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Marketing Strategies for the Primary Sector: An Empirical Study

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Abstract:

This study aims to profile the marketing strategies that sheep farmers follow in the Region of East Macedonia and Thrace (EMTh) in Greece and the County of Cornwall in U.K. based upon their distribution channel selection, farm and personal characteristics. A survey conducted to 343 and 240 sheep farmers in EMTh and Cornwall respectively.

Farmers in EMTh follow three marketing strategies: (i) cost focus, (ii) production orientation and (iii) return focus strategy, while Cornish farmers adopt the: (i) production Orientation and (ii) differentiation strategy. There are many differences regarding their marketing orientation, distribution outlet selection, farm and farmer characteristics.

Key Words: *Livestock Marketing, Marketing Strategies, Livestock Marketing Channels, Strategic Typology, Sheep Farmers*

JEL Classification: *C12, M11, M31*

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1. Introduction

Marketing channels are very important in the farming sector since it comprises a large number of small agricultural holdings, most of the agricultural products are “undifferentiated”, and the farming enterprises are isolated for the final consumer (Ritson 1997). Distribution channel choice is one in which an organization can achieve its marketing objectives within the framework of its marketing strategy (Fifield 1992; Kotler 1994). A marketing strategy that an organization follows aims to identify a competitive and consumer advantage and therefore can be viewed as an integral part of the business strategy (Wind and Robertson 1983).

Porter (1980) identified three internally consistent generic strategies for creating a defensible position in the long run for competitors in an industry. The three generic strategies that a firm may adopt are: (a) overall cost leadership, (b) differentiation and (c) focus. Following on from this, four broad strategies based on the above generic strategies were suggested by Fearn and Bates (2000): (i) cost leadership strategy, (ii) differentiation strategy, (iii) diversification strategy and (iv) specialization strategy. Kohls and Uhl (1990) argued that in the food industry most firms mainly adopt the following two strategies: product differentiation and market segmentation.

It can be difficult to use the typologies of business strategies presented above to describe adequately the way agricultural businesses behave, due to the nature of farm firms (especially their small scale and dependence on family labour and management) and the environment in which they operate. Generally, little is known about the decision making process of farmers regarding marketing strategy selection and particularly about the factors and the farmers’ characteristics that influence them to choose a particular strategic alternative. Some studies have sought to cluster farmers according to their strategic behaviour.. McLeay et al. (1996) identified five strategic groups of crop farmers in New Zealand, while Ohlmer, et al. (1998) clustered Swedish farmers in relation to their decision making. Carter (2001) examined the role of farms in the creation of new business in rural areas. Three groups of farmers were identified by Carter (2001) based on their relative engagement in additional business ownership activities: monoactive farmers, structural diversifiers and portfolio business owners. Distinctive group differences found in their personal, farm business, managerial characteristics and in their perceptions of business opportunities and constraints. Vesala et. al. (2007) explored the concept of entrepreneurial capability of farmers to diversify. Their main focus was on the entrepreneurial identity of portfolio farmers in Finland and the extent to which the differences between portfolio farmers, other farmers and non farm rural businesses can be explained. They found that portfolio farmers have stronger entrepreneurial identity than conventional farmers as well as they have the perception that they are growth oriented, risk takers, innovative, optimistic and having more personal control upon their business activities.

Other studies have attempted to identify the factors that influence farmers to adopt a particular marketing strategy. For example, distribution risk is one factor that influences marketing decision making in the agribusiness sector. Risks that agricultural producers face are linked with decisions about the prices, quantity, quality, and the timing of delivery (Royer, 1995). Transaction cost was identified as another factor, which has significant impact on marketing decision-making (Hobbs, 1996). Age, education and farm profit are also, according to Hobbs (1997), some factors that affect farmers using live auction markets: the type of cattle, quick payment and the price received were the most important reasons for selling cattle live-weight. Mishra et. al. (2009) investigated the factors such as farm, operator and household characteristics, farm type and regional location of the farm, that affect the financial performance of new and beginning farmers. They found that there is an inverted U shaped relationship between age of the farmer and financial performance as well as that management strategies such as increasing the number of decision makers, involving in added value activities and having a written business plan can lead to higher financial performance. Furthermore, Escalante et. al. (2009) aiming to introduce the application of sustainable growth challenge model in agricultural finance and therefore to understand the economic conditions and business decisions made by farmers in U.S.A.; found that farm's tendencies to attain balance growth seem to be more influenced by asset productivity and leverage decision, which are given different emphasis by grain and livestock farms due to different operational structures. According to Gong et.al. (2007) there are significant relationships between economic and social variables and marketing channel selection for cattle distribution in China. They argued that transaction cost has a significant impact on marketing channel selection while the information cost does not show an important influence on marketing decisions. Moreover, socioeconomic factors including collective ownership, younger age and experience tend to influence farmers to choose forward contract sales.

Agricultural economists, policy makers and farm advisers need to develop strategic programs and business plans in order to maintain farm incomes in regions where the agricultural sector consists of an important part of their economy. Furthermore, in eras that the British and Greek economy faces economic and fiscal crisis as well as are characterised by depression, the effective and efficient operation of farm businesses is a crucial issue. Therefore, it is very important to have a clear understanding of the marketing behaviour of farmers regarding the livestock distribution channel selection and their response to the changes that occur across the supply chain. However, there is not much objective evidence regarding to the strategic management process of farmers and, particularly, about the factors that influence their choice of a specific marketing strategy. The main aim of this study is to identify the marketing strategies that livestock farmers (sheep and goat farmers in EMTh as well as sheep farmers in Cornwall) follow regarding the factors that affect their marketing attitudes. Furthermore, this study aims to profile each of the identified marketing strategic groups in the sheep and goat livestock sector in terms

of farm and farmers characteristics as well as their preferred livestock distribution channels. It also aims to explore the association between the factors that influence the farmers of each strategic group in choosing a particular distribution pattern and their selection of a particular marketing strategy.

2. Methodology

2.1. The Conceptual Model

In this study, a conceptual model aims to place the key concepts outlined in the literature review into an identifiable framework, which is illustrated in the Figure1. In particular it investigates the relationships between aspects of the internal and external environment of the farming businesses and the development of strategic dimensions that may influence the farmers to adopt a specific distribution pattern, as well as to examine the association between the adoption of a specific marketing strategy and a particular marketing outlet.

The research hypotheses that this study examines according to the conceptual model presented below are:

H1: The sheep farmers in the Region of East Macedonia and Thrace (EMTh) in Greece and the County of Cornwall in U.K. can be classified to strategic groups regarding their livestock marketing activities and business orientations respectively.

H2: It is unlikely that the existing generic business or agricultural typologies can describe farming businesses' marketing strategies at the beginning of the third millennium.

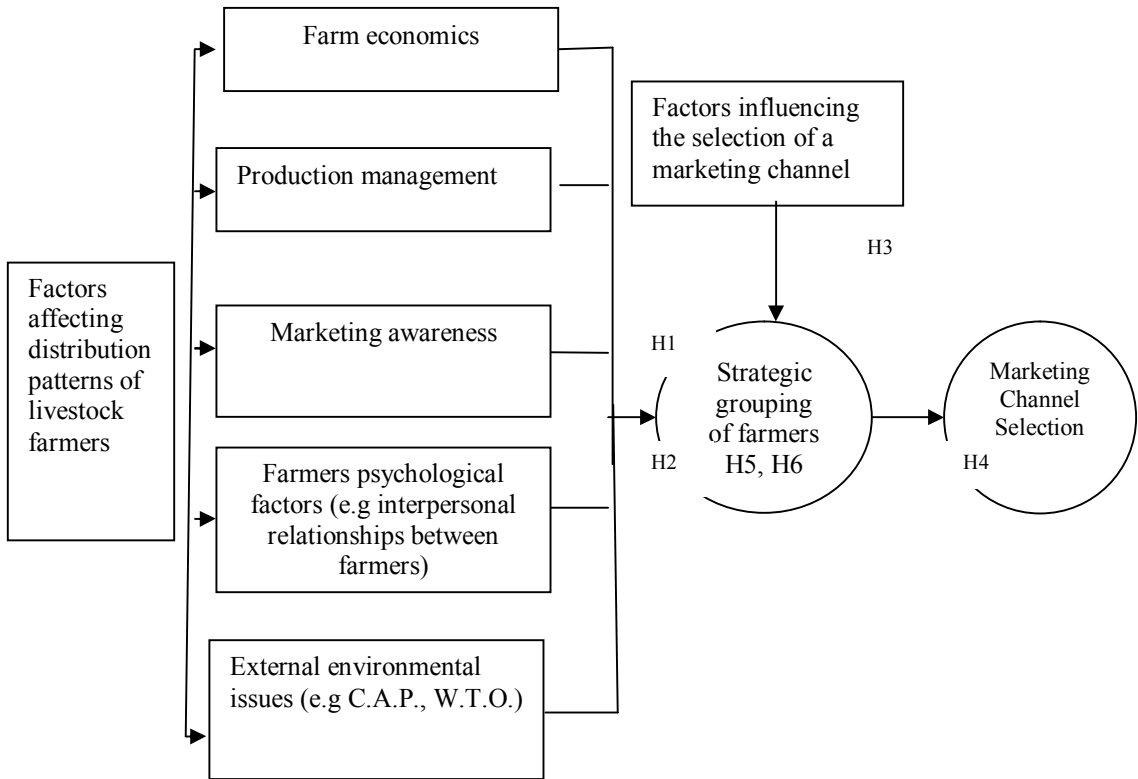
H3: The factors that influence sheep farmers in EMTh and Cornwall in the selection of a particular livestock marketing channel, respectively, are significantly associated with the selection of a specific livestock marketing business strategy.

H4: Marketing strategy selection is significantly associated with distribution channel choice.

H5: The sheep and goat farmers in EMTh follow similar livestock marketing strategies with the sheep farmers in Cornwall.

H6: The sheep and goat farmers in EMTh are influenced by the same factors regarding the selection of a particular marketing strategy with the sheep farmers in Cornwall

Figure.1: The Conceptual Model



2.2. The Area of Study

The Region of East Macedonia and Thrace (EMTh) is an administrative Region and is situated in the North East Part of Greece. The population of EMTh is according to National Statistic Service of Greece (N.S.S.G) 611,067 people (N.S.S.G 2005e) - 5.6% of the total population of the Country. Almost 40% of the population of EMTh is rural and 60% is urban. The primary sector represents about the 29% of the GRP; the manufacturing sector the 32%, and the service sector 39%. The income per capita in the Region of EMTh is about 9,219 euro while the national per capita income is about 11,995 euro (N.S.S.G 2005d). That means that the Region of EMTh is one of the poorest in Greece, and is also characterised by the E.U. as an Objective One Region (as is the whole of Greece).

Cornwall on the other hand, is a rural and maritime county included in the South West Standard Region of England and its whole population is about 501,267 (National Statistics 2005b), only a little smaller than that of EMTh. The GDP per head is £7,614 for Cornwall (four times that of EMTh) while for the whole country

it is £10,711. Compared with the rest of the U.K. it is therefore poor and indeed Cornwall has been designated by the E.U. as Objective One Area.

Both regions are dominated by ruminant livestock production. The sheep and goat sector consists of the most important livestock sector in terms of gross output in the Region of EMTh. In Cornwall the most important livestock sector in terms of gross output is the dairy cow sector followed by the beef sector and sheep sector. Thus, both regions comprise wholly appropriate areas to study the livestock marketing strategies adopted by farmers and to compare each other.

2.3. Survey Method

The researchers undertook a survey of sample farms to gather data necessary to identify the marketing channels that the farmers use in the Region of EMTh and the County of Cornwall as well as to explore the relationship between various variables and their marketing orientations of farm businesses.

For the survey in EMTh, information was gathered through field interviews due to the poor literacy of most sheep and goat farmers in the Region of East Macedonia in Greece. Regarding the study in Cornwall, it was decided to gather information conducting a postal survey as the livestock farmers in U.K. are familiar with this kind of research and their educational level is suitable for the use of this kind of survey method. Furthermore, the postal method was more convenient as the researchers should not have access to the personal protected data of the farmers in any of the possible sample frameworks, such as NFU member lists, DEFRA member lists. Besides, the disadvantages of the postal survey could be reduced by ensuring that the questionnaire was wholly appropriate for the methodology used (e.g. adaptation of McLeay et al.'s (1996) and Davies (2001) approaches) and rigorous (pre –tested and piloted).

A sample frame including information about 6,826 farmers that operate in the Region of EMTh was obtained from the Local Authorities in the Region of EMTh. A random selection of sheep and goat farmers was selected for the sample, due to the fact that the researchers wished to generalize their findings beyond the sample of farms covered by the survey. A stratified random sample was employed, with each prefecture being represented in the same proportion as it appears in the main population (The Region of EMTh consist of the Prefectures of Drama, Kavala, Xanthi, Rhodopi and Evros). This ensured a more efficient estimation of some population characteristics that might exist in each prefecture (e.g. large and small farmers) than available by simply randomly sampling from the population at large (Barnett 1991, Fink 1995).

Regarding the marketing survey in Cornwall the National Farmers Union database of the South West England comprises the sampling frame. Whilst there is some criticism of this kind of sampling frame, such as not all farmers are members and there may be regional variations, Emerson and MacFarlane's (1995) farm survey study indicated that NFU member lists would appear to be the most representative of farm businesses by area of farmland. Furthermore, the problem

with the protection of the sensible personal data information was overcome by sending the questionnaires to the sheep farmers in Cornwall through the NFU South West Office. Additionally, it also provided the opportunity to obtain a meaningful industry support to increase the response rate.

In the NFU lists were registered 266 sheep farmers operating in Cornwall. Due to the fact that in postal surveys the response rates are normally less than 30% and a multivariate statistical analysis would be employed for the development of a strategic typology, it was not possible to exclude any farmers from the survey sample. As the 10% of the registered sheep farmers were used as a sample for conducting the pilot survey, the remaining 240 sheep farmers comprised the sample for the main survey.

The representativeness of the sample in both surveys was checked by comparing the characteristics of the sample with those of the total population following the methodology that Errington (1984) used in his survey. A comparison between the characteristics of the selected sample and those of the total population of the sheep farmers in both study areas is presented in Table 1. Hence, the samples is reasonably representative of the total population of sheep farmers operating in Cornwall and EMTh.

Table 1. Evaluation of the Sample

Characteristics of the sample in EMTh			
	Sample	Region of EMTh	Sample as % of Region EMTh
Number of sheep and goat holdings ¹	343	6826 ¹	5.0%
Sheep livestock population	31295	580451 ²	5.5%
Goat livestock population	27257	491372 ²	5.6%
Average size of sheep farms (heads)	91	90 ²	
Average size of goat farms (heads)	79	79 ²	
Characteristics of the sample Cornwall			
	Sample	County of Cornwall	of Sample as % of County of Cornwall
Number of sheep farms	240	1,809 ³	13%
Number of sheep farmers answered the questionnaire	52	1,809 ³	3%
Sheep livestock population	17,866	5,250,571 ³	3%
Livestock production (heads)	8,058	244,645 ³	3%
Average livestock production per farm (heads)	155	135	

¹ Compiled of Drama Prefectural Authority (2001), Evros Prefectural Authority (2001), Kavala Prefectural Authority (2001), Rhodopi Prefectural Authority (2001), and Xanthi Prefectural Authority (2001),

² N.S.S.G. (2001a)

³ DEFRA (2004)

2.4. Statistical Methodology

Multivariate analysis techniques were used to reveal the key information contained in the responses, and these analyses were applied in three stages. First, principal component analysis (PCA) was used to identify the variables that accounted for the maximum amount of variance within the data in terms of the smallest number of uncorrelated variables (components)⁵. The correlation and anti-image matrix were examined and only 11 of the 25 variables regarding the livestock marketing attitudes of the farmers in EMTh and 10 from the 44 variables (listed in Appendix I) describing the livestock marketing and business attitudes of the sheep farmers in Cornwall, were used for factor analysis⁶. Second, factor analysis was conducted on these remaining 11 variables of the Greek survey and 10 variables of the U.K. survey, in order to reduce them to a smaller number of underlying factors (or dimensions).⁷ Factor analysis enables scores to be calculated for each underlying factor, and these are substituted for the original variables. These factor scores were then subjected to cluster analysis to group farm businesses with similar patterns of scores into similar clusters based on their strategic behaviour.^{8,9} Discriminant analysis was performed to assess how accurately the identified key strategic dimensions that were derived from the factor analysis could predict and discriminate strategic group membership. Finally, bivariate statistical techniques including one-way Friedman Test and chi-square analysis were used to profile each strategic group regarding their marketing channel preference as well as their farm and farmers' characteristics.

⁵ The anti-image correlation matrix was used as well as Bartlett's test of sphericity and measure of sampling adequacy (MSA) in order to check the appropriateness of the data for subsequent factor analysis. The variables that had a high proportion of large absolute values of anti-image correlations as well as MSA less than 0.5 were removed before analysis.

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⁷ An orthogonal rotation (varimax method) was conducted and the standard criteria of eigenvalue = 1, scree test and percentage of variance were used in order to determine the factors in the first rotation (Hair *et al.* 1998, Hair, J. F., Anderson, R. E., Tatham, R. L. and Black, W. C. 1998. *Multivariate data analysis*. Prentice Hall Inc, New Jersey. 730 pp.). Different trial rotations followed where factor interpretability was compared.

⁸ In this study, both hierarchical and non-hierarchical methods were used according to the recommendations of Hair *et al.* (1998) and Punj and Stewart (1983) Punj, G. and Stewart, D. 1983. Cluster analysis in marketing research: Review and suggestions for application. *Journal of Agricultural Economics*, **20**, 134-48. Punj, G. and Stewart, D. 1983. Cluster analysis in marketing research: Review and suggestions for application. *Journal of Agricultural Economics*, **20**, 134-48. in order to develop a typology of the marketing strategies that sheep and goat farmers follow in the Region of EMTh in Greece.

⁹ A non-parametric Kruskal-Wallis one way ANOVA was conducted to validate the cluster solutions by examining if variables not used in cluster analysis differ significantly among the identified clusters.

3. Results

3.1. The Marketing Strategies Sheep Farmers Follow in the Region of EMTH in Greece and the Country of Cornwall in the U.K.

PCA analysis identified three factors which explained the 66% of the total variance in the case of the Greek survey and three factors, which explained the 71.43% of the total variance in the case of the British survey (Table 2). The factors that describe the marketing attitudes of the sheep farmers in the two study areas are represented with their factor loading scores in Table 3. The cut off point used to interpret the factor loading scores in the case of the sheep farmers in EMTh was 0.59, much higher than the 0.35 required according to Hair et al. (1998) for samples of at least 250 observations in order to achieve 0.05 significance level and 80% level of power. Regarding the Cornish farmers, the cut off point for interpretation of loading scores was 0.70 according to Hair et al (1998) and Tabachnick and Fidell (1989) suggestions.

Table 2. Results of Principal Components Analysis of Strategic Variables

Results of PCA regarding the marketing survey in EMTh				
Components	Eigenvalues	% of Variance	Cumulative Variance %	Communalities
1	3.335	30.318	30.318	0.868
2	2.531	23.007	53.325	0.721
3	1.397	12.700	66.025	0.461
4	0.8229	7.537	73.561	0.781
5	0.775	7.046	80.607	0.726
6	0.624	5.676	86.284	0.529
7	0.498	4.532	90.815	0.419
8	0.362	3.290	94.106	0.374
9	0.265	2.412	96.518	0.887
10	0.218	1.980	98.499	0.742
11	0.165	1.501	100.00	0.756

Results of PCA regarding the marketing survey in Cornwall

Components	Eigenvalues	% of Variance	Cumulative Variance %	Communalities
1	4.782	47.817	47.817	0.840
2	1.278	12.784	60.601	0.722
3	1.083	10.832	71.434	0.758
4	0.737	7.365	78.799	0.828
5	0.538	5.384	84.183	0.703
6	0.483	4.825	89.008	0.660
7	0.429	4.291	93.299	0.686
8	0.341	3.407	96.706	0.707
9	0.203	2.033	98.739	0.486
10	0.126	1.261	100.000	0.753

Table 3. The Identified Key Strategic Dimension

KEY STRATEGIC DIMENSIONS OF THE SHEEP FARMERS IN EMTh	Factor Loading
Profit Orientation	
Maximizing profit is my most important farming goal	0.861
When I have finished my livestock I must sell immediately and can not afford to wait for prices to improve	0.854
I have no influence over the price I receive for my meat produce	0.829
Policies of other countries have little influence on my farm profitability relative to meat sector	-0.687
Disease is the major cause of fluctuations on my farm returns	0.593
Production Orientation	
I always set a side a proportion of my production flock to experiment with livestock techniques relative to meat production I am not familiar	0.848
I breed animals which requires special knowledge, equipment or facilities that other farmers do not have	0.836
I maximize meat quality by using special techniques such e.g. artificial insemination	0.660
I adapt my enterprise mix to minimize risk	0.617
Cost focus	
Budgeting and planning to obtain the lowest possible farm costs is the most important management activity I undertake	0.924
I am aware of the exact costs and returns of the meat I produce	0.913
<i>Determinant of Correlation Matrix: 0.008149</i>	
<i>KMO MSA = 0.73</i>	
<i>Bartlett test of Sphericity = 1483.86 <0.001</i>	

Table 3. The Identified Key Strategic Dimension (cont'd)

KEY STRATEGIC DIMENSIONS OF THE SHEEP FARMERS IN CORNWALL	Factor Loading
Production Orientation	
I plan my production decisions by continually monitoring market prices	0.894
I simultaneously plan production and sales decisions	0.810
I continually update the production techniques I use to produce my meat	0.624
I continually monitor market information other than price to plan my sales and production decisions	0.574
Market Orientation	
The Common Agricultural Policy has the most important influence over my farm profitability	0.829
I understand detailed market requirements for the livestock I produce	0.799
I produce livestock which meet market requirements	0.702
Differentiation	
I increase my farm profitability by satisfying the buyers of my produce	0.757
I use special techniques to gain the highest quality premium for my livestock	0.727
I maximize carcass quality by using specialist techniques e.g. artificial insemination	0.683
<i>Determinant of Correlation Matrix: 0.008149</i>	
<i>KMO MSA = 0.73</i>	
<i>Bartlett test of Sphericity = 1483.86 <0.001</i>	

In the next stage, cluster analysis was used to develop a typology of the marketing strategies that sheep farmers adopt in both examined regions (Harrigan 1985; Helsen and Green 1991; Hair et al. 1998; and Siardos 1999). Hierarchical and non-hierarchical clustering methods were used, which identified three clusters of farms/farmers in EMTh and two clusters of farms/farmers in Cornwall, that were named according to the business strategy that the farmers in each group appeared to follow. These are: (a) Cost Focus Strategy, (b) Production Orientation Strategy and (c) Return Focus Strategy in EMTh (Table 4) as well as: (i) Differentiation strategy and (ii) Production Orientation Strategy in Cornwall (Table 5).

Table 4. Characteristics of the Three Clusters from Cluster Analysis

Key Strategic Dimensions	Strategic Groups			P
	Cost Focus	Production Orientation	Return Focus	
Profit Orientation	0.1277^a <i>0.4576</i>	-0.1135^a <i>0.7399</i>	0.3507^b <i>0.61251</i>	0.0001
Production Orientation	-0.4672^a <i>0.2836</i>	1.6731^b <i>0.7152</i>	-0.1752^c <i>0.3983</i>	0.0001
Cost Focus	0.8541^a <i>0.4912</i>	0.2464^b <i>0.7260</i>	-1.0117^c <i>0.4259</i>	0.0001
Number of Businesses (n=289)	135	33	121	

NB: Within rows, means with different superscript differ significantly at $P < 0.05$ (the difference between Group 1 (Cost Focus) and Group 2 (Production Orientation) within the 1st row (Profit Orientation) is significant at $P = 0.07$) according to Tukey's post hoc test. Means are reported in standard text and standard deviations in italics.

In particular, the **cost focused farmers** scored highly on the strategic dimension associated with cost focus (Table 4). They were highly aware of the exact cost of the livestock they produced and very interested in budgeting and planning their production in order to achieve the lowest possible farm cost. They were not so keen on strategic dimensions regarding profit maximization, since these farmers were mostly concerned with reducing their farm cost and not in achieving high sale prices or dealing with financial aspects that would lead to profit making. On the other hand, they were not interested in production orientation strategic issues, presumably because activities relative to increasing livestock quality, experimenting with new livestock production techniques, breeding animals that required special knowledge that would increase the farm cost.

The **production orientated farmers** scored highly on the strategic dimension associated with production orientation (Table 4). They set aside a proportion of their flock in order to experiment with new livestock techniques and they bred animals that required special knowledge and equipment. They were a little bit concerned in the cost focus strategic dimension due to the fact that they preferred to invest more money in production facilities, equipment or genetic material compared to other farmers, aiming in this way to increase their productivity and therefore to reduce their farm cost in the long term. Moreover, they were aiming to improve the quality of the meat they produce and thus to differentiate their farm. On the other hand, they scored negatively in profit orientation as these farmers did not consider profit maximization as their primary farm goal, neither were they interested in external factors which might influence their farm profitability. Probably, these farmers were aiming to increase their returns in long term through the increase of their productivity and the development of a reputation that they produce high quality products.

The **return focused farmers** scored highly on profit orientation strategic dimension (Table 4). They were very much interested in maximizing their profits and tried to sell their livestock immediately because they could not wait for better prices as the quality of their livestock would be reduced. They believed that they were not able to influence the configuration of the prices in which they would sell their produce as they considered that those prices were mostly affected by other external to their farm factors such as Common Agricultural Policy, GATT, or a globalisation of the economy. Hence, they thought that policies of the other countries highly affected their farm profitability. On the other hand, they were not interested in improving the quality of their products, breeding livestock that required special knowledge, equipment and facilities that other farmers in their area did not have; neither were they concerned in budgeting and programming their facilities in order to reduce their farm cost. This may be because these farmers were interested in achieving short term profits rather than structuring their farm operation in order to increase their productivity and to reduce their operational cost in the long term.

Table 5. Characteristics of the Two Clusters from Cluster Analysis

Key Strategic Dimensions	Strategic Groups		P
	Differentiation Strategy	Production Orientation Strategy	
Production Orientation	-0.5334 <i>0.8310</i>	0.6223 <i>0.8102</i>	0.0001
Market Orientation	0.1938 <i>1.1210</i>	-0.2261 <i>0.8019</i>	0.132
Differentiation	0.4770 <i>0.8188</i>	-0.5566 <i>0.9111</i>	0.0001
Number of Businesses (n=52)	28	24	

NB: Means are reported in standard text and standard deviations in italics.

The farmers who preferred the **differentiation strategy** scored highly on the strategic dimension associated with differentiation (Table 5). These farmers were interested in differentiating their farm and moreover increasing their farm profitability by satisfying the buyers of their produce. They also adopted special livestock production techniques in order to achieve the highest quality premium for their livestock. The adoption of this strategy was not significantly associated with the market-orientated strategic dimension that was derived from factor analysis. On the other hand, the farmers who preferred the differentiation strategy were not interest in production orientation strategic issues, presumably because they aimed to improve their farm business competitiveness by differentiating their produce and to increase their profitability by exploiting the added valued of their products instead of targeting to increase their farm's returns by improving the productivity of their enterprise and reducing the production cost.

In contrast, the **production orientated** Cornish farmers scored highly on the strategic dimension associated with production orientation (Table 8). They made their decisions about livestock production by continually monitoring the market prices. The production orientated sheep farmers planned their livestock production and made their sales decisions simultaneously. Thus, they planned their production in order to sell specific volumes of livestock in predetermined periods when the price was expected to be high. These farmers were not interested in differentiating their produce and gaining premium sale prices, presumably because they preferred to increase their farm profitability by increasing their productivity and reducing in that way the production cost per animal. On the other hand, cluster analysis indicated that there was no significant association between the selection of the production orientation strategy and the marketing orientated strategic dimension that was derived from factor analysis.

Quadratic discriminant analysis was employed using Minitab 12 to assess how accurately the factors that were derived from Principal Component Analysis could predict and discriminate strategic group membership of sheep farmers in EMTh, as the equality of variance for each strategic dimension was violated (Hair et al 1997; MINITAB 1997). The summary of the cross validation classification is shown in Table 6. Thus, the three strategic dimensions could accurately predict and discriminate strategic group membership.

Table 6. Summary of Classification with Cross - validation

Actual Classification	Predicted Classification		
	Cost Focus Strategy	Production Orientation Strategy	Return Focus Strategy
Cost Focus Strategy	97	0	3
Production Orientation Strategy	0	11	0
Return Focus Strategy	2	0	64
Total N	99	11	67
N Correct	97	11	64
Proportion of Correct Classification	98.0%	100.0%	95.5%
N=177	N Correct = 172		Proportion Correct = 97.2%

Regarding the survey conducted in Cornwall, a stepwise DA performed using SPSS, in order to assess how accurately they could predict and discriminate strategic group membership. The random split reliability test was employed to evaluate the predictive accuracy of the discriminant model. The predictive validity of the discriminant function was supported by a number of tests that are summarized in Table 7.

Table 7. Classification Results of Overall Discriminant Model

Actual Strategic Group	Number of Businesses	Predicted Group Membership	
		Differentiation strategy	Production orientation strategy
Differentiation strategy	28	28 (100.0%)	0 (0.0%)
Production Orientation Strategy	24	4 (16.7%)	20 (83.3%)
Percentage correctly classified:			
Analysis sample	100.00%		
Hold out sample	84.62%		
Overall sample	92.31%		
Cmax	42.31%		
Cpro	32.65%		
Press Q	52.00		

Conclusively, the results of the discriminant analysis indicated that the three strategic dimensions could accurately predict and discriminate strategic group membership as well as signify the stability of the two cluster solution.

3.2. Marketing Challenge Selection and Marketing Strategies

The sheep and goat farmers in the Region of EMTh in Greece and in the County of Cornwall in U.K. utilise four marketing channels. In particular the sheep farmers in EMTh sell their livestock: (a) direct to retailers, (b) direct to wholesalers, (c) make private use of their livestock and (d) sell to more than one marketing channel (Multi channel selection). On the other hand, the marketing system in Cornwall is quite different. The distribution channels Cornish sheep farmers use are: (i) sales through auction markets, (ii) direct sales to abattoir, (iii) sales to abattoir via Group Marketing Schemes (GMS) and (iv) sales to more than one marketing channel (multi channel). The one-sample chi-square analysis was employed to identify the preferred livestock marketing channel for the farmers adopting each marketing strategy in EMTh and Cornwall. More particularly this study identified that the majority of the farmers in EMTh who adopted each marketing strategy preferred to sell their livestock produce direct to wholesalers whilst the majority of the Cornish farmers who followed each marketing strategy preferred to market their produce to more than one marketing channel (Table 8). The reasons that explain this particular marketing channel preference by each strategic group were investigated through the Friedman one-way non-parametric test. This test was used to identify which factors mostly affect the farmers of each strategic group in their marketing channel choice. The results of the test are summarised in Figures 2 and 3.

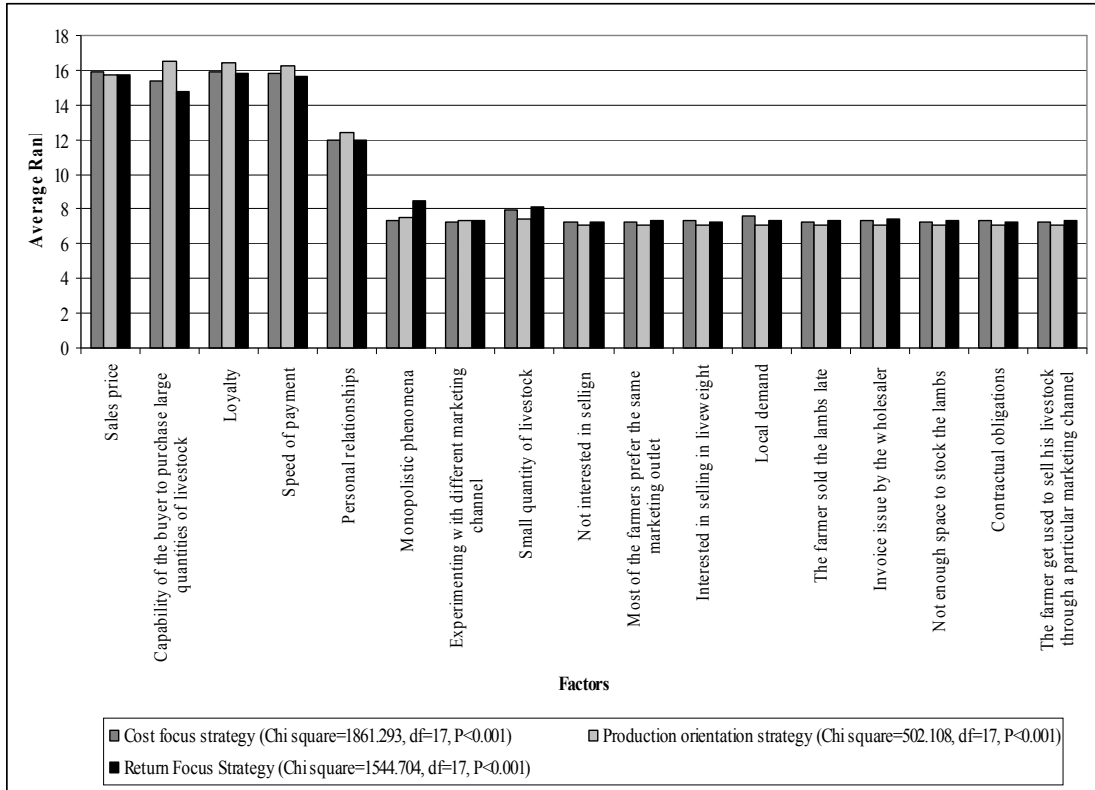
Table 8. The livestock marketing channel utilization by each strategic group in EMTh and Cornwall.

Marketing Channel Selection in EMTh		% of farmers	Standardized residuals
Cost Focus Strategy $x^2=114.630$, df=3, P<0.001	Direct Sales to Retailers	20.7%	n.s
	Direct Sales to Wholesalers	63.7%	8.99 ^c
	Private Use of Livestock	5.2%	-4.60 ^c
	Sales to more than one marketing channel	10.4%	-3.40 ^c
Production Orientation Strategy $x^2=30.152$ df=3, P<0.001	Direct Sales to Retailers	24.2%	n.s
	Direct Sales to Wholesalers	63.6%	4.44 ^c
	Private Use of Livestock	0.0%	-2.87 ^b
	Sales to more than one marketing channel	12.1%	n.s
Return Focus Strategy $x^2=63.893$, df=3, P<0.001	Direct Sales to Retailers	24.8%	n.s
	Direct Sales to Wholesalers	54.5%	6.50 ^c
	Private Use of Livestock	13.2%	-2.59 ^b
	Sales to more than one marketing channel	7.4%	-3.86 ^c
Marketing Channel Selection in Cornwall		% of farmers	Standardized residuals
Differentiation strategy $x^2=15.457$, df=3,P<0.01	Sales through auction markets	7.1%	n.s
	Direct sales to abattoir	39.3%	n.s
	Sales to abattoir via GMS	10.7%	n.s
	Sales to more than one marketing channel	42.9%	2.70 ^a
Production orientation strategy $x^2=9.333$, df=3, P<0.01	Sales through auction markets	8.3%	n.s
	Direct sales to abattoir	16.7%	n.s
	Sales to abattoir via GMS	25.0%	n.s
	Sales to more than one marketing channel	50.0%	2.45 ^a

^aP<0.05, ^bP<0.01 and ^cP<0.001.

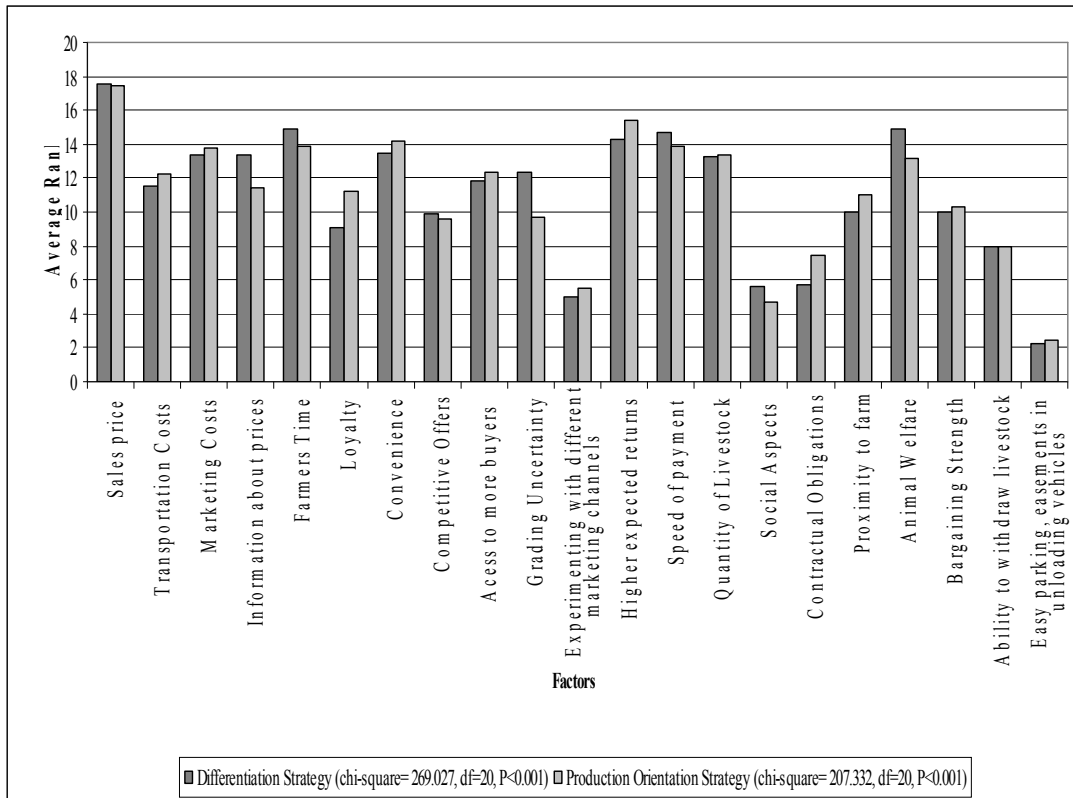
In particular, the farmers operated in EMTh who adopted the cost focus strategy when they have to choose where to sell their produce are more interested than the other two groups in sales price but they are also influenced by other factors as Figure 2 presents including buyer's loyalty and speed of payment. On the other hand, the production orientation farmers are more influenced in their marketing channel selection in comparison with the other two groups by the capability of the buyers to absorb large quantities of livestock, loyalty, speed of payment and personal relationships with their buyers. These farmers are also interested in other factors illustrating in Figure 2 including sale price. The return focused farmers are influenced in their marketing channel choice by their buyer's loyalty, sales price and speed of payment (Figure 2). Moreover, they are more affected in their marketing outlet choice than the other two groups by monopolistic phenomena that may exist in their area as well as by their small volume of livestock production.

Figure 2. The importance of each factor for each strategic group in EMTh regarding marketing channel selection



On the other hand, the farmers operated in Cornwall who adopted the differentiation strategy were mostly influenced in their marketing channel choice by the sale price, animal welfare, time spent, speed of payment and higher expected returns (Figure 3). Besides, the farmers who preferred the production orientation strategy were mostly influenced in their marketing channel selection by sale price, higher expected returns, their convenience, speed of payment, their time and marketing cost.

Figure 3. The importance of each factor for each strategic group in Cornwall regarding marketing channel selection



3.3. Profiling each Strategic Group according to Farm and Farmer's Characteristics

The one-sample chi-square analysis indicated (Table 9) that the farmers who follow each marketing strategy in EMTh have similar profile regarding their farm characteristics. Both the cost focused and return focused farmers had big flocks, allocate the majority of their farm land to their sheep and goat enterprise in order to reduce the feeding cost as well as let a small part of their farm land to other farmers in order to have an additional income. On the other hand most of the return focused farmers are medium scale livestock producers in comparison with the cost focused farmers who are large scale farmers because their main interest was not the increase of the production efficiency but the profit maximization (short term in most cases). For the same reason the majority of them produced less than 10 tonnes sheep and goat milk annually.

The one sample chi-square analysis that was performed to profile each strategic group regarding the farmers' characteristics indicated that the farmers of

the three strategic groups have similar profiles (Table 10). In particular, the return focused farmers contrary to the production orientated farmers whose financial performance was average, had low financial performance compared to the other farmers in their area because they operated opportunistically: they were neither interested in improving the production efficiency of their farm nor in reducing their farm cost. The financial performance of the cost focused farmers as Table 12 presents was not average. Moreover, the production orientated farmers were not members of an agricultural cooperative.

Table 9. Profiling the farmers who adopted each marketing strategy regarding the characteristics of their farms

Farm Characteristics	Cost Focus Strategy			Production Orientation Strategy			Return Focus Strategy		
	χ^2	% farmers	Standardized residuals	χ^2	% farmers	Standardized residuals	χ^2	% farmers	Standardized residuals
Farm size	<5ha, $\chi^2=90.844$, df=2, P<0.001	71.9%	7.75 ^c	<5ha, $\chi^2=19.636$, df=2, P<0.001	69.7%	3.62 ^c	5ha, $\chi^2=99.587$, df=2, P<0.001	76.0%	8.14 ^c
Flock size	>151 heads, $\chi^2=21.733$, df=2, P<0.001	51.9%	3.73 ^c	>151 heads, $\chi^2=6.545$, df=2, P<0.05	51.5%	n.s	>151 heads, $\chi^2=9.736$, df=2, P<0.01	44.6%	2.15 ^a
Volume of livestock production	>151 heads, $\chi^2=7.778$, df=2, P<0.001	44.4%	2.24 ^a	n.s			51-150 heads, $\chi^2=8.446$, df=2, P<0.01	45.5%	2.32 ^a
Volume of milk production	n.s			n.s			<10,000kg, $\chi^2=12.512$, df=2, P<0.001	81.8%	n.s
Farm land owned by the farmer	>61%, $\chi^2=28.881$, df=3, P<0.001	44.4%	4.52 ^c	>61%, $\chi^2=8.818$, df=3, P<0.05	42.4%	2.00 ^a	>61%, $\chi^2=50.603$, df=3, P<0.001	52.1%	5.95 ^c
Farm land rent from other farmers	<30%, $\chi^2=28.644$, df=3, P<0.001	43.7%	4.35 ^c	<30%, $\chi^2=33.061$, df=3, P<0.001	51.5%	3.05 ^b	<30%, $\chi^2=34.438$, df=3, P<0.001	48.8%	5.23 ^c
Farm land let to other farmers	<30%, $\chi^2=157.17$, df=3, P<0.001	65.9%	9.51 ^c	n.s			<30%, $\chi^2=167.430$, df=3, P<0.001	71.9%	10.32 ^c
Farm land allocated to sheep and goat enterprise	>61%, $\chi^2=34.215$, df=3, P<0.001	46.7%	5.03 ^c	n.s			>61%, $\chi^2=21.975$, df=3, P<0.001	41.3%	3.59 ^c

^aP<0.05, ^bP<0.01 and ^cP<0.001.

Table 10: Profiling the farmers who adopted each marketing strategy regarding the characteristics of themselves

Farmer's Characteristics	Cost Focus Strategy			Production Orientation Strategy			Return Focus Strategy		
	x ²	% farmers	Standardized residuals	x ²	% farmers	Standardized residuals	x ²	% farmers	Standardized residuals
Farm related activities	NO, x ² =78.585, df=1, P<0.001	88.1%	6.27^c	NO, x ² =33.000, df=1, P<0.001	100.0%	4.06^c	NO, x ² =113.132, df=1, P<0.001	98.3%	7.52^c
Off-farm activities	NO, x ² =64.067, df=1, P<0.001	84.4%	5.66^c	NO, x ² =22.091, df=1, P<0.001	90.9%	3.32^c	NO, x ² =77.760, df=1, P<0.001	90.1%	6.24^c
Livestock farming experience	>16 years, x ² =53.733, df=2, P<0.001	60.7%	5.52^c	>16 years, x ² =19.918, df=2, P<0.001	69.7%	3.62^c	>16 years, x ² =69.488, df=2, P<0.001	68.6%	6.41^c
Experience in farming decision making	>16 years, x ² =45.733, df=2, P<0.001	59.3%	5.22^c	>16 years, x ² =16.545, df=2, P<0.001	66.7%	3.32^c	>16 years, x ² =63.934, df=2, P<0.001	66.9%	6.41^c
Previous non-farm experience	NO, x ² =25.785, df=1, P<0.001	71.9%	3.59^c	NO, x ² =8.758, df=1, P<0.05	75.8%	2.09^a	NO, x ² =32.802, df=1, P<0.001	76.0%	4.05^c
Debt level	<9%, x ² =258.037, df=2, P<0.001	84.4%	13.81^c	<9%, x ² =85.606, df=3, P<0.001	93.9%	7.92^c	<9%, x ² =281.017, df=3, P<0.001	90.9%	14.50^c
Farm income derived by the sheep and goat enterprise	>50%, x ² =141.111, df=2, P<0.001	81.5%	9.69^c	>50%, x ² =19.818, df=2, P<0.001	69.7%	3.62^c	>50%, x ² =74.248, df=2, P<0.001	70.2%	7.02^c
Financial Performance	Below average, x ² =11.511, df=2, P<0.01	43.0%	n.s	Average, x ² =8.727, df=2, P<0.05	57.6%	2.41^a	Below average, x ² =31.256, df=2, P<0.001	52.9%	3.73^c
Obtained livestock prices	Average, x ² =246.533, df=2, P<0.001	97.0%	12.82^c	Average, x ² =13.636, df=2, P<0.01	63.6%	3.02^b	Average, x ² =155.521, df=2, P<0.001	86.8%	10.18^c
Educational level	Primary, x ² =249.326, df=3, P<0.001	83.7%	13.64^c	Primary, x ² =19.841, df=1, P<0.001	90.9%	7.57^c	Primary, x ² =77.709, df=3, P<0.001	94.2%	15.23^c
Membership in an agricultural cooperative	n.s			NO, x ² =13.364, df=1, P<0.001	81.8%	2.58^b	NO, x ² =6.025, df=1, P<0.05	61.2%	n.s
Holding of responsible position in an agricultural cooperative	NO, x ² =91.267, df=1, P<0.001	91.1%	6.76^c	NO, x ² =33.000, df=1, P<0.001	100.0%	4.06^c	NO, x ² =109.298, df=1, P<0.001	97.5%	18.50^c

Table 10: Profiling the farmers who adopted each marketing strategy regarding the characteristics of themselves (cont'd)

Farmer's Characteristics	Cost Focus Strategy			Production Orientation Strategy			Return Focus Strategy		
	x ²	% farmers	Standardized residuals	x ²	% farmers	Standardized residuals	x ²	% farmers	Standardized residuals
Holding of responsible position in an agricultural organisation	NO, x ² =135.000, df=1, P<0.001	100.0%	8.22 ^c	NO, x ² =33.000, df=1, P<0.001	100.0%	4.06 ^c	NO, x ² =121.000, df=1, P<0.001	100.0%	7.78 ^c
Holding of responsible position in a non-farm business they might own	NO, x ² =108.452, df=1, P<0.001	94.8%	7.36 ^c	NO, x ² =33.000, df=1, P<0.001	100.0%	4.06 ^c	NO, x ² =117.033, df=1, P<0.001	99.2%	7.65 ^c
Holding of responsible position in a non-farm business they did not own	NO, x ² =135.000, df=1, P<0.001	100.0%	8.22 ^c	NO, x ² =33.000, df=1, P<0.001	100.0%	4.06 ^c	NO, x ² =121.000, df=1, P<0.001	100.0%	7.78 ^c

^aP<0.05, ^bP<0.01 and ^cP<0.001.

Regarding the sheep farmers in Cornwall both strategic groups have similar profiles regarding their farm characteristics (Table 11). Most of the farmers who adopted the differentiation strategy farmed between 41 – 80 ha while the production orientated farmers own less than 50 ha of their farm land.

Furthermore, both strategic groups have similar profiles regarding farmers' characteristics (Table 12). On the other hand, the farmers who adopted the differentiation strategy tried to differentiate their farm by satisfying the buyers of their produce and adopting special livestock production techniques (as cluster and factor analysis indicate). Most of these farmers were not involved with farm-related activities away from their farms and derived less than one quarter of their farm income from their sheep enterprise. The production-orientated farmers had long experience in livestock farming, but not any previous non-farm working experience. Moreover, they derived between 25% - 49% of their farm income from their sheep enterprise. As much as it concerned farmers' educational level, the majority of the farmers were highly educated (Higher National Diploma, Bachelor's degree, postgraduate degree).

Table 11. Profile of each strategic group regarding farm characteristics

Farmers Characteristics	Differentiation strategy			Production Orientation Strategy		
	x ²	% farmers	Standardized residuals	x ²	% farmers	Standardized residuals

Farm size	41-80 ha, $x^2=8.857,$ $df=3,$ $P<0.05$	46.4%	2.27^a	n.s		
Farm land owned by the farmer	n.s			<50 ha, $x^2=7.000,$ $df=2,$ $P<0.05$	58.3%	2.12^a
Farm land rent from other farmers	<50 ha, $x^2=34.696,$ $df=2,$ $P<0.001$	85.7%	4.82^c	<50 ha, $x^2=6.750,$ $df=2,$ $P<0.001$	58.3%	2.12 ^a
Farm land rent to other farmers	<50ha, $x^2=56.201,$ $df=2,$ $P<0.001$	100.0%	6.13 ^c	<50ha, $x^2=48.000,$ $df=2,$ $P<0.001$	100.0%	5.66 ^c
Livestock quota leased from other farmers	NO, $x^2=28.000,$ $df=1,$ $P<0.001$	100.0%	3.74 ^c	NO, $x^2=24.000,$ $df=1,$ $P<0.001$	100.0%	3.46 ^c
Livestock quota leased to other farmers	NO, $x^2=17.286,$ $df=1,$ $P<0.001$	89.3%	2.94 ^b	NO, $x^2=24.000,$ $df=1,$ $P<0.001$	100.0%	3.46 ^c

^aP<0.05, ^bP<0.01 and ^cP<0.001

Table 12. Profile of each strategic group regarding farmers' characteristics

Farmers'	Differentiation strategy	Production Orientation Strategy
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Characteristics	χ^2	% farmers	Standardized residuals	χ^2	% farmers	Standardized residuals
Farm related activities	0 days, $\chi^2=16.571$, df=3, P<0.001	57.1%	3.40 ^c	n.s		
Off-farm activities	0 days, $\chi^2=32.857$, df=3, P<0.001	67.9%	4.24 ^c	0 days, $\chi^2=23.000$, df=3, P<0.001	66.7%	4.08^c
Livestock farming experience	n.s			31+years, $\chi^2=9.000$, df=3, P<0.05	50.0%	2.45^a
Holding of responsible position in a marketing cooperative group	NO, $\chi^2=20.571$ df= 1 P<0.001	92.9%	3.21 ^b	NO, $\chi^2=13.500$ df= 1 P<0.001	87.5%	2.60 ^b
Holding of responsible position in an agricultural organization	NO, $\chi^2=17.286$, df= 1 P<0.01	89.3%	2.94 ^b	NO, $\chi^2=10.667$, df= 1 P<0.01	83.3%	2.31 ^a
Holding of responsible position in a non-farm business owned by the farmer	NO, $\chi^2=24.143$, df=1, P<0.001	96.4%	3.47^c	NO, $\chi^2=20.167$, df=1, P<0.001	95.8%	3.18 ^b
Holding of responsible position in a non-farm business owned by the farmer	NO, $\chi^2=24.143$, df=1, P<0.001	96.4%	3.47 ^c	NO, $\chi^2=24.000$, df=1, P<0.001	100.0%	3.46 ^c
Previous non-farm experience	NO, $\chi^2=14.429$ df=1, P<0.001	75.0%	n.s	NO, $\chi^2=22.833$ df=1, P<0.001	95.8%	3.18 ^a
Farm income derived from sheep enterprise	<24%, $\chi^2=12.000$, df=3, P<0.01	50.0%	2.65 ^b	25%-49%, $\chi^2=25.333$, df=3, P<0.001	66.7%	4.08 ^c

Financial performance	Average, $x^2=12.330$, df=2, P<0.001	64.3%	2.85 ^b	Average, $x^2=15.750$, df=2, P<0.001	70.8%	3.18 ^b
Educational level	Higher, $x^2=15.714$, df=3, P<0.01	50.0%	2.65 ^b	National Diploma $x^2=24.333$, df=3, P<0.001	54.2%	2.86 ^b
Distance from marketing channels	1-50 miles $x^2=62.000$, df=2, P<0.001	89.3%	6.80 ^c	1-50 miles $x^2=72.000$, df=3, P<0.001	100.0%	7.35 ^c
Obtained livestock prices	Average, $x^2=18.567$, df=2, P<0.001	71.4%	3.51 ^c	Average, $x^2=13.000$, df=2, P<0.001	58.3%	2.12 ^a
Use of added value activities	NO, $x^2=14.286$, df=1, P<0.001	85.7%	2.02 ^a	NO, $x^2=13.500$ df=1, P<0.001	87.5%	2.60 ^b

^aP<0.05, ^bP<0.01 and ^cP<0.001

4. Discussion

Although many studies have developed typologies and taxonomies regarding the business strategies that enterprises follow; these focus on cost leadership, product or market differentiation, and firm diversification (Porter 1980; Douglass and Rhee 1989; Barker 1989, Kohls and Uhl 1990; Kotler 1994, Feka et al. 1997; and Fearn and Bates 2000). On the other hand, this study identified the livestock marketing strategies farmers follow in the two examined Objective One areas; and which marketing channel is preferred by the farmers who follow a particular strategy and for what reason. Furthermore, this study indicated that farmers even in isolated Objective One regions like EMTh and Cornwall as well as with small farms, who are quite old and have a low level of education like the farmers examined in EMTh, behave and operate like businessmen. They make marketing decisions, follow business strategies, choose distribution outlets as well as analyse conditions and examine factors in order to make their marketing decision.

Additionally, the farmers in the two study areas do not follow similar marketing strategies even though there are some similarities among them. The production-orientated farmers in both areas aim to increase their productivity and therefore to reduce their farm cost in long term base and are very interested in

intensive production methods. Sale prices and speed of payments are two factors that influence the production orientated farmers in both regions to choose a particular marketing channel. Both strategic groups have average financial performance and achieve average livestock prices in the market as well as they have long livestock experience. They are not involved with off-farm activities neither do they have previous non-farm experience. Therefore, farming consists of the only job that they have learned to do. It also is their main source of income. On the other hand, the production orientated farmers in EMTh and Cornwall have many differences regarding their marketing orientation, distribution outlet selection, factors affecting marketing channel utilisation, farm and farmer characteristics as previous analysis indicated.

The remaining sheep farmers in EMTh and Cornwall followed completely different marketing strategies. In particular, the cost-focus strategy and the return-focus strategy followed by the sheep and goat farmers in EMTh have different marketing orientations compared with the differentiation strategy adopted by the Cornish farmers. On the other hand, all the three strategic groups achieve average livestock prices in the market, are not involved with farm related activities away of their farm neither with off-farm activities. Furthermore, they do not have previous non-farm experience. Sale prices and speed of payment are also two factors that affect farmers in EMTh and Cornwall to choose a distribution channel. Moreover, farmers of the three strategic groups are very interested in being informed about livestock and meat prices. They also prefer to be informed by other farmers.

The economic growth of both countries, the impact of the internationalisation of the trade and the globalisation of the economy on E.U. agricultural economy as well as the C.A.P. and W.T.O. agreements are the main factors that affect the sheep farmers in EMTh and Cornwall to reduce their farm costs, adopt intensive production methods and make their production decisions by monitoring market prices. Farmers marketing orientations in both case study regions are also influenced by the European and national legislation mainly on food safety issues.

On the other hand, the differences that exist among the strategic groups in EMTh and Cornwall occur mainly because of the:

- different marketing systems that exist in the two countries and the higher dominance of the British meat retail market by the supermarket chains in comparison with the Greek market,
- different meat consumption preferences in the two countries and the high seasonality of the Greek lamb market,
- larger sheep farms operate in Cornwall in comparison with those in EMTh,
- longer distances of the Cornish farms from their marketing outlets in comparison with those in EMTh,
- importance of the European Carcass classification system in livestock marketing in U.K. while this system is not applicable in Greece,

- higher education that farmers have in Cornwall in comparison with the farmers in EMTh,
- fact that sheep enterprise is more important for the farm income of the farmers in EMTh compared to that of the Cornish farmers.

According to this study, the production-orientated farmers in EMTh have similar profiles (regarding their personal and farm characteristics) with the cost focused and return focused farmers operate in the same region but they have better financial performance. Therefore, this study suggests that the sheep and goat farmers in the Region of EMTh, in order to increase their farm profitability and the sustainability of their livestock enterprise within an intensively competitive environment, should focus on production orientation strategy. Furthermore, a further opportunity for the farmers in order to increase their profits is to add value to their products by processing a part of their produce by themselves and selling either direct to consumers through their own retail outlets or through local retailers. On the other hand, the combined affect of the increased bargaining power of the supermarket chains (which affects negatively the profitability of the traditional butcher shops) is likely to add a further enterprise risk. They can reduce this risk by marketing a part of their livestock production direct to wholesalers.

The marketing strategies that sheep farmers follow in Cornwall, according to the results of this study, have similar profiles regarding the farm and farmers characteristics. Both strategies can contribute to the increase of the profitability and sustainability of the sheep farms in Cornwall by breeding large flocks with highly productive animals. Moreover, they should add value to their products either by processing their produce on their own and selling them through their own retail outlets; or by producing niche market products like organic meat. The sheep farmers, through the use of vertical coordinated relationships may increase their efficiency, gain market advantage, reduce uncertainty, reduce the cost of financing as well as reduce the risk regarding price, quantity, quality of supply and timing of delivery (Featherstone and Sherrick 1992; Davies 2001). On the other hand, the farmers that market their produce to a multi-marketing channel, have more chances to increase their market coverage, they have lower channel costs as well as lower enterprise risk.

The financial cost for receiving bank credits in accordance with the high production cost the farmers face and the low prices in which they have to sell their livestock products, are some main constraints that exist in both case study areas that inhibit in farmers' decisions for making investments in their farm business. On the other hand, livestock farmers within E.U. can be supported from the EAGGF through the measures and programmes of the C.A.P. in order to make investments to enlarge their farm, improve the structure of their livestock holding, modernise their farm buildings and machinery, process and market their livestock products as well as develop niche market meat and dairy products. Hence, the rural stakeholders and policy makers of the local and regional authorities, if they want to support livestock

farming in their area, should include in their master plans actions for the supportiveness of making investments funded by EAGGF in buildings, machinery, equipment and livestock in order to support Rural Development. They should also design actions that will aim to keep young people stay and working in rural areas and farming sectors. In particular they should develop funding programmes that will support productive investments to create and safeguard sustainable jobs, investment in infrastructure and the development of endogenous potential by measures that encourage and support local development, employment initiatives and the activities of small and medium sized enterprises

Conclusively, the six mentioned research hypothesis have been verified. In particular,

- The sheep farmers in the Region of East Macedonia and Thrace (EMTh) in Greece and the County of Cornwall in U.K. can be classified to strategic groups regarding their livestock marketing activities and business orientations respectively.
- The farm and farmer characteristics do have significant impact to the selection of a particular livestock marketing strategy by the sheep farmers in EMTh and Cornwall.
- The factors that influence sheep farmers in EMTh and Cornwall to the selection of a particular livestock marketing channel respectively are significantly associated with the selection of a specific livestock marketing business strategy.
- Marketing strategy selection is significantly associated with distribution channel choice.
- The sheep and goat farmers in EMTh follow similar livestock marketing strategies with the sheep farmers in Cornwall.
- The sheep and goat farmers in EMTh are influenced by the same factors regarding the selection of a particular marketing strategy with the sheep farmers in Cornwall.

References

1. Barker, J. 1989. *Agricultural marketing*. Oxford University Press, Oxford. 1-199 pp.
2. Barnett, V. 1991. *Sample survey, principles and methods*. Edward Arnold, Kent. 1-173 pp.
3. Davies, B. 1999. Farm groups and red meat marketing - a survey of retail and marketing group members. Agricultural Economic Unit, University of Exeter, Exeter. 1-66 pp.
4. Davies, D. 2001. An investigation into the factors determining ruminant livestock distribution in the far south west. Unpublished PhD Thesis, University of Plymouth.
5. DEFRA 2004. Holdings and areas/ numbers for landuse/crops/livestock/labour - from the June 2002 census.
http://farmstats.defra.gov.uk/cs/farmstats_data/DATA/nuts_data/nuts_query_results.asp, 17/1/2004.

6. Douglas, S. and Rhee, D. K. 1989. Examining generic competitive strategic types in u.S. And european markets. *Journal of International Business Studies*, Fall, 437-463.
7. Drama Prefectural Authority 2001. Personal communication.
8. Emerson, H. and McFarland, R. 1995. Comparative bias between sampling frames for farm surveys. *Journal of Agricultural Economics*, 46, 241-251.
9. Errington, A. 1984. Delegation on farms: An examination of organisation structure and managerial control on farms in the vale of the white horse. Unpublished PhD thesis, University of Reading.
10. Evros Prefectural Authority 2001. Personal communication.
11. Fearn, A. and Bates, S. 2000. Co-operative milk marketing. Imperial College at Wye, University of London, London. 119 pp.
12. Featherstone, A. and Sherrick, B. 1992. Financing vertically coordinated agricultural firms. *American Journal of Agricultural Economics*, 74, 1232-1237.
13. Feka, V., Xouris, D. and Tsiotras, G. 1997. Mapping strategic groups: An international example. *Journal of Business & Industrial Marketing*, 12, 66-73.
14. Fifield, P. 1992. Marketing strategy. Butterworth-Heinemann, Oxford. 1-259 pp.
15. Fink, A. 1995a. *How to sample in surveys*. Sage Publications, Thousand Oaks. 1-71 pp.
16. Hair, J. F., Anderson, R. E., Tatham, R. L. and Black, W. C. 1998. *Multivariate data analysis*. Prentice Hall Inc, New Jersey. 730 pp.
17. Hobbs, J. E. 1996a. A transaction cost approach to supply chain management. *Supply Chain Management*, 1, 15-27.
18. Hobbs, J. E. 1996c. Transaction costs and slaughter cattle procurement: Processors' selection of supply channels. *Agribusiness*, 12, 509 - 523.
19. Hobbs, J. E. 1997. Producers attitudes towards marketing channels for finished cattle. *Farm Management*, 9, (11) 566-579.
20. Kavala Prefectural Authority 2001. Personal communication.
21. Kohls, R. L. and Uhl, J. N. 1990. *Marketing of agricultural products*. Maxwell Macmillan. 1-423 pp.
22. Kotler, P. 1994. *Marketing management - analysis, planning, implementation, and control*. Prentice-Hall Inc, Englewood Cliffs. 1-801 pp.
23. McLeay, F., Martin, S. and Zwart, T. 1996. Farm business marketing behaviour and strategic groups in agriculture. *Agribusiness*, 12, 339-351.
24. MINITAB 1997. Minitab statistical software. User's guide 2: Data analysis and tools.
25. Morrison, D. 1969. On the interpretation of discriminant analysis. *Journal of Marketing Research*, 6, (May 1969) 156-163.
26. N.S.S.G 2001. Statistical yearbook of greece.
27. Ohlmer, B., Olson, K. and Brehmer, B. 1998. Understanding farmers' decision making processes and improving managerial assistance. *Agricultural Economics*, 18, 273-290.
28. Porter, M. 1980. *Competitive strategy - techniques for analyzing industries and competitors*. Free Press, New York. 1-336 pp.
29. Punj, G. and Stewart, D. 1983. Cluster analysis in marketing research: Review and suggestions for application. *Journal of Agricultural Economics*, 20, 134-48.
30. Rhodopi Prefectural Authority 2001. Personal communication.
31. Ritson, C. 1997. Marketing, agriculture and economics: Presidential address. *Journal of Agricultural Economics*, 48, 279-299.
32. Royer, J. S. 1995. Industry note - potential for cooperative involvement in vertical coordination and value - added activities. *Agribusiness*, 11, 473-481.
33. Tabachnick, B. G. and Fidell, L. S. 1989. *Using multivariate statistics*. Harper Collins, New York. 748 pp.
34. Warren, M. 1989. Farming change in devon and cornwall: The implications for training and advice. Politechnic South West, Seale Hayne Faculty of Agriculture, Food and Land Use, Newton Abbot. 55 pp.

35. Wind, Y. and Robertson, T. S. 1983. Marketing strategy: New directions for theory and research. *Journal of Marketing*, 47, (Spring 1983) 12-25.
36. Xanthi Prefectural Authority 2001. Personal communication.

