Identifying Social Entrepreneurial Behaviour in Farmers participation in Alternative Food Network

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Abstract

The concept of social entrepreneurship is growing rapidly and attracting increased attention from research institutions and business schools around the world to understand how these satisfy the needs of communities, those private and public institutions are not adequately addressing. Social entrepreneurship, identified as activity with a social objective, was used in this study as a conceptual tool to empirically examine farmer's participation in AFNs. Using a behavioural approach, we conducted a survey in Sicily, Italy, using a questionnaire with modified items from the Edinburgh Study of Decision Making on Farms. From the results emerges that around 64% of the farmers participating in AFNs is driven by social entrepreneurial dimension.

Keywords
Alternative supply chain, Local food, Entrepreneurship.

Introduction

In recent years new forms of food production and distribution organization, as part of small-scale and local agriculture, have been gaining ground. Generically termed Alternative Food Networks (AFNs) these new models of distribution organization, based on farmers and consumers relationship, include various forms such as farmers markets, community supported agriculture, solidarity purchasing groups (SPGs), to name a few.
In AFNs context farmers play an important role in ensuring high quality productions, promoting environmental conservation and well-being of individuals and communities (Migliore et al., 2014b; Cembalo et al., 2013). This has leaded a discussion to distinguish farm life and/or activities from two different perspectives. The first one considers farmers as mass food producers and generators of profit, who attempt of overcoming nature limits. While the second point views farming as a way of life in which farmers are in balance with nature and between beauty and profit. Only a few studies have attempted to explain the

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differences between these two types of farmers by examining their basic attitudes, beliefs and values (Migliore et al., 2014b; Sullivan et al., 1996; 2003; Willock et al., 1999). What emerges is that there is a deep difference between farmers in alternative and conventional agriculture, in which the former is mainly a way of life in balance with nature, while the latter equates with a business operator mainly oriented to profit maximization. Though a great part of these studies have analysed the differences between farmers in organic and conventional farming, to the best of our knowledge a very few studies have examined farmer behaviour in local AFNs (Migliore et al., 2014b). Among the few studies, none of them tempts to explain whether farmers in alternative agriculture are uniformly considered in balance with nature, or they simply are commercial operators who recombine economic and environmental resources to survive on the globalized market. Based on the literature, AFNs represent new forms of innovative entrepreneurship, which have important implications for rural development since they allow improving economic aspects of rural community in terms of recirculating of financial capital and creation of new jobs, and in terms of preserving local environment (Graziano and Forno, 2012; Marsden and Smith, 2005). Furthermore, Marsden and Smith (2005) highlight that a crucial part of sustainable development is sustainable wealth creation and "this requires that social and entrepreneurial initiatives be merged with respect of ecological, human social and manufactured capital" (Marsden and Smith, 2005: 441). Put differently, sustainable wealth creation requires a social entrepreneurship dimension where resources are innovatively recombined to create value by meeting economic, social and environmental needs of rural community and providing solution to social problems, such as landscape degradation, unemployment and, in general, rural poverty, just to name a few.

Social entrepreneurship, identified as activity with a social objective (Peredo and McLean, 2006; Tilley and Young, 2009), was used in this study as a conceptual tool to empirically examine farmer's participation in AFNs. Social entrepreneurial activity has been broadly defined by Mair and Marti (2006) as a process of creating value by combining resources in new ways to primarily explore and exploit opportunities for creating social value by stimulating social change or meeting social needs, it involves the offering of services and products but can also refer to the creation of new organizations. The aim of this study is to verify whether farmers' participation in AFNs is uniformly driven by social entrepreneurship dimension or it is predominated by a profit maximization motivation. Using a behavioural approach, we conducted a survey in Sicily, Italy, using a questionnaire with modified items from the Edinburgh Study of Decision Making on Farms (ESDMF; Willock et al., 1999). The ESDMF assumes that farmers are not always motivated by profit alone but also by the environmental aspects of their activities (Willock et al., 1999a). In addition, unlike other cognitive behavioural approaches, the ESDMF conveys standardized measurements of vocational behaviours (Willock et al., 1999b). Therefore, we chose the ESDMF because it seems the most comprehensive tool for inferring how social or commercial entrepreneurs' behaviour is affected by social or profit purposes. In addition, the ESDMF allows us to understand whether social/profit objectives and specific attitudinal constructs influence social/commercial entrepreneurship types.

Social entrepreneur and commercial entrepreneur: some key differences

The concept of social entrepreneurship is growing rapidly and attracting increased attention from research institutions and business schools around the world. The great interest, not adequately addressed in the literature, is mainly focused on understanding how this concept satisfies the needs of communities (Bornstein, 1998). Who are the entrepreneurs? What is the main entrepreneurial activity need to be addressed as starting point before looking at the wider context of social entrepreneurship? What is it about? These are only some of the most urgent questions to be addressed.

Harding et al. (2002) reported that being an entrepreneur is associated with starting a business and that entrepreneurs are anyone who undertakes a significant activity to stimulate economic progress and growth by finding creative way of doing things. Yet, there is no a universally widely accepted and adopted definition that describes entrepreneurs. Many researchers followed a trend where they differentiate and categorize different types of entrepreneurial activities in an attempt to present deeper disclosure to the concept. For instance, Anderson (1998), in his attempt to describe entrepreneurs and the real aims of entrepreneurship, suggested that there are more than one type of entrepreneur by stressing that entrepreneurs are not just economically motivated or limited only to financial profit rather there is another type of entrepreneurs seek to create social value by reflecting on personal and generalized value systems (Bacq and Janssen, 2011; Tilley and Young, 2009). Entrepreneurs with these characteristics are defined as 'social entrepreneurs' (Sullivan et al., 2003); they are driven by social objectives and find innovative solutions to social problems in their communities. Further, in order to better identify the social entrepreneurship, Peredo and McLean (2006), revealed that entrepreneurial activity embraces both social and economic aspects but the core of what distinguishes economic and social entrepreneurship is mainly the level of priority given to the creation of social wealth and economic wealth (Peredo and McLean, 2006; Mair and Marti, 2006). For instance, in commercial entrepreneurship, social wealth is a by-product of the economic value created; whereas in social entrepreneurship, social wealth creation is the primary objective, but economic value creation, in the form of earned income, is necessary to ensure the sustainability and financial self-sufficiency of the initiative (Mair and Marti, 2006).

In another stream of research, to distinguish between social entrepreneurship from other entrepreneurial phenomena, Santos (2012) interestingly supported the previously explained notion by presenting what he called 'value creating and value capturing trade-off'. He stressed that maximizing both value creation and value capture in the same organizational unit is usually difficult and that organizations regularly need to make trade-offs between value creation and value capture to maximize one of the dimensions while satisfying the other (Santos, 2012). In other words commercial entrepreneurs aim to maximize value capture and satisfy value creation by following legal requirements and engaging in socially responsible behaviour. For a social entrepreneur, however, the social mission of value creation is fundamental, while value capture is required just to sustain operations and re-invest in growth. According with the AFN literature, seems that farmers play a significant role in offering sustainable solution to the main environmental and societal issues (Migliore et al., 2014b; Graziano and Forno, 2012). In addition, farmers in AFNs try to prioritize the

development and improvement of the level of interaction and cooperation not only with the consumers in the AFNs (inside organization), but also with the rural community (outside organization relations) (Migliore et al., 2014a). Following this stream of literature, we can hypothesize that farmers participating in AFNs could be identified as social entrepreneur only if their main behaviour is affected by attitudes and objectives, which are oriented to satisfied environmental and social needs.

Methodology

A questionnaire survey was used to determine whether farmers in AFNs could be considered social entrepreneurs or not. Data were collected in 2013 via face-to-face interviews with 106 farmers in Sicily (Southern Italy). These 106 farmers interviewed came from a set of 286 farmers who regularly participate in two important events of AFNs in Siciliy, such as 'A Fera Bio' and Campagna Amica. Among the interviewed farmers, 75% were male. The average age of respondents was 45 years (ranging from 24 to 78). Interviews were conducted face to face during the execution of the initiatives of AFNs. To accomplish the goal of the research we used a behavioural approach. We adopted the Edinburgh Study of Decision Making on Farms (ESDMF) as the main theoretical framework in this research (Willock et al., 1999). The ESDMF examines the nature of the interaction between psychological variables, such as attitudes, objectives/goals and farming behaviour. ESDMF allows us to understand whether social/profit objectives and specific attitudinal constructs have an effect on social/commercial types of entrepreneurship. ESDMF has an operational tool, that is, a questionnaire aiming at capturing the theoretical framework posed. It is composed of three groups of items: The Edinburgh Farming Attitudes Scales (EFAS), The Edinburgh Farming Objectives Scales (EFOS), and The Edinburgh Farming Implementation Scales (EFIS), that measure attitudes, objectives/goals and behaviours respectively (see tables 1, 2 and 3). To verify whether farmers are commercial or social entrepreneurs we have carried out three different *Principal Components Analysis* (PCA): for attitudes, objectives and behaviours respectively[1]. Finally we carried out Brevais and Pearson[2] correlation matrix to understand how social/commercial attitudes and objectives affected farmers' behaviour.

[1] A PCA can be expressed through the following general formula: $Y_i = w_{i1} X_i + w_{i2} X_2 + \ldots + w_{ip} X_p$. Where Y_i is the i-th new variable, $X_1, X_2, \ldots\ldots, X_p$ are the standardized original P variables, and $w_{i1}, w_{i2}, \ldots, w_{ip}$, are the values of the loading weights associated with each of them (Flury 1988; De Lillo et al. 2007).

[2] The Bravais and Pearson correlation index is determined as $\rho_{xy} = \frac{\sigma_{xy}}{\sigma_x \sigma_y}$. The values of the correlation coefficient range between -1, when there is an inverse linear relationship, and +1, when there is a direct linear relationship. If the value of ρ_{xy} is close to 0, there is no linear correlation between the variables (Levine et al. 2002).

Results

As mentioned earlier, three PCA were performed: one for attitudes, one for the objectives and one for behaviours. Then a correlation matrix on the extracted components was performed. With regard to attitudes, we identified four components that explain 68% of the variance (table 1): Social & Environmental, Rational self-interest, Relational Sensitivity and Sense of Community.

Table 1. Components derived after orthogonal rotation of attitudes

Items	Components*			
	1	2	3	4
Personal financial contribution to promote AFNs and meet social needs	**.797**	.170	.240	-.071
Establishment of personal relationships with consumers	**.750**	.164	.054	.050
General reduction of pesticides in farming	**.737**	-.065	.093	.240
Establishment of reciprocity and loyalty with consumers	**.728**	.169	.176	-.017
General reduction of chemical fertilizers in farming	**.721**	-.129	.130	.233
Direct relationships with consumers improves product quality	**.567**	.240	.474	.114
Profit is not the only important factor in AFN	**.467**	.068	.362	.172
Farm land should be fully productive	.079	**.782**	.008	.317
Successful farming is a result of cautious planning	.123	**.661**	-.030	.052
Farmers are generally in control of their farm business	-.069	**.645**	.319	-.005
A farm is a business to be run efficiently	.091	**.625**	.240	.188
Successful farmers take financial risks	.157	**.500**	.085	-.316
It is important to have plentiful production in farming	-.437	**.492**	.230	-.133
Meeting with consumers improves my environmental sensitivity	.203	.142	**.845**	.168
Meeting with consumers improves my food safety sensitivity	.244	.168	**.814**	.036
Meeting with consumers improves my sensitivity towards my rural community	.161	.087	**.750**	.071
It is important to sustain the economy of the rural community	.196	-.060	-.019	**.686**
Respecting biodiversity should be highly prioritized by the farm	.166	.531	.015	**.553**
It is important to share technical and trading problems with other farmers in the community	.213	.118	.416	**.542**
Farm production is the thing to take most pride in	-.130	.024	.324	**.533**
Farmers are generally respected in the community	.215	.286	.058	**.505**

*Extraction method: PCA; rotation method: Varimax with Kaiser Normalization.
Values in bold are variables characterizing principal components

Source: own elaboration with IBM SPSS software

The component Social & Environmental summarizes the variables that relate to the attitudes of farmers participating in AFNs towards social aspects, such as, their personal contribution to the promotion of AFNs and to meet social needs. This component also summarizes the variables that measure the ability of farmers to adopt environmentally friendly production method, such as the reduction of pesticides and the reduction of chemical fertilizers in agriculture. The component 'Rational self-interest' concerns the attitudes of farmers with regard to profit maximization. Variables summarized by this component measures the attitude that characterize the business entrepreneur, rational subject that seeks to control

the production process in order to maximize profit. The component 'Relational Sensitivity' summarizes the variables that relate to the ability of the farmer to increase their sensitivity to the environment, environmental security in the rural community by relationships with consumers that are realized precisely through the AFNs. The last component that relates to the attitudes consists of one called "Sense of Community". The second PCA has identified the objectives of the farmer who participates in the AFNs (table 2). From 16 variables, four components were extracted namely: Rural Protection, Profit Improvement, Solidarity and Farm Progress. These components explain 64% of variance.

The first component summarizes the information contained in the items on the objectives of protection of the rural environment in which the entrepreneur operates. Based on what have been found in the results, the farmers who participate in AFNs are committed to aspects such as the preservation of traditional food production, the development of cooperative relationships with the rural communities, in order to maintain the 'rural' that characterizes the environment in which it operates. The Profit Improvement component summarizes the information taken from the items that relate to the objectives of farmers regarding the growth of the company size and the maximization of profit. Entrepreneurs can also be driven by objectives relating to the creation of employment opportunities for local communities.

The last component, "Farm Progress" expresses the objectives that can reinforce the company through diversification of production and the realization of investments in innovative technologies.

Through PC3 (table 3) was possible to identify two components: Commercial oriented behaviour and Social oriented Behaviour. The first component expresses the behaviour of farm business to maximize profit above all else and to use chemicals fertilizers on the farm. This component is also characterized by the lack of willingness of farmers to take active conservation measures in the last five years and to help other farmers to resolve trading and technical problems (in fact, the factor loading are negative).

Social oriented behaviour is the second component extracted. It summarizes the willingness to continue selling in AFNs in the next five years, to contribute financially in the AFNS. This component also summarizes the efforts of farmers to the use of local inputs and to increase traditional produce on your farm.

The last PCA procedure was intended to identify the behaviour of the farmers participating in AFNs. We extracted two components that together comprise 58 % of the cumulative variance contained in eight variables (Table 3). The first component extracted, 'Commercial-oriented Behavior', expresses two opposing sets of variables: under the correlation with a positive sign we find variables such as profit maximization behaviour (.725) and use of chemical products, sprays, and fertilizer to improve farm productivity (.675), while the negative correlation sign applies to variables concerning the adoption of conservation measures in the last 5 years (-.603) and helping other farmers to resolve commercial/technical problems (-.546). Finally, the second extracted component, 'Social-oriented Behaviour', is correlated with the farmers' willingness to continue participating in AFNs in the next 5 years (.826), the financial resources invested to participate in AFNs (779), usage of artisanal/local agricultural equipment (.427), and growing traditional produce at the farm (.419).

Regarding Brevais and Pearson correlation matrix (figure 1), it allowed us to understand how social/commercial attitudes and objectives are correlate with farmers' behaviour.

Table 2. Item loading on components derived after orthogonal rotation of objectives

	Components*			
	1	2	3	4
My goal is to increase environmental protection	**.913**	-.034	.056	.015
Safeguard the health of farm workers	**.851**	-.084	.087	-.047
Pay attention to farm workers' rights	**.838**	.095	.167	.015
Preserve traditional food production	**.799**	.016	.076	.250
Increase consumer trust	**.780**	.027	.031	.083
Increase the protection of the rural landscape	**.780**	-.030	.088	.120
Maintain and improve soil fertility in a natural way	**.696**	.137	.060	.056
Improve interaction with the consumers	**.652**	.144	-.024	.275
Improve cooperation with rural communities	**.619**	-.048	.339	-.208
Improve my family's living standard	**.480**	.305	.157	.358
Increase the size of the farm	-.122	**.899**	.063	-.073
Maximize profit	.190	**.764**	-.048	.262
Hire economically insecure workers	.071	-.078	**.844**	-.064
Increase the solidarity of artisans in the community	.181	.125	**.804**	.052
Diversify farm production to be competitive in the market	.058	-.018	-.014	**.810**
Increase market competitiveness by investing in new technologies	.065	.107	-.029	**.596**

*Extraction method: PCA; rotation method: Varimax with Kaiser normalization.
Values in bold are variables characterizing principal components

Source: own elaboration with IBM SPSS software

Table 3 – Item loadings on component derived from aspects of farmers' management behaviour

	Components*	
	1	2
Do you manage the farm business to maximize profit above all else?	**.725**	.202
Do you use fertilizers, sprays, and chemicals on the farm?	**.675**	-.027
Have you taken any active conservation measures in the last five years?	**-.603**	-.133
Do you help other farmers to resolve trading/technical problems?	**-.546**	-.273
Do you want to continue selling in AFNs in the next five years?	.366	.826
Do you invest financial resources to participate in AFNs?	.329	.779
Do you use artisanal and local agricultural equipment?	.286	.427
Do you grow traditional produce on your farm?	.318	.419

*Extraction method: PCA; rotation method: Varimax with Kaiser normalization.
Values in bold are variables characterizing principal components.

Source: own elaboration with IBM SPSS software

Our results show that there are two types of entrepreneurs participating in AFNs. A commercial entrepreneurial activity has been identified, in which the main attitudes and

objectives affecting farmer behaviour are oriented toward commercial entrepreneurship dimension, such as economic improvement, rational self-interest to maximize both profit and a successful farm progress. The 36% of farmers surveyed shown commercial-oriented behaviour (BEH_1). Their behaviour is mainly influenced by rational self-interest (ATT_2) and relational sensitivity attitude (ATT_3). The objectives for which they found significant correlations are those of farm progress (OBJ_4) and the profit improvement in (OBJ_2). This last objective is influenced by the rational self-interest attitude (ATT_2) and relational sensitivity attitude (ATT_ 3).

By looking at the correlation of the profit improvement objective with rational self-interest attitude (ATT_2) and with relational sensitivity attitude (ATT_3), it can be inferred that the objective of the profit improvement is mostly influenced by rational self-interest attitude (ATT_2). In fact the correlation value between the two is of 0.545. The correlation between the objective of improving the profitability and the relational sensitivity attitude (ATT_3) is still modest. It takes the value 0.316, this suggests that the behaviour of the entrepreneurs participating in the AFNs is not only oriented to capture the value, but the creation of value. The first attitude is represented by ATT_2 and the second by ATT_3. However, in rural protection objective correlation with the weight of social and environmental attitudes (0.480) is stronger than rational self-interest (0.284). Those farmers can be considered as social entrepreneurs. Nevertheless, albeit weak, rational self-interest attitude is also characterizing those farmers. This is in line with what Mair and Marti (2006) claimed, when they mentioned that economic value in the form of earned income is necessary to ensure the sustainability of the initiative and financial self-sufficiency of social entrepreneurship.

Figure 1. Correlation among Principal Components from EFAS, EFOS and EFIS

		ATT_1 (Social & environmental)	ATT_2 (Rational Self-interest)	ATT_3 (Relational sensitivity)	ATT_4 (Sense of community)	OBJ_1 (Rural protection)	OBJ_2 (Profit improvement)	OBJ_3 (Solidarity)	OBJ_4 (Farm progress)	BEH_1 (Commercial-oriented behav.)
ATT_2	(Rational Self-interest)	.004	-							
ATT_3	(Relational sensitivity)	.001	-.007	-						
ATT_4	(Sense of community)	.008	.006	.000	-					
OBJ_1	(Rural protection)	**.480****	**.284****	.150	**.271****	-				
OBJ_2	(Profit improvement)	-.140	**.545****	**.316****	-.100	.023	-			
OBJ_3	(Solidarity)	.058	.042	**.202***	.096	.004	-.003	-		
OBJ_4	(Farm progress)	.178	.138	.000	-.041	-.007	.004	.000	-	
BEH_1	(Commercial-oriented behav.)	-.186	**.210***	**.245***	-.059	-.048	**.389****	.053	**.219***	-
BEH_2	(Social-oriented behav.)	.109	.009	.012	.190	**.353****	-.067	-.129	-.048	.000

* $p < .05$ - ** $p < .01$

Source: own elaboration with IBM SPSS software

Conclusions

The results indicate that two types of entrepreneur participate in AFNs. Commercial entrepreneurs are oriented toward value-capturing activities such as economic improvement and rational self-interest to maximize both profit and farm business growth. They represent around 36% of the farmers participating in AFNs. Though considered more commercially

oriented, they are also slightly concerned about environmental and social issues, as observed through the emergence of the relational sensitivity dimension. This result is consistent with the view in Santos (2012) that profit-oriented organizations seek to maximize value capture and satisfy value creation by engaging in socially responsible acts. The second type of entrepreneur was more likely to exhibit the social entrepreneur personality. This type constitutes the majority of farmers participating in AFNs (around 64%). The environmental dimension of this process is evident in items such as preserving traditional food production, increasing environmental protection, protecting the rural landscape, and improving soil fertility through natural practices, loaded under the objective 'rural environmental protection' construct. On the other hand, the social aspect could be seen to combine both sustainable solutions and a high degree of empowerment, as attitude to relational sensitivity represents a learning process inside AFNs: farmers' regular meetings with consumers improve their sensitivity to the environment, food safety, and the rural community. Furthermore, we can observe the relationship between sustainable solutions and the level of empowerment through farmers' attitudes to strengthening personal relationships with consumers and their desire to establish reciprocity with them along with trust and loyalty. Farmers also prioritized improving their interactions and cooperation with not only AFN consumers (inside the organization) but also the rural community (outside the organization). This view is also supported by AFN studies that have found that farmers and consumers tend to develop projects and synergies in the context of local sustainable development and pursue concrete and virtuous initiatives of social empowerment (Migliore et al., 2014a). In regard to rural development, social entrepreneurs need to be recognised and supported since they have important implications for rural areas by helping improve business conditions through the recirculation of financial capital, job creation, and environmental conservation. Further comparative research is obviously needed to overcome limits to the external validity of the results and to investigate the analytical effort proposed in this article based on a small number of farmers concentrated in a single region of Southern Italy.

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