

FACTOR INVESTIGATION LEADING TO THE DEVELOPMENT OF WOMEN AGROTOURISM ENTREPRENEURSHIP IN GREECE

Aggelopoulos S.,
TEI of Thessaloniki
Farm Management Department
P.O. BOX 141
57400 Thessaloniki
Greece
Email: stamagg@farm.teithe.gr

Samathrakis V.,
TEI of Thessaloniki
Farm Management Department
P.O. BOX 141
57400 Thessaloniki
Greece
Email: sbagis@farm.teithe.gr

Pavlouidi A.,
TEI of Thessaloniki
Farm Management Department
P.O. BOX 141
57400 Thessaloniki
Greece
Email: stalex@farm.teithe.gr

Hatzigeorgiou, Ch.
University of the Aegean
Serron 5
55438 Thessaloniki
Greece
Email: chhatz@hol.gr

Abstract

The modern demands of the globalized economy have led to a mobilization of the local female population, with the aim of developing entrepreneurial activities, both in the secondary and tertiary sector of the economy. The development of entrepreneurial activities by women in rural areas is a newly-emerging phenomenon that constitutes a driving force for local growth, by combating unemployment among women and reinforcing women's activities through agricultural policy measures. This paper is based on research carried out within the framework of the project co-funded by the European Social Fund and National Resources – EPEAEK II – ARCHIMIDIS, and concerns a sample of 203 women's agro-tourism companies or cooperatives functioning all over Greece. It examines the relation between the corporate form of the agro-tourism enterprises and the monthly income gained, as well as the various funding programmes, their relation with the initial capital invested, and the final value of the investment. After studying the above-mentioned associations, conclusions are reached pertaining to the form and growth of women's entrepreneurship as regards agro-tourism activities.

Key-words: women's and cooperative agro-tourism enterprises, χ^2 statistical test, financing.

Introduction

The term "agro-tourism" refers to the form of tourism developed in rural areas that have not yet become touristically congested; it relates to social, environmental, cultural and community values, that allow both the hosts and their guests to interact and share experiences (Geotechnical Chamber of Greece, 2003).

Agro-tourism is linked to small-scale tourism activities (accommodation, food and recreation), in the form of a family business or cooperative, which are developed by individuals whose main profession is farming, within the framework of the farm's operation, in order to provide an alternative



source of income (Iakovidou 1997, Kloeze 1993, Bazin and Roux, 1997). Furthermore, agro-tourism also refers to tourism activities undertaken by people who are not farmers by profession, but are permanent residents of rural areas, who establish agro-tourism units that provide goods and services, in the form of a family or cooperative enterprise. Agro-tourism aims to safeguard, promote and exploit our cultural heritage, which is the cradle of Greek tradition and, along with our country's natural beauty, paints the portrait of the Greek countryside. This alternative form of tourism adapts to the needs and potential of the rural family, and makes a positive contribution by linking isolated regions with urban centres, and more importantly, by creating future prospects for local youth (Geotechnical Chamber of Greece, 2003).

Businesses of agro tourism are listed in the following categories:

- outlets/ exhibitions of agro tourism products,
- agro tourism catering and recreation centers,
- tourist offices organizing or implementing programmes offering outdoor activities and tours of ecotourist and cultural interest,
- farms,
- businesses producing traditional products,
- popular art workshops

The growth of agro-tourism is governed by exceptionally ambitious goals and it is a human activity that is incorporated within the efforts being made to boost the country's economic progress. The role of women in realizing these objectives is significant, since many studies have shown that agro-tourism is a field of activity dominated by women, giving them a new opportunity to contribute towards rural development (Kafe-Gidarakou, 1996).

In Greece, agro-tourism is a new policy for the development of rural areas, in particular targeting mountainous or island regions and socio-economically disadvantaged areas, by activating their inherent potential. This developmental policy is offered as an "alternative solution" for the country's regional growth, that will reduce under-employment in the countryside, increase the agricultural family income and strengthen problematic local communities (Tsartas 1994, Apostolopoulos 1995).

The development of agro-tourism was incorporated within the EU strategy; it instituted funding programmes for its promotion, and subsidized agro-tourism activities. The above-mentioned programmes are (European Commission, 2005; Leader Dossiers, 1993):

-Regulation 1257/1999

-Regional Operational Programmes (ROP) of the 1st, 2nd and 3rd Community Support Framework

-Community Initiative Leader I, Leader II and Leader plus

The managing authorities for the related funds can be the Ministry of Agriculture, Prefectures, Regions or Local Action Groups (Development Agencies). In the effort to promote agro-tourism, the European Union has adopted and defined the criteria and principles that need to be implemented by the National Governments, and also by farmers who develop agro-tourism activities, so that they are able to take advantage of the measures offered to them through community actions.

It is worth mentioning that other programmes and initiatives, which indirectly reinforce investments in agro-tourism, are also being developed by the EU and National Agencies, such as:

-the UFE/EU programme

-the NOW/EU community initiative

-programmes by the Hellenic Organization of Small and Medium-Sized Enterprises and Handicraft (EOMMEX)

-programmes by the Greek Manpower Employment Organization (OAED)

-ECOS - OUVERTURE

-INTERREG

The enterprising activity of agro-tourism has as aim the undertaking of economic activities, from an individual or collaborating teams of individuals, aiming at the achievement of profit, contributing simultaneously in the aid of competitiveness, in the increase of employment and in the



more total economic growth (Xapapadeas, *et al.*, 1997). In this work are investigated factors that characterize the growth of enterprising agro-tourism structures.

With this work it is sought to investigate the more basic factors that lead to the enterprising growth of feminine agro-tourism enterprises and cooperatives, such factors are the corporate organization, their financing possibility, the attribution of invested capital. The financing of productive activities of enterprises constitutes an important department of cost of production and hence their total cost of operation (Ball and McCulloch, 1999). The level of growth of agro-tourist activities is influenced decisively by the height and the structure of their financing. The capital that is channeled determines to a large extent the course and the development of this activities as well as the level of exploitation of other productive factors.

Thus therefore, the financing (discovery of capital) can be ensured with the following ways (Wilkens, 2001):

- a). With the saving (self-financing) or internal financing, which is limited because his that the agricultural income, in the regions where are developed the agro-tourist activities, leaves big margins of saving.
- b). Via programs of economic aid, which can have the form of government owned financing with transport of resources from the regular budget and the budget of Public Investments or the form of programs of economic aid of E.U., under form of subsidies and aids so that become work of infrastructure or public and private investments .
- c). Via Lending. In the frames of no developed rural economy, the necessity of lending is given.

The present study will attempt to explore the most basic factors that lead to the entrepreneurial development of women's agrotourism companies and cooperatives. Such factors include their corporate or cooperative profile, the funding programme that provided their initial financial assistance, the size of the initial investment, the monthly income achieved through their operation and the final configured value of the investment.

Materials and methods

In order to perform this specific research, it was decided at the outset to record and collect data concerning all women's agro-tourism units of a cooperative or entrepreneurial form, operating all over the country. Being unable to visit certain isolated units or due to the inability of certain companies or cooperatives to respond to the demands of the research, judgment sampling was used to determine a sample of 203 agro-tourism units, that cover the overall agro-tourism activities in Greece. judgment sampling was chosen in this study instead of random sampling due to the fact that it was considered essential to cooperate with units willing to provide reliable technical-economic data, since the quality and accuracy of the provided information is of utmost importance in such studies (House, 1992)

The agro-tourism units in the sample belong to all geographical regions of Greece. They include 74 companies or cooperatives from Macedonia, 47 from the islands, 27 from Thessaly, 23 from Epirus, 18 from Peloponnese, 8 from Thrace and 6 from Sterea Ellada (Table 1).

Table 1. Geographic origin of the agro-tourism units in the sample

Region	Number of agro-tourism units	Percentage of the whole sample
Thrace	8	3.8
Macedonia	74	36.5
Thessaly	27	13.3
Epirus	23	11.3
Mainland Greece	6	3
Peloponnese	18	8.9
Islands	47	23.2
Total	203	100

Source: Research data

As mentioned above, the research concerns women's agro-tourism activities, either in the form of cooperatives or in the form of companies. Table 2 shows the corporate profile of these activities. We can observe that out of a total of 203 agro-tourism units in the sample, 78 (38.4%) are women's cooperatives, 103 (50.7%) are private women's companies, 20 (9.9%) are general partnership or special partnership companies (GPC and SPC), and 2 (1%) are capital enterprises (Limited Liability Companies - LLC), (Table 2).

Table 2. Corporate form of the agro-tourism units in the sample

Form of unit	Number of agro-tourism enterprises	Percentage of the whole sample
Cooperative	78	38.4
Personal enterprise	103	50.7
Corporate form: GPC	19	9.4
Corporate form: SPC	1	0.5
Corporate form: LLC	2	1
Total	203	100

Source: Research data

The agro-tourism units described above, develop a series of activities that supplement the family's income from agriculture (Apostolopoulos, 1995), but also constitute successful business activities. The activities developed by the agro-tourism units in the sample are presented in Table 3.

Table 3. Activities by agro-tourism units

Type of activity	Number of agro-tourism enterprises	Percentage of the whole sample
Food	77	37.93
Cottage industry	32	15.76
Catering	31	15.27
Tourist accommodation	53	26.10
Other	10	4.94
Total	203	100

Source: Research data

A questionnaire and personal interviews was the method used to collect the primary data from the company owners or cooperative chairmen. The collection of data was realized from June until December 2005. All meetings were arranged by phone and took place at the company or cooperative premises.

At the investigation of growth of enterprising agro-tourism structures, they are studied their corporate form, the monthly income that ensures the agro-tourist cooperative or enterprise in their members, the program of financing or economic aid, the initial capital that was invested as well as the final height of investment, as it was shaped.

Through the use of the χ^2 test of independence and more specifically with the Double Entry tables, the following relations were examined (Kolyva-Machaira and Bora-Senta, 1998, Tsantas et al, 1999, Hinkle *et al.*, 1988).

1. Relation between the corporate form of the agro-tourism activities and the monthly income gained.
2. Relation between the corporate form of the agro-tourism activities and the programme category funding the investments.
3. Relation between the initial capital and the programme category funding the investments.

4. Relation between the initial capital and the final value of the investment.

The observed significance level of the χ^2 (*p-value*) test, is calculated by the simulation method Monte Carlo* (Mehta and Patel 1996, Yang and Chan 1999). The intensity of the relation is determined with the help of the Cramer's V correlation coefficient, (Kolyva-Machaira and Bora-Senta, 1998, Tsantas et al., 1999, Hinkle et al, 1988). The coefficient takes values at the interval [0, 1], value 0 for full independence and value 1 for full dependence**.

In order to interpret the relation between the examined variables, the value of the *Std. Residual* is used (Hinkle et al, 1988 and Tsantas et al, 1999). Therefore it is in the cells of the Double Entry Table, where the standardized residual is higher than 2 at an absolute value, that the major part of the statistical significance of χ^2 is owed.

Results

The χ^2 statistical test of independence showed that there is a statistically significant relation between the corporate form of the agro-tourism activity and the average monthly income it provides to its members or shareholders through its operation ($\chi^2=54.253$, $\beta.e.=16$, $p=0.000$ and it is $p<0.005$). With the help of the Cramer's V correlation coefficient, it is observed that the relation between the above-mentioned parameters (Cramer's V=0.282 and it is $0.20 < C.V < 0.40$) is of medium intensity.

Table 4 presents the relation between corporate form and the average monthly income gained by 171 women's enterprises or cooperatives.

We see that out of a total of 72 women's cooperatives, 25 (34.7%) ensure a mean monthly income lower than 300 euros, 33 (45.8%) a mean monthly income of 300-500 euros, 10 (13.9%) a mean monthly income of 500-1000 euros, while the mean monthly income is over 2000 euros for 4 (5.6%)

Of the 80 private women's companies, 5 (6.3%) provide a mean monthly income lower than 300 euros, 21 (26.3%) a mean monthly income of 300 to 500 euros, 29 (36.3%) a mean monthly income of 500 to 1000 euros, 15 (18.8%) a mean monthly income of 1000 to 2000 euros, while 10 (12.5%) gain a mean monthly income of over 2000 euros.

Of the 16 general partnership companies (GPC), 3 (18.8%) ensure a mean monthly income lower than 300 euros, 6 (37.5%) a mean monthly income of 300 to 500 euros, 3 (18.8%) a mean monthly income of 500 to 1000 euros, 1 (6.3%) a mean monthly income of 1000 to 2000 euros, and 3 (12.5%) a mean monthly income of over 2000 euros.

In addition, one special partnership company (SPC) was found which ensures a mean monthly income ranging between 300 and 500 euros and two capital enterprises (LLC), one with a monthly income of 1000 to 2000 euros, and one gaining over 2000 euros.

* This method was chosen in order to overcome any probable problems caused by not fulfilling the preconditions for the application of the χ^2 statistical test (Kirkwood, 1988 and Daniel, 1995). Deviation from the application conditions of a statistical test weakens its force along with the validity and reliability of the final decision regarding the rejection or non-rejection of the null hypothesis (H_0). This method is available in the Exact-tests subsystem of the statistical package SPSS 11.5. (Mehta and Patel 1999 and Tsantas et al. 1999).

** When the Cramer's V coefficient $\in [0-0,1]$, then the intensity of the association between the examined variables is negligible. When the Cramer's V coefficient $\in [0.1-0.2]$, then the intensity of the association between the examined variables is weak. If the Cramer's V coefficient $\in [0.2-0.4]$, then the association between the examined variables is of medium intensity. If the Cramer's V coefficient $\in [0.4-0.6]$, then the intensity of the association between the examined variables is strong. When the Cramer's V coefficient $\in [0.6-0.8]$, then the intensity of the association between the examined variables is very strong. Finally, if the Cramer's V coefficient $\in [0.8-1]$, then the intensity of the association between the examined variables is extremely strong (Kirkwood, 1988, Hinkle *et al.*, 1988).



Table 4. Relation between the corporate form of the enterprise and monthly income

Corporate form	Criteria	Monthly income categories					Total
		1. <300 €	2. 300-500 €	3. 500-1000 €	4. 1000-2000 €	5. >2000€	
1. Cooperative	Absolute frequency	25	33	10	0	4	72
	Percentage of the row's total (%)	34.7%	45.8%	13.9%	0%	5.6%	100
	Standardized residual	3	1.4	-1.8	-2.7	-1.3	
2. Personal enterprise	Absolute frequency	5	21	29	15	10	80
	Percentage of the row's total (%)	6.3	26.3	36.3	18.8	12.5	100
	Standardized residual	-2.7	-1.4	2.1	2.5	0.5	
3. General Partnership co. (GPC)	Absolute frequency	3	6	3	1	3	16
	Percentage of the row's total (%)	18.8	37.5	18.8	6.3	18.8	100
	Standardized residual	0	0.1	-0.5	-0.5	1	
4. Special Partnership co. (SPC)	Absolute frequency	0	1	0	0	0	1
	Percentage of the row's total (%)	0	100	0	0	0	100
	Standardized residual	-0.4	1.1	-0.5	-0.3	-0.3	
5. Limited Liability co. (LLC)	Absolute frequency	0	0	0	1	1	2
	Percentage of the row's total (%)	0	0	0	50	50	100
	Standardized residual	-,6	-0.8	-0.7	1.8	1.7	

Sample total: 203

Responses: The data in the table refers to 171 companies or cooperatives that responded (84,2% of the total)

Based on the above, we observe that a small number of women's cooperatives (5.6%), provides its members with a mean monthly income of over 2000 euros, while the largest percentage (80.5%) provides a mean monthly income ranging until 500 euros. In women's agro-tourism companies, the mean monthly income provided is higher. In the individual enterprises the 31.3% achieve monthly income above 1000 Euros. Also, a important percentage of personal enterprises (25.1%), ensures in the partners high monthly income of over the 1000 Euros.

The χ^2 statistical test of independence showed that there is a statistically significant relation between the corporate form of the agro-tourism activity and the programmes for initial funding of their investments ($\chi^2=51.50$, $\beta.e.=16$, $p=0.000$ and $p<0.05$). The Cramer's V correlation coefficient has the value 0.264 and is $0.20 < C.V < 0.40$, so the relation between these parameters is characterized as medium.

Table 5 shows the relation between the corporate form and the initial funding programmes, for 186 women's companies or cooperatives.

From table 5 we can observe that out of a total of 70 women's agro-tourism cooperatives, 25 (35.7%) were funded through the Leader (I&II, plus) programmes, 14 (20%) by National Resources (programmes by EOMMEX, OAED, funding provided by Municipalities, Prefectures, etc), 10 (14.3%) by various European programmes (NOW, EQUAL etc.), while 5 (7.1%) were initially financed by

donations. It is worth noting that 16 cooperatives (22.9%) began their operation without being incorporated within a funding programme.

Out of a total of 94 private agro-tourism companies by women, 74 (78.7%) were funded by the Leader programmes, 3 (3.2%) by other European programmes, 1 (1.1%) was financed by National Resources, while 16 businesses (17%) were not included in any programme for funding.

Of the 19 general partnership agro-tourism enterprises (GPC), 15 (78.9%) were funded by the Leader programmes, 1 (5.3%) by European programmes, 1 (5.3%) by National resources, and 2 companies (10.5%) were not included in any programme for initial funding.

Table 5. Relation between the corporate form of the enterprise and the initial funding programme

Corporate form	Criteria	Categories of initial funding programmes					Total
		No funding provided	Leader programmes	National resources	Other European programmes	Donations	
1. Cooperative	Absolute frequency	16	25	14	10	5	70
	Percentage of the row's total (%)	22.9	35.7	20	14.3	7.1	100
	Standardized residual	0.9	-2.8	3.3	1.8	2.3	
2. Personal enterprise	Absolute frequency	16	74	1	3	0	94
	Percentage of the row's total (%)	17	78.7	1.1	3.2	0	100
	Standardized residual	-0.3	2	-2.5	-1.7	-1.6	
3. General Partnership co. (GPC)	Absolute frequency	2	15	1	1	0	19
	Percentage of the row's total (%)	10.5	78.9	5.3	5.3	0	100
	Standardized residual	-0.8	0.9	-0.5	-0.4	-0.7	
4. Special partnership co. (PLC)	Absolute frequency	0	1	0	0	0	1
	Percentage of the row's total (%)	0	100	0	0	0	100
	Standardized residual	-0.4	0.5	-0.3	-0.3	-0.2	
5. Limited Liability co. (LLC)	Absolute frequency	0	1	0	1	0	2
	Percentage of the row's total (%)	0	50	0	50	0	100
	Standardized residual	-0.6	-0.2	-0.4	2.1	-0.2	

Sample total: 203

Responses: The data in the table refers to 186 companies or cooperatives that responded (91.6 %).



The research indicated two private agro-tourism companies (LLC), which were financed through European programmes (Leader programmes or others). It also showed one private agro-tourism company (SPC), that was financed through Leader programmes.

As the analysis presents, the cooperatives were mainly incorporated within European funding programmes (50%), while the companies were mainly financed through the Leader programmes. In the enterprises the financing emanates mainly via the European programs (Leader and other) (81,9%). It deserves it is reported that, important percentage of cooperatives but also enterprises they invested with proper funds.

A study was then made into the relation of the initial investment capital and the category of funding programme. The χ^2 statistical test of independence showed that there is a statistically significant relation between the initial investment capital and the funding programme employed ($\chi^2=41.17$, $\beta.e.=16$, $p=0.001$ and it is $p<0.05$). The intensity of the relation between the above-mentioned parameters is checked with the help of the Cramer's V correlation coefficient (Cramer's $V=0.250$ and is $0.20 < C.V < 0.40$). The relation between the above-mentioned parameters in question is medium.

Table 6 portrays the relation between the initial investment capital and the initial funding programmes used by 165 agro-tourism companies or cooperatives.

From Table 6, we observe that out of the 38 companies or cooperatives whose initial capital was up to 5000 euros, 15 (39.5%) were financed through Leader programmes, 5 agro-tourism activities (13.2) were financed by other European programmes, 8 (21.1%) were financed through national resources, 2 (5.3%) were financed by donations, while 8 (21.1) were not incorporated in any programme for initial funding.

Out of the 16 companies or cooperatives with an initial capital ranging between 5001 and 10000 euros, 7 (43.8%) were financed through Leader programmes, 5 companies (31.3%) were not incorporated in any programme for initial funding, 2 companies (12.5%) were financed by donations, while one company (6.3) was financed by other European programmes or by national resources.

Table 6. Relation between the initial investment capital and the category of funding programme

Initial investment capital	Criteria	Funding programme					Total
		LEADER	National resources	Other European programmes	Donations	No funding provided	
1. Up to 5000€	Absolute frequency	15	8	5	2	8	38
	Percentage of the row's total (%)	39.5	21.1	13.2	5.3	13.8	100
	Standardized residual	-1.8	2.4	1.5	1.1	-1	
2. From 5001 to 10000€	Absolute frequency	7	1	1	2	5	16
	Percentage of the row's total (%)	43.8	6.3	6.3	12.5	31.3	100
	Standardized residual	-0.9	-0.4	-0.1	2.6	1.1	
3. From 10001 to 20000€	Absolute frequency	14	1	2	0	9	26
	Percentage of the row's total (%)	53.8	3.8	7.7	0	34.6	100
	Standardized residual	-0.6	-0.9	0.2	-0.8	1.8	
4. From 20001 to 50000€.	Absolute frequency	20	4	1	0	2	27
	Percentage of the row's total (%)	74.1	14.8	3.7	0	7.4	100
	Standardized residual	0.8	1	-0.6	-0.8	-1.4	
5. Over 50000€	Absolute frequency	47	1	2	0	8	58
	Percentage of the row's total (%)	81	1.7	3.4	0	13.8	100
	Standardized residual	1.8	-1.9	-0.9	-1.2	-1	

Sample total: 203

Responses: The data in the table refers to 165 companies or cooperatives that responded (81.3 %).

Of the 26 companies or cooperatives with an initial capital of 10001 to 20000 euros, 14 (53.8%) companies were financed through Leader programmes, 2 companies (7.7%) were financed by other European programmes, 1 company (3.8%) by national resources, while 9 (34.6%) companies were not included in any programme for initial funding.

Of the 7 companies or cooperatives with an initial capital ranging between 20001 and 50000 euros, 20 (74.1%) were incorporated into Leader programmes for initial funding, 4 companies (14.8%) were financed by national resources, 1 company (3.7%) by other European programmes, while 2 companies (7.4%) were not incorporated in any funding programme.

Of the 58 companies or cooperatives with an initial capital over 50000 euros, 47 (81%) were financed through Leader programmes, 2 companies (3.4%) were financed through other European programmes, 1 company (1.7%) by national resources, while there are 8 companies (13.8%) that were not included in any funding programme.

As we can see from the above-mentioned data, the initial capital investments over 20.000 euros, were primarily made through Leader or other European programmes.

The χ^2 statistical test of independence showed that there is a statistically significant relation between the initial investment capital and the final value of the investment ($\chi^2=57.758$, $\beta.e.=16$, $p=0.000$). With the help of the Cramer's V correlation coefficient, it is observed that the relation between the above-mentioned parameters (Cramer's $V=0.325$ and it is $0.20 < C.V < 0.40$) is of medium intensity.

Table 7 presents the relation between the initial investment capital and the final value of the investment in 137 companies or cooperatives. As we can see in Table 5, of the 25 companies with an initial investment capital of up to 5000 euros, the final value of the investment remained stable for 4 companies (16%), for 3 (12%) it ranged between 5001 and 10000 euros, for 7 (28%) between 20001 and 50000 euros, and for 11 (44%) the final value reached over 50001 euros.

Of the 13 companies with an initial investment capital of 5001 to 10000 euros, 3 companies (23.1%) remained stable, the final value of 2 (15.4%) was configured at 10001 to 20000 euros, for one company (7.7%) it was configured at 20001 to 50000 euros, while the final value of 7 (53.8%) was configured at over 50001 euros.

Of the 22 companies with an initial investment capital from 10001 to 20000 euros, the final value of the investment remained stable for 2 companies (9.1%), for 4 (18.2%) the final value increased from 20001 to 50000 euros, while for 16 (72.7%) the final value was increased to over 50001 euros.

Of the 26 companies with an initial investment capital ranging between 20001 and 50000 euros, for one company (3.8%) the final value of the investment was reduced to less than 5000 euros, for 4 companies (15.4%) the final value of the investment remained stable, while for 21 (80.8%) it increased to an amount over 50000 euros.

Of the 51 companies with an initial investment capital over 50001 euros, for one (2%) the final value of the investment was reduced by 5000 to 10000 euros, for one (2%) its was reduced by 20000 to 50000 euros, while for 49 companies (96.1%) it remained stable.

As the above-mentioned analysis indicates, investments in agro-tourism activities are profitable, since the final value of the investments is usually higher than the initial investment.



Table 7. Relation between the initial investment capital and the final value of the investment

Initial Investment Capital		Final investment value					
		1. Up to 5000€	2. From 5001 to 10000€	3. From 10001 to 20000€	4. From 20001 to 50000€	5. Over 50001€	TOTAL
1. Up to 5000€	Absolute frequency	4	3	0	7	11	25
	Percentage of the row's total (%)	16	12	0	28	44	100
	Standardized residual	3.2	1.5	-0.9	2.2	-1.8	
2. From 5001 to 10000€	Absolute frequency	0	3	2	1	7	13
	Percentage of the row's total (%)	0	23.1	15.4	7.7	53.8	100
	Standardized residual	-0.7	2.9	2.6	-0.5	-0.9	
3. From 10001 to 20000 €	Absolute frequency	0	0	2	4	16	22
	Percentage of the row's total (%)	0	0	9.1	18.2	72.7	100
	Standardized residual	-0.9	-1.1	1.7	0.8	-0.2	
4. From 20001 to 50000€	Absolute frequency	1	0	0	4	21	26
	Percentage of the row's total (%)	3.8	0	0	15.4	80.8	100
	Standardized residual	0.1	-1.2	-0.9	0.4	0.3	
5. Over 50001 €	Absolute frequency	0	1	0	1	49	51
	Percentage of the row's total (%)	0	2	0	2	96.1	100
	Standardized residual	-1.4	-1	-1.2	-2.1	1.7	

Sample total: 203

Responses: The data in the table refers to 137 companies or cooperatives that responded (67.5 %).



Discussion-Conclusions

Agro-tourism is a mild form of tourism and rural development. It is a developmental process, which contributes to the growth of the local community offering economic progress and prosperity. It secures an additional income for farmers and for local communities in general, provides employment and supports the rural population. The participation of women in agro-tourism is of primary importance. Women are active in this field, either by establishing private companies or through participation in cooperatives (Iakovidou, 2000).

The institution of funding programmes for the promotion of agricultural activities through subsidies, has been of catalytic importance for the development of women's agro-tourism cooperatives and private companies in Greece.

As the study has shown, the majority (77%) of women's agro-tourism cooperatives in the sample received financial support during their establishment from several state authorities through various funding programmes. Furthermore, 26% of the women's agro-tourism cooperatives were incorporated into subsidized programmes in order to expand their range of activities.

The percentage of private companies (83%) subsidized during their establishment is also high. In addition, all the corporate forms of women's agro-tourism enterprises in the sample (GPC, SPC and LLC) received subsidies during their establishment.

However, a large percentage of the companies or cooperatives in the sample implemented various required investment activities at a later stage using own funds, thus avoiding their incorporation in funding programmes. The main source of funding both for the women's agro-tourism cooperatives and the women's agro-tourism companies were the Leader programmes (Leader I, Leader II and Leader plus).

The Community Initiative Leader is the most important programme for the promotion of agro-tourism in the EU. Through its implementation, the competitive nature of rural regions develops with the best exploitation of their natural, economic and human resources, new sources of income are revealed and there is simultaneous protection of nature and the country's cultural heritage. An indicative fact is that the higher the initial investment capital, the greater the dependence of the companies or cooperatives involved on the Leader programmes. As the study shows, 79% of the investments with an initial capital over 20.000 euros were made through Leader, compared to 45% of investments of a lower amount.

As for the mean monthly income that agro-tourism companies or cooperatives provide for their members or shareholders, it is small in most cases in the sample.

Out of the total women's agro-tourism companies in the sample, 55% earn a monthly income under 300€ and up to 500€. This phenomenon is more intense in cooperative businesses (80.5% of the cooperatives in the sample), while for women's agro-tourism companies, the mean monthly income gained is usually higher. It is worth noting that a significant percentage of GPC companies (18.8%), achieves a high monthly income of over 2000 euros.

Finally, it should be noted that although the monthly income provided by the agro-tourism companies or cooperatives to their members or shareholders is not usually high, however, investments in agro-tourism activities are profitable. For 88% of the companies, the final value of the investments is higher than the initial one, thus confirming the contribution of agro-tourism to an increase in the agricultural family income and a financial strengthening of problematic local communities.

References

- Apostolopoulos K., (1995). "Introduction to Rural Home Economy", Harokopeio University, Athens, (in Greek).
- Ball A. and McCulloch W., (1999). International Business: The Challenge of Global Competition, McGraw-Hill, 7th Edition.
- Bazin G., Roux B., (1997). L' Agro-tourisme: un atout pour les zones rurales difficiles mediterraneennes? Ed. Harmattan, Paris, p.p. 215-236.
- Geotechnical Chamber of Greece (2003), "Mountainous and Disadvantaged Regions", Thessaloniki, (in Greek).
- Daniel, W., (1995). "Biostatistics: A foundation for Analysis in the Health Sciences", John Willey and Sons, Inc.
- European Commission (2005). "The Agricultural Situation in the E.U.", 2005 Report.
- Hinkle, D., Wiersma, W., and Jurs, S., (1988). "Applied Statistics for the Behavioral Sciences", 2nd Edition, Boston: Houghton Mifflin Company.



- House, C., (1992), “*Approaches to Collecting Data on Production Technologies In: Costs and Returns for Agricultural Commodities*” Edited by Ahearn M.C. and Utpal Vassavada, Westview Press pp.80-88
- Iakovidou O. (1997). Agro-tourism in Greece: The case of Women Agro-tourism Co-operatives of Ambelakia. *MEDIT*, No. 1:44-47.
- Iakovidou O. (2000). Agrotourism: The small, beautiful and female face of tourism (In Greek) in P. Tsartas (Eds), *Tourism development, Multiscientific approaches* (pp 69-79)
- Kafe-Gidarakou, I., (1996) “*Multiactivity among Women Farmers. New roles in the countryside-New Necessities*”, Minutes of 4th Panhellenic Conference on Rural Economy, pp.464-476, (in Greek).
- Te Kloeze J.W., (1993) “*An International Study on the Marketing Aspects of Agrotourism in Europe, preliminary proposition*” Wageningen Agricultural University, the Netherlands.
- Leader Dossiers. (1993), “Tourisme at the service of rural development”. LEADER Coordinating Unit, AEIDL, Bruxelles.
- Kirkwood, B., (1996). “Essentials of Medical Statistics”, Blackwell Science Ltd.
- Kolyva-Machaira, F. and Bora-Senta, E., (1998). “*Statistics: Theory and Applications*”, Zitis publications, Thessaloniki, (in Greek).
- Mehta, C. and Patel, N., (1996). “SPSS Exact Tests 7.0.for Windows” SPSS Inc.
- Tsantas, N., Moysiadis, Ch., Bagiatis, N., and Chatzipantelis, Th., (1999). “*Data Analysis with the help of Statistical Packages*”, Thessaloniki: Zitis publications, (in Greek).
- Tsartas P., Thanopoulou M., (1994). Women Agrotourism Cooperatives in Greece. Evaluation study on their operation. Research Center for Women in the Mediterranean Basin, Athens (in Greek)
- Yang, Y., Chan, W., (1999). *Statistical Analyses Using Bootstrapping*: Alfred Publishing Co., Inc., Sherman Oaks, California.
- Wilkens E., (2001). “Actual and Future Role of European Private Insurance for Agriculture-Risk management in agriculture in the EU”. Copa & Cogeca seminar, Brussels, 2001.
- Xepapadeas A., Androulaki E., Botsetou M., (1997). “Measurement of Technical and Economic Efficiency of Agriculture and Tourism Sector in the Region of Crete”, 3rd International Symposium on Quantitative Methods, Athens.