Tourists' attitudes and opinions on the features of coastal agritourisms – the case of Istria County, Croatia

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Jel classification: Q180, O180

Abstract

The aim of this paper is to review the recent trends of potential demand for rural tourism in Istria County, considering the socio-economic and demographic features of tourists staying in the hotels of this region. The characteristics of the niche market are outlined based on a market research which was conducted using probit (and logit) regressions and cluster analysis. The results of the logit model estimation pointed out that preference for organic food consumption was an important factor determining demand for rural tourism as well as a higher income of the respondents. The view of this model is supported by wealthy respondents who prefer the consumption of organic food and rural tourism and form, therefore, an independent and self-sustaining cluster. Consequently, it would be appropriate to further promote or at least strongly recommend a rural tourism policy integrating organic farming and high quality products in the rural environment in order to attract wealthier tourists.

Key words*:* rural tourism, organic food, probit and logit regression, cluster analysis, survey, Istria County.

Résumé

L'objectif de ce travail est de passer en revue l'évolution récente de la demande potentielle de tourisme rural en Istrie, en considérant les caractéristiques socio-économiques et démographiques des touristes séjournant dans les hôtels de la région. Les caractéristiques du marché de niche sont décrites sur la base des résultats d'une étude de marché qui a été réalisée en utilisant des modèles de régression probit (et logit) et une analyse par grappes. Les résultats de l'estimation du modèle logit ont mis en évidence que la préférence pour la consommation d'aliments biologiques est un facteur déterminant pour la demande de tourisme rural, associé à un revenu plus élevé des personnes interrogées. Les indications de ce modèle sont confirmées par les touristes riches qui préfèrent la consommation d'aliments biologiques et le tourisme rural et forment, de cette façon, un groupe indépendant et autonome. En définitive, il serait nécessaire de promouvoir ou, du moins, de recommander une politique pour le tourisme rural intégrant l'agriculture biologique et des produits de haute qualité en milieu rural afin d'attirer des touristes plus riches.

Mots-clés: *tourisme rural, aliments biologiques, régression probit et logit, analyse par grappes, enquête, région d'Istrie.*

1. Introduction

The development of a new product entails different stages but it always starts from an idea about a product and results in its launch on the market. Several authors suggest a number of steps to be taken in the product developing process. By way of example, Cooper (2001) suggests that after every step, an analysis through control gates should be preformed and he indicates a 13-step process. At a certain stage of their life cycle, the already existing products should be further developed and renewed. It is also possible to position an already existing product into a new market.

In this case the product is actually a service or a range of activities, usually services known under the name of rural tourism. Rural tourism is a selective form of tourism, already available on the market, and directed at a specific segment of tourists who are generally attracted by spending their vacation in the rural environment. The expansion of rural tourism is a trend that is common to most countries in Europe (Cánoves *et al*., 2004). There are many works on the evolution of rural tourism in Spain (Cánoves *et al*., 2004), tourism diversification through the development of rural tourism in Cyprus (Sharpley, 2002), which examine the development of rural areas related to the promotion of rural tourism. This form of tourism already exists in Croatia, as well as in Istria County, but the number of rural tourists is very limited compared to coastal tourists. It is estimated that in Croatia rural tourism represents about 5% of the total tourist flow (Meler and Horvat, 2007). Unlike Italy (Paulina, Dettori and Paba, 2006), in Croatia the legislation governing rural tourism is not very well defined and this can be considered a serious problem. The most common form of rural tourism is agritourism although it is still underdeveloped due to many reasons. According to the results of a research on the use of EU funds for rural development (Svržnjak *et al*., 2007), conducted in two Croatian counties, involving different experts and stakeholders, the reasons behind the underdevelopment of rural tourism are inadequate information, lack of help to collect and prepare the necessary documentation, inexperience and unavailability of funds etc. Another research on the development of agritourism clusters (Štefanec, Gašparlin and Razum, 2007) showed that, in order to improve the image of a region as an agritourism destination, some actions are required and more importantly, it is necessary to set the quality parameters and define the quality management, but there also other determining factors (Rajko, Tomčić and Juraković, 2007) like

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natural and cultural beauties, infrastructure, sufficient and adequate labour offer, education of local population concerning rural tourism etc. However, unfortunately they are not properly enhanced. An excellent solution to develop different forms of rural tourism would be the offer of excursions to coastal tourists. Tourists visiting costal areas represented over 90% of the total tourist arrivals in Istria County in 2008 (Istria Tourist Board, 2009); hence by offering different forms of rural tourism to this segment of tourists, it is possible to achieve a diversification of tourist destinations in Istria County, to supply additional services, to unburden the Istrian coast and to stimulate the development of rural Istria. Rural tourism as a «product» of tourist destination already exists in Istria County, but in this paper we shall discuss the possibility of launching this «product» on a different market i.e. the market of coastal tourists.

One interesting and relatively new trend which could be supported more as a part of the Istrian tourism offer is organic food. By adding organic food to the Istrian tourism offer, it would be possible to achieve the segmentation of gastronomy and penetrate different niches of the tourism market. Organic food shows an upward trend on the markets of the advanced countries. In recent years, these markets have developed a particular interest in these products.

The consumption of organic food and beverages is concentrated in Europe and the United States, but the production of certified organic products is scattered worldwide (Greene, 2008). More than 77 million acres of farmland were managed organically by farms in 119 countries during 2005 and 2006, with Australia taking the lead; China, came in second place; and Argentina, in third place (Greene, 2008). Of the European countries, Italy, Germany, Spain, France, Austria, Greece, Ukraine, and the Czech Republic are particularly engaged in organic farming. At present organic agriculture does not allow the mass production of organic food, and this is one of the reasons explaining the higher prices of organic products compared to conventional agricultural products, which means that organic food is not available to a broader circle of consumers.

The production of organic products in Croatia, Istria County included, is still in its infancy and, accordingly, the market of organic products has to be further developed. The major constraints to the development of organic agriculture in Istria County, as well as in other Croatian counties, are: the fragmentation of the farmland that took place from the middle of the nineteenth to the middle of the twentieth century (Kušen, 2003); the considerable differences in yields compared with conventional farming of particular crops; a narrow range of possible protective chemicals to use, and the fact that producers are poorly informed about the possible ways of protecting crops. Up till now many papers have been published in Croatia in the field of organic production, and they have focused, for example, on the interdependence of organic production and tourism (Kušen, 2002), organic farming as a means of enriching the tourism offering (Ban *et al*., 2004), the marketing mix for organic food in Eastern Croatia (Tolušić *et al*., 2002), the ways in which the farmers' experience can be transferred to organic farming (Cifrić, 2003), the possibility of distributing organic food on the Istrian tourism market from the restaurants' point of view (Težak *et al*., 2008).

Combining rural tourism with organic food and offering this «new product» to tourists staying in costal areas would be a step forward trying to diversify tourist destinations. This paper briefly reviews the survey dedicated to recent preferences towards rural tourism in Istria County and tries to explore the current trends based on the descriptive statistics and on model building. These trends of rural orientation of potential tourists are evaluated by probit/logit regression and cluster analysis. Consequently this paper intends to characterize the trends of future demand for rural tourism and evaluate the significance of trying rural life for representative groups of hotel tourists in Istria County. Finally, by summarizing the results of these analyses, the implications for future marketing policies in promoting the core features of this relatively new form of selective tourism, as rural tourism, will be easily highlighted.

2. Methodology

2.1. Data source and samples

In order to strengthen the comparative concurrent possibilities of Istria county as a tourist destination in the framework of the scientific project «Valorisation of selective forms of tourism in sustainable development of rural spaces», a survey was conducted in July and August 2007 by the Institute of Agriculture and Tourism, Tourism Department, that demonstrated how interested tourists are in consuming organic food during their stay in Istria County. The survey data served as a starting point for a study entitled «Market Opportunities for Developing Organic Agriculture in Istria County» carried out in 2008.

The survey was focused on tourists visiting the coastal area of Istria County and a total of 413 questionnaires were collected (according to the Croatian Bureau of Statistics, http://www.dzs.hr, the total number of tourists in August and September 2008 in the surveyed sites was 559,014, with a 95% confidence level, a 50% response distribution and a margin of error of 4.82%).

The questionnaire included 16 questions divided into three groups. The first group of questions concerned the purchase of organic food by tourists in their home country. The second group of questions focused on the stay of tourists in Istria County and the tourists' interest in buying and consuming organic food during their stay in Istria County. Additional questions about the interest in spending summer holidays in rural Istria County were posed to the tourists. The last group of questions related to demography: country of origin, age, gender, education, profession, income and media used in gathering information about Istria County.

The research was conducted in August and September in six Istrian towns according to the following pattern: Umag

51.00%, Poreč 12.31%, Rovinj 17.62%, Pula/Medulin 8.92% and Rabac 10.15%. The national structure of the respondents is the following: Austria 13.54%, Great Britain 12.00%, Italy 15.54%, Germany 14.46%, Russia 28.92% and other 13.08%. The sample was stratified based on the accommodation category, so high-category facilities, i.e., three star-hotels and higher and four-star villas were selected. In order to prepare a sufficient number of questionnaires per national structure of the respondents and per visited facility, data on tourist arrivals were collected from the contacted hotels. The questionnaire was provided in the following languages: English, German, Italian, Russian, Slovenian and Croatian. The research was conducted in 18 facilities based on the following structure pattern: three-star hotels, 35%; four-star hotels, 63%; and high category villas, 2%. Hotels were visited on dates previously agreed upon with the hotel management. The guests were given the questionnaires and were asked to fill them out and hand them to the researchers. Tourists were explained the purpose of the questionnaires and were told that the questionnaires were anonymous. People aged less than 16 were excluded from the research. A convenient sample was used.

2.2. Logit/probit regression model

The primary objective of this analysis is to explore the rural tourism potential demand in Istria County. Due to data limitations, many aspects of rural tourism demand cannot be analyzed, for example what would lead to the decision to spend a vacation in a rural area, but the hypothesis is that there could be a significant co-morbidity among the wish to try a rural tourism vacation and organic food consumption. This data analysis is a fine prelude to answer a broader question on the economics of tourism development, and this is also a unique way of diversifying the tourism offer. This study is particularly aimed at a preliminary exploration of the interest in trying rural tourism. Therefore the analysis has been divided into two parts.

Using data regarding 413 individuals in working age and active in their country, who reside outside Croatia and have spent their summer vacation in one of Istria's hotels located in the coastal area, the probability of expressing the interest in spending a vacation in a bucolic country landscape is estimated. The main focus of this paper is represented by the factors that influence or not the respondents' wish to change their current habits as typical tourists stereotypically attracted by the Croatian sea and sun, and to try one or other forms of rural tourism. The outcome variable has only two possible values: interest or lack of interest in experiencing rural tourism. Some factors e.g. the income level, the preference for organic food consumption, are positively related to the outcome response, but strong intuition about whether the respondent's age, sex or profession have an affirmative or rejecting impact on the outcome has not been formed.

Since the outcome variable is binary, a model that handles this feature correctly needs to be used. A Logit (and Probit enforced by the Bayesian Probit regression specification), which is expressed as the odds ratio in favour of being tourist in a rural region some day or somehow is employed. The dependent variable is the likelihood of one's preference to spend the vacation in a rural area and the independent variables are the preference for organic food consumption, gender, age, profession, education and income level. The model is presented below.

A logit/probit regression consists in the application of the following model to a survey dataset. Since the response to the survey question on the willingness to taste rural tourism could be only yes or no, as a series of binomial results, the probability is assumed to follow a binomial distribution. So, this model assumes that Y is a binary outcome variable relating to rural tourism, and X is a vector of regressors consisting of seven external variables obtained by the census of 413 responders, giving a consistent response to all questions: – FOODi denotes the habit to consume organic food (1 if the answer is affirmative, 0 if opposite), SEXi denotes the gender (1 if male, 0 if female), AGEi denotes the age in years, EDi denotes the education level, PROFi denotes the profession, and INCi denotes the earning capacity or income level of respondents. Our logit/probit model assumes that

$$P(Y = 1|\mathrm{X} = x) = \Phi(x'\beta)$$

where Φ is the cumulative distribution function of the standard normal distribution. The parameters β, as an impact measure of a particularly repressor according to the survey, are estimated by maximum probability.

The logit/probit model can be generated by a simple latent variable model. It is supposed that tasting the flavour of rural tourism is determined by

$$Y^* = x'\beta + \varepsilon,$$

where $\varepsilon|x \approx N(0, 1)$, and assume that Y is an indicator of whether the latent variable Y * (rural tourism) is positive:

$$Y = 1_{(Y^*>0)} = \begin{cases} 1 & if \quad Y^*>0 \\ 0 & otherwise \quad no \end{cases},$$

Then it should be showed that if pi = P(Yi = 1) denotes the probability the i*th* respondent wishes to taste rural tourism depends on

$$P(Y = 1|X = x) = \Phi(x'\beta)$$

2.3. Cluster Analysis methodology

There are many analytical techniques which define the potential market niche. In this part of the paper we shall apply one of the most common techniques: the cluster analysis. In cluster analysis the basic philosophy is to find a number of positive respondent tourists regarding their whish to consume rural tourism who, considering some sets of characteristics (sex, age, profession, income, preference for organic-food etc.), prove to be similar within groups but different among groups.

The joining or tree clustering method uses the dissimilarities or distances between objects when forming the clusters. These distances can be based on a single dimension or on multiple dimensions. For example, if we were to cluster the potential demand for rural tourism, we could take into account the number of affirmative respondents they contain, their age, sex and other variables included as mentioned before. The most straightforward way of computing distances between objects in a multi-dimensional space is to compute Euclidean distances. If we had a two- or three-dimensional space, this measure would be the actual geometric distance between objects in space (that is to say as if measured with a ruler). However, the joining algorithm does not «care» about whether the distances that are «fed» are actual real distances, or another derived measure of distance that is more meaningful to the researcher; and it is up to the researcher to select the right method for a specific application. The aim of cluster analysis is to compute various types of distance measures, or a matrix of distances, which form a tree diagram.

Euclidean distance is probably the most commonly chosen type of distance. It is simply the geometric distance in the multidimensional space. It is computed as:

$$\left\{\sum_{i=1}^{n}(x_i - y_i)^2\right\}^{1/2}$$

Matching those who give similar responses to the questions asked forms clusters of potential demand for rural tourism.

3. Results and discussion

3.1. Sample description

Table 1 summarizes the main characteristics of rural tourism and tourist preferences for organic food as well as other demographic issues relating to the sample obtained in Istria County and from the variable batch of the tourists' countries of origin which represent very well, in statistic terms, the general features and tendency of the tourists' demand.

Table 1 indicates the low percentage of respondents (26%) who wish to taste rural tourism. About 76% of the total respondents prefer organic food. Males are slightly underrepresented (44%).

Most respondents are young or middle-aged, between 35 and 44 years, and have at least a college or a faculty degree. Most of those who are employed are white-collar clerks.

3.2. Empirical findings

In the second part of this analysis, a logit model is estimated while in the third part a Bayesian fitting of a probit regression model is performed, to validate the final results of the initial general model which will be reduced to a specific strategy command.

The model estimated by logit, probit, and the Bayesian probit regression use the same explanatory variables, which are defined in Table 1. The first model is presented below.

P(RUR)i = β1 + β 2FOODi + β 3SEXi + β 4AGEi + β 5EDi + β 6PROFi + β 7INCi + ui where the i subscript stands for the interviewed individual tourist respondent, while other variables are defined as indicated earlier.

Table 1 – *Descriptive statistics for rural tourism preferences in Istria County.*

	Description	Sample Means,	Sample Standard Deviation
	Endogenous Variable		
RUR (Wish to try rural tourism…?)	1 = yes (110) 0 = no (303)	0.26	0.44
	Explanatory Variable		
FOOD *(Interest in organic food consumption…?)*	1 = yes (314) 0 = no (99)	0.76	0.43
SEX	1 = male (178) 0 = female (235)	0.44	0.49
AGE *(What is your age?)*	1-5	3.37	1.17
ED *(What was the last grade of school you completed?)*	2-5	3.76	0.78
PROF *(What is your job-profession?)*	1-8	3.62	2.28
INC *(What is your total household income before taxes, from all sources?)*	Up to 500 € - 1, Up to 1.000 € - 2, Up to 2.000 € - 3, Up to 5.000 € – 4, Over 5.000 € -5	3.19	1.03

The coefficient table (Table 2) estimated by probit regression shows that only food and INC are statistically significant with a 5% significance level while other variables are not statistically significant. This is confirmed by the logit analysis, which gives results similar to the probit regression. Since none of the demographic coefficients besides food and income earning is significantly different from zero according to a general strategy, insignificant repressors would be left out and a more specific model will be applied. In the more specific model only income remains significant as a determinant of choice in deciding to perform some kind of rural tourism. The average marginal effects in a probit /logit regression model vary with each repressor (food or income independent) according to the results given in Table 3.

The results indicate that the marginal effect of preferences to consume organic food on the wish to taste rural tourism is lower in absolute size than in the case of income repressor.

The remaining significant coefficients will be analyzed in detail and interpreted as odds-ratios. Now it can be said that for a one unit increase in INCi, the odds of being interested in rural tourism vs. not being interested increased by a 0.12 or 0.21 factor, probit or logit, respectively, with confidence intervals around the odds ratios as given in Table 2. Since INCi increases by a single unit, a one-unit increase is rea-

Table 2 – *Probability of deciding to try rural tourism using Probit & Logit Maximum Likelihood Estimation.*

	Probit (unrestricted)	Probit (restricted)	Logit (unrestricted)	Logit (restricted)
Regressors				
Constant	-0.94337 *	-1.00731	-1.54406 *	-1.6729
	(-2.077)	-(4.513)	-2.019	-4.376
FOOD	**0.08239 ** **	0.07944	**0.14408 ** **	0.1375
	(1.721)	(0.505)	**1.738**	0.517
SEX	0.13464		0.22940	
	(0.952)		0.968	
AGE	-0.04343		-0.07453	
	(-0.761)		-0.775	
ED	- 0.02720		- 0.04529	
	(-0.247)		- 0.251	
PROF	0.02164		0.03830	
	(0.945)		0.9	
INC	**0.12617 ** **	0.12468 **	**0.21327 ** **	0.2137 **
	(1.751)	(1.900)	**1.747**	1.921
Sample size				
Goodness of fit	Null deviance: 478.74 on 412 degrees of freedom Residual deviance: 472.64 on 406 degrees of freedom	Null deviance: 478.74 on 412 degrees of freedom Residual deviance: 474.91 on 410 degrees of freedom	Null deviance: 478.74 on 412 degrees of freedom Residual deviance: 472.61 on 406 degrees of freedom	Null deviance: 478.74 on 412 degrees of freedom Residual deviance: 474.85 on 410 degrees of freedom
Pseudo-R2	0.18	0.13	0.19	0.14

Note: (z-value in parentheses); * significant at 1% level of significance; ** significant at 5% level of significance.

Table 3 – *Marginal effects of regressors on rural tourism decision Marginal effects.*

	Probit	Logit
Constant	-0.328	-0.395
FOOD	0.025	0.032
INC	0.041	0.051

sonably an approximation when the transition from strata of relatively poorer to more well-off respondents is observed. A similar conclusion on food repressors due to the dummy nature cannot be drawn, but it can be recognised that theoretically organic food preference is positively related to the wish for trying rural tourism.

The specific (or reduced) logit/probit models have a 3893 (3831) chi-square with a p-value of less than 0.071 (0.073) in a log-likelihood test (the residual deviance is -2*log likelihood) and this shows that the reduced model as a whole fits significantly better than an empty model. The model's log likelihood is -237.4537 or -237.4233 (df=3) in the reduced logit or probit model, respectively. However due to very low pseudo R^2 for the models fitted to the reduced models, which is often the case in cross–sectional data, there should be an alert in further analysis not to categorically stress these findings.

3.3. Predicted Probabilities to Interpret Regression Results

Since odds ratios in the logit/probit version are hard to interpret, predicted probabilities would also be used, which are easier to understand than the coefficients or odds ratios. Predicted probabilities for rural tourism are computed for both continuous predictor variables: food and income.

The predicted probability of deciding to experience rural tourism (Table 4) is 0.27 if organic food consumption is envisaged (food = 1) and slightly lower, 0.24, if organic food consumption is not envisaged (food = 0), while INCi is held constant at its mean value (about 3.19).

According to the results presented in Table 5, where the first column gives the food values and the second column the predicted probability based on the value of RURi with FOODi and INCi held at their means, it can be suggested that the predicted probability of getting interested in rural tourism is only 0.17 if one's INCi strata is 1, or the lowest income revenue, and it increases up to 0.38 if one's INCi is located in 5^{th} class, or the highest income, while food is held constant at its mean value of about 0.27. This clearly shows how the rural tourism interest probability increases as the income increases, thus indicating that rural tourism offering should be directed towards tourists with a higher income.

Table 4 – *The predicted probability of deciding to experience rural tourism (income held at mean).*

INC (mean)	food	food predicted
3.19	0	0.27
3.19	1	0.24

Table 5 – *The predicted probability of deciding to experience rural tourism (organic food held at mean).*

Food (mean)	income	income predicted
0.26	1	0.17
0.26	2	0.21
0.26	3	0.24
0.26	4	0.29

Since both food and income variables appear to be significant in this specific rural tourism model, a simulated posterior sample of probabilities was computed, using the Bayesian probit model (Albert, J., 2007), for the following covariate sets: a) probabilities of trying rural tourism for persons who consume organic food and are located in particular strata of standard of living according to wages in interval from 1 through 5; and b) otherwise, for persons without strong preferences for organic food and with income tags as before.

Figure 1 represents these results graphically; for each income, the particular dot indicates the location of the median of the rural tourism probability and the interval between the dashed lines corresponds to an interval estimate of this probability.

In case a) it is obvious that the probability interval for the decision to try rural tourism is increasing as the income of the sample respondents grows; from a 10% interval, in the case of the lowest income to an interval of over 60%, the probabilities for people with the highest income are estimated. The economic literature suggests that as the income increase gets higher, quality products are required at a growing rate. Following this logic, the collateral analysis of this part of the study demonstrates that rural tourism can be considered superior to the so- called stationary costal tourism with respect to its quality. However, there is no true evidence, comparing the quality, of what is offered by these different forms of tourism (rural). Therefore we conclude that as a 'relatively rare good', rural tourism attracts the wealthier classes of tourists. This may be due to the fact that the wealthier classes of tourists are more interested in the various advantages offered by rural tourism, including the availability of organic food. While preparing a strategy to develop rural tourism, it will be necessary to enhance the specific factors of sustainable development. Rural tourism has to be considered as a vital element in rural economies. In Istria County rural space is undeveloped and, accordingly, relatively not polluted. It is quite obvious that tourists attracted by the consumption of organic food and willing to visit rural areas are attracted by this kind of offer, mainly due to their interest in the environment. Hence it is important to preserve rural areas.

On the other hand, respondents who are not attracted by eating organic food in case b) give opposite results; the decision to experience some kind of rural tourism decreases slightly in terms of probability rate as respon-

Figure 1 – *The Probabilities of Rural Tourism for Tourists who Consume Organic food.*

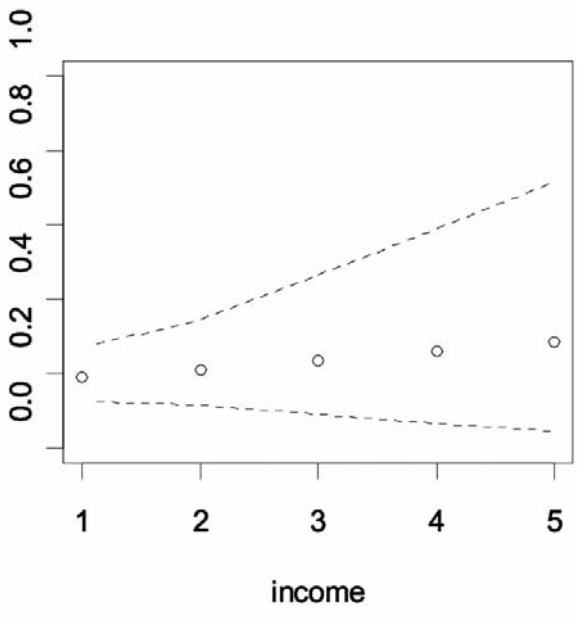
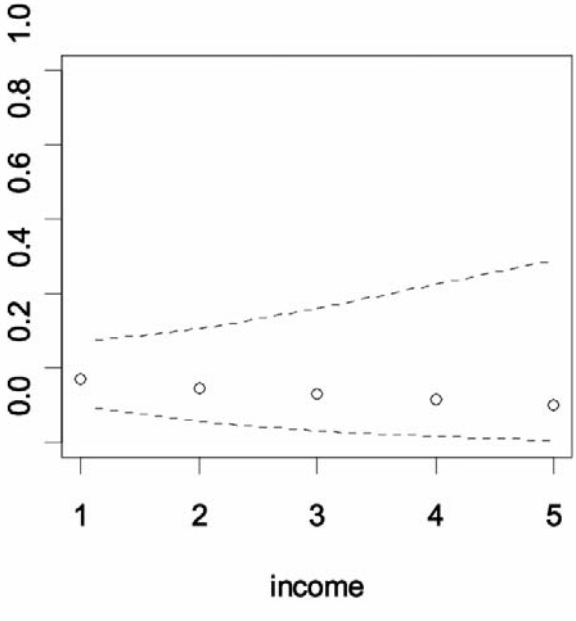


Figure 2 – *The Probabilities of Rural Tourism for Tourists who do not Care for Organic Food.*



dents get more well-off (Figure 2). These tourists are probably more interested in «sun and sea», so they should not be targeted as a segment. The problem of Istria County as a tourist destination is that, although there is a trend to shift from mass tourism towards different kinds of tourist alternatives, the mass tourism trend is still present in our case.

The previous results, with a few positive correlations, linking the higher income and the preference for organic food to the interest in rural tourism, were neither surprising nor specific; however should this contribution to shedding light on the basic problem be confirmed by an alternative analysis, we would achieve some of the broader objectives mentioned in this paper, (i.e. estimating the demand for rural tourism by coastal tourists, the importance of organic food as a determinant to visiting Istria) and hence, we would further highlight the importance of wealthier and ecologically aware healthy-food consumers as a potential niche for future rural tourism demand.

3.4. Profile of Potential Visitors to Rural Istria who consume organic food

In a hierarchical cluster analysis we treat the co-occurrence values as aggregate similarity measures and seek to group the characteristics (or frequencies) of rural areas' visitors so that any two frequencies within a group are similar (have high co-occurrence values) and so that any two potential visitors' frequencies in different groups are dissimilar (have low co-occurrence values). A hierarchical cluster procedure begins with the rural visitor's characteristic as a separate cluster and then joins the two most similar ones. It continues joining the quest's frequencies to clusters or clusters to one another to form a tree (or hierarchy) known as a dendogram. By visually examining this tree we can identify the structure of potential visitors to rural Istria.

Figure 3 – *Tree Diagram.*

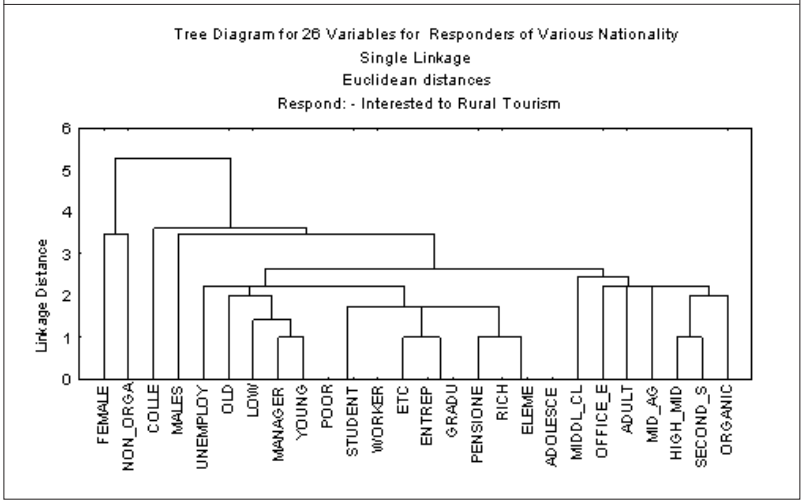


Figure 3 gives a hierarchical structure based on the co-occurrence matrix (the matrix table is not reported due to a lack of space). We have 26 frequencies to illustrate the dendogram. Notice that at the first stages the dendogram joins wishes to visit rural areas in Istria to clusters. The main clusters are joined only at the final stage. At first sight Figure 3 seems to indicate that there are few primary clusters.

In this part of the work we are primarily interested in the cluster marked by the preference for consuming organic food as linked to other variables. It is clear that the first cluster, as seen from the right side, forms a coherent whole of individuals who perceive themselves as middle or upper middle class and, based on what indicated earlier, the higher material status seems to reflect a greater interest in rural tourism. The remaining characteristics of this cluster are mostly stereotypical; these are adult and middle-aged office workers of undefined gender with high school education. It seems that the results of the remaining clusters, as seen in the extension on the right side, give somewhat confusing and trivial results (for example, women who consume non-organic processed food), but these results present clusters that showed no interest in rural tourism. It would be interesting for future research works to try and determine the characteristics of the tourists segment not interested in rural tourism.

4. Conclusions

In Croatia an adequate development strategy has led to many economic problems. The main economic focus for costal counties is tourism. Unfortunately tourism in Istria County is highly season dependent, so mass tourism is still a dominant trend. Some limited attempts to develop rural tourism in Istria County have been made, but the fact remains that most of the tourist arrivals are recorded in the towns along the Istrian coast. These tourists are mostly interested in a passive vacation, and gastronomy does not play a major role in their decision to visit Istria County.

Given the lower interest in rural life-style, including rural tourism, of the total number of respondents analysed in this survey, only one quarter approximately intend to visit rural areas. Consequently, it can be stated that rural tourism as a tourism niche is fairly underestimated and perceived as a minor attraction by the typical hotel's tourist who still prefers the «the sun and sea» idea and hence, opts for a stationary, passive type of vacation in the coastal part of Istria County. There is strong evidence that the preference for organic food and a higher income, as indicated by the probit/logit regression model and the cluster analysis, are relevant determinants in the *ex ante* conception of some kinds of agro-tourism ventures. This tendency to buy healthy food could determine much more a rural orientation in the future above

all with a rural supply, enhanced by pesticide and chemical free food products. It is very plausible that the more well-off middle aged generations are more concerned about their health and as a result, they eat more organic food. Hence a broader interest of these people in the rural life-style, including rural tourism, should be taken into consideration, when encouraging a growth policy for agritourism in Istria County and Croatia. Concerning the policy implications, the supply of authentic local products certified as organic, the information about the high quality level, the wish to preserve the rural environment, as authentic Mediterranean and colourful, are important in order to attract potential visitors who have a preference for rural areas. Taking into account the progress of diversification of rural economy, it will be important to set up a proper policy framework in which farming policy and rural tourism policy are well integrated at the local level.

Recently some strategies for tourism development in Istria County, Croatia, have been developed leading to mass tourism or to golf tourism, but these ideas have a certain political impact and are not well perceived by different ecological associations. Apart from the fact that offering golf tourism implies different activities like the repositioning of the tourist destination, offering suitable facilities, one very important factor is that at present tourists are not interested in this kind of tourism offer, so a great effort is needed to attract adequate tourists. From an ecological and sustainable point of view, taking into account these two different strategies, we believe that rural tourism should be further promoted in Istria County, Croatia, because some forms of rural tourism already exist. Sustainable rural tourism should be strengthened and aimed at the development of rural areas where agriculture plays a crucial role. If a cost – benefit analysis is performed on these two strategies, we assume that in the long run rural tourism would prove to be an adequate development strategy taking into account the concern about future generations and about the preservation of resources.

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