

P78: FUNCTIONAL FOODS & ALIMENTARY HABITS IN PURCHASE- CONSUMPTION OF COMESTIBLE SNAILS

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Abstract- The main objective of present study is the definition of bio-functional foods and the investigation of attitude of consumers toward the market and consumption of comestible snails in the wider region of Thessalonica.

The questionnaire of particular study was applied in sample of 353 individuals at the duration: 13 December his 2013 until 28 his April 2014 in the urban group of Thessalonica. The questions that included it was for the most part “closed” type, so that it can become statistical treatment and analysis of elements in order to results a line of conclusions. The analysis of elements became with the use of statistical parcel IBM SPSS statistics 21. The method that was selected as more suitable, for the statistical investigation of attitudes and opinions of consumers, is the categoric regression (Categorical Regression), which constitutes extension of classic statistical technique of analysis of regression, that is used when somebodies of the variables are not numerical or exist suspicion that the relations from each other are not linear.

From the results it results that the socio-economic characteristics (income, age, sex, familial situation, education) Thessalonikeon of consumers influence their consuming tendencies as for the snails, also have been studied the frequency of consumption of snails, the money that allocate the consumers as well as the part in which they prefer they consume him. and finally it has been studied how is influenced the consumption of snails from their particular socio-economic and demographic characteristics.

Finally, are formulated certain proposals that they aim at as, the better promotion and improvement

of sector saligkarotrofias, and right promotion of snails in the market.

Keywords: functional foods, Consumer's behavior, Thessaloniki, Categorical regression.

1.INTRODUCTION

Eating snails was known from antiquity. Over the centuries, the consumption of snails remained low, due to their limited offer. The intensive consumption of snails began from the end of the 19th century, mainly due to the high promotion of their culinary traits. Nowadays, the snails are sought after by their devotees on all five continents to be used as food delicacies.

(<http://greeksnails.comlu.com>). In Greece, snail-food consumption is not particularly popular with the exception of the island of Crete, where residents are more familiar with their consumption and the snails comprise one of their main dishes. Indeed, Cretans are considered world champions in snail consumption. The breeding of snails for food is very widespread in France, where it is also in line with the dietary habits of the population and it is a process that can be profitable enough. Thus, it deserves to be treated with due professionalism and not to be exhausted in the logic of casual employment. Snails are considered as a highly valued food product, with continuously growing demand and guaranteed existing markets. Snails, belonging to the group of luxury foods like caviar, foie gras and truffles, have become relatively scarce and expensive (Karamani, E. 2014).

1.1. Consumer attitude towards organic food

More and more consumers are worried about pesticide residues on the food they consume. At the same time, the countryside and the environment are being destroyed by modern forms of agriculture.

The interest in organic products, however, was rekindled when some researchers (Thompson and Kidwell, 1998) dealt with whether pesticide residues found in baby foods targeted at young children were within the allowed limits. However, the number of consumers in each country who are aware of organic food is the result of the nutritional development of the organic market in each country and the particular marketing strategy followed. For example, in Turkey (Rundgren, 2000) only 9% of the population is aware of the existence of organic products, while in Greece (Fotopoulos and Krystallis, 2002) 81.5% of the population is informed.

Different surveys (Wandel and Bugge, 1997) have shown that the main reasons that lead consumers to the organic market are that they are not used for their production, they are more nutritious and healthier and have a richer taste and flavor. On the contrary, their high price, their inappropriate visibility, and their availability from a limited number of stores, are the main reasons for consumers.

Another research (Gil et al., 2000), conducted in Spain, found that consumption of organic products is directly relevant to the consumer for the protection of the environment. This means that people who are interested in healthy diets are usually those who manifest and have a particular interest in ecological issues. It should be noted here that according to the survey, these consumers are willing to spend even more quantities to secure organic-food.

In a survey conducted in Denmark (Grunert and Juhl, 1995), with the cluster analysis technique, the sample of consumers is divided into three categories: organic buyers, occasional buyers and regular buyers. research has shown that those with strong ecological interests are more likely to buy organic products.

Therefore lifestyle and consumer attitudes towards ecological issues should be the subject of research when organic marketing strategies are organized.

2. Purpose and specific objectives of the survey with the review of the literature on organic food carried out above, it was realized that there is a correlation with the consumption of snails. Thus, we report that the purpose of this research is to investigate the behavior of consumers, the potential and the prospect of promotion in edible snails in Greece.

In particular, the research objectives are:

- 1) Study whether consumers will consume organic snails in the future
- 2) Exploring the correlation between consumer tastes in processed and non-snail products with the following characteristics: a) Demographics (sex, age, marital status) b) Geographical (area of residence) and c) Socio-economic level, income)
- 3) Identify the points where consumers are supplied with snails, whether they are shops or nature.

2. RESEARCH METHODOLOGY

The quantitative survey was carried out based on raw data that were collected with the aid of a questionnaire. This questionnaire was completed by consumers residing in the city of Thessaloniki in a time framework from December 13, 2013 up to April 28, 2014. The questionnaire was the type of self-management questionnaire (Siardos, 2009, p. 165), that is to say it was presented to the respondents with its purpose explained, it was left to the respondents to answer it themselves and then it was received back completed.

The sampling frame was about constructing and collecting the names of members (statistical units) of the population from which the sample was taken. So, while in a general survey this construction is not necessary for the taking of the sample, yet it is considered essential in limited surveys. Searching for a suitable sampling frame, the concern of researchers is to find one that responds to the particular purpose of their research. So, they must include all the elements of the population that are of interest to them and exclude those that do not serve that purpose (Siardos, 2009, pp. 78-79).

In this research, the planning maps with building the blocks of the seven municipalities of the urban complex of Thessaloniki were considered as a sampling frame. Also, for the determination of the total population of the area under study interim results of the 2011 population census were used. The population census was conducted by the Hellenic Statistical Authorities (EL.STAT.). According to these results, 819,770 inhabitants live in the urban complex of Thessaloniki and are distributed as follows: (a) Municipality of Thessaloniki: 322,240 inhabitants, (b) Municipality of Kalamaria: 91,270 inhabitants, (c) Municipality of Neapoli - Sykies: [84,500 inhabitants](#), (d) [Municipality of Pavlos Melas: 98,870 inhabitants](#), (e) [Municipality of Kordelio - Evosmos: 101,010 inhabitants](#), (f) [Municipality of Ampelokipoi - Menemeni: 51,670](#)

<http://www.statistics.gr>
 inhabitants and (g) Municipality of Pilea - Hortiatiss: 70,210 inhabitants (Source: <http://www.statistics.gr>)

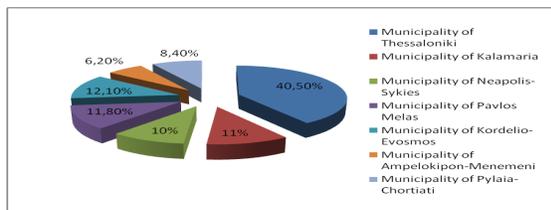


Figure 1: Frequency distribution of questionnaires in the urban complex of Thessaloniki

2.1 SIZE OF SAMPLE

According to Stathakopoulos (2001:218), a nationwide research in Greece is considered representative if the sample consists of 1,600 people at least, whereas a sample of 750 people is considered satisfactory for the population of Athens.

For the purpose of this research, the minimum required sample was fixed at 353 people, with 95% confidence interval ($\alpha = 0.05$) and $\pm 4\%$ mean acceptable error, according to the equation described by Crimp (1985:55) regarding the determination of sample size for random sampling:

$$n = p \times q \times Z^2/E^2$$

Where

n: the size of the sample

Z: the reliability factor ($Z=3$)

E: the acceptable margin of error

p: the percentage that we want to be assessed and $q = 1-p$.

In a number of 50 questionnaires that were randomly filled out, 44 consumers responded that they had eaten snails.

Thus $p = 44/50 = 0.88$ and $q = 1-0.88 = > q = 0.12$

3. RESULTS

3.1 Conclusions of descriptive statistics

To the question "Would you buy organically bred snails" 57.2% of the answers were negative and 42.7% were positive. This is because consumers have linked organic products with healthy food and for this reason they show greater preference even in new concepts such as the concept of "organic snail farming".



Figure 2: Purchase-consumption of organically bred snails

The innovative idea of biological snail farming reinforces the new Common Agricultural Policy (CAP) which now puts emphasis on rural development and on disciplines of alternative agriculture, with a particular focus on the sustainable development and the protection of the environment by shifting to organic farming in the first place and to crops that are not only dynamic but can also be biological.

To the question "Do you buy snails from delicatessen stores" 91.5% responded "no" and 8.5% responded "yes".

Similarly, to the question "Do you buy snails from producers in the farmer's markets", 75.4% answered "no" and 24.5% answered "yes", which is also the largest percentage that responded positively from the total. Thus, it is concluded that the consumers that had taken part in the survey were purchasing their snails from farmer's markets in the first place.

Finally, there was the option "I do not buy them" added and the 62.3% responded positively because they collected their snails from nature, and 37.7% of those asked stated that they buy their snails.

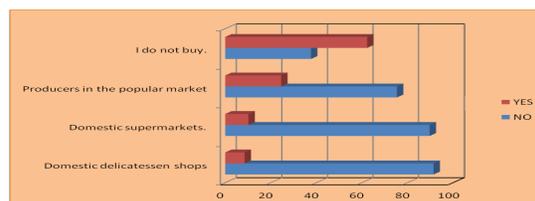


Figure 3: Sale points of snails

3.2 Conclusions of categorical regression

The results of the regression analysis for each of the dependent variables in the sample survey are then presented and interpreted. For research purposes and depending on the nature of each dependent variable, they are divided into three groups:

- 1) With the dependent variable "I have tried snails"
- 2) With the dependent variable "I buy snails"
- 3) With the dependent variable "I will continue to buy snails"

And independent variables the demographic traits

The estimation of the contribution of the independent variables on the interpretation of the dependent ones will significantly help to determine those factors that make consumers want to taste the product and then buy it or buy it in the future, so that there is an assessment of the model's proper adaptation to the survey data.

i) *"I have tried snails"*

Only three variables (age, income, number of family members) significantly interpret the dependent variable *"I have tried the snails"*. All the three variables together cumulatively interpret 68.5% of the dependent variable.

ii) *"I buy snails"*

The four variables (age, occupation, income, number of family members) significantly interpret the dependent variable *"I buy snails"*. All the four variables together cumulatively interpret 86.5% of the dependent variable.

iii) *"I will continue to buy snails"*

The four variables (sex, age, occupation, number of family members) significantly interpret the dependent variable *"I will continue to buy snails"*. All the four variables together cumulatively interpret 89.8% of the dependent variable.

i)

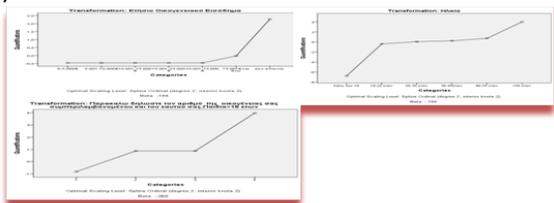


Chart 1: Annual family income, Age, Please indicate the number of members that your family consists of, including yourself

ii)

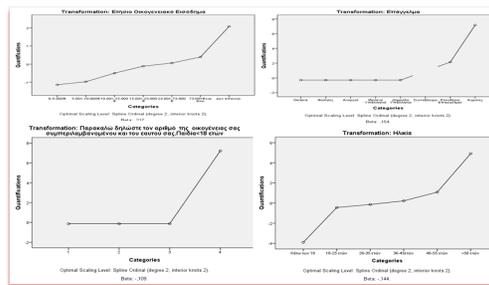


Chart 2: Annual family income, Occupation, Please indicate the number of members that your family consists of, including yourself and Age

iii)

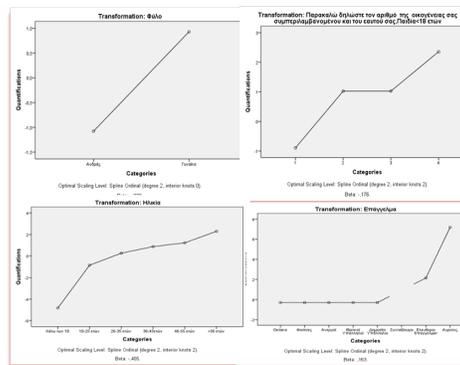


Chart 3: Sex, Please indicate the number of members that your family consists of, including yourself, Age and Occupation

4. SUGGESTIONS

In accordance with the findings of this research, it is implied that consumers are concerned not only about the nutritional value of the food and the conditions of its production but also about the quality of the food they eat. Nonetheless, information on snails and their nutritional value is incomplete.

Hence, it is suggested that:

- 1) Biological snail farming is established.
- 2) Mechanisms are developed with the aim of safeguarding and stabilizing the quality, such as the certification of product quality by competent bodies.
- 3) Snail-food is better promoted as product through advertising methods so that consumers are better informed about the nutritional value of it and its general benefits to humans.

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