European Union Young Farmers Program: A Greek case study

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1. Introduction

Rural policy (with only certain exceptions) has largely ignored the need for human capital improvement, by focusing mainly either on price support schemes and market management or on crop restructuring and infrastructure development. The lack of information and vocational guidance for young people living in the countryside has been apparent since the early years of the establishment of the EEC. The Mansholt plan claimed that vocational guidance would contribute to a reduction in the number of young people entering the agricultural profession, simply because they had not been trained in any other sector (Fennel, 1999).

In recent years, and more specifically in the framework of regulation 1257/99, investments in human resources constitute a major category of rural development measures. In this way, support is provided for the transfer of farms from one generation to the next, by financing a major part of the initial settlement costs of young farmers

Abstract

In recent years, successive reforms of the CAP have placed particular emphasis on the integrated development of the countryside and on strengthening the multiple job-holding of farmers. More specifically, incentives have been granted to young people in the European countryside in order for them to remain in rural areas and improve their income.

The aim of the aid Programmes for young farmers is, on the one hand, to renew the age composition of the rural population and, on the other, to improve the structure of their farms. In this way, the issue of the ageing rural population is addressed, while simultaneously exploiting the new labour resources for agriculture, thus providing an impetus for the improvement of its entrepreneurial and competitive profile.

The purpose of this paper is to evaluate the aid Programmes for Young Farmers and, more specifically, the First Measure of the Third Axis of the Operational Programme «Rural Development – Regeneration of the Countryside 2000- 2006», based on improvements to the level of viability. The methodology used in this case is the Categorical Regression. At first, improvements to the viability level of a sample of farms that were included in the Regional Operational Programmes of the Region of Central Macedonia are checked. On a second level, an analysis evaluation is made on how the effect of the basic socio-economic parameters may have changed, in formulating the final economic viability level of the farms, after the completion of their Investment Plans (future status). The results show that the orientation of the farms, after the implementation of the financing Programme, is towards exploiting the comparative advantages of the various regions by making use of suitable crops.

Key words: Financing programmes, Viability, Young Farmers, Evaluation, Categorical Regression

Résumé

Ces dernières années, les révisions successives de la PAC ont accordé une importance particulière au développement intégré des zones rurales et au renforcement de la pluriactivité des agriculteurs. Les jeunes de l'Europe rurale ont notamment reçu des incitations pour rester dans leur région et améliorer leurs revenus.

Le but des programmes d'aide aux jeunes agriculteurs a été, d'une part, de renouveler la pyramide des âges de la population rurale et, d'autre part, d'améliorer la structure de leur exploitation. On a de la sorte abordé le problème du vieillissement démographique dans les zones rurales tout en valorisant les nouvelles ressources en main d'œuvre au profit de l'agriculture, ce qui a permis de renforcer l'esprit d'entreprise et la compétitivité.

L'objectif de ce document est d'évaluer les programmes d'aide aux jeunes agriculteurs et, plus particulièrement, la première mesure du troisième axe prévu par le programme opérationnel « Développement rural: régénération du monde rural 2000-2006 » en fonction des améliorations constatées par rapport au niveau de viabilité. La méthodologie utilisée ici est la régression catégorique. Premièrement, nous avons donc pointé toutes les améliorations par rapport au niveau de viabilité observées dans un échantillon d'exploitations ayant bénéficié des programmes opérationnels régionaux de Macédoine centrale. Deuxièmement, nous avons examiné dans quelle mesure l'effet des paramètres socio-économiques de base a pu être modifié en indiquant le niveau de viabilité économique des exploitations finalement atteint, une fois leurs plans d'investissement achevés (futur statut). Les résultats montrent qu'après la mise en oeuvre du programme de financement, les exploitations se sont orientées vers la valorisation des avantages comparatifs des différentes régions au moyen de cultures appropriées.

Mots clé: Programmes de financement, viabilité, jeunes agriculteurs, évaluation, régression catégorique.

aged below 40 years, and by subsidizing early retirement programmes in order to encourage older farmers to cease their productive activities at an earlier date. Consequently, young farmers are given the chance to better the economic viability of their own farms (Damianos et al., 2005).

At present, despite the fact that the educational level of farmers has greatly improved in the countryside, agriculture in Europe is still dominated by middle-aged and elderly farmers. The young people living in the countryside of Europe form a critical factor for its developmental process, in order to ensure its viability and boost its multi-functional role (Villa, 1999; FAO, 1998; Shucksmith, 2004, Kazakopoulos et al., 2005).

In Greece, rural policy programmes, as defined by the CAP during the last few years, have resulted in an inflow of major capital resources, an improvement of the producers' income, and a further intensification of production, without however reducing the existing spatial and social inequalities, and without causing any major improvements to the basic structural characteristics of the Greek rural sector (Papadopoulos, 2004; Arabatzis, 2005; Arabatzis et al., 2006).

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Based on the structural characteristics of the rural sector in Greece (Tsiboukas and Tsoukalas, 1999; Rezitis et al., 2002a; Galanopoulos et al., 2004) and in view of the new rural policy requirements and directions, which stem from the CAP reform (OECD, 2004; Tsiboukas, 2005) and the impact from the EU enlargement (European Commission, 2003; Kavallari et al., 2004), it is considered necessary for appropriate measures to be taken to assist farmers. These measures focus on improving the competitiveness of Greek agriculture, given the challenges of an increasingly competitive global environment (Zioganas, 2003).

A basic parameter for strengthening the competitiveness of Greek agriculture is related to maintaining its economic and social cohesion (Zioganas, 1998; Rezitis et al., 2002b). An essential precondition for dealing with the ageing rural population, renewing its composition and addressing the problem of unemployment, is the exploitation of young labour resources in farming (Nazare Oliveira Roca, 1998). Young people are the most dynamic, productive and innovative members of any society. In rural communities especially, the development of sustainable solutions for addressing economic, social and environmental problems is at risk, due to the shrinking of this population group (Sarris and Zografakis, 1996; European Parliament, 2000). One major issue is the reproduction of the family farm, since young farmers have more business incentives at their disposal (Kinsela et al., 2000; Gidarakou and Kazakopoulos, 2002) and more technical knowledge (Lianos et al., 1997), and can therefore produce better quality and more competitive products for the international market. Furthermore, young farmers, as carriers of innovation, can dynamically participate in the ever-changing, increasingly competitive environment of the European and global market for agricultural goods (Sarris and Zografakis, 1996; Lianos et al., 1997; Kasimis et al., 1998).

2. The financing of young farmers in Greece

The financing of the aid Programs for Young Farmers is realized through national resources, and through the structural funds of the European Union. This financing scheme for young farmers includes measures for a single payment for their first installation, financial assistance in the form of an interest rate subsidy and supporting investments in farms through special investment programs (Ministry of Rural Development and Food, 2001; Ministry of Rural Development and Food, 2003).

More specifically, the Third Axis of the Operational Programme «Rural Development – Regeneration of the Countryside 2000-2006» (Ministry of Rural Development and Food, 2001; Ministry of Rural Development and Food, 2003) aims at improving the age composition of the rural population. This axis covers 8.9% of the total budget of the Operational Programme, which amounts to 3.28 billion euros (37.5% is the Community Contribution, 16.5% is the National Contribution and 46% is from Private Contribution). The First Measure of the Third Axis concerns payments for the first installation of young farmers and the related budget is 258,253,852 ευρώ. The aim of this measure is the installation of a minimum of 14,000 young farmers. This Measure is exclusively addressed to potential young farmers and includes incentives which aim to attract them to and help them permanently settle in rural areas, as well as terms and conditions that will safeguard the viability of their farms. Through the implementation of this Measure, the following aims are pursued:

- renewing the age composition of the rural population
- installing young farmers in areas characterized by a population decline and serious demographic problems, such as mountainous, disadvantaged and island regions
- improving the financial status of farmers and their families
- improving the operation of the farms, the living standards of the livestock and protecting the environment.

Some essential preconditions for inclusion in the programme's aid scheme are:

a) the area where the installation will be located,
b) the requirements of the farm as regards Human Labour Units – H.L.U. (the minimum labour requirements are 0.5 H.L.U., where 1 H.L.U.=1,750 hours of work per year), and
c) the possibility of improving the viability level of the farm.

In order to participate in the Programme, young farmers are asked to present a detailed portfolio (investment plan), with full data regarding the initial level of economic viability of the farm (*existing status*) and the chosen target-level that the farm must reach after the completion of the Investment Plan (*future status*).

One of the most important problems when evaluating a policy Measure is assessing its contribution to the changes observed in the beneficiary economic units. This means that an accurate description must be provided about how the financing programme will contribute to the creation of farms of a high viability. In order to examine the above-mentioned hypothesis, the «net» contribution of the measure under examination must be «isolated» from the total results observed prior to and following the inclusion of the beneficiaries in this Measure (European Commission, 2002; Agra-CEAS, 2003; European Commission, 2004; European Union, 2004). Thus, in the case of the Young Farmers' Programme, this issue is specialized as follows: a) exploring the degree of improvement to the viability level of the farm, and b) exploring the effect of basic parameters of the programme on formulating the final assessment of the viability level. The present paper contributes to the evaluation of this specific financing Programme by examining the factors that affect the net impact of the investment subsidy measure on Greek Agriculture. It is the continuation of a previous research effort (Aggelopoulos et al., 2007) which aimed at studying the impact of basic socio-economic parameters (gender, age, educational level of the beneficiaries

of the farms, the location of the farm, the number of HLUs and the type of agricultural activity), on the formulation of the initial economic viability level *(existing status)* of the farms that took part in the Programme for Young Farmers. The purpose of the present paper is to study the effect of the above-mentioned socio-economic parameters on formulating the target-viability level of the relevant farms *(future status)*. After evaluating and comparing the effect of these factors on the viability (existing and future) of the farms, conclusions can be drawn regarding the validity, i.e. the effectiveness, of the specific financing Programme.

3. Materials and methods

The data used in this paper were taken from a random sample of 100 investment plans that were submitted to the Region of Central Macedonia, in the framework of the Operational Programme «Rural Development – Regeneration of the Countryside 2000-2006». The region of Central Macedonia is located in the central part of Northern Greece. It consists of the following prefectures: Thessaloniki, Serres, Kilkis, Pella, Imathia, Pieria and Chalkidiki. It is the largest Greek region in size, covering 14.5% of the country's total area. The Central Macedonia region is an area with a very dynamic presence in all sectors of the economy; its share in the country's GDP is 17.3%. Central Macedonia includes five of the most developed agricultural prefectures in Greece, and is a production centre for a variety of basic products, such as peaches, cotton, tobacco, asparagus, as well as processed products. It also constitutes the main cattle breeding centre of Greece. It is worth noting that 18.7% of the total economically active population in this Region consists of persons employed in the primary sector (agriculture-fishing). More specifically, as regards the Region's workforce, a notable shift of workers has been observed in recent years from the secondary to the primary, and primarily the tertiary sector, due to the closure of several labour-intensive industrial enterprises; this phenomenon has also been coupled with an increase in the number of young farmers entering the agricultural profession. The multi-faceted nature of the primary sector in Central Macedonia, along with the inclusion of a large number of young farmers in this specific financing programme, allows for a generalization of the research results for the whole country, with no major deviation from the real picture.

In order to examine the effect of the socio-economic parameters on the level of economic viability of the farms, Categorical Regression was applied (Gifi, 1996; Meulman and Heiser 2004). Categorical Regression, also known as Regression with Optimal Scaling, quantifies categorical variable data by rendering numerical values to the variable categories. The variable categories are quantified, so that the square of the multiple correlation coefficients between the dependent variable and the group of independent variables is the maximum, based on the

available data (Kooij and Meulman, 1997; Meulman et al., 2002). Through the quantification, it is possible to study and assess the effect of each independent variable on the dependent variable, based on the values of relevant coefficients of statistical significance and relative importance.

In order to construct the Categorical Regression model, the following socio-economic parameters were used:

1. The gender of the beneficiaries of the farms,
2. The age of the beneficiaries (in age groups: 18-25 years, 26-35 years, 36-40 years),
3. The educational level of the beneficiaries (Primary School, Lower/Higher Secondary School, Vocational School & Training Institutes),
4. The location of their farm (standard, mountainous, disadvantaged region),
5. The number of HLUs ($1 > HLU > 1.5$ and $HLU > 1.5$),
6. The type of agricultural activity (horticulture, large crops, animal breeding, beekeeping).

Parameters 2, 4, 5 and 6 also constitute criteria for Young Farmers to be included in the Financing Programme [19,20], while parameters 1 and 3 are linked to the fulfillment of economic, demographic and social criteria, related to the exploitation of the region's social capital (Baron et al., 2001).

The applied statistical method is suitable for the development of the model, due to the categorical-qualitative nature of the available data. More specifically, the «viability level» (dependent variable) was declared in the model as an ordinal scale variable, along with the independent variables: «educational level», «age» and «number of HLUs». The remaining independent variables, i.e. «gender», «location of farm» and «type of agricultural activity», were declared as nominal scale variables.

The same methodology was also used in the former study (Aggelopoulos et al., 2007). The resulting models, both from the previous research and the present one, point towards two versions of the relation between the socio-eco-

Table 1 – *Evaluation of the independent variable coefficients in the categorical regression model*

Coefficients	Standardized Coefficients		df	F	p	Pratt Index
	Beta	Std. Error				
Gender	-0.045	0.099	1	0.202	0.654	0.021
Age	0.127	0.094	2	1.850	0.163	0.018
Educational level	-0.095	0.063	1	1.036	0.312	0.042
Location of farm	-0.205	0.089	1	5.314	0.023	0.110
No of HLUs	0.126	0.090	1	1.941	0.167	0.088
Type of agricultural activity	0.468	0.090	3	27.056	0.000	0.723

nomic factors that directly affect the formulation of the economic viability level of the farms.

4. Results and Discussions

The use of Categorical Regression showed that there is a statistically significant multiple correlation between the level of economic viability of the farms and the socio-economic parameters – independent variables ($R=0.573$, $p=0.000$, $R^2=0.329$). In fact, 32.9 % of the generalized variance of the economic viability level of the farms can be justified by the combined effect of the independent variables. Table 1 presents the basic results of the Categorical Regression. In Table 1, we see that the gender, age and educational level of the beneficiaries, and the number of HLUs do not have a statistically significant effect ($p>0.05$) on the economic viability level of the farms, in the presence of the other independent variables. For the variables «Location of farm» and «Type of Agricultural Production», the relevant Beta coefficients were found to be statistically significant at a significance level $\alpha=0.05$. The highest relative effect seems to come from the type of agricultural production (Beta=0.468), while the lowest is linked to the location of the farm (Beta=-0.205).

While assessing the significance of the independent variables in formulating the values of the dependent variable, based on the Pratt index of relative importance, we observe that once again the type of agricultural activity has the highest relative importance for predicting the economic viability level of the farms (Pratt's importance=0.723), while the lowest relative importance is linked to the location of the farm (Pratt's importance=0.110).

Table 2 presents the optimally quantified values of the categorical variables that were included in the Categorical Regression model. Diagram 1 is a graphic depiction of representation of the quantified values of all independent variables on a single axis
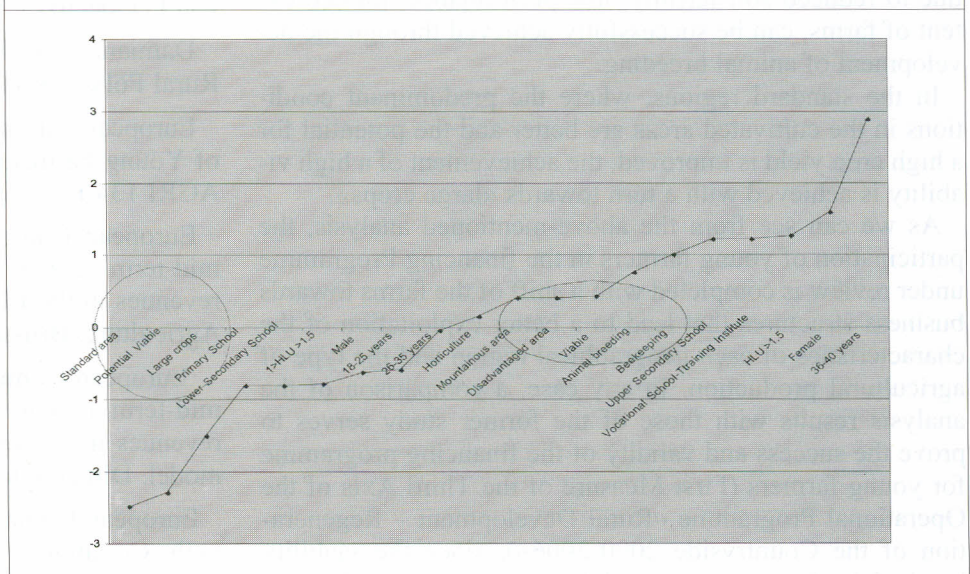
Based on the optimal values of the variable categories presented in Table 2 and from their depiction on a single axis of values (Diagram 1), we conclude that:

The potentially viable farms are oriented towards large crops, are located in standard regions, and their beneficiaries are mainly Primary School graduates. The viable farms are located in mountainous and disadvantaged regions, have a clear orientation towards animal breeding, and the educational level of their beneficiaries is relatively high.

Table 2 – *Optimal quantification of the variable categories.*

Variables		Frequency	Optimal value
Level of economic viability			
	Small farm	0 (0%)	-
	Declining	0 (0%)	-
	Potentially viable	16 (16%)	-2.291
	Viable	84 (84%)	0.436
Gender			
	Male	72 (72%)	-0.624
	Female	28 (28%)	1.604
Age			
	18-25 years	45 (46.6%)	-0.595
	26-35 years	45 (43.68%)	-0.049
	36-40 years	10 (9.7%)	2.897
Educational level			
	Primary School	31 (31%)	-0.816
	Lower Secondary School	29 (29%)	-1.816
	Upper Secondary School	23 (23%)	1.225
	Vocational School-Training Institute	17 (17%)	1.225
Location of farm			
	Standard area	14 (14%)	-2.478
	Mountainous area	26 (26%)	0.403
	Disadvantaged area	60 (60%)	0.403
No of HLUs			
	1>HLU>1.5	62 (62%)	-0.783
	HLU>1.5	38 (38%)	1.277
Type of agricultural activity			
	Horticulture	20 (20%)	0.150
	Large crops	29 (29%)	-1.513
	Animal breeding	43 (43%)	0.762
	Beekeeping	8 (8%)	1,012

Table 1 – *Rapresentation of the quantified values of all indipendente variables on a single axis.*

The results of the former research (Aggelopoulos et al., 2007) showed that there is a statistically significant multiple correlation between the level of economic viability of the farms and the independent socio-economic variables (R^2=0.723, p=0.000). The greatest relative effect on the level of economic viability when the farms first enter the Programme, is related to the variables «n° of HLUs) (Beta=0.866) and «age» (Beta=0.134), while the lowest relative effect seems to be linked to the variable «type of agricultural activity» (Beta=-0.089) and «location of the farm» (Beta=-0.155). Farms with a high intensity of labour achieve higher viability levels, since intensification in labour is associated with achieving a high productivity rate. In addition, a high correlation is noted between the age of the beneficiaries and the increased productivity of the farms.

Conclusions

From the model which interprets the relation between the factors that have a direct effect on the formulation of the final economic viability level of the farms, it seems that the greatest relative effect is linked to «type of agricultural production» and «location of the farm». According to the analysis carried out, these factors have a decisive effect on formulating a high level of economic viability.

We can conclude therefore that a «network of interaction» is created at the viable farms that are active in mountainous and disadvantaged regions, with the development of animal breeding activities. Furthermore, there is also a «network of interaction» noted at the potentially viable farms located in standard regions, with the cultivation of large crops (e.g. cotton, medic).

As it seems, the orientation of the farms after the implementation of the financing Programme has turned towards exploiting the comparative advantages of the regions with suitable crops. In fact, the development of a high level of viability (potentially viable farms) in the mountainous and disadvantaged regions that are characterized by problems due to reduced soil fertility, low performance, limited extent of farms, can be successfully achieved through the development of animal breeding.

In the standard regions, where the predominant conditions in the cultivated areas are better and the potential for a high crop yield is improved, the achievement of a high viability is achieved with a turn towards «large crops».

As we can see from the above-mentioned analysis, the participation of young farmers in the financing Programme under review is completed with a shift of the farms towards business structures that lead to a better exploitation of the characteristics of each geographical region and the type of agricultural production. In any case, a comparison of the analysis results with those of the former study serves to prove the success and validity of the financing programme for young farmers (First Measure of the Third Axis of the Operational Programme «Rural Development – Regeneration of the Countryside 2000-2006»), since the viability level of the farms is improved, leading to «potentially» viable and fully viable farms. Furthermore, various factors (such as «no of HLUs» and «age») that had a significant effect, no longer seem to contribute to the formulation of the final viability level of the farms, since there is a major shift towards an exploitation of their comparative advantages.

The applied methodology has evaluated the young farmers' financing programme as successful, and also considers it a reliable tool for a rational assessment of the agricultural holdings; in addition, it constitutes a sound «mechanism» for a targeted financing of the latter. It can thus be concluded that the inclusion of young farmers in this specific financing programme serves to improve the financial viability of their agricultural holdings. This improvement in the holdings' viability is expected to lead to the production of highly competitive agricultural products and an integrated development of agriculture.

References

Aggelopoulos S., Samathrakis V., Theocharopoulos A., 2007. Determination of the economic viability level of agricultural farms based on socio-economic parameters. In the Proceedings of the 4th International Conference in Advances in Applied Financial Economics (AFE), pp: 395-402.

Agra-CEAS, 2003. Ex-Post Evaluation of measures under Reg. (EC) No 950/97 on improving the efficiency of agricultural structures. Final Report for the EC-DG VI.

Arabatzis, G., 2005. European Union, Common Agricultural Policy (CAP) and the afforestation of agricultural land in Greece. New Medit: Mediterranean Journal of Economics, Agriculture and Environment, 4: 48-54.

Arabatzis G., Tsantopoulos, G., Tampakis, S and Soutsas, K., 2006. Integrated rural development and the multifunctional role of forests: A theoretical and empirical study. Review of Economic Sciences, 10:19-38.

Baron S., Field S., Schuller T., 2001. Social Capital: Critical Perspectives. Oxford University Press.

Damianos, D., Papageorgiou, K. and Spathis, P., 2005. Rural Policy. Stamoulis. Athens. (in Greek).

European Parliament, DG for Research, 2000. The Future of Young Farmers in the European Union. Working Paper AGRI 134 EN, Luxembourg.

European Commission, 2002. Impact assessment of the mid-term review proposals for agricultural markets and revenues in the EU-15 2004-2009. Directorate General for Agriculture, Brussels.

European Commission, 2003. Impact assessment of the mid-term review proposals for agricultural markets and revenues in the EU-15 and in the EU-25 using the ESIM model. Directorate General for Agriculture, Brussels.

European Commission, 2004. The Agricultural Situation in the Community: 2004 Report. Directorate General for Agriculture, Brussels.

European Union, 2004. Evaluation of socioeconomic programmes–the guide. In: http://www.evalsed/ Info.

FAO, 1998. Increasing the Involvement of Young Men and Women in Rural Development in Europe. Technical Series 55, Rome.

Fennel, R., 1999. The Common Agricultural Policy. Continuation and Change. Greek edition. N. Maravegias (ed). Themelio. Athens. (in Greek).

Galanopoulos K., Kamenidou I., Tziakas V., and Mitsopoulos A., 2004. Technological progress in agricultural production: Analysis of improvement plans in Central Macedonia. In the Proceedings of 7th ETAGRO Conference, pp:79-89 (in Greek).

Gidarakou I. and Kazakopoulos, L., 2002. Incentives for young farmers: The case of young women farmers in the region of Thessaly. In the Proceedings of the 7th ETAGRO Conference, pp: 573-587 (in Greek).

Gifi, A., 1996. Non-Linear Multivariate Analysis. Chichester: John Willey & Sons Ltd press.

Kavallari A., Borresch R. and Schmitz P. M., 2004. The CAP reform and EU enlargement: Assessing the impact on agricultural markets. In the Proceedings of the 8th Conference on Rural Economy, pp: 172-183. (in Greek).

Kazakopoulos, L., Kaffe-Gidarakou, I., and Koutsouris, A., 2005. Young farmers and spatial differentiation. In: E-TAGRO (Ed.), Greek agriculture and countryside in an enlarged EU (pp. 616–626). Thessaloniki: Agrotypos. (in Greek).

Kasimis C., Papadopoulos A.G., Stravoravdis S., 1998. Some reflections over the changing structure of the Greek rural labour market. In the Proceedings of the 14th International Conference of Sociological Association, pp:122-133.

Kinsella, J., Wilson, S., de Jong, F. and Renting, H., 2000. Pluriactivity as a livelihood strategy in Irish farm households and its role in rural development. Sociologia Ruralis 4 (40): 481-496.

Kooij, A.J. and Meulman, J.J., 1997. Multiple Regression and Optimal Scaling using alternating least squares. In: Softstat '97, Eds., W. Bandilla and E.Faulbaun. Stuttgart: Lucius and Lucius, pp.99-106.

Lianos Th., Sarris A. and Katseli L., 1997. Illegal immigration and local labour markets: The case of northern Greece. International Migration Review: 449-484.

Meulman, J., Kooij, A.J. and Van der and Babinec, A., 2002. New features of Categorical Principal Components Analysis for Complicated Data Sets. In Data Mining, Eds., Gaul, W. & Ritter, G. AG. Publishers, pp: 342-355.

Meulman, J. and Heiser, W., 2004. SPSS Categories 13.0. Chicago: SPSS, Inc.

Ministry of Rural Development and Food, 2001. Subsidy regimes of the community support framework 2000-2006 for investments in farms (CMD 451/2001, available at: http//www.minagric.gr/data/apof277753_220702.doc. (in Greek).

Ministry of Rural Development and Food, 2003. Subsidy regimes for farms (CMD 532/2003), available at: http//www.minagric.gr/data/par_coded.pdf (in Greek).

Nazare Oliveira Roca de, M., 1998. Youth and rural development in Europe-Policy issues and responses in the European Community. In Increasing the Involvement of Young Men and Women in Rural Development in Europe, Eds., F.A.O., Rome, pp:1-36.

OECD, 2004. Analysis of the 2003 CAP reform. Directorate General for Agriculture, Paris.

Papadopoulos, A., 2004. The Development in a Multifunctional Countryside. Gutenberg. Athens. (in Greek).

Rezitis, A., Tsiboukas, K., and Tsoukalas, S., 2002a. Efficiency and Productivity of Animal Farms that Implemented Improvement Plans (EEC Reg. 2328/91). In the Proceedings of the 7th Conference, Association of Agricultural Economics, pp: 88-99.

Rezitis, A., Tsiboukas K., and Tsoukalas S., 2002b. Measuring technical efficiency in the Greek agricultural sector. Applied Economics, 11(34): 1345-1357.

Sarris, A. and Zografakis, S., 1996. Agricultural income statistics and policy: A view from Southern Europe. European Commission, Eurostat, pp: 160-170.

Shucksmith, 2004, Young people and social exclusion in rural areas. Sociologia Ruralis, 44 (1): 43-59.

Tsiboukas, K. and Tsoukalas, S., 1999. Structure and typology of farms towards 2010. In Greek farming towards 2010, Eds., Maravegias N.: Papazisis-AUA, Athens. (in Greek).

Tsiboukas, K., 2005. Experts study on the impact of the Common Agricultural Policy review on the European Union structural policy concerning in Greece. Agricultural University of Athens. (in Greek).

Villa, 1999. Born to be farmers? Changing expectations in Norwegian farmers' life courses. Sociologia Ruralis, 39 (3): 330-342.

Zioganas, C., 1998. The organization of Primary Agricultural Production in Greece. In Evolution and New Challenges for Re-Orientation, Eds., Jameson A., Dordrecht Kluwer Academic Publishers, pp: 229-239.

Zioganas, C., 2003. Agricultural Economic Development. Zitis Publications Thessaloniki. (in Greek).