Paper prepared for the 126th EAAE Seminar

New challenges for EU agricultural sector and rural areas.

Which role for public policy?

Capri (Italy), June 27-29, 2012

The adoption of agricultural extension policies in the Italian farms

De Rosa M.[1], Bartoli L. [1] and Chiappini S.[1]

1 University of Cassino/Department of Economics and Law, Cassino, Italy

mderosa@eco.unicas.it

The adoption of agricultural extension policies in the Italian farms

De Rosa M. , Bartoli L. and Chiappini S.

Abstract

Policy for agricultural extension services (AES) has been revitalized during the last phases of rural development policies (2007/2013), to empower human capital in agriculture. A wider package of measures aiming at improving the supply of extension at farm level is foreseen and financial resources have been allocated in all Italian regions, to strengthen the measures. The paper aims at testing whether such a high proportion of funding match high levels of utilization of services on behalf of the farms. By assimilating farmers to consumers of AES, the analysis proposes a classification of the farms on the basis of their propensity to consume services.

Keywords: Agricultural extension services, farm development.

JEL classification: Q16, Q18.

1. INTRODUCTION

The progressive transition towards the paradigm of multifunctional agriculture has redefined farms' boundaries and has accorded to them new opportunities of development. Strategies of product differentiation, through qualification and valorisation of specialties, diversification of farm activities represent important trajectories along which address agriculture in the new rural paradigm (OECD, 2006). In this context, the role of agricultural extension services has been deeply reviewed to fulfil farmers' new needs. As a consequence, policy for agricultural extension services (AES) has been revitalized during the last phases of rural development planning, to empower human capital in agriculture. Nonetheless, "good intention clash with hard realities" (Anderson, Feder, 2004): the aim of our paper is the analysis of the farms' capability to exploit AES as tool to stimulate farm change.

2. THEORETICAL BACKGROUND

An important change in analytical perspective of AES has characterized latest years: previous AES methods had major drawback in lacking of a system perspective (Asopa, Beye, 1997). More recent approaches have overcome this deficiency by introducing new methods, based on Agricultural Knowledge and Information System (AKIS): *AKIS is the set of agricultural institutions, organizations, persons and their linkages and interactions, engaged in the generation, transformation, transmission, storage, retrieval, regulation, consolidation, dissemination, diffusion and utilization of knowledge and information, with the purpose of working synergically to support opinion formation, decision making, problem solving and/or*

innovation in a given sector, branch, discipline or other domain' (Roling, 1989: 1-2). A more complete definition includes the idea of rural development as framework to implementing AKIS model: therefore, *an AKIS/RD is the entire complex of agencies and institutions that provide rural people with the knowledge and information necessary for promoting innovation in their diversified livelihoods. It can be considered equivalent to an "enhanced AKIS" in that it incorporates both agricultural and nonagricultural knowledge and information services* (Rivera *et al*., 2005).

As a consequence of the overcoming of modernization paradigm and the affirmation of multifunctional role of agriculture, in recent years the policy of agricultural extension services have been reviewed to come off with a more complex scenario which characterizes agricultural sector (Esposti, 2012). In this context, pluralistic models of AES governance prevail, where public, private and Ngo actors play a relevant role (Umali and Schwartz, 1994). New sets of opportunities for stimulating farms' boundary shift (Banks, Long, van der Ploeg, 2002) are predicted in the policy agenda; accordingly, AES are asked to support the evolution of the agricultural sector. The possibility to accomplish transition towards new rural paradigm involves, on the one hand, the redefinition of institutional assets governing the supply of services. On the other one, it implies crossing from linear models of transfer, which belong to "best practices" perspectives, to "best fit" approaches, able to delineate "a menu of options that can be combined in different ways" (Birner *et al*., 2006): contextual factors have to be considered, to organize and structure an adequate AES. To this end regional rural development policy have revitalized the role of extension in fostering rural development. A wide package of measures aiming at improving supply of extension at farm level is foreseen, the most important being[1]:

- Measure 111: Vocational training and information actions
- Measure 114: Use of advisory services
- Measure 115: Setting up of management, relief and advisory services.

These measures concern activities aiming at improving farmers' training and promoting an upgrading in farmer's economical and technical knowledge (measure 111). To fulfil this objective, farmers are supported in using advisory services, above all in the field of good agricultural practices and compulsory management criteria (measure 114); finally, measure 115 supports farm management, above all to encourage young farmers' and women's access in agricultural sector.

Financial resources have been allocated in all Italian regions, to strengthen the measures and stimulate farms. Nonetheless, not always to higher levels of investments in extension services correspond adequate levels of demand, due to a set of causes that should be deepened. In this context, a good demand of research concerns the capability of AES to satisfy the main trajectories of recent agricultural and rural systems. If we consider Renting and Wiskerke's

1. This paper analyses only services of education and extension; therefore it excludes measures concerning research activity.

(2010) distinction between agroindustrial and territorial integrated paradigm[2], a relevant question arises: are agricultural services coherent with both paradigms? Are they offering an adequate system of supply which satisfies potential demand on behalf of the farms? From this standpoint, some shortages in literature emerge: the majorities of studies on the subject have pointed out the relevance of supply-side topics: less attention has been devoted to demand-side ties, even if recent attempts have been realized in specific regions or on specific themes[3]. These analyses are important in emphasizing key-topics in performing the access of AES, as underlined by Lamine *et al*. (2010) in their study of path-dependency through socio-historical approaches, and by Charatsary *et al*. (2010), who assimilate farmers to consumers of agricultural services and emphasize the costs of this activity in terms of spending time and money. In the following, we will try to provide an exhaustive analysis of farmers' behaviour with respect to AES in Italy. According to Charatsary *et al*. (2010), farmers are considered as consumers of services and classified on the basis of a set of characteristics. In this framework, the necessary attention has to be dedicated to the analysis of what impede a full "consumption" of agricultural extension services. Hence, the research inquires following aspects which integrate the classification of farms on the basis of consumption of services: the socioeconomic characteristics of farms getting access to AES; the description of learning gaps, that is a set of motivations which interfere in learning process; the degree of farms' satisfaction towards extension services. Therefore, in the following paragraphs, after a brief methodological note (par.3) we will continue by testing the rate of regional expenditure on AES in Italy, to highlight the main regions which have been investing on agricultural services (par.4). Hereafter, we will concentrate on the analysis of the access to agricultural services on behalf of a sample of farms (par.5). The analysis will provide for further possible final insights on this complex theme of research (6), before providing some brief concluding remarks (7).

3. MATERIALS AND METHODS

Two methodological steps have been necessary, to fulfil our aims: the first concerns the classification of the Italian regions on the basis of their propensity to fund measures 111, 114, 115: to test regional propensity towards AES, a specialization index has been calculated, to effectively evaluate the importance of the intervention. To estimate the relevance of the regional expenditure, we have calculated a specialization index as follows:

$$SPIaes_{ij} = (x_{ij}:\Sigma_i x_{ij}) / (\Sigma_j x_{ij}:\Sigma_i \Sigma_j x_{ij})$$

Where:

i represents the Italian regions

j indicates type of measure

x is the amount of expenditure in each measure j on behalf of each region i

2. See Renting and Wiskerke (2010) for a precise description of the two paradigms.

3. An interesting analysis, done on aggregate levels, focuses on role of services in fostering farm innovation (Ascione, Cristiano, Tarangioli, 2011).

A specialization is obtained in the case of value higher than 1. The index is calculated for each measure; the sum of every index (for each measure) contributes to the final score.

Second methodological step concerns the demand analysis of AES on behalf of a sample of Italian farms, localized within the regions with highest levels of expenditure. The sample comes from the database of the Italian Institute of Statistics, which is extracted through a stratified sample with proportional allocation (Cochran, 1977); a questionnaire was proposed to the sample, administered through telephone surveys, the questionnaire is structured around following key aspects: a) use of AES (information, training, advisory); b) source of services (public, private, Ngo[4]); c) frequency of contacts; d) farmers' satisfaction; e) introduction of change in farm's activity. Other information collected concern socioeconomic and demographic characteristics of sampled farms, territorial localization (region and type of rural areas, along the four rural zones predicted in the national strategic plan), kind of production. The data collected was processed through a multivariate analysis (multiple correspondence and cluster), which has brought out homogeneous groups of farms on the basis of their propensity to adopt AES. Two objectives characterise this part of the analysis: the first is to study the demand for AES and, more precisely:

- understanding the incidence of farms having access to AES, by splitting the three key types of services: information, training, knowledge. In this context, we have investigated, on the one side, the source of service (public, private, Ngo) which, according to Rivera et Alex (2004), plays a relevant role in performing supply of extension and, on the other side, the intensity of access, under the hypothesis that relational aspects and duration of contact represent important factors in facilitating access to AES (Labarthe, 2005);
- analysing customer (farm) satisfaction about AES and possible reasons for not consuming them;

The second aim is to link the access to AES to the introduction of farm change: a set of questions concerning modification in farm activity has been predicted, in order to test connection among use of AES and introduction of modification in farm activity.

A multivariate analysis has been conducted, through multiple correspondence and cluster analysis; as a consequence, homogeneous groups of farms on the basis of use of AES has been deduced. To complete our survey, we have deepened two important aspects: first, the reasons for not consuming AES, second the degree of farmers' satisfaction towards AES. As a consequence, a set of coherent questions were posed to farmers to investigate the two themes.

The selected active variables are listed below, in table 1:

Tab.1 – Active variables

Variables	**Categories of variables**
X1 Professional farmer	2
X2 Self-consumption production	2

4. Not governmental organizations.

X3 Awareness about the existence of AES	3
X4 Change and innovation introduced in farming	2
X5 Source of information (magazine)	8
X6 Source of information (internet)	8
X7 Source of information (fairies)	8
X8 Source of information (other)	7
X9 Source of training (courses)	8
X10 Source of training (conferences and seminars)	8
X11 Source of training (farmers field school)	8
X12 Source of advice (farm visits)	8
X13 Source of counter advice	8
X14 Source of phone advice	8
X15 Use of information (magazine)	6
X16 Use of information (internet)	8
X17 Use of information (fairies)	8
X18 Use of information (other)	7
X19 Use of training (courses)	8
X20 Use of training (conferences and seminars)	8
X21 Use of training (farmers field school)	8
X22 Use of advice (farm visits)	8
X23 Use of counter advice	8
X24 Use of phone advice	8
X25 What types of AES are used?	8
X26 Number of contacts/month (magazines)	4
X27 Number of contacts/month (internet)	4
X28 Number of contacts/month (fairies)	4
X29 Number of contacts/month (other)	4
X30 Number of contacts/month (training courses)	4
X31 Number of contacts/month (conferences and seminars)	4
X32 Number of contacts/month (farmers field school)	4
X33 Number of contacts/month (farm visits)	4
X34 Number of contacts/month (counter)	4
X35 Number of contacts/month (phone)	4
X36 Combination services used/introduction of farm changes	4
X37 Introduction of farm changes	7
X38 Customer satisfaction (information)	5
X39 Customer satisfaction (training)	5
X40 Customer satisfaction (technical assistance)	5
X41 Duration (years) of services used (information)	4
X42 Duration (years) of services used (training)	4
X43 Duration (years) of services used (technical assistance)	4
X44 Services not available but potentially useful	9
X45 Willingness to pay for services	3
X46 Public funding received	3

Illustrative variables aiming at obtaining information about farm's socioeconomic characteristics investigate three groups of variables, listed in table 2.

Tab.2 – Illustrative variables

Farm structure[5]	
• *Not-competitive farms*	• Farms with reduced equipment; • Self-consumption farms, with low market orientation
Farms with precarious competitiveness (or with aided competitiveness)	• Diversified farms, farms with low input agriculture and high positive externalities • Necessity to get a public support to reach economic equilibrium
Competitive farms	• Full-time, industrialized farms, high equipment of factors, • Farms with intensive agriculture • Market oriented production
Demographic factors	
Average age of the family members involved in agricultural activity	• Average age < 40 • 40 < Average age < 60 • Average age > 60
Intergenerational transmission	Presence of successor in farm activity
Territorial localization	
(four areas predicted by the national strategic plans)	• Urban poles • Areas with intensive agriculture • Rural intermediate areas • Rural marginal areas

4. RESULTS

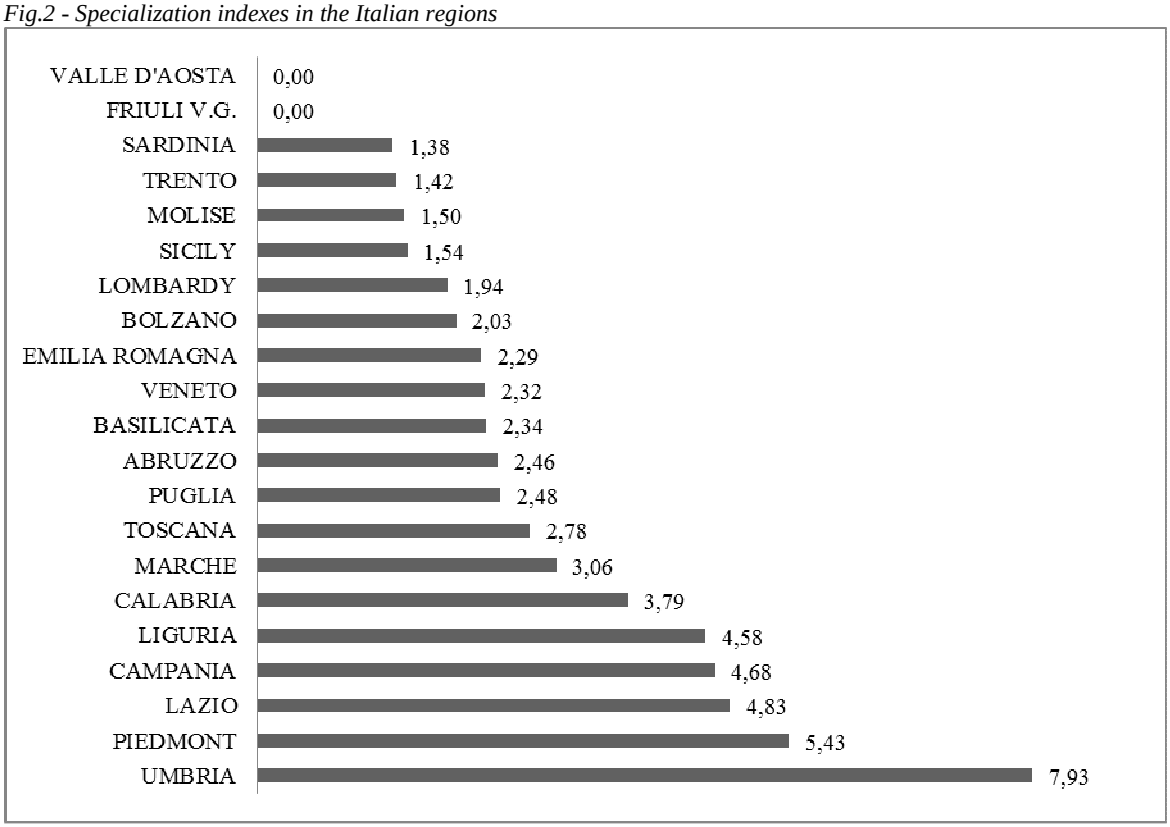
4.1 The selection of regions

The specialization index permits to highlight the most important regions in terms of investments on extension. Figure 1 clearly illustrates the graded list of the regions classified on the basis of specialization in the regional expenditure to support AES.

The first four region are localized in almost all geographical districts of Italy: Umbria (central-eastern), Piedmont (north-western), Lazio (central-western) and Campania (south) are the most relevant regions: therefore, they were chosen for the successive analysis of demand for AES on behalf of farms. However, in order to fill a geographical gap and, hence, to consider all districts, a north-eastern region has been added, Veneto, with the highest level of index in the area.

5. See Sabbatini (2008) for a detailed description of the types of farms.

Fig.2 - Specialization indexes in the Italian regions



Source: own calculations

4.2 Demand analysis of AES

Demand analysis was conducted through multivariate tools of investigation, more specifically multiple correspondence and cluster analysis: the first one has identified four main explicative factor, on the basis of which the following cluster analysis has been carried out, to obtain homogeneous groups of farms.

Multiple correspondence analysis

Multiple correspondence analysis gave back 4 clearly identifiable factors, which explain 21,67% of the total variance (table 3).

Tab. 3 – Extracted factors

factors	*Variance %*	*cum. %*
1	9,16	9,16
2	5,60	14,76
3	3,50	18,26
4	3,40	21,67

Source: own calculations

I factor could be defined as *degree of use of AES*: it compares farms using services and farms not using them. Table 4 evidences main active variables influencing the factor. On the

negative side farms with full access to services (training, information and advisory) are found. They are competitive farms localized prevailingly in Veneto (North-eastern Italy).

Tab.4 – Active variables influencing I factor

Variables	**Categories of variables**	**Values-Test**
x36	Use of services + change	-34,63
x25	Information+training+extension	-34,51
x22	Yes	-34,12
x19	Yes	-33,97
x37	Yes	-31,38
…		
central zone		
…		
x36	No services, no change	31,10
x39	Na (no answer)	31,31
x33	No contact	31,38
x41	Na	31,61
x37	No change	31,65
x30	No contact	31,80
x42	Na	31,96
x43	Na	32,13
x12	Na	32,63
x40	Na	33,02
x9	Na	33,28
x25	No service	33,29
x38	Na	33,47

The used services are most of all offered by non-public sources (Ngo+private) and farmers express good judgements about them. The role of AES is relevant in fostering the introduction of innovation. On the positive side, we find farms with no access to AES; they are localized in southern Italy and are mostly not competitive farms, with no type of contact neither with information nor training nor extension. It is not surprising that these farms did not introduce any change in their activity.

II factor describes *awareness about A*ES and compares farms with different degrees of consciousness (table 5): as a matter of fact, on the one side, there are farms with a good awareness about AES, even though they do not apply them. Instead, farms which are unaware of AES characterise the other side.

Tab.5 – Active variables influencing II factor

Variables	**Categories of variables**	**Values-Test**
x3	Yes	-35,49
x45	No	-14,24
…		
central zone		

…		
x45	Na	30,21
x46	Na	30,97
x3	Do not know	39,52
x24	Na	40,86
x18	Na	41,12
x20	Na	41,20
x15	Na	41,30
x22	Na	41,30
x16	Na	41,42
x17	Na	41,42
x17	Na	41,42

III factor could be defined as *reasons not to use AES*. The factor explains two main causes for not using AES: the first one is a negative perception and a sense of AES's inadequateness to the real need of farming. Other possible reason are linked either to the low diffusion of AES on the territory or to informational asymmetries. Northern regions are mainly interested in this type of motivation.

On the other side, refusing these services is due to the indifference towards the real utility of AES and to a sort of farmers' self-reliance. Here, southern regions are prevailingly represented.

Tab.6 – Active variables influencing III factor

Variables	**Categories of variables**	**Values-Test**
x19	not adequate or not able personnel	-22,17
x21	not adequate or not able personnel	-21,97
x7	not adequate or not able personnel	-20,61
x18	not adequate or not able personnel	-20,39
…		
central zone		
…		
x23	not interested or self-reliant	28,30
x22	not interested or self-reliant	28,35
x24	not interested or self-reliant	28,90
x15	not interested or self-reliant	31,97
x16	not interested or self-reliant	32,63
x17	not interested or self-reliant	32,88
x9	not interested or self-reliant	33,11
x19	not interested or self-reliant	33,47
x18	not interested or self-reliant	33,56
x21	not interested or self-reliant	33,59

IV factor illustrates both *source of AES and duration of contacts*: it sets against services supplied exclusively from Ngos and private actors to services supplied by the public sector and Ngo (table 7). The low presence of public sectors distinguishes central regions (Umbria and

Lazio), while Piedmont and Campania get access to public sector. AES offered by Ngo or private sector are sufficiently appreciated, while the public sector does not satisfy farmers and, in many cases, is fully negative. Besides, relationships between private-Ngo and farmers seem more durable (>10 years) with respect to relations between farmers and public operators (<5 years).

Tab.7 – Active variables influencing IV factor

Variables	**Categories of variables**	**Values-Test**
x13	Ngo	-17,92
x26	1	-17,55
x23	yes	-14,89
x41	> 10 years	-14,74
x9	Ngo	-12,71
x30	1	-11,65
x43	> 10 years	-11,32
x33	1	-11,01
x42	> 10 years	-10,49
x38	Sufficient	-8,25
x12	Private	-7,62
…		
central zone		
…		
x12	Public+Ngo	6,61
x9	Public	7,01
x38	Poor	8,33
x30	>2 contacts	8,41
x39	Poor	8,54
x41	< 5 years	8,66
x5	Public+Ngo	9,15
x34	no contact	17,17

Cluster analysis

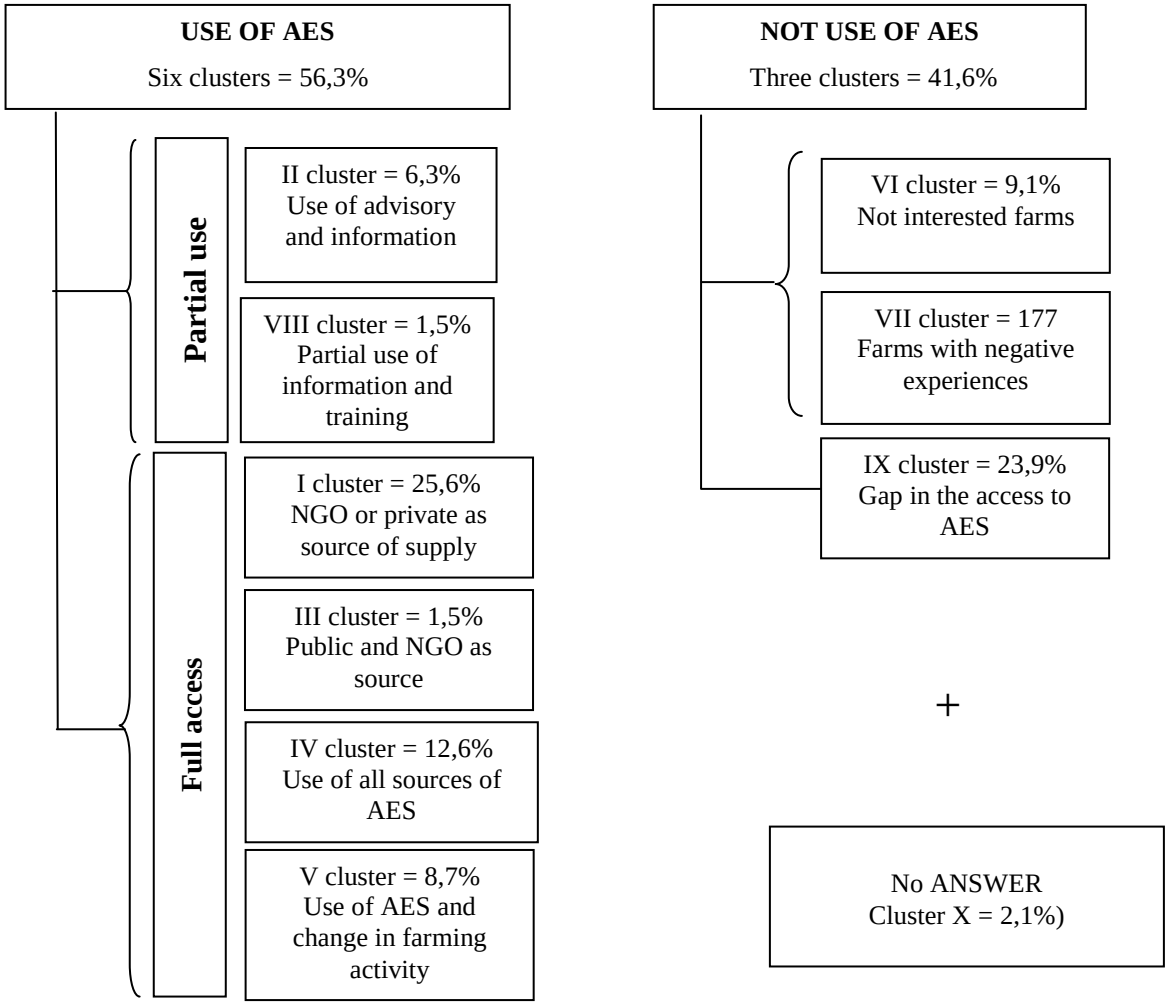
Cluster analysis has been conducted through hierarchical method: it resulted 10 clusters of clearly identifiable homogeneous farms, in relation to AES. Table 8 evidences the values-test for each cluster, while figure 2 exemplifies the articulation of the groups of farms.

Tab.8 – Values-test of factors

	n.	*1*	*2*	*3*	*4*
Cluster 1	546	-11.5	-0.3	-11.5	-8.5
Cluster 2	142	-6.8	0.5	7.1	-5.9
Cluster 3	21	-3.9	1.0	1.2	6.4
Cluster 4	222	-20.5	6.7	7.4	-2.9
Cluster 5	225	-14.2	3.4	1.3	11.1
Cluster 6	242	16.2	-10.4	32.3	-7.5
Cluster 7	185	13.0	-6.6	-18.0	-20.9

Cluster 8	29	1.8	-1.7	-3.1	6.0
Cluster 9	393	16.4	-9.2	-11.4	25.0
Cluster 10	42	17.0	41.3	0.5	-0.5

Fig. 2 – Cluster analysis



Two macro-clusters are distinct, the one relative to farms having access to AES; this is the prevailing macro-cluster, which includes 56,3% of the total. It is in turn divided up into two sub-groups of farms which evidence either partial or full "consumption" of AES. The other macro-cluster absorbs 41,6% of farms and refers to farms not using AES. In not using macrocluster a difference between clusters VI and VII and cluster IX emerge: the first two are conscious about AES but they do not want consume them, due to negative experience in the past or due to other motivations (family farm in the ancient phase of the life cycle or an excessive cost of access to be sustained). Finally, the last cluster contains 2,1% of farms which gave no feedback regarding AES. In following pages we propose a more detailed description of the clusters.

Farming with access to AES

Six clusters of farms are included in the macro-group which use AES. This could be a partial or a full use.

Cluster II and VIII evidence a partial utilization of agricultural services, more precisely:

- cluster II includes 6,3% of farms and refers to farms, localized in intermediate rural areas, using two main types of services, advisory and information; farms in question are localized prevailingly in central Italy (Umbria and, in a lesser extent, Lazio). These farms are characterized by sustainable agricultural production, with low environmental impact: therefore, AES are mainly aimed at introducing mandatory standards, like those foreseen within the unique payment regime. The access to AES is ensured by diversified sources, from public to NGO to private. Inside the private source an important channel of information is informal, which links farmers through informal networks of information. The overall assessment about AES is positive, with particular satisfaction on private extension services.
- The farms of cluster VIII are a limited share (1,4%) and get access to information and training, with no access to advisory services. Farms are mainly localized in north-west Italy and in many cases are specialized in wine production. Source of services are mainly public or NGO, with no presence of private support. Farms evidence high propensity to consume services but, in lot of cases, they must renounce to use them due to high cost of access.

Farms showing a full access to AES are less than half and comprehend four clusters:

- cluster I includes 25,6% of farms which, systematically have been using AES for more than 10 years. Regularly consumed services are either advisory, information and only some training. Source of services are mostly private and not governmental, with a low presence of public sector. The supplied services are very effective, therefore they stimulate the introduction of changes in the farm's activity. Finally, farms judgments about AES are relatively satisfying, above all in the case of advisory.
- The IV cluster includes specialized farms (12,6%) localized in north eastern Italy. They demonstrate a full utilization of services in all possible forms: advisory, information and training. AES are very important for farming activity, as revealed by the high frequency of contacts with workers of AES, coming from public, private and Ngo sector. This attitude gives farms opportunities for strategic change: modification in farms' activity involve not only structural aspects, but technical, commercial and managerial too. The role of assistantship is evident even from the capability to exploit opportunities given by the rural development policies.
- The V cluster is composed of farms using AES to introduce innovation linked to binding legislation: therefore, the role of advisory, training and information is relevant in performing the introduction of compulsory standards in farming activity. The farms of the cluster are prevailingly localized in Campania region, but also in Piedmont. The judgment about AES is contradictory: it is positive concerning advisory and

information, negative regarding formation, due to high cost of access to courses on behalf of entrepreneurs.

Farms not using AES

A consistent and diversified set of farms does not use AES, 43,7%. The reasons for not applying for AES are various, ranging from the not interest about them to an excessive cost of access or to negative past experiences or to displeasing supply of services which does not match with specific demand. Clusters involved are 4:

- Cluster VI includes 9,1% of not interested farms, which consciously do not use services: agricultural activity is prevailingly for self-consumption and it is performed in not professional way. In many cases farms are managed by families in the old phase of life cycle. As a matter of fact, it not surprising that farms no change in farm activity have been recently introduced and that farms continue their activity along inertial paths.
- Cluster VII consist of farms which have had negative past experiences with AES and, therefore, they do not intend to use them again. Farms are localized in central Italy and absorb 7,6% of total sample. Personnel employed in AES is not perceived as effective in performing useful services for farm activity. As a consequence, farms would like to consume services but decide not to.
- Cluster IX includes a relevant set of farms (23,9%) localized in Campania and Piedmont: they operate out of market and produce just for self-consumption. However, the limited use of services (just 10% of the cluster use them) is not linked to structural characteristics but it is a consequence of a sort of product gap: the supply of services is not adequate to the needs of these farms. As a matter of fact, farms of the cluster would consume services but they cannot, because they do not satisfy the farmers' needs. The lack of introduction of change in farm activity is a natural consequence of this scenario.
- Finally, cluster X takes account of a small share of farms (2,1%) which have given no answer to the questionnaire and have expressed a total indifference concerning AES.

5. DISCUSSION

Cluster analysis evidences the presence of a clear dichotomy in the access to agricultural services: to obtain further detailed information about the access to AES it could be helpful considering some further insight stemming from illustrative variables which we have used in the multivariate analysis:

1) *farms using services* are professional farms with high market orientation but with some internal differentiations: we can find, on the one side, professional farms with high structural and economic equipment, specialised in livestock or arable crops; entrepreneurs are in the mature phase of life cycle and they are, on average, 51 years old: furthermore they can count on the possibility of vertical transmission of farms to their descendants, which stimulates high investments and foster a strong interdependency with suppliers of extension services. On the

other side, relational farms, with strategies of horizontal integration, are a relevant part of the cluster. The farms are professional too, they produce standardised products and obtain good economic performances; main fields of activity are the horticultural, floricultural and mixed crop and livestock sectors. From a territorial point of view, they mainly operate in intensive and specialised agricultural areas. A relevant trait of these farms is the localization of family members in the younger phase of life cycle, which raise interest towards services and the propensity to invest in the future to consolidate farming activity. As a consequence, it is not surprising that the main source of services are prevailingly private and not governmental organizations, with a reduced presence of the public sector. The farms express a good degree of satisfaction about the used services, with few exceptions.

2) *Farms not using services* are mostly small farms with low market orientation; farm types are prevailingly in the sphere of not-competition or, in few cases, in the domain of precarious competitiveness, with no change in the last years: fruition, marginal and subsistence farms predominate in these clusters. From a territorial point of view, these farms are localised at the two territorial poles, urban areas or in rural marginal areas. Besides, family members are in the mature or in the older phase of the life cycle: therefore, they obviously do not get frequent access to AES. As a matter of fact, they declare not to use services either because they are not interested in or, on the other side, because services are not always adequate to their needs, due insufficiently trained personnel[6] or to a sort of "distributional gap", that is the AES is not distributed throughout the territory. This produces particularly high costs in the case of farms located in marginal areas. Farms with negative past experience complete the scenario of the disuse of AES.

6. CONCLUDING REMARKS

Anderson and Feder (2004) were surely right in saying "good intentions clash with hard realities". The recent strengthening of policy for agricultural services is a good starting point, but it is still insufficient. Our research has presented some results from an investigation in Italy, which confirms a dichotomy in the access to services on behalf of farms. Besides, access/not access to services are divided up into a series of typologies which have been analyzed in the paper.

From the empirical evidence a set of implications emerge: the first affects the categories of users. Our impression is that AES are still oriented towards a traditional type of supply. If we recall the previous distinction of Renting and Wiskerke (2010), our impression is that AES are actually supporting the agroindustrial paradigm, more than the alternative territorial integrated (and multifunctional) paradigm. The analysis of learning gaps confirm this impression, above all in the cases of farms with precarious competitiveness, where diversified and environmental friendly activities are at work. These farms could be more stimulated by a more adequate system of extension but, as they have declared, supply is not coherent with a renewed demand for new

6. This aspect has been very emphasised in developing countries by van de Baan and Hawkins (1988).

types of services. Moreover, as previously demonstrated (Labarthe, Laurent, 2009), small farmers seem more excluded from services consistent with their needs. As demonstrated in recent socio-historical approaches to AES (Lamine *et al*., 2010), path-dependency models of diffusion of services create possible lock-in effects. Talking about modernisation of agriculture, Noe (2003: 1) clearly points out: *the growing amount of knowledge and how this knowledge is produced and circulated may be an even stronger factor of explanation for this development and thereby a key to understanding the challenges and obstacles to the development of farming which takes into consideration ecological, social and political factors, hereafter abbreviated as "multidimensional farming"*. As a consequence, a large part of farms remains left out, due to the types of services supplied, mainly production oriented and less careful to environmental and multifunctional aspects of agricultural activity. Previous reflections induce to think about a sort of consolidation of what has been defined in literature as a "result paradox" (Benvenuti, 2000), where farms having less necessity get more from AES. Therefore, are AES still a privilege for the few?

A second important conclusion concerns the territorial discrepancies in the consumption of services: northern territories evidence higher attitude to gain access to AES, while in the south low percentages of consumption have been found. Paradoxically, higher rates of expenditure in services do not correspond to higher propensity to get access on behalf of farmers. Farms of region Veneto are prevailingly localized in cluster with medium-high rates of consumption of services. Besides, marginal rural areas and urban poles seem more distant to services with respects to farms localized in areas with intensive agriculture or in intermediate rural areas.

Finally, that brings us to aspects, recently emphasized by Vagnozzi (2012), related to the efficacy of AES supply: the paper has investigated the source of services and has emphasized the efficacy of services offered by private or Ngo, with respect to public sector; the analysis of farmer/customer satisfaction has revealed good performances obtained by private and Ngo, while services offered by public sector still evidence low levels of approval. Due to the particular nature of public good held by some multifunctional agricultural productions, the role of public sector will continue to be relevant: in this perspective, further analyses regarding governance of AES are wished to shed light on real efficacy/efficiency of agricultural services: as Birner *et al*. (2006) and Rivera (1996) point out, a shared framework for designing and analyzing pluralistic agricultural services is needed to obtain more rigorous tools for evaluation and monitoring AES and, finally, to avoid spending money unnecessarily.

ACKNOWLEDGEMENTS

Work carried out within the research project funded by the Italian Ministry of agriculture: *The functional repositioning of agriculture and the renewed role of agricultural extension services*, coordinated by M. De Rosa Special thanks to Giuseppe La Rocca, Felice Adinolfi and Fabian Capitanio for useful suggestions.

REFERENCES

Anderson J., Feder G. (2004). Agricultural extension: good intentions and hard realities. *World Bank Research Observer*, 19(1): 41-60.

Ascione, E., Cristiano S., and Tarangioli S. (2011). Farm Advisory Services for the Agro-Food Supply Chain as a Foster of Innovation: The Case of Veneto Region. International European Forum on System Dynamics and Innovation in Food Networks, February 14-18, Innsbruck-Igls, Austria.

Asopa, V.M., and Beye, G. (1997). *Management of agricultural research: A training manual, Module 8: Research-extension linkage*. Rome, FAO.

Banks J., Long A., van der Ploeg J. D. (2002). *Living Countryside: Rural Development Processes in Europe - The State of the Art*. Elsevier, Doetinchem.

Benvenuti, B. (2000). Assistenza tecnica e divulgazione agricola tra tradizione e rinnovamento", in Caldarini C., Satta M. (eds.): *Formazione e divulgazione*, Roma, Inea.

Birner, R., Davis, K., Pender, J., Nkonya, E., Anandajayasekeram, P., Ekboir, J., Mbabu, A., Spielman, D., Horna, D., Benin, S., and Kisamba-Mugerwa, W. (2006). From "Best Practice" to "Best Fit": A framework for designing and analyzing pluralistic agricultural advisory services. JFPRJ Research Brief 4. Washington D.C.: International Food Policy Research Institute.

Charatsary, C., Papadaki-Klaudianou, A., and Michailidis, A. (2011). Farmers as consumers of agricultural education services: willingness to pay and spend time", *Journal of agricultural education and extension*, 3: 253-266.

Cochran, W.G. (1977). *Sampling Techniques.* New York: John Wiley & Sons, 3rd edition.

Esposti R. (2012). Il sistema della conoscenza in agricoltura: una lettura introduttiva, *Agriregionieuropa*, 28.

Haug R. (1999); Some leading issues in international agricultural extension. A literature review, *Journal of agricultural education and extension*, vol.5, n.4: 263-274.

Labarthe, P. (2005b). Performance of services: a framework to assess farm extension services. Paper prepared for presentation at the 11th seminar of the EAAE (European Association of Agricultural Economists),'The Future of Rural Europe in the Global Agri-Food System', Copenhagen, Denmark, August 24-27.

Labarthe, P., and Laurent, C. (2009). Transformations of agricultural extension services in the EU: Towards a lack of adequate knowledge for small-scale farms. 111th EAAE-IAAE Seminar: Small Farms: decline or persistence, University of Kent, Canterbury, UK, 26th-27th June.

Lamine, C., Meynard, J.M., Bui, S., and Messéan, A. (2010). Réduction d'intrants: des changements techniques, et après? Effets de verrouillage et voies d'évolution à l'echelle du systèmes agri-alimentaire", *Innovation Agronomique*, 8: 131-134.

Noe E. (2003); Management of multidimensional farming - the perspective of farm enterprises as heterogeneous self-organising systems, Proceedings of the 6th European Symposium of the International farming systems association, 507-516.

Renting, H., and Wiskerke, J.S.C. (2010). New emerging roles for public institutions and civil society in the promotion of sustainable local agro-food systems, Proceedings of the 9th IFSA Symposium, Vienna 4-7 July.

Rivera, W.M., Qamar, M.K., and Mwandemere, H.K. (2005). *Enhancing coordination among AKIS/RD actors*, Rome, FAO.

Rivera, W.M. (1996). Agricultural extension in transition worldwide: structural financial and managerial reform strategies. *Public Administration and Development*, 16: 151-161.

Rivera, W.M., and Alex, G. (2004). The continuing role of the public sector in pluralistic extension systems. Proceeding of the Association for International Agricultural and Extension Education. Dublin, AIAEE 20th Annual Conference

Roling, N. (1989). The research/extension interface: a knowledge system perspective. ISNAR Staff Notes, No. 89-48.

Sabbatini M. (2008). Competitività e strategie emergenti delle imprese agricole. In Boggia A., Martino G. (eds.): *Agricoltura e mercati in transizione*, Milano, Franco Angeli, 103-147.

Umali D. L. and Schwartz L. (1994). Pubblic and Private Agricultural Extension: Beyond traditional Frontiers. World Bank Pubblication, Washington D.C., USA.

Vagnozzi A. (2012). "Il sistema della conoscenza in agricoltura in Italia: è in corso una fase regressiva?", *Agriregionieuropa*, 28.

Van Den Ban, A.W and Hawkins, H. S. (1988). *Agricultural extension*. New York: John Wiley & Sons, Inc..