CAP vs farmers: which beliefs move incentives

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Abstract: Conditional measures in Common Agricultural Policy integrate a number of societal expectations and intend to channel private resources toward the achievements of critical environmental objectives. The central idea of this paper is to rely on the farm as the economic entity able to mobilize the resources in the intended direction. The paper aims to identify the motivations as key drivers for such "state of the play" and claims that the farmers are moved not only by the economic issue but there are complex motivations which include individual and social collective concerns on environmental.

The paper focus on the importance of farmers' beliefs, for choice to apply environmental schemes, and the driving forces that contribute to create and consolidate these. The methodology is based on direct collected data from farmers regarding their knowledge and opinions about the contribution of agricultural practices to respond to "the new challenges", as defined by the Cap Health Check documents (2010), and to the effectiveness of the current conditional measures on promoting such practices.

Summarizing, the author's assumption is that the response to public intervention, through conditional measures, is primarily determined by a system of beliefs among farmers. The conditional responses emerge from a common perspective within society and public opinion from which individual decision-makers infer "behavioural beliefs" to choose strategically. On the other hand, beliefs are the cognitive bases for the attitudes and the norms that relate the classes of stimuli and responses. The interaction between attitudes and norms affect behaviour.

The authors present the evidence an extensive survey among 1.007 farmers in Italy in 2010 focusing on the evaluation of environmental conditional measures introduced by the CAP Health Check. A series of ordered logit models are used to evaluate the role of beliefs and public representation from the farmers' perspectives. The results shows that specific beliefs and existing level of CAP intervention influence the farmers assessment and decisions .The authors conclude that the collected evidences could help to improve the implementation programme putting more attention to contextual actions aimed at mobilizing the cognitive resources toward societal expectations.

Keywords: Policy evaluation, CAP incentives, Common Knowledge

Introduction

From here you write the remaining manuscript. The body text of the paper should be supplied with headings reflecting the contents of the subsequent paragraphs In the last decades, one of the main efforts of the Common Agricultural Policy was to promote a better use of natural resources in agricultural and food production. In the New Reform this goal has been further enhanced both in terms of budgetary terms and in new tools. One third of the funds will be given as Direct Payments ("green") and the Rural Development Plan will press for investment in environmental sustainability. All these tools aim to promote sustainability and improve environment-friendly production methods.

This policy, both at European and National level, will be more effective if farmers will rapidly change their production behavior (Burton and Schwarz, 2013).

The empirical evidences clearly show that the policy process toward sustainability objectives has taken different paths and speeds in the European Regions. So, to find a common line and vision for all economic actors involved in the European agri-food system becomes more important. This, first of all, to achieve the ambitious purpose of Horizon 2020.

The starting idea of this paper relies on the representation of the farms and farmers as complex organizations able to mobilize internal and external resources in different directions, in response to the relationships and external solicitations. This situation strongly depends on the strength and numbers of institutional interactions. In other words, the continuous exchange between farmers and other economic and institutional actors enables to understand the change in the framework, to reallocate their assets and to adapt their process to the new market and social conditions. At the same time the farmers' adaptation depends on their experience and beliefs in the different solutions offered by the knowledge-based systems. This idea is truth also in the case of the environmental measures.

In many cases, the way and time of a broader measure implementation by farmers determines the success of the policy tools. Moreover, we assume that there is an important imitative mechanisms in the introduction of innovative practices in agricultural systems.

One of the main problems encountered in empirical research on the agri-environmental measures effectiveness is linked to the heterogeneity of the areas and the conditions of the natural resources that control the agricultural process (Hasund, 2013). The participation of farmers in the scheme's definition seems to allow a better effectiveness of the instruments, both from the environment point of view and from the reorganization of the company and its competitiveness (Westhoek et al., 2013).

The implementation of agri-environmental measures in Italy during the last program period (2007-2013) was significantly delayed with respect to the objectives set by the regional administrations. The change in commitments and contracts led to an increase in transaction costs[294] and an initial distrust of many measures. Overall, during the first three years of the program, the farmers focused their attention on existing measures related to organic farming, integrated pest management and grazing land management.

In subsequent years, new measures have increased disproportionally, with an total recovery toward the targets set for the regions. However, the differences in participation in agri-environmental measures between different regions appear very evident. We report (table 1) the financial expenditure for Axis II measures in Rural Development Plans by regions. This to understand the percentage of actual expenditure in the last reform about environmental measures.

The causes of this diversity was investigated through a desk analysis on both, the choices of RD program and management of these measures, using a direct questionnaire for farmers about the motivations of accession to the measures or during the revision of the Common Agricultural Policy in 2011, known as the "health check". This revision provided additional resources mostly aimed to environmental objectives such as: climate change, rationalization of water resources, and renewable energy production. 50% of the regions used these resources within the existing agri-environmental measures with considerable success and allowed their rapid implementation.

[294] "transaction cost" means an additional cost linked to fulfilling a commitment, but not directly attributable to its implementation or not included in the costs or income foregone that are compensated directly; and which can be calculated on a standard cost basis; Reg. EU 1305/2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and repealing Council Regulation (EC) No 1698/2005.

The EU Regulation on rural support indicated a minimum amount of funds that were intended for the measures for the protection and the quality of the environment (Axis II), within the regional rural development plans, corresponding to 40% of the total public funding (Table 1). The variation in the allocation of financial resources for this purpose (including specific measures for the protection of natural resources) is high among the Italian regions.

We also consider the revision of the schemes implemented in many regions during the early years of program using the evaluation documents produced by the independent evaluators. The evaluators data and indictors and the focus on environmental impact in the evaluation questions required by the Managing Authority can be considered as a measure of the importance given to the "environmental issue" and of the implementation of recommended practices.

At present, the farmers do not recognize a real efficiency and effectiveness of agri-environmental measures by the Community Agricultural Policy, so there is the need to understand how it could be possible to increase it. In summary, the incentives for these measures were not working as expected. In Italy, there was a real lack of interest in agri-environmental measures and appropriate practices not were encouraged by national policy.

This is certainly linked to the beliefs that farmers have with respect to certain aspects of the agri-environmental measures. It is therefore particularly interesting to adopt a sociological model that helps to explain the behavior of farmers in regard to environmental variables. This could give the right clues to understand how to encourage "environmental friendly" behaviours of farmers, who lose interest in these issues. Specifically, the sociological model could explain on what basis such beliefs are formed, help to understand what the conditions are that guide the farmers and what interventions could be made to further European policies.

The impact of these results and their strategic consequences could lead to better care for the environment if the first hand actors in the rural community (farmers) accept the "policy". A participatory approach allows formulating and demonstrating practices, which enhance the overall awareness and integrate the general public opinion and the complex economic system.

The key research question is how to improve farmers participation to agro environmental schemes as well as their effectiveness.

On the basis of the above considerations the paper analyzes the inter-dependency between factors that determine positive opinions and beliefs of farmers about the effectiveness of agri-environmental measures of rural development and their interest to join and implement these measures in future.

Tab. 1 - Italian Financial expenditure fo Axis II measures in RDP by Regions up to December 2012

Region	Axis II €	Total Expenditure €	Axis II/Total Expenditure %
Abruzzo	147.680.465	426.327.617	0,35
Bolzano	207.839.066	330.192.224	0,63
Emilia Romagna	435.282.046	1.157.893.833	0,38
Friuli Venezia Giulia	98.469.872	265.683.479	0,37
Lazio	225.955.989	700.434.557	0,32
Liguria	66.099.183	290.140.047	0,23
Lombardia	466.586.342	1.026.027.304	0,45
Marche	199.612.553	482.282.568	0,41
Molise	77.726.126	206.582.326	0,38
Piemonte	409.464.966	974.087.993	0,42
Sardegna	769.890.909	1.284.746.987	0,60
Toscana	346.806.568	870.527.329	0,40
Trento	121.059.823	278.764.791	0,43
Umbria	345.571.628	785.813.348	0,44
Valle d'Aosta	85.731.017	123.649.759	0,69
Veneto	320.810.520	1.042.158.575	0,31
Basilicata	318.617.980	667.928.664	0,48
Calabria	453.584.639	1.087.508.918	0,42
Campania	709.141.391	1.809.983.083	0,39
Puglia	581.308.624	1.595.085.914	0,36
Sicilia	929.551.127	2.172.958.855	0,43
Italia	**7.316.790.834**	**17.578.778.171**	**0,42**

Source: author's processing from Regional RDPs, 2012.

The theoretical framework

One of the main challenges of European environmental policies is to recruit local-level actors to fulfill set targets (Kaljonen, 2006). The policy implementation and success are relates to the different actors' willingness and capacities to act. In this paper we refer to an actor oriented theory framework to analyze the political interventions. We consider it as a multiple reality made up of different cultural perceptions, social and institutional interests; the main result depends from the on going interrelations between social and political actors (Long and Van Der Ploeg, 1989).

In the case of CAP environmental policy, the effectiveness largely depends from the number of farmers who join the environmental schemes and how they modify the practices towards a more sustainable path. This process depends not only by the incentives, but also by the farmers willingness to adopt a more environmental friendly activities and attitudes.

It is a real cultural change through which the quality reproduction of natural resources becomes a joint objective of the agricultural activity to the productivity and profitability.

The collective change is a precarious process (Callon, 1986); it depends not only by the actors who built it, but also by social and material entities involved. In other words, the change of the

collective behavior of the farmers is a process based on the interactions between political choices impacts on natural resources and long-term economic objectives.

In the case of the CAP environmental Policy, there is an increasing level of autonomy by the Member States' regional administrations regarding to the direct incentive's level, the total amount of resources and also to the specific research and demonstration funding activities (Farmer *et al.*, 2013).

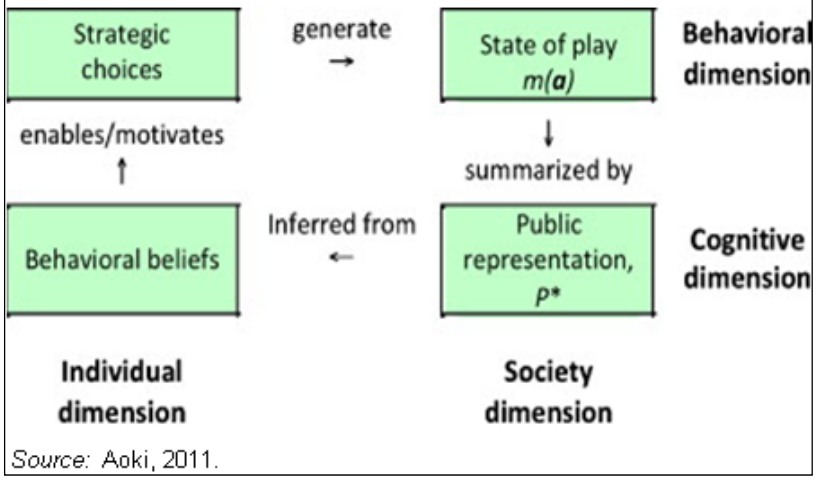
The farmer's effectiveness perception of these environmental schemes is a social constructed knowledge based on the social networks, in which the farmers are embedded, and on the practices that are shared in the networks (Murdoch, 1997, 1998 and 2001).

Starting from the Aoki's assumption (2011), our approach is based on the conceptualization of the relationships between beliefs and the predominant perspectives. The society level can be thought as a public representation from which individual decision-makers infer behavioural beliefs motivating their strategic choices. On the other hand, beliefs are the cognitive bases of the attitudes and the evaluative states that intervene between a class of stimuli (e.g. the sensorial characteristics of a products) and a class of evaluative responses (Petty *et al.*, 1997). According to Fazio (1986) and Ajzen and Fishbein (1980) attitudes and norms interact at the basis of the behaviour.

The last decades determined the emerging of detailed representation of the policy challenges in rural development and of the requirements related. European and national decision-makers, scientific communities and stakeholders elaborated a complex picture which substantiates the public representation from which individual beliefs about food safety are usually inferred. Aoki (2011) integrates this inferential process in a causal nexus series which identifies the individual beliefs as drivers of the strategic individual choices.

Substantially, the author affirm that a public proposition *P** mediating the stable physical states of play (strategic interactions) and individual beliefs in recursive ways may be referred to as a *substantive form of an institution* in the sense more specific and concrete than the societal rules as the deep structure of institutions. By so mediating, it supports the self-sustaining of societal rules as an institution in deep structure. It summarily represents the aspect of recursive states of play of the societal games as captured by *m(***a***)* and thereby induces the partial convergence of individual behavioral beliefs toward *m(***a***)*, which in turn reproduces the states of strategic play to fall in *m(***a***)* over time and so on. The recursive cycle is depicted in the Fig. 1.

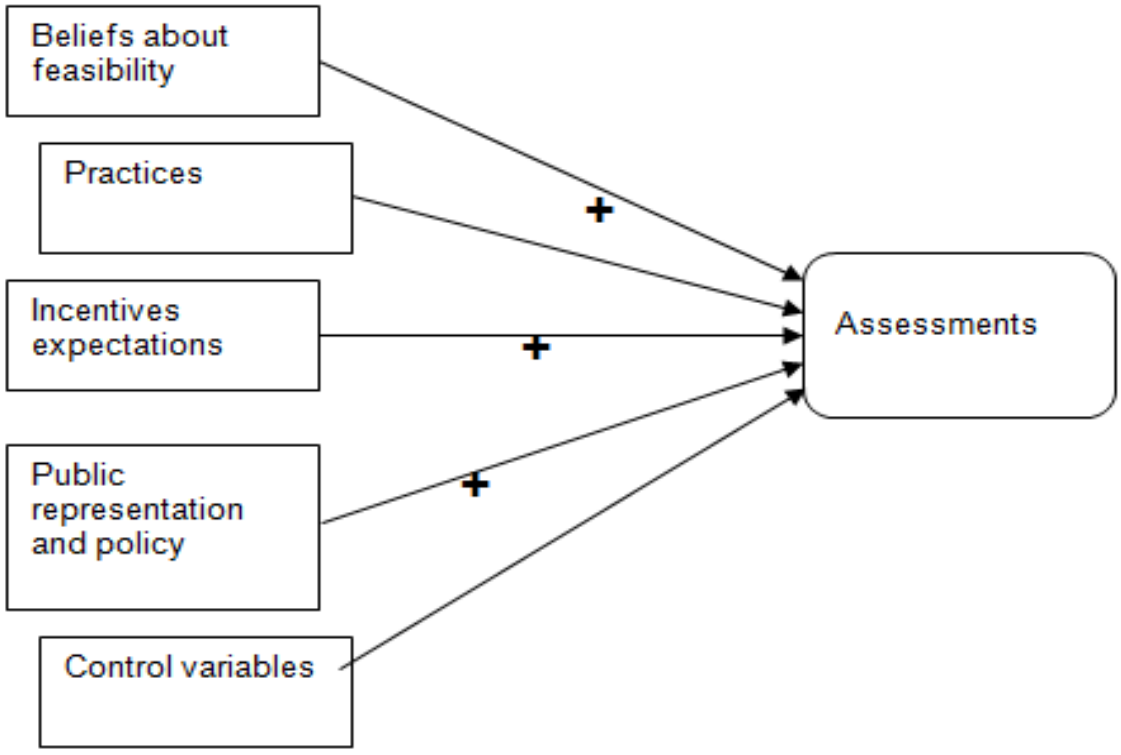
Fig. 1 The mediating role of institutions in substantive form



Source: Aoki, 2011.

From the Aoki theoretical framework we go on focusing our attention on the importance and the role that beliefs (in the sense of expectation) as regards other's actions and beliefs plays in social interactions. In this sense we try to summarize the main key factor that influence the beliefs and, consequently, the farmers behaviour (See Fig. 2).

Fig. 2 - The key factor affecting different behavioural beliefs



Source: author's processing, 2012.

Materials and Methods

The interviewed and validated sample consists of 1,007 interviewees, extrapolated according to a progressive stratification for class premium and region. The investigative questionnaire has been administered during the period June-July 2010. We used an ordered logit model to describe the relationship between beliefs and actions. We estimate an ordered logit models for each "challenge" (climate, energy, water etc). The variable *Control_cl* concerns with the answers given to the question D.2 Clima: *In our view, what is the contribution of farming activities to cope with the European policy challenge concerning the mitigation of the climate change?* The respondents chose among four degrees: *Very high, High, Low, Null*. In the following table we describe the variables (Tab. 2).

Tab. 2 - Significative Variables description

Variable	Symbol	Meaning
Beliefs Climate	BEL_FERT	Reduction of fertilizers
	BEL_ENER	Energy efficiency
	BEL_SOILM	Soil management practice
	BEL_REDUC	Reduction of crop intensity
	BEL_WOOD	Wood planting
	BEL_FIREP	Fire prevention
Beliefs Energy	BEI_BIOG	Biogas production
	BEL_CROPEN	Perennial energy crops
	BEL_BIOM	Energy production from agriculture and forestry biomass
	BEL_SUN	Energy production from sun
	PRACT_ENE	Energetic practices
	ASSE_2	Public intevention
Practices effectiveness	PRACT_CLIM	Mitigation of climate changes effects
	PRACT_ENE	Development of Renewable energies
Incentives expectation	CLIM_INC	Principal component
Public representation	REP_RES	Lack of research
	REP_FIN	Lack of financial resources
	REP_INF	Lack of information
	REP_TECH	Lack of technical assistance
	REP_OTHER	Other lack

Source: author's processing, 2012.

Results

From the evidences of questionnaire, the descriptive characteristics of the sample can be summarized in the following table (Tab. 3).

Climate

The beliefs considered in the model estimated relate to the evaluation of respondents about the contribution of the farming activities to cope with the EU policy challenges. In the following tables we show the results derived from the ordered logit model.

In the case of the policy objection of mitigating the climate change the coefficient of Bel_fert and Bel-soilm are statistically significant, but negative, This indicates that just these two beliefs have an explaining power with respect to the probability to contribute to the climate change challenges.

The variables specified to operationalize the concept of public representation (rep_res: lack of scientific research and rep_inf: lack of information) have both statistically significant coefficients, but with opposite signs. The incentives as evaluated by the respondents (agri-environment payments to reduce greenhouse gas emissions by agriculture, training to improve processes, Investments to reduce emissions, forestation) were summarized in a latent variable (Clim_inc) ob-

tained by a factor analysis of the original answers. The Cronbach's Alpha is 0.54 and the variance explained by the unique factor considered is the 36.85%. The structure of the factor indicates that "environmental payments", "Training/Information" Investments and Wood plantation are positively correlated to the latent variable. We interpret the variable Clim_inc as a variable positively correlated with the interest for incentives. The correspondent coefficient in the model is positive and statistically significant. Among the control variable only sett_5 has a positive and statistically significant coefficient.

In the present ordered logit models, the Average Marginal Effects (AMEs) provide a measure of the impact of a unit change in a variable on the probability of the rank (1, 2, 3 or 4) expressed by the respondents. Table 2 illustrates the AME for the four ranks. The Beliefs variables bel_fert and bel_soilm have statistically significant AMEs for all the four ranks. The increase of a unit (from 0 to 1) of the variable bel_fert cause the increase of the probability of the rank=1 by the 6.54%, while the increase determined by bel_soilm is 8.81%. The increase of the probability that a respondent would rank=2 the farmer contribution to the climate policy challenges are 5.1% and 4% respectively for the two variables. The picture changes in the case of the two remaining ranks. In both cases an increase of the two variables determine a decrease of the probability, The decrease, would be by 5.62% and -7.58% respectively where the results indicates that the two beliefs having a significant impact increase the probability of low rank contribution and decrease the probability of high rank contribution. Therefore, the respondents' believe that the contribution of the specific farming practices (reduction of fertilizers and change of soil management etc) have just a weakly impact on the policy challenges concerning climate change. To assess this evidence is necessary to consider how much the public representation is grounded on these practices. The impact of the public representation is captured by the variables rep-res and rep_inf. Also in these cases impacts of the variables vary with the ranks. The rep_res decreases by the 5.12% the probability that the rank is 1, while res_inf increases by 4.63%.The variable rep_res decrease the probability of rank=2 by -2.62% while rep_inf increase it by 2.37%. The impact of rep_res for the rank 3 and 4 – by 4.4% and 3.34% respectively – and negative for rep_inf (-3.98% and 3.02%). The variable clim_inc has a negative impact on the first rank (-4.52% -2.31%) and positive on the remaining two (3.38% and 2.95%). The impact of the variable asse_2 becomes larger as the rank pass from 1 to 4: it is negative and very small (-0.02%) for the rank 1 and becomes 3%, 5% and 3% in the remaining case.

Tab. 3 - Descriptive characteristics of the sample's firms	
Region	**%**
North	41,7
Centre	16,5
South	41,8
age	**%**
< = 40	12,1
>40 e <= 60	35,7
>60	30,1
Don't answer	22,0
Sector	**%**
Cereals	31,3
Horticulture	1,2
Arable	11,0
Wine	2,7
olive	8,3
Fruit	3,2
Wood	0,8
Bovine breeding	19,3
Pork breeding	1,4
Sheep and goat breeding	4,2
Chicken breeding	0,4
mixed breeding	4,4
Other	11,9
Main activity	**%**
Agriculture	79,6
Not agriculture	5,9
Don't answer	14,5
Education	**%**
Primary school	23,2
High school	22,3
University	8,7
Don't answer	45,7
Firm typology	**%**
Capitals society	1,0
Society of persons	24,3
Simple society	38,0
Cooperative	0,8
Other	2,3
Don't answer	33,6
Revenue	**%**
x < = 10 K€	13,1
10 < x <= 50 K€	15,7
50 < x < = 150 K€	8,6
150 < x < = K€	2,3
x > 300 K€	3,1
Don't answer	57,2
Source: author's processing from questionnaires, 2013.	

Tab. 4 - CLIMATE, Coefficients estimates				
Climate	**Coef.**	**Std. Err.**	**z**	**P>z**
bel_fert	-0,661	0,335	-1,97	0,05
bel_ene	-0,282	0,442	-0,64	0,52
bel_soil	-0,891	0,413	-2,16	0,03
bel_reduc	-0,262	0,438	-0,60	0,55
bel_wood	-0,662	0,456	-1,45	0,15
bel_firep	-0,616	0,491	-1,26	0,21
rep_res	0,518	0,198	2,62	0,01
rep_fin	0,191	0,183	1,04	0,30
rep_inof	-0,468	0,208	-2,24	0,03
rep_tech	-0,265	0,238	-1,12	0,27
clim_inc	0,456	0,150	3,05	0,00
pract_clim	0,444	0,481	0,92	0,36
asse_2	0,002	0,001	2,19	0,03
sett_1	0,192	0,371	0,52	0,61
attagr	0,339	0,474	0,72	0,47
sett_2	1.127	1.017	1,11	0,27
sett_3	0,729	0,465	1,57	0,12
sett_4	0,833	0,703	1,19	0,24
sett_5	1.369	0,758	1,81	0,07
sett_6	1.013	0,695	1,46	0,15
sett_7	0,557	1.610.297	0,35	0,73
sett_8	0,411	0,419	0,98	0,33
sett_9	-0,044	0,891	-0,05	0,96
sett_10	1.186	0,785	1,51	0,13
sett_11	0,648	2.181.382	0,30	0,77
sett_12	0,281	0,690	0,41	0,68
eta_1	-0,468	0,354	-1,32	0,19
eta_2	-0,349	0,288	-1,21	0,23
/cut1	-2.104.454	1.112.267		
/cut2	0,022	1.114.593		
/cut3	3.843.609	1.125.279		

Source: author's processing from STATA, 2013.

Tab. 5 - CLIMATE, Average Marginal Effects (Delta-method)

	Prob(CLIMATE=1)				Prob(CLIMATE=2)				Prob(CLIMATE=3)				Prob(CLIMATE=4)			
	dy/dx	*Std. Err.*	*z*	*P>z*	*dy/dx*	*Std. Err.*	*z*	*P>z*	*dy/dx*	*Std. Err.*	*z*	*P>z*	*dy/dx*	*Std. Err.*	*z*	*P>z*
bel_fert	0,065	0,033	1,96	0,05	0,033	0,017	1,92	0,06	-0,056	0,029	-1,95	0,05	-0,043	0,022	-1,90	0,06
bel_ene	0,028	0,044	0,64	0,52	0,014	0,022	0,64	0,52	-0,024	0,038	-0,64	0,52	-0,018	0,029	-0,64	0,52
bel_soil	0,088	0,042	2,10	0,04	0,045	0,020	2,27	0,02	-0,076	0,035	-2,19	0,03	-0,057	0,028	-2,05	0,04
bel_reduc	0,026	0,043	0,60	0,55	0,013	0,022	0,59	0,55	-0,022	0,037	-0,60	0,55	-0,017	0,028	-0,59	0,55
bel_wood	0,066	0,045	1,46	0,15	0,034	0,024	1,42	0,16	-0,056	0,039	-1,44	0,15	-0,043	0,030	-1,42	0,16
bel_firep	0,061	0,048	1,27	0,21	0,031	0,026	1,21	0,23	-0,052	0,042	-1,24	0,21	-0,040	0,032	-1,24	0,22
rep_res	-0,051	0,019	-2,65	0,01	-0,026	0,011	-2,34	0,02	0,044	0,018	2,50	0,01	0,033	0,014	2,47	0,01
rep_fin	-0,019	0,018	-1,05	0,30	-0,010	0,009	-1,03	0,31	0,016	0,016	1,03	0,30	0,012	0,012	1,04	0,30
rep_inof	0,046	0,020	2,26	0,02	0,024	0,011	2,09	0,04	-0,040	0,018	-2,19	0,03	-0,030	0,014	-2,15	0,03
rep_tech	0,026	0,024	1,12	0,27	0,013	0,012	1,09	0,28	-0,023	0,020	-1,10	0,27	-0,017	0,016	-1,10	0,27
clim_inc	-0,045	0,015	-3,01	0,00	-0,023	0,008	-2,76	0,01	0,039	0,014	2,85	0,00	0,029	0,010	2,87	0,00
pract_clim	-0,044	0,047	-0,93	0,35	-0,022	0,025	-0,91	0,37	0,038	0,041	0,92	0,36	0,029	0,031	0,91	0,36
asse_2	0,000	0,000	-2,22	0,03	0,000	0,000	-2,00	0,05	0,000	0,000	2,13	0,03	0,000	0,000	2,09	0,04
sett_1	-0,019	0,037	-0,52	0,60	-0,010	0,019	-0,51	0,61	0,016	0,032	0,52	0,61	0,012	0,024	0,52	0,61
attagr	-0,034	0,047	-0,72	0,47	-0,017	0,024	-0,71	0,48	0,029	0,040	0,71	0,48	0,022	0,031	0,71	0,48
sett_2	-0,112	0,100	-1,11	0,27	-0,057	0,053	-1,08	0,28	0,096	0,088	1,09	0,27	0,073	0,066	1,10	0,27
sett_3	-0,072	0,046	-1,57	0,12	-0,037	0,024	-1,51	0,13	0,062	0,040	1,54	0,12	0,047	0,031	1,54	0,12
sett_4	-0,082	0,069	-1,19	0,23	-0,042	0,036	-1,16	0,25	0,071	0,060	1,18	0,24	0,054	0,046	1,17	0,24
sett_5	-0,135	0,075	-1,81	0,07	-0,069	0,041	-1,71	0,09	0,116	0,067	1,75	0,08	0,088	0,050	1,78	0,08
sett_6	-0,100	0,068	-1,46	0,14	-0,051	0,037	-1,40	0,16	0,086	0,060	1,44	0,15	0,065	0,046	1,43	0,15
sett_7	-0,055	0,159	-0,35	0,73	-0,028	0,082	-0,34	0,73	0,047	0,137	0,34	0,73	0,036	0,104	0,35	0,73
sett_8	-0,041	0,041	-0,99	0,32	-0,021	0,022	-0,95	0,34	0,035	0,036	0,97	0,33	0,027	0,027	0,97	0,33
sett_9	0,004	0,088	0,05	0,96	0,002	0,045	0,05	0,96	-0,004	0,076	-0,05	0,96	-0,003	0,057	-0,05	0,96
sett_10	-0,117	0,078	-1,51	0,13	-0,060	0,040	-1,50	0,13	0,101	0,066	1,52	0,13	0,077	0,052	1,47	0,14
sett_11	-0,064	0,216	-0,30	0,77	-0,033	0,111	-0,30	0,77	0,055	0,186	0,30	0,77	0,042	0,141	0,30	0,77
sett_12	-0,028	0,068	-0,41	0,68	-0,014	0,035	-0,40	0,69	0,024	0,059	0,41	0,68	0,018	0,045	0,41	0,69
eta_1	0,046	0,035	1,33	0,19	0,024	0,019	1,27	0,21	-0,040	0,031	-1,30	0,19	-0,030	0,023	-1,30	0,19
eta_2	0,035	0,028	1,22	0,22	0,018	0,015	1,16	0,25	-0,030	0,025	-1,19	0,24	-0,023	0,019	-1,20	0,23

Source: author's processing from STATA, 2013.

Tab. 6 - ENERGY, Coefficients estimates

Energy	Coef.	Std. Err.	z	P>z
bel_biog	-0,851	0,309	-2,75	0,01
bel_cropen	-0,695	0,377	-1,84	0,07
bel_biom	-0,855	0,389	-2,2	0,03
bel_sun	-0,827	0,383	-2,16	0,03
rep_res	-0,122	0,175	-0,7	0,49
rep_fin	-0,117	0,156	-0,75	0,46
rep_inof	-0,007	0,198	-0,03	0,97
rep_tech	-0,083	0,209	-0,4	0,69
pract_ene	0,662	0,249	2,66	0,01
ene_inc	0,551	0,163	3,38	0,00
asse_2	0,002	0,001	2,32	0,02
sett_1	0,565	0,356	1,59	0,11
sett_2	0,600	0,982	0,61	0,54
sett_3	1.315.481	0,441	2,98	0,00
sett_4	135.047	0,754	1,79	0,07
sett_5	0,880	0,541	1,63	0,10
sett_6	11569	0,620	1,87	0,06
sett_7	-1.834.914	1.766.178	-1,04	0,30
sett_8	0,860	0,372	2,31	0,02
sett_9	0,992	0,728	1,36	0,17
sett_10	0,421	0,699	0,6	0,55
sett_11	-0,040	1.859.218	-0,02	0,98
sett_12	0,164	0,695	0,24	0,81
eta_1	0,087	0,315	0,28	0,78
eta_2	0,043	0,256	0,17	0,87
/cut1	-2.140.019	0,687		
/cut2	0,649	0,688		
/cut3	3.350.342	0,698		

Source: author's processing from STATA, 2013

Tab. 7 - ENERGY, Average Marginal Effects (Delta-method)

	Prob(ENERGY=1)				Prob(ENERGY=2)				Prob(ENERGY=3)				Prob(ENERGY=4)			
	dy/dx	Std. Err.	z	P>z	dy/dx	Std. Err.	z	P>z	dy/dx	Std. Err.	z	P>z	dy/dx	Std. Err.	z	P>z
bel_biog	0,124	0,043	2,88	0,00	-0,004	0,009	-0,48	0,63	-0,076	0,027	-2,82	0,01	-0,043	0,016	-2,74	0,01
bel_cropen	0,101	0,052	1,94	0,05	-0,004	0,007	-0,50	0,62	-0,062	0,033	-1,86	0,06	-0,035	0,019	-1,86	0,06
bel_biom	0,114	0,055	2,06	0,04	-0,004	0,009	-0,46	0,65	-0,070	0,033	-2,14	0,03	-0,040	0,020	-2,00	0,05
bel_sun	0,092	0,054	1,69	0,09	-0,003	0,007	-0,44	0,66	-0,057	0,032	-1,75	0,08	-0,032	0,019	-1,69	0,09
rep_res	0,006	0,025	0,25	0,81	0,000	0,001	-0,23	0,82	-0,004	0,015	-0,24	0,81	-0,002	0,009	-0,25	0,81
rep_fin	0,015	0,022	0,70	0,49	-0,001	0,001	-0,42	0,67	-0,009	0,014	-0,69	0,49	-0,005	0,008	-0,69	0,49
rep_inof	0,003	0,028	0,12	0,91	0,000	0,001	-0,12	0,91	-0,002	0,017	-0,12	0,90	-0,001	0,010	-0,12	0,90
rep_tech	0,004	0,030	0,13	0,90	0,000	0,001	-0,12	0,90	-0,002	0,018	-0,13	0,90	-0,001	0,010	-0,13	0,90
pract_ene	-0,105	0,035	-3,04	0,00	0,004	0,008	0,49	0,62	0,065	0,022	2,97	0,00	0,037	0,013	2,75	0,01
ene_inc	-0,082	0,023	-3,63	0,00	0,003	0,006	0,49	0,62	0,050	0,015	3,41	0,00	0,029	0,008	3,38	0,00
asse_2	0,000	0,000	-3,15	0,00	0,000	0,000	0,49	0,62	0,000	0,000	3,08	0,00	0,000	0,000	2,85	0,00
asse_	0,941	0,312	3,02	0,00	-0,034	0,070	-0,48	0,63	-0,578	0,194	-2,98	0,00	-0,329	0,117	-2,82	0,01
sett_1	-0,074	0,050	-1,49	0,14	0,003	0,006	0,47	0,64	0,046	0,031	1,47	0,14	0,026	0,018	1,46	0,15
sett_2	-0,019	0,141	-0,13	0,89	0,001	0,005	0,13	0,90	0,012	0,087	0,13	0,89	0,007	0,049	0,13	0,89
sett_3	-0,165	0,061	-2,68	0,01	0,006	0,012	0,49	0,62	0,101	0,039	2,58	0,01	0,057	0,023	2,54	0,01
sett_4	-0,174	0,106	-1,64	0,10	0,006	0,013	0,48	0,63	0,107	0,066	1,62	0,11	0,061	0,038	1,59	0,11
sett_5	-0,094	0,076	-1,23	0,22	0,003	0,007	0,47	0,64	0,058	0,047	1,22	0,22	0,033	0,027	1,22	0,22
sett_6	-0,140	0,087	-1,61	y	0,005	0,011	0,47	0,64	0,086	0,054	1,60	0,11	0,049	0,031	1,57	0,12
sett_7	0,232	0,251	0,92	0,36	-0,008	0,020	-0,42	0,67	-0,142	0,153	-0,93	0,35	-0,081	0,088	-0,92	0,36
sett_8	-0,111	0,052	-2,16	0,03	0,004	0,008	0,49	0,62	0,068	0,033	2,08	0,04	0,039	0,019	2,09	0,04
sett_9	-0,156	0,102	-1,54	0,12	0,006	0,012	0,47	0,64	0,096	0,063	1,53	0,13	0,055	0,036	1,51	0,13
sett_10	-0,118	0,100	-1,18	0,24	0,004	0,009	0,46	0,65	0,073	0,062	1,17	0,24	0,041	0,035	1,17	0,24
sett_11	0,083	0,264	0,31	0,75	-0,003	0,012	-0,25	0,80	-0,051	0,162	-0,31	0,75	-0,029	0,092	-0,31	0,75
sett_12	-0,058	0,097	-0,60	0,55	0,002	0,006	0,38	0,70	0,036	0,060	0,60	0,55	0,020	0,034	0,60	0,55
eta_1	-0,008	0,044	-0,17	0,86	0,000	0,002	0,16	0,87	0,005	0,027	0,17	0,86	0,003	0,016	0,17	0,86
eta_2	-0,009	0,036	-0,25	0,80	0,000	0,001	0,22	0,82	0,006	0,022	0,25	0,80	0,003	0,013	0,25	0,80

Source: author's processing from STATA, 2013.

Energy
The variables bel_biog, bel_cropen, bel_biom, bel_sun have statistically negative and significant coefficient and explain the ranking of the farming activities contributions to the energy challenges. The variables pract_ene and asse_2 have positive and statistically significant coefficients indicating that the practices already carried out and the public intervention explain the evaluation of the respondents. The variable ene_inc (structured in the following elements: the substitution of fossil energy at farm level, training/Information, diversification incentives for cooperation for new product and technologies, new product/technologies) has also positive and statistical significant coefficient, indicating the explanatory capacity of the incentives expectations. In this case the Cronbach's Alpha is 0.442.
Therefore all the types of incentives seems to have a positive relation with the ranking made by the respondents. Furthermore, many sector variables contribute to explaining the dependent variable.

The AMEs of the variables bel_biog, bel_cropen, bel_biom, bel_sun have a similar pattern of impact on the probability of the respondent ranking. The impact is positive in the case of rank=1; in the case of rank=2 the coefficient are not statistically significant and in the two remaining levels the impact is negative. This indicates that the respondents are not so much confident that the practices evaluated could be effective in facing the energy challenges. The impacts of Bel_biog and Bel_biom in the first level are the largest (respectively, 12.44% and 11.35) and also their negative impact are the largest in the case of rank=3 and rank=4. Notably, the respondents who are already engaged in carrying out practices concerned with energy sources management (pract_ene) hold the practices illustrates in questionnaire could contribute to cope with energy challenges (the AME is negative for the first rank, but for rank=3 the probability to contribute increases by 6.46% and by 3.47% for rank=4 when practice_ene=1. The impact of asse_2 is small, negative in the first rank and then positive. The variables relative to the sectors have similar pattern of impact.

Discussion and final remarks

The choices of the regions, both in terms of resource allocation and of actions "menu", certainly, have a positive impact on the farmers' views and their decisions with respect to the accession of agri-environmental measures.

The regions that have allocated more resources to the Axis II, and in particular to the agri-environmental measures, are also those where there is more research and testing activity and where the environmental patterns were the result of an adaptive process to the specific local conditions.

The presence of leading farmers that have positively experimented with these practices had a strong influence on the beliefs of other farmers. It is a well-known process in agriculture that emulation is a way to introduce new practices, techniques and technologies.

We want emphasize the most interesting result of this research: the farmers that experienced positively the implementation of the environmental schemes, both in terms of economic and environmental sustainability and effectiveness, are those who also believe appropriate the premium levels and methods of incentives. In other words, the positive result strengthens the confidence in both practice and in policy making.

This seems to lead to a real cultural change of the farmer linked to the results and not only to the incentives. Incentives are important as an entry and approach tool for the Agri-Environment Scheme but their importance decreases with the progressive and permanent shift to more sustainable practices giving expected results.

The new CAP is aimed to support and speed the transition of European Agricultural towards a more sustainable model. From an environmental perspective this has to be translated in the transformation of the actually sustained virtuous practices from voluntary and innovative to conventional ones. A process that need a new consciousness and culture of farmers and society with respect to the production of environmental public goods by the agricultural sector. A process departing from an increased and broader farmers implementation of CAP agri-environmental measures for which it is possible to identify a number of recommendations:

1. A greater interest and a more constant attention from the political and institutional actors towards the environmental issue, which manifests itself through investments in different integrated actions as the identification of existing sustainable practices introduced by farmers and the validation of their impact on the expected local/social goals; the improvement of scientific knowledge joined with the development of technical and locally specific indicators.
2. The re-introduction of specific measures to test and demonstration of successful activities and more sustainable practices in farm that are considered leaders within the social networks in which both, farmers and stakeholders and environmental movements operate.
3. The dissemination of information through the most effective and most closely farmers related tools.
4. The identification and dissemination of best practice that consider not only the environmental effects but also those related to the economic sustainability of practices and the profitability of the enterprise;
5. The introduction and spread of collective management systems for evaluating the effectiveness of the schemes and the positive results obtained with the application of the measures.

Many of these activities are possible through the new regulation of rural development support. It includes the activation of operating groups for the validation and dissemination of innovations in techniques and practices that ensure a greater sustainability, and offers, both, the realization of pilot projects and the collective management of environmental measures.

It should, however, encourage a synergic management between environmental measures and new possible activities, considering the construction of incentives and of the measures as an "on-going process" with direct involvement of farmers, in particular those who have already experimented innovative environmental friendly practices and constructed positive pinions and attitudes on the effectiveness and the potential of policy measures to sustain the innovation.

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