personal features, MO to motivations, OR to the use of other typology of retailers, and EX to the overall expenditure at the farmers market. Table 1 presents the results of the probit model.

Table 2. Results of the discrete choice *model*

Explanatory variables		*Marg.effect*	*S.E.*	
Farmers' Market Features (FM)	CampagnaAmica Market	0,0040	(0,0543)	
	Slow Food Market	-0,0412	(0,0845)	
	Age of the FM	0,1240	(0,0449)	***
	Number of producers	-0,0024	(0,0032)	
	Frequency of the FM	0,0008	(0,0033)	
Consumer personal features (CF)	Age of consumer	-0,0042	(0,0015)	***
	Gender of consumer	-0,0539	(0,0411)	
	High-educated consumer	-0,0230	(0,0411)	
	Work position	0,1118	(0,0490)	**
	Locate in the same town of FM	0,1039	(0,0332)	***
	Households number of members	0,0348	(0,0171)	**
	Number of children	-0,0530	(0,0300)	*
Motivations (MO)	To meet friends	-0,0142	(0,0410)	
	If habitual consumer	0,0065	(0,0647)	
	Saving money	0,0572	(0,0467)	
	Local products	0,0046	(0,0376)	
	Environment	0,1946	(0,0549)	***
	Quality	0,0360	(0,0365)	
	Convenience	0,0772	(0,0554)	
	Freshness	0,0890	(0,0371)	**
Other typology of retailers (OR)	This FM only	0,0788	(0,0427)	*
	Supermarkets	0,0963	(0,0347)	***
	Small grocery shops	-0,0071	(0,0460)	
	Discount	-0,0866	(0,0395)	**
	Street markets	0,0044	(0,0378)	
Expenditure (EX)	Today expenditure	-0,0016	(0,0015)	
	Habitual expenditure	0,0010	(0,0014)	

Log-likelihood = -149.26 % Corr. Answers = 83,72% Adj-R^2 = 0.183

LR chi2(28) = 66.66Prob> chi2 = 0.0001

N = 393

*** significant at 1%; ** significant at 5%; * significant at 10% level

The model indicates a good-fitness with an adjusted R2 of 0.183, and a percentage of correct answers close to 84%.

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Results and Discussion

Results indicate that some of the explanatory variables used have a significant impact on the likelihood of farmers' market attendants to change their food habits toward high-quality products.
Among the factors related to farmers' market features only the dummy related to the age of the farmers' market results as significant in shaping food habits. Therefore it is confirmed that the probability to change food habits is indeed a matter of time and requires a long-run decision making process.

If we look at the personal characteristics of the consumers we can notice that being older and having children reduces the likelihood to observe a habit change, while a positive habit change effect is observable for consumers with a stable work position, more family members in their household, and are situated in the same town/city where the farmers' market takes place. Hence, proximity is another major factor that undermines consumers' "resistance to change". Motivations seem to play an important role as drivers of change. Results indicate that consumers sensitive for environmental issues related to their consumption choices, are more likely to change food habits in favour of high-quality foods as well as consumers who are looking for fresh products. Thus, ethical motivations seem to play a more important role than economic and social issues. Finally it is interesting to highlight a positive impact of supermarket retailers, while a negative effect is shown by hard-discounts. If the latter is quite easy to explain considering the main motivations driving change, then the influence of shopping at supermarkets on consumers' attitude to change is controversial. Two main interpretations are possible here: on one hand the spread of a shopping pattern among consumers that includes the purchase of fruit and vegetables at farmers' markets (consistent with the driver motivation of "freshness") while other products (not available at the farmers' market) are purchased at supermarkets; on the other hand it is possible that some supermarkets respond to ethical reasons concerning the environment, thus facilitating, together with farmers' markets, a change towards organic products. It is also important to highlight how the expenditure does not seem to have an effect on consumers' attitude to change.

Conclusions

In this paper we analyze how new, direct relationships between producers and consumers can influence the adoption of high-quality food habits. We define these as new and alternative producers-consumers relationships with the concept of food community networks (FCN).
Insights from the literature about FCN, and more specifically, participation to farmers' markets, suggests potential benefits for farmers participating in alternative food supply systems, as well as positive impacts on environmental and social sustainability of the food systems. Many studies mentioned in the review also focus on the advantage to consumers who join food community networks, which are able to shape customers' motivations to buy food in alternative markets.
In this study we focus on a specific issue which is related to farmers' markets positive influence on attendants' change in food habits. The objective was to understand how a change in food habits due to shopping at farmers' markets is shaped by characteristics and motivations of the attendants while controlling for farmers market features.

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The empirical analysis, based on a fairly large sample of famers' market attendants as surveyed in the major Italian cities, indicates that one out of six consumers participating in farmers' markets experienced a change in food habits since attending the market.

The study confirms that price and saving money are not determining factors in attendants' decision to participate in FCN, just as it is found in some other literature studies. Therefore, it seems that price is not a useful tool to promote farmers' markets and their positive implications for high-quality food consumption.

Focusing on the change in food habits, consumers reported an increased consumption of organic products and vegetables. This certainly has a positive impact on their health, as well as a broader impact on the economic, environmental, and social sustainability of the area. The major drivers of such changes, identified with a discrete choice model, should be used by farmers' market promoters to extend the dimension of these local markets and by policy makers to maximize these positive externalities of consumer choice. Regarding farmers' market promoters, it may be appropriate to address the marketing policies of FCN to those subjects who show a lower "resistance to change", namely young consumers, residents of the area where the market is held, and large families. In this process, the integration with other types of food retailers is controversial: from an empirical point of view, an integration of farmers' markets and large retailers such as supermarkets seems possible, and is indeed desirable. While this could lead to larger scale benefits, it is clear that such integration in practice presents many challenges. Looking at the implications for policy makers, the results of the study suggest some directions for supporting farmers' markets development. One first issue concerns the need to ensure time continuity (both in terms of time and place) in the presence of these alternative markets, because the chance of food habits changing is strongly linked to age of the farmers' market and its localization in the same town where the consumer lives. Second, ethical (environmental) motivations that push consumers to farmers' market should be enhanced, especially in younger people, as they are positively correlated with turning to more sustainable food habits. Finally, it would be very important to monitor the products offered at FCN for their environmental impact and their freshness, as these issues have shown a significant ability to push a change in food habits among customers of the farmers' markets.

Such insights for policy makers represent the main innovative issues highlighted in the paper, although they should be carefully evaluated considering the limitations of the empirical research. Among them we report: the survey was completely based on customers' perceptions, while no information on their real behaviors was considered; the sample was not fully representative of the Italian population. For these reasons, the findings of this study might be usefully integrated with further studies on the topic. Indeed, this research has been able to highlight the potential role of farmers' markets in improving consumers to seek high-quality foods, opening the way for further research focused on new ways to broaden the scale of these experiences. A possible way to explore these options could be the application of new Information Communication Technologies (ICT) and social networking, for example by building up virtual FCNs. Indeed we consider this development as the next step in enhancing the capacity of high-quality food supply systems to be more competitive with respect to mainstream food supply systems which are based on trading commodities, and usually have a lower transaction costs (Raynaud et al. 2005). In this perspective, the use of (virtual) FCN could be a frontier to be explored in the very near future.

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