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## Article

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# Family farm business and access to rural development polices: a demographic perspective

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## Abstract

This article aims to show the ability of family farms in obtaining funds from rural development policies. Under the hypothesis that family farms' characteristics influence their access to policies, the perspective of analysis is demographic. In the paper two demographic viewpoints are investigated, to emphasize the role of the family composition in fostering strategic farms' decisions: the localization in the life cycle and the presence of assistants. The empirical test is provided for an Italian region: the funds of rural policies gained by family farms are examined, divided up into the three main strategic axes of the rural development plan. The results of the analysis highlight some interesting differences between the two demographic perspectives; the presence of assistants influences a farm's strategic process and increases the access to rural policies. This induces normative consequences in terms of the possible articulation of policies aimed at sustaining family farms.

**Keywords:** Rural development policies; Family farm business

## Background

The aim of this paper is to analyze funding strategies adopted by family farms with reference to rural development plans. More precisely, it looks into the influence of demographic variables on obtaining funds from the rural development policy: we define as "consumption of policy" the farm's ability to obtain funds from rural development policies.

A general characteristic of the agricultural sector in many European countries is the presence of an overlap between the productive and domestic spheres, that is farms' strategies depend on the family situations (Jervell 1999). According to Gasson *et al.* (1988), family farm businesses are related to situations where:

- a) *the principals are related by kinship or marriage,*
- b) *business ownership is usually combined with managerial control, and*
- c) *control is passed from one generation to another within the same family.*

In this context, *any boundary between productive and reproductive work in the farm household is artificial* (Errington and Gasson 1993) and conditions farms' strategies and aptitude to invest: the number of family members and localization in the life cycle could be relevant variables of influence. In a lot of cases, demographic transition, either

vertical or oblique (Bergstrom 1996), is stimulated by policies aiming at favoring intergenerational transmission. Besides, other investments are necessary to maintain a farm's profitability and its persistence over time. In order to cope with an even more competitive scenario and to secure a family farm's resilience, a mix of strategies has to be carried out (Darnhofer 2010).

Recent rural development policies make a set of instruments available in order to sustain farm competitiveness and to diversify agricultural income. The possibility to obtain funds is influenced by a set of constraints which, in many cases, reduce the consumption of policies. In this situation, an interesting field of analysis is the influence of demographic variables in accessing rural policies.

After presenting a brief theoretical overview, the paper proposes an empirical test within an Italian region (Lazio), where the odds of gaining access to rural development policies will be examined through a logistic regression model. The paper sustains the hypothesis of differentiation in the access to policies, due to demographic factors in the composition of family farms.

As Offutt (2002) points out, *since farm households are demonstrably diverse, analysts would seem obliged to investigate hypotheses about differential response and impact*. One of these differences concerns demographic variables: family contexts are particularly favorable to set up a farm venture (Jervell 2011): an abundant economic literature has emphasized the strict connection between farm household strategies and style of farming (among others, Whatmore, 1994), by demonstrating the persistency of family farms (Sabbatini 2011). Their ability to survive over time witnesses the relevance of F-connection<sup>1</sup> in fostering lower levels of transaction costs and a higher aptitude to adapt (Ben-Porath 1980; Pollack 1985; Corsi 2009).

Social approaches to this theme underline the relevance of non-profit decisions in maintaining farming activity (Kuehne *et al.* 2010). For example, some researchers emphasize the relevance of family identity in strengthening the links between the future and past family history (Burton, 2004). Furthermore, a sentimental attachment to the place (place dependence and place identity) reinforces the links between farmer and farming and delays the eventual decision to retire (Kuehne 2012). However, in many other cases financial constraints are determining factors, thus inducing the abandonment of activity. To avoid this, agricultural policy offers financial support to promote farm adjustments.

Some authors have recently stressed the role of the Common Agricultural Policy in preserving small farms (Koutsou *et al.* 2011), through the process of the functional repositioning of agriculture, as a result of deepening, broadening and regrounding, and through the creation of rural webs (van der Ploeg and Marsden 2008).

As a matter of fact, family farms are expected to play an important role even in the new scenario of "modern rurality" designed within the rural development policies (Abdelmalek, 2000). Family units are requested to face competitive challenges through the definition of farm strategies, which are generally overlapping with family strategies (Caillavet *et al.* 2005; Abdel 1997). In this context a relevant subject of analysis is related to the capabilities of gaining access to rural development policies, which contain a set of measures to sustain either farm competitiveness or diversification, along sectorial or territorial trajectories of development. This ability could be decreased both on the supply and the demand side. From the supply standpoint, a large literature taking origin from Downs (1957) work has demonstrated that deviations emerge in a context of

public choice. As far as demand is concerned, collective action theories evidence the relevance of pressure groups in conditioning policy decisions (Olson 1965; Becker 1983)<sup>2</sup>.

The impacts of agricultural policies on farms' structural adjustments are analysed also within agent-based models (Balmann 1997; Albisser and Lehmann 2007; Balmann et al. 2003), which endogenise the importance of psychological and social factors which interfere in the farmer's strategy definition. They are considered to be a useful tool to evaluate agricultural policy impact (Berger 2001; Happe 2004). More recent studies have emphasized the relevance of territory, social capital and socio-economic farm characteristics in obtaining access to rural policies and fostering local rural development (Sabbatini, 2008; Meert *et al.*, 2005; Marotta, 2007; Casieri *et al.*, 2010). The inclination to adopt rural policy, that is to receive subsidies within the rural development framework, is variable and could depend on socio-demographic characteristics of the farm: family size, presence of young farmers and localization in the life cycle are influencing factors that should be examined in depth. As a matter of fact, consuming policy is a costly activity in terms of time spending and opportunity costs; in addition, informational asymmetries represent an important barrier to access. To overcome these obstacles, farmers have to improve their attention: neo-Austrian perspectives permit to get a better comprehension of the decision processes through the concept of entrepreneurial alertness (Kirzner 1973).

In the Kirznerian perspective, the entrepreneur is characterised by the aim to increase profits: to this end, he or she must pay attention to opportunities. Kirzner (1997) makes reference to the concept of *alertness* to summarize the entrepreneur's aptitude to take advantage of opportunities. Access to rural development policies becomes a way to support farm adjustments.

The decision about consuming or not and about what measures are better to adopt could be influenced by demographic variables. As thoroughly demonstrated in literature, demographic variables are commonly recognized as explanatory factors influencing farm strategies: family composition and localization in the life cycle are determinants of different paths of development. What does the term *demographic* really mean? Should one refer to all the members of the family, or to the members effectively employed on the farm? Are there any differences if considering one or the other typology of family farms? Our paper sets in this context and aims at analysing the influence of demographic variables on the farm's decision to adopt rural policies. By proposing a two-way classification of family farms, the hypothesis under analysis is that possible differences in the access to rural development policies could emerge. The research is conducted through interdisciplinary approaches which privilege a demographic perspective of analysis, where the fundamental elements are related to farm family traits.

To this end, after a brief methodological note our analysis proposes an empirical test of the access to rural policies, within an Italian region (Lazio). The hypothesis under study is that family composition influences the consumption of policies.

## Methods

Family farms are the object of our analysis, marked out by three methodological steps. The first one concerns the demographic classification of family farms from a double perspective:

- a. one is essentially based on demographic variables: it considers just age and the size of family as relevant aspects to be analysed;
- b. the other classification takes into account farm activity and the composition of family work.

The first classification makes reference to previous publications (Bartoli and De Rosa 2007), where family composition and its localization in the life cycle are the key variables. The second one emphasizes the role of farm's assistants<sup>3</sup> exclusively employed within the farm or not. Due to the different perspective, the family cycle is a bit different: in the demographic typology, the young phase threshold is 35 years. Otherwise, in the second typology the age of reference is 40 years, because it is the threshold to gain access to rural development policies for generational change<sup>4</sup>.

Of course, this difference could raise possible dissimilarities in the total amount of young farms<sup>5</sup>.

#### I typology

- < 35 years
- 35–64 years
- > 65 years

#### II typology

- < 40 years
- 40–64 years
- > 65 years

Accordingly, the following typologies of farms will be analyzed (Table 1):

The differences between the two types of family farms concern a possible different degree of involvement of family members: in the first type, family members may not be involved in the farm business and may have interests in working outside the farm; in the second case the decision process stems from people who may not share similar objectives but who are involved in farming activity; they participate and cooperate to define the farm's strategy.

The second methodological step tries to link family types and access to the rural development policy, by focusing attention on the consumption of rural development policies in the region of Lazio (Italy): the measures under observation belongs to the three main axes of regional rural program:

1. competitiveness of the agricultural sector;
2. environment and landscape;
3. quality of life and diversification in rural areas.

Information and data are taken from the questionnaire of the last census of Italian agriculture, at Section 1, point 7<sup>6</sup>. As a consequence, our analysis is necessarily partial: indeed, census data take as reference year 2010, so this covers a maximum of two/three years compared to the duration of the rural development programme (7 years).

**Table 1 The two considered typologies**

<i>I typology</i>	<i>II typology</i>
Only farmer	Young farmer and a not young assistant
- young	- p/e
- mature	- np
- older	
Childless couples	Young farmers without assistant
- young	
- mature	
- older	
Couples with children	Mature farmer and a young assistant
- young	- p/e
- mature	- np
- older	
Extended families and other	Mature farmers without assistant
	Older farmer and a young assistant
	- p/e
	- np
	Older farmers without assistant

p = prevalingly employed in the farm.

np = not prevalingly employed in the farm.

e = exclusively employed in the farm.

The third methodological step aims at testing the (eventual) higher probability to gain access to the rural development policy on the basis of type of family farm. To this end, we apply a binomial logistic regression with categorical explanatory variables: more precisely the explanatory variables were divided into  $n-1$  dichotomous variables (Knoke and Burke 1980). This methodology is based on the assumption that the probability for the dependent variable Y to be equal to 1 is a function of the considered explanatory variables<sup>7</sup>. Since these variables are polichotomous (belonging to one of the types of that particular issue), they are treated as if each mode is in turn an explanatory dichotomous variable that helps to increase or decrease the success probability of the dependent variable. The function studied by the model is the following:

$$Y = \log it(x) = \ln[\text{odds}(x)] = \beta_0 + \beta_1 x_1 + \dots + \beta_k x_k$$

where Y is the dichotomous dependent variable “adoption of policies” that equals 1 for farms that have gained funds and 0 for those that have not obtained any fund. The estimation function measures the success probability related to each modality of the independent variable. For each modality, the probability to get access to funds is estimated with respect to a defined modality.

The model is based on the concept that the logit is a linear function of each regressor’s parameters. In order to distinguish the two different demographic perspectives, two different models will be estimated for each type of family farms.

## Results and discussion

The recent publication of the Italian census of agriculture reveals some structural adjustments but confirms two key factors characterising the agriculture of Lazio region.

First of all, the presence of a fragmented structure of family farms can be observed: even though the number of family farms has reduced by 41%, with respect to the previous census in 2000, in 2010 96% of all farms are directly managed by farmers, i.e., an increase of two percentage points. The second aspect of interest is the low presence of young farmers: Table 2 illustrates the prevalence of mature and older farms with respect to the younger ones. Less than 9% of farms is managed by younger farmers (<40 years); the share sensibly reduces in farms managed by farmers under 30. In the perspective of our analysis this contributes to fix the agricultural sector and impede processes of structural adjustment.

In what follows, we investigate the role of policies in fostering farm transformation and the eventual differences on the basis of demographic variables.

### Consumption on the basis of family characteristics

An important result of our analysis confirms previous studies on limited access to rural policies on behalf of Italian farms (Bartoli and De Rosa, 2011). Very small percentages of farms gain access to funds; in this context some differences on the basis of demographic variables emerge. Most of the first type of family farms does not use rural policy measures to sustain farm growth (Table 3). On average, 95% of farms have not used any measure of the rural development plan. However, the presence of young farmers raises the percentage of policy consumption, but within the group of young farmers different aptitudes stand out. Single young farmers display the highest percentage of access to policies (14.4%). On the other hand, moving to other young families (childless and couple with children), the percentages decrease, even if they remain above the average (respectively 9% and 10%). In the remaining family farms, statistically significant results are found in extended families and partially in single mature farms. In the other typologies a systematic lower level of access is evident, above all in the childless

**Table 2 Age of farm entrepreneur (%)**

	2010	2000
< 20 years	0.04	0.15
20 – 24 years	0.52	0.36
25 – 29 years	1.35	1.10
30 – 34 years	2.50	2.65
35 – 39 years	4.46	4.70
40 – 44 years	6.83	7.16
45 – 49 years	9.22	9.61
50 – 54 years	11.06	13.00
55 – 59 years	12.60	11.08
60 – 64 years	14.35	13.24
65 – 69 years	10.27	12.58
70 – 74 years	10.82	11.12
75 – 79 years	8.10	8.01
> 80 years	7.89	5.24
Total	100.00	100.00

Source: Region Lazio, 6<sup>th</sup> Italian census of agriculture.

**Table 3 Access to rural policies in the first type of family farms**

<i>I family type</i>	Total consumption		Total
	NO	YES	
<i>Only farmer Y</i>	1,466	246	1,712
<i>Only farmer M</i>	14,603	952	15,555
<i>Only farmer O</i>	12,154	589	12,743
<i>Childless couple Y</i>	780	77	857
<i>Childless couple M</i>	18,694	800	19,494
<i>Childless couple O</i>	11,115	367	11,482
<i>Couple with children Y</i>	753	89	842
<i>Couple with children M</i>	19,830	1,135	20,965
<i>Couple with children O</i>	3,638	146	3,784
<i>Extended families and other</i>	13,516	1,178	14,694
<i>Total</i>	96,549	5,579	102,128
<b>%</b>	Total consumption		Total
	NO	YES	
<i>Only farmer Y</i>	85.6	14.4	100.0
<i>Only farmer M</i>	93.9	6.1	100.0
<i>Only farmer O</i>	95.4	4.6	100.0
<i>Childless couple Y</i>	91.0	9.0	100.0
<i>Childless couple M</i>	95.9	4.1	100.0
<i>Childless couple O</i>	96.8	3.2	100.0
<i>Couple with children Y</i>	89.4	10.6	100.0
<i>Couple with children M</i>	94.6	5.4	100.0
<i>Couple with children O</i>	96.1	3.9	100.0
<i>Extended families and other</i>	92.0	8.0	100.0
<i>Total</i>	94.5	5.5	100.0

Source: data processed from the database of Region Lazio.

older families: in this case the reduced propensity to consume policies is evidently due to the limited perspective of vertical transmission.

The second typology highlights a similar composition in the access to policies, which points out a higher percentage in the case of young families: but, in this case, a significant contribution to the phenomenon is given by the presence/absence of an exclusive assistant (Table 4). In young families with an exclusively employed (even not young) assistant, the percentage of access is relevant: 18.3% of farms have obtained funds. In the other two cases of young family farms the shares of access are certainly statistically significant, but lower (about 11%). The transition toward older stages of the life cycle reduces the access to rural policies, above all in the presence of assistants non-exclusively employed in the farm. The role of assistants seems relevant in obtaining access to funds, even when this role is decreasing in older phases of the life cycle.

By comparing the two types of family farms we can add other considerations: in each phase of life cycle, the presence of an assistant (either prevalent or exclusive) enhances the access for funds and gives a strong contribution to decision process. In order to validate previous results, an econometric model is proposed in the next paragraph.



**Table 4 Access to rural policies in the second type of family farms**

<i>II family type</i>	Total consumption		Total
	NO	YES	
<i>Young farmer and a not young assistant p/e</i>	1,669	374	2,043
<i>Young farmer and a not young assistant np</i>	641	84	725
<i>Young farmer without assistant</i>	6,483	840	7,323
<i>Mature farmer and a young assistant p/e</i>	4,754	382	5,136
<i>Mature farmer and a young assistant np</i>	2,018	109	2,127
<i>Mature farmer without assistant</i>	44,461	2,264	46,725
<i>Older farmer and a young assistant p/e</i>	1,240	86	1,326
<i>Older farmer and a young assistant np</i>	894	60	954
<i>Older farmer without assistant</i>	34,389	1,380	35,769
<i>Total</i>	96,549	5,579	102,128
<b>%</b>	Total consumption		Total
	NO	YES	
<i>Young farmer and a not young assistant p/e</i>	81.7	18.3	100.0
<i>Young farmer and a not young assistant np</i>	88.4	11.6	100.0
<i>Young farmer without assistant</i>	88.5	11.5	100.0
<i>Mature farmer and a young assistant p/e</i>	92.6	7.4	100.0
<i>Mature farmer and a young assistant np</i>	94.9	5.1	100.0
<i>Mature farmer without assistant</i>	95.2	4.8	100.0
<i>Older farmer and a young assistant p/e</i>	93.5	6.5	100.0
<i>Older farmer and a young assistant np</i>	93.7	6.3	100.0
<i>Older farmer without assistant</i>	96.1	3.9	100.0
<i>Total</i>	94.5	5.5	100.0

Source: data processed from the database of Region Lazio.

### The logistic model

As highlighted in Table 5, the results of the logistic regression model are acceptable and statistically significant, even if the pseudo R-squared does not have a high value. From the table we can reject the zero value hypothesis. Thereby, family farms typology influences the access to rural development policies.

Tables 6 and 7 shows the results obtained from the model, comparing the likelihood of access among the two typologies of family farms. Demographic variables introduce further elements of reflection with respect to previous analysis: the logistic regression highlights a strong correlation between localization in the life cycle and access to policies. Family farms in which the entrepreneur is a young farmer are more probable to gain access to policies; in mature and elderly families an inverse correlation with the access to rural policies is evident. The more a family farm is in the advanced stage of the life cycle the less will be the probability to consume policy. In the Kirznerian perspective, single young farmers are more alert and determined to invest and to exploit the opportunities, with respect to young couples with or without children. In relation to extended families the probability for a single young farmer is 91% higher (Table 7), while, in young couples the same probability is 13% higher and in couples with children it is 35% higher: the presence of children increases the access to policies, presumably to increase the ability of the next generation to take over the farm. On the other hand,

**Table 5 Zero value global hypothesis test**

<i>I typology</i>			
Test	$\chi^2$	DF	Pr > $\chi^2$
Likelihood ratio	6,614.769	9	<.0001
Score	7,450.192	9	<.0001
Wald	6,976.323	9	<.0001
<i>Association of predicted probabilities and observed answers</i>			
Concordant percentage	52.1	D Sommers	0.189
Discordant percentage	33.2	Gamma	0.222
Linked percentage	14.8	Tau-a	0.020
Couples	538,646,871	c	0.594
Pseudo R-squared	0.07		
<i>II typology</i>			
Test	$\chi^2$	DF	Pr > $\chi^2$
Likelihood ratio	11,253.678	8	<.0001
Score	14,730.895	8	<.0001
Wald	13,103.435	8	<.0001
<i>Association of forecasted probabilities and observed answers</i>			
Concordant percentage	45.8	D Sommers	0.208
Discordant percentage	25.0	Gamma	0.294
Linked percentage	29.2	Tau-a	0.021
Couples	538,646,871	c	0.604
Pseudo R-squared	0.07		

families in the mature and older phase of the life cycle have a lower probability to exploit policy opportunities.

The logistic model applied to the second type of family farms gives other interesting insights, due to the presence of an assistant (Tables 8 and 9). If, on the one hand, young farmers confirm their aptitude to obtain funds for rural development, on the other side, the presence of an assistant partially modifies the picture. An assistant prevalently or exclusively employed to support farming activity gives the farm higher opportunities of being funded. Moreover, in the case of negative estimates, the presence of prevalent or

**Table 6 Logistic regression for the first demographic typology**

	Estimation	Standard error	$\chi^2$ Wald	Pr > $\chi^2$
Intercept	-2.7072	0.0218	15404.318	<.0001
Only farmer Y	0.9222	0.0654	199.0056	<.0001
Only farmer M	-0.0233	0.0370	0.3949	0.5298
Only farmer O	-0.3198	0.0436	53.8447	<.0001
Childless couple Y	0.3917	0.1090	12.9005	0.0003
Childless couple M	-0.4442	0.0390	129.9321	<.0001
Childless couple O	-0.7035	0.0522	181.4673	<.0001
Couple with children Y	0.5717	0.1026	31.0505	<.0001
Couple with children M	-0.1534	0.0349	19.2762	<.0001
Couple with children A	-0.5084	0.0786	41.8620	<.0001

**Table 7 Odd ratio (vs extended families)**

	<i>Estimation</i>
<i>Only farmer Y</i>	1.925
<i>Only farmer M</i>	0.748
<i>Only farmer O</i>	0.556
<i>Childless couple Y</i>	1.133
<i>Childless couple M</i>	0.491
<i>Childless couple O</i>	0.379
<i>Couple with children Y</i>	1.356
<i>Couple with children M</i>	0.657
<i>Couple with children A</i>	0.460

exclusive assistants reduces the negative effect on the access to rural development policies. Table 9 makes this well-rendered. Firstly, the transition towards older steps of the life cycle induces a reduction in the probability to obtain funds. Secondly, it confirms the importance of a prevalent or exclusive presence of assistants in farming activity.

The comparison between the two methodologies of classification of family farms has revealed its utility: in fact, discriminating the presence of assistants is a relevant factor in stimulating the ability of consuming policy. The next paragraph details the main measures used by farms.

### The consumed measures

In this paragraph we will detail the consumption of rural development policies by articulating them on the basis of the three strategic axes. The synthetic results are presented in Table 10, while in the following tables the same results are distinguished by family farm typology.

The lowest share of funded farms concerns the incentives for farm diversification (third axis): here the percentage of farms is less than 1%. In the first axis the level of adoption is very low and involves 2.4% of total farms (Table 10), while the rate of access to the measure included in the second axis is higher (3.4%).

The high costs of using European policies, in terms of bureaucracy, transaction costs, etc. could be a first motivation to explain low rates of access. On the other side, the

**Table 8 Logistic regression for the second demographic typology**

	<i>Estimation</i>	<i>Standard error</i>	$\chi^2$ <i>Wald</i>	<i>Pr &gt; <math>\chi^2</math></i>
<i>Intercept</i>	-25.083	0.0277	8216.9520	<.0001
<i>Young farmer and a not young assistant p/e</i>	1.0126	0.0575	309.6402	<.0001
<i>Young farmer and a not young assistant np</i>	0.4760	0.1060	20.1646	<.0001
<i>Young farmer without assistant</i>	0.4647	0.0426	119.2140	<.0001
<i>Mature farmer and a young assistant p/e</i>	-0.0131	0.0545	0.0576	0.8104
<i>Mature farmer and a young assistant np</i>	-0.4103	0.0910	20.3114	<.0001
<i>Mature farmer without assistant</i>	-0.4692	0.0336	195.4155	<.0001
<i>Older farmer and a young assistant p/e</i>	-0.1603	0.1022	2.4610	0.1167
<i>Older farmer and a young assistant np</i>	-0.1931	0.1208	2.5544	0.1100

**Table 9 Odd ratio (vs extended families)**

<i>Odd ratio (vs older farmer without assistant)</i>	<i>Estimation</i>
<i>Young farmer and a not young assistant p/e</i>	5.584
<i>Young farmer and a not young assistant np</i>	3.266
<i>Young farmer without assistant</i>	3.229
<i>Mature farmer and a young assistant p/e</i>	2.002
<i>Mature farmer and a young assistant np</i>	1.346
<i>Mature farmer without assistant</i>	1.269
<i>Older farmer and a young assistant p/e</i>	1.728
<i>Older farmer and a young assistant np</i>	1.672

low share of access is particularly relevant in the case of 3<sup>rd</sup> axis, which contains new tools for sustaining quality of life and economic diversification in rural areas<sup>8</sup>.

A detailed consumption of policies is illustrated in Table 11: the table clearly discriminates young versus older families: policies falling in the first axis are generally consumed by young farms; besides, when young farmers have an assistant the aptitude to invest is systematically higher (6 percentage points);

Elderly families prevalently consume measures under the second axis, which are exclusively related to environmental payments<sup>9</sup>. Finally, the table points out a very low percentage of farms having used measures of quality of life and diversification of rural economy (3<sup>rd</sup> axis). However, even in this case, the second type of family farms located in younger phases display a higher percentage of access, thanks to the presence of an active assistant.

## Conclusions

The paper aimed at showing the relevance of demographic factors in influencing the way family farms gain access to funds for rural development. The demographic perspective has been introduced through two typologies of classification of family farms. Empirical analysis has shown important insights:

- first of all, a reduced share of consumption of rural policy emerges, above all in terms of new tools foreseen within the third axis of the rural development programme;
- a second element of reflection stems from the consideration of demographic variables: family farms managed by a young entrepreneur demonstrate a higher probability to obtain funds, thanks to a longer life expectancy, which raises farmers' alertness and his propensity to invest;
- finally, the two adopted demographic perspectives confirm the importance of the assistants, above all exclusive or prevalent, in taking investment decisions and

**Table 10 Rate of access to rural development policies**

	<i>n. farms</i>	<i>% on total farms</i>
<i>axis 1</i>	2,463	2.4
<i>axis 2</i>	3,479	3.4
<i>axis 3</i>	101	0.1

**Table 11 Consumption of rural development policies (%)**

	<i>I axis</i>	<i>II axis</i>	<i>III axis</i>
<i>Only farmer Y</i>	9.5	6.5	0.3
<i>Only farmer M</i>	23.3	3.6	0.1
<i>Only farmer O</i>	2.1	2.7	0.0
<i>Childless couple Y</i>	6.0	3.5	0.0
<i>Childless couple M</i>	1.6	2.8	0.1
<i>Childless couple O</i>	1.1	2.3	0.0
<i>Couple with children Y</i>	5.6	6.5	0.1
<i>Couple with children M</i>	2.1	3.7	0.1
<i>Couple with children O</i>	1.1	3.0	0.1
<i>Extended families and other</i>	4.0	4.7	0.2
	<i>I axis</i>	<i>II axis</i>	<i>III axis</i>
<i>Young farmer and a not young assistant p/e</i>	12.6	7.7	0.7
<i>Young farmer and a not young assistant np</i>	7.3	5.7	0.6
<i>Young farmer without assistant</i>	7.0	5.7	0.4
<i>Mature farmer and a young assistant p/e</i>	3.0	4.9	0.2
<i>Mature farmer and a young assistant np</i>	1.8	3.6	0.0
<i>Mature farmer without assistant</i>	1.9	3.3	0.1
<i>Older farmer and a young assistant p/e</i>	3.1	4.1	0.2
<i>Older farmer and a young assistant np</i>	2.1	4.4	0.0
<i>Older farmer without assistant</i>	1.5	2.6	0.0

obtaining access to rural policies to sustain farm adjustment. The lower level of access registered in the first typology of farms emphasises the relevance of the present/absent assistant farmer, recently underlined in literature on the subject (Koutsou et al. 2011).

According to the neo-Austrian perspective adopted by this paper, it is possible to sustain the hypothesis that the family farm's alertness is significantly higher in the case of either young farms or young farms where assistants support the farmer's activity, above all in the early stages of life cycle. However, the explanation for the ability of young farmers of obtaining funds from rural development policies cannot overlook the fact that the subjective condition of a "young farmer" is a priority in the allocation of resources for rural development. There is also a specific measure for the settlement of young farmers and an implicit resource reservation. On the other side, that means that "targetisation" works well in improving generational renewal. In this perspective, the introduction of a demographic viewpoint has given important insights, in order to fully understand the decision making mechanism to consume rural policies. The differences due to the two adopted demographic perspectives support the necessity to discriminate the supply of policy by taking these factors into account. More precisely, the discovered impact of the presence of family members working as assistants should encourage policies to foster their permanence in the farm and to avoid the search of off-farm jobs. Surely, rural development policies aimed at encouraging a farm's boundary shift (Banks et al. 2002) are in the agenda, but they are not exploited enough, owing to a set of motivations well described in other studies on the subject. To this end, more efforts are

necessary to increase the percentage of access and, through this, raise the probability of higher levels of persistency of family farms.

## Endnotes

<sup>1</sup>Families, friends and firms.

<sup>2</sup>See, among others, Rausser 1982; de Gorter and Swinnen 2002, Peltzman 1976.

<sup>3</sup>The assistant is a family member who helps the farmer.

<sup>4</sup>The average age is related to the woman, when she is present in the farm.

<sup>5</sup>Dissimilarities are eventually attributable to the presence of young members even within extended families.

<sup>6</sup>See [www.istat.it](http://www.istat.it) for more details.

<sup>7</sup>The value is equal to 1 for farms that get access to funds and 0 for farms that do not.

<sup>8</sup>For the evaluation of policy consumption under Axis 3 it is necessary to precise that a part (often considerable) of the resources allocated to this axis is not devoted to farmers, but to other entities, both public and private.

<sup>9</sup> See the data concerning the progress of the spending on [www.reterurale.it](http://www.reterurale.it).

## Competing interests

Both authors declare that they have no competing interests.

## Authors' contributions

LB and MDR prepared the data, performed the statistical analysis, drafted, read and approved the final manuscript together.

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