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Natural resources, landscape and environment in the economy of the green enterprise
Full paper

"Cluster of opportunities and development of entrepreneurial skills in modern rural areas"

Abstract

The recent reforms of the policies for rural development lead farms towards more entrepreneurial models and, at the same time, competitive and sustainable. New European agricultural model is based on high added value activities, with the production of quality goods according to "agronomically sound and sustainable agricultural systems as vital to guaranteeing competitiveness on local, regional and international markets". In this regulatory framework, the multifunctional agriculture can generate processes of boundary shift oriented towards differentiation and diversification strategies. According to McElwee e Bosworth (2010), to trigger business models are necessary: competition by quality, product and service innovation, market governance (niche markets and alternative food network). These variables generate opportunity clusters that can promote business development mechanisms, even in marginal rural areas if exploited properly. The present work aims to analyse the role of human family capital, according the family farm business unit, in order to produce entrepreneurial attitude. The survey seeks to relate the family dimension, the typological dimension of the farm and the maximum degree of study within the family, aimed at verifying the influence of the family educational qualification in strategic business processes.

Keywords: opportunity cluster, rural entrepreneurship, educational level, family farms' strategy.

1. Introduction

The paper deal with family farm business in Italy (Errington, Gasson, 1993; Davidova, Thompson, 2014), with the purpose of exploring processes of collective entrepreneurship, by focusing on the capability to exploit clusters of opportunities in farming activity (McElwee, 2005). More precisely, the aim of the paper is to link education at family farm level and adoption of "innovative" agricultural practices, mostly oriented towards multifunctional and sustainable agriculture. The paper is articulated as follows: next section is focused on theoretical background, aiming at highlighting recent debate on rural entrepreneurship and transition towards sustainable agriculture. Paragraph 3 illustrates materials and method of analysis, while paragraph 4 presents the main results of our empirical analysis. Final conclusion will close the paper.

2. Literature review

In their book chapter "Researching rural enterprise", McElwee and Smith (2014) cast *"the question of whether rural enterprise can be framed as a distinctive category of entrepreneurship theory in its own right, and by doing so paves the way for future theorizing about the distinctive nature of rural entrepreneurship"*. In this paper we will try to banish every doubt about it.

In order to do this, we make reference to the recent trend in the political discourse centered around trade liberalization and reform of the Common Agricultural Policy (CAP) which are bringing about more entrepreneurial (competitive and sustainable) model in farming activity. Consequently, farmers have to cope with the pressing need to adapt (Phillipson *et al*., 2004).

Adaption of the entrepreneurial model has to be contextualised, with reference to the new competitive European agricultural model. The evolution of rural territory and the new European agricultural model framed in the modern rurality approach (OECD, 2006; van der Ploeg, 2010) boost the evolution of both rural entrepreneurship (Korsgaard *et al.*, 2016) and the so-called ecological entrepreneurship (Gast *et al*., 2017). As underlined by Marsden and Smit (2005), ecological entrepreneurship involves different paths of value creation and value appropriation on behalf farmers and "*new potentialities with regard to forging synergies between agricultural practices and different types of multi-functional activities; such as agri-tourism, engagement in off-farm incomes activities and environmental schemes and projects"* (Marsden and Smith, 2005). In the new scenario, supported by recent trends in rural policies, farmers necessarily have to adapt (Phillipson *et al*., 2004), by both upgrading entrepreneurial skills and by creating a favorable internal and external entrepreneurial environment (McElwee, 2005). Nonetheless, if on the one side, the external environment seems more complex, on the other side it provides farmers with more opportunities for diversifying rural businesses. As a matter of fact, rural development trajectories design what McElwee (2005) defines "clusters of opportunities" that, if well exploited, may boost farm's growth. Cluster of opportunities emerge from various dimension of the value-capturing by family farms (Marsden and Smith, 2005): a) possibility to retain added value at farm level, b) new network creation and new activities in rural contexts, c) develop new forms of multifunctional agriculture. This may bring about collective entrepreneurship, above all in the family farm business; in most occasion, the aptitude to exploit these opportunities may depend on entrepreneurial skills. This paper aims at exploring the level of education as critical variable in performing collective entrepreneurship. To this end, a family farm business indicator of education will be considered, under the hypothesis of collective decision-making process at family farm level.

3. Methodology

In order to evaluate eventual connections between family farms' strategy and level of education, we will consider the maximum title hold by a family member. The underlying hypothesis is that a member who lives in the family farm may affect decision-making process, by positing a collective (family) entrepreneurial profile. Data are collected from the database of the Agricultural Accounting Survey (RICA); the year of reference is 2015. The surveyed sample consists of 10,453 farms. Variables under study concern sociodemographic characteristics of the family farms, like life cycle and level of education (demographic profile), farms typology and access to rural development policies.

As far as family farm life cycle (identified according to the age of the woman, if present in the family) is concerned following types of family farms have been classified:

- young families, under the age of 40. This limit is demarcated in relation to the minimum age necessary to access the rural development policies regarding the generational change.
- mature families, aged between 40 and 65;
- old families, above the age of 65 year.

As far as the composition of the family unit is concerned, we find:

- young single parent, consisting of a single person without a consort or dependent children;
- couple with or without dependent children;
- single-parent family, made up of a parent with at least one dependent child who may or may not be the manager of the family business;
- other families, where family labor is associated with salaried labor.

The combination of previous variables (family life cycle and family composition) generates the demographic profile of the family farm, consisting of 18 modes (table 1).

As far as the education level, 8 levels of education are considered:

1. No title;
2. Primary school diploma;
3. Middle School diploma;
4. Professional diploma;
5. High school diploma;
6. University diploma (3 years);
7. Graduation (5 years);
8. Postgraduate specialization.

Finally, the types of farms proposed by CREA (Henke and Salvioni, 2013) were identified, with reference to strategies adopted 6 types of farming activity are consequently considered:

1. Micro farms (farms with economic size units of more than 4 and gross saleable production less than 15,000 euro);
2. Conventional small farms (farms with a gross saleable production ranged from 15,000 and 100,000 euro);
3. Conventional big farms (farms with a gross saleable production exceeding 100,000 euro and with marginal investments on quality products);
4. Differentiated farms (farms where more than 30% of the turnover derived either from the sale of quality products, or from deepening activities (Banks et al., 2002);
5. Diversified farms (farms where more than 30% of the turnover derived from related broadening activities as agritourism and educational and therapeutic activities (Banks et al., 2002);
6. Differentiated and diversified farms.

Finally, as far as access to rural development policies is concerned, the number of applications submitted was considered, distributed according to the measures of the Rural Development Policy (RDP) for the period 2007-2013; we have considered measures of the Ist and IIIrd axes, which are measures of investment. Table 1 synthesises the classified variables[1].

Table 1: The variables identified: demographic profile, level of education, farms typologies and access to the measures of the Rural Development Policy

Demographic profile	Level of education	Farms typologies	Access to RDP funding
Young only farmer Mature only farmer Old only farmer Young childless couple Mature childless couple Old childless couple Young couple with children	- No title/primary education - Secondary Education - Tertiary education - International baccalaureate - First degree - Higher Degree	- Micro farms - Conventional small farms - Conventional big farms - Differentiated farms - Diversified farms	– Farms with application for RDP – Farms with no application

[1] Due to lack of data, youn couples with children and young single parent have not been considered

Mature couple with children Old couple with children Young single parent Mature single parent Old single parent Young single parent with son/doughter as manager Mature single parent with a son/daughter as manager Old single parent with a son/daughter as manager Young other families Mature other families Old other families	- Master/Doctorate - PhD	- Differentiated and diversified farms	

Source: our data processing

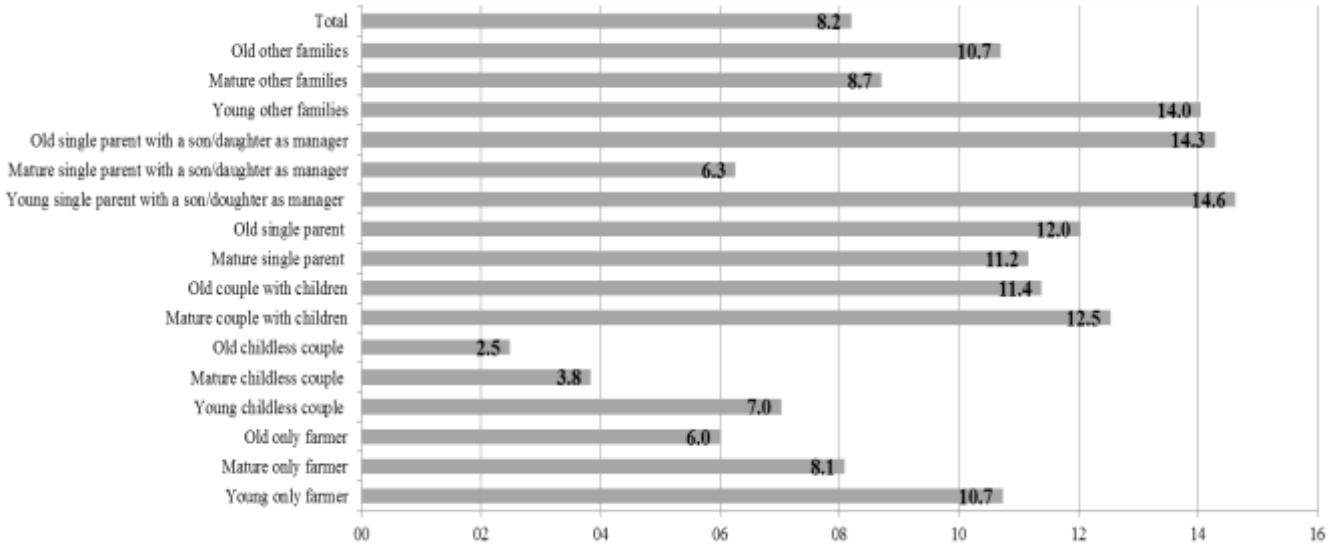
4. Results

Results are articulated on the basis of the relationship between:

a. family type and level of education,
b. farm's typology and level of education,
c. with a final attempt of synthesis of relationships through a positioning map.

With reference to the links between family type and education, figure 1 shows an inverse correlation between life cycle and the upper levels of education. In old families, the percentage of those families who have had access to university education is low. The farm with high level of education are either young and adult single parent with a son or daughter as manager (14.6 and 14.3 respectively).

Figure 1: Types of farms in relation to maximum family level of education

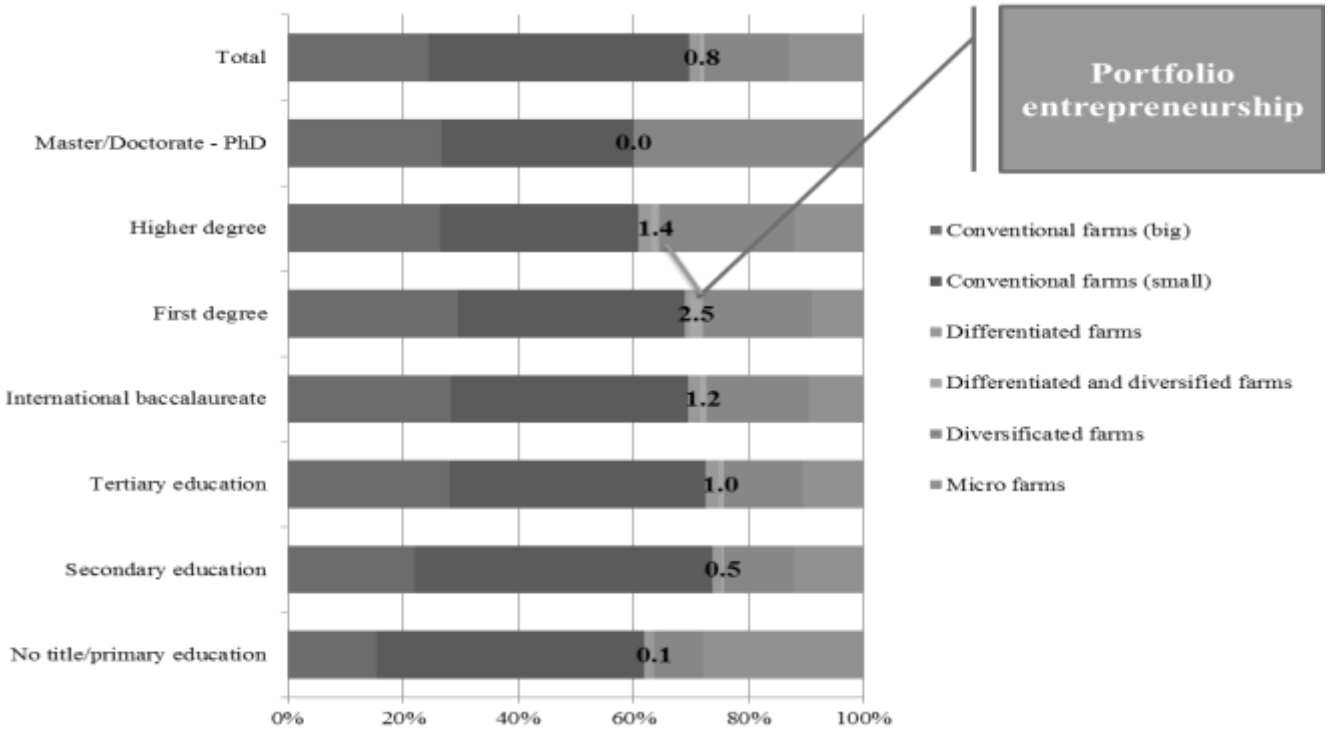


Source: data processed from the RICA dataset

As far as the relations between education and business strategy are concerned, differentiation and diversification strategies are concentrated in family farms with highest levels of education. Even

though portfolio strategy is still limited in farming activity, as evidenced in figure 2, higher relevance of portfolio entrepreneurship emerges in more skilled farms (with a first and higher degree). First degree holds 2.5% of differentiated and diversified farms, while in farms with higher degree the percentage is 1.4 (the percentage in farms with no title is 0.1%).

Figure 2: Types of farms in relation to maximum family level of education



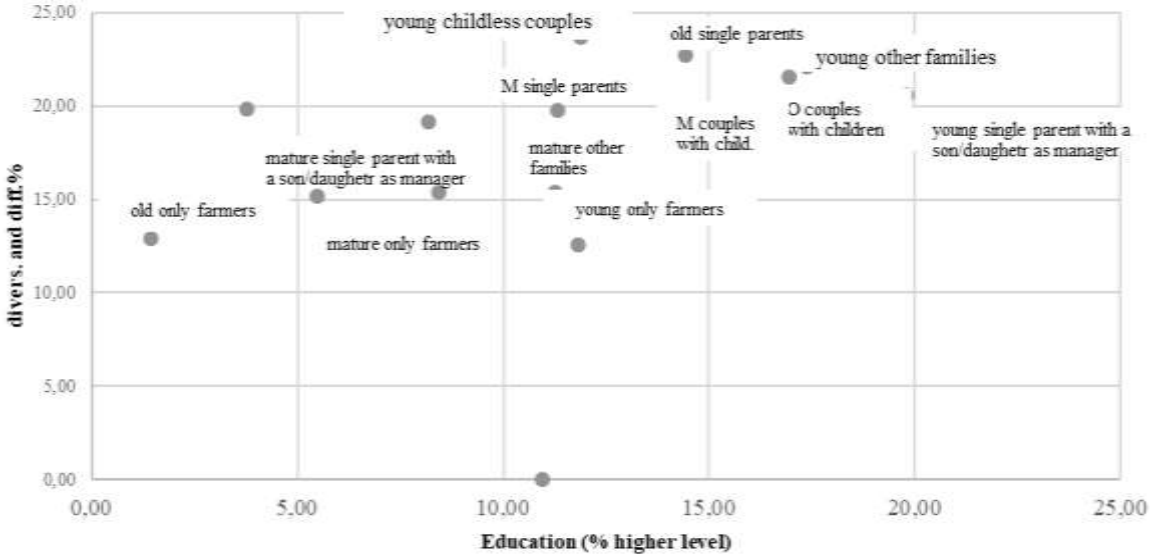
Source: data processed from the RICA dataset

In order to synthesize previous considerations, the figure 3 represents a positioning map where family farms have been positioned with reference to portfolio strategy and level of education. In this figure, level of education makes reference to the percentage of farms with higher levels (degree and post-graduation studies). Thus, the positioning map of the family farms is carried out in relation to differentiation/diversification strategy and level of education.

A first element of evidence from the picture is that, regardless the life cycle, higher levels of education are usually associated with higher percentage of farms with both quality and portfolio strategies. On the whole, higher is education, higher the propensity to invest on multifunctional agriculture, through strategies of deepening and broadening.

Nonetheless, also in youngest family farms (specifically in young single parent with son/daughter as manager and in other young families), good performance in transition towards multifunctional agriculture are associated with higher levels of education. By making reference to the family composition and life stage the links between the other two variables may be revealed. For example, single young parents with a son/daughter as manager becomes an effective tool for boosting portfolio entrepreneurship and activate trajectories of boundary shift (Banks *et al.*, 2002). When portfolio strategies are carried out within farms managed by educated elderly people, these usually happen in presence of children, coherently with a strategy aiming at securing a "robust" and diversified farming activity to future generations.

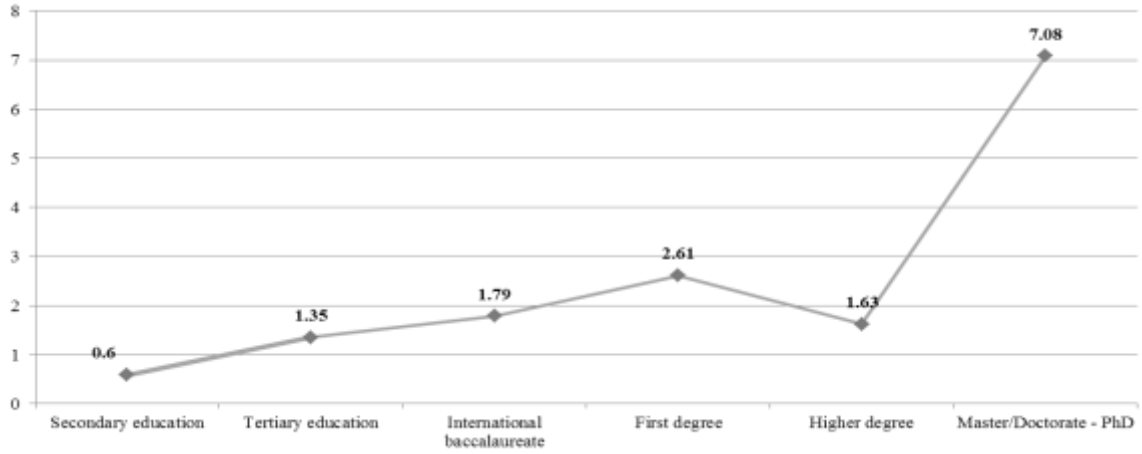
Figure 3: Level of education and the strategic business process



Source: data processed from the RICA dataset

A final information is drawn on figure 4, reporting access capability to rural policies for funding farms' investments. According to Vesala (Vesala *et al*., 2007), access to the rural policies is considered as an activity with a high content of entrepreneurship, due to the existence of dimensions such as risk-taking, business development orientation and innovativeness, typical of the entrepreneurial process. The figure 4 shows that the consumption of policies is directly related to the education and young peoples in the family farms business in relation to any education.

Figure 4: Consumption of rural development policies and maximum family level of education



Source: our data processing on RICA dataset (2018)

5. Discussion and conclusions

The relevance of household strategy in affecting the development of new business in rural contexts has been deeply recognized in literature (Errington, Gasson, 1993; Alsos et al., 2014). Our work is set against this approach and represents a first attempt to analyze the relevance of family context in addressing portfolio strategies at farm level. This attempt has been limited to the analysis of the influence of education on farming strategies, which is a first limit of the paper.

Despite these limit, our research presents interesting insights, by confirming that highly educated family farms are more oriented towards portfolio entrepreneurship based on multifunctional activities, so contributing to indigenous growth in rural areas (Carter, 1998).
Entrepreneurial household is characterised by high propensity to value-capturing, through unconventional and strategic business processes aiming at boosting deepening and broadening activities (Banks *et al*., 2002). Also, access to rural development policies to support family farms' strategy is correlated to the family life cycle and level of education, so confirming the goodness of the chosen approach, as tested in our empirical analyses (Pascucci *et al*., 2013). These results are mainly based on descriptive analyses, then evidencing a second limit of our paper. A more rigorous and robust approach is needed to fully estimate this correlation and this will be developed in further studies.
However, as a first attempt, we think our paper may evidence possible policy implication, in terms of a policy measures aiming fostering collective family entrepreneurship. As a matter of fact, reorientation of rural policies is bringing about a decline in the traditional mechanisms of support and a stronger orientation to broader rural development measures which are going to require collective initiative at family farm level (Schermer *et al*., 2011). To this end, reinforcement of human capital at family level and the (well-known) generational renewal may become a priority to perform the new rural paradigm and stimulate business strategies oriented towards multifunctional agriculture.

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