DEFINING FACTORS OF CONSUMING LOCAL NUTRINION PRODUCTS: NEW CONSUMING BEHAVIOURS

Theodossiou George[1], Goulas Apostolos[2] Marie Noelle Duquenne[3],

Abstract

The last few years, the European Union rural policies are focused on a balanced rural development and especially with a major support on less favoured areas. This can be achieved by differentiation strategies focused on support and promote the local products of each area. The main aim of this process is to create synergies among the local producers and the various distributors, and more over to add value on the final local product. The importance of the quality of the products has created a world trend on nutritional topics. This has caused a highly competitive food market, and the aspect of quality and locality can be a unique asset for sustain competitiveness on a global scale. Consumers, the last years, are getting more and more interested on the origin of their food not only for healthy reasons but also for an inner need to satisfy the lack of 'original' and 'traditional' flavours and tastes of their daily life.

The present research paper will try to underline the importance on the local economy of the local nutrition products and especially on countries on economic crisis for the last few years like Greece. It is a fact that the last few years there is a world trend on consuming healthy eco friendly products that are connected with the territory of production, also called as local nutrition products or local food products. Furthermore there is an increasing amount of local products all over the world and also a number of various specific shops and restaurants that the consumer can buy or taste those local products. Also the research paper will try to investigate a new frame on the consume of healthy products and also the new trends on the topic.

The research is based on a representative sample of 671 adult persons and the questionnaires distribution covers the country.

The methodology used for the analysis is based on implementation of multinominal logistic regression (MLR).

INTRODUCTION

The present research paper will try to underline the importance on the local economy of the local nutrition products and especially on countries on economic crisis for the last few years like Greece. It is a fact that the last few years there is a world trend on consuming healthy ecofriendly products that are connected with the territory of production, also called as local nutrition products or local food products. Also the research paper will try to investigate a new frame on the consume of healthy products and also the new trends on the topic. Local food farms principally produce fresh vegetables, fruits, and nuts, contrasting with traditional farm production, which is principally composed of livestock and program commodity crop

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[1] Associate Professor, Technological Educational Institute of Larissa, Department of Business Administration 41110 Larissa, Greece, e-mail: geortheo@teilar.gr

[2] PHD STUDENT University of Thessaly Department of Planning and Regional Development Pedion Areos, 38334 Volos, Greece

[3] Professor, University of Thessaly Department of Planning and Regional Development Pedion Areos, 38334 Volos, Greece, e-mail: mdyken@uth.gr

production. (Sarah A. Low, Stephen Vogel 2011). Local food markets typically involve small farmers, heterogeneous products, and short supply chains in which farmers also perform marketing functions, including storage, packaging, transportation, distribution, and advertising. [Steve Martinez et al. 2010).

The last 20 years the local products market is growing, and is characterized of high competitiveness. More over the market of local products is of growing importance because of the impact on the local development. And it is believed that it can contribute on the unemployment reduction and the exit of an economic crisis. From the perspective of marketing, local foods systems offer alternative marketing channels which may help diversify a firm's portfolio of buyers and thus reduce their marketing risk. Sociologists often point to the ideological commitment of local food buyers to civic participation, to supporting their local community, and to enhancing local social capital via this more personal form of market exchange. Fields as diverse as political science, soil science, pathobiology, public health, and women's and gender studies (among many others) have all weighed in on these benefits, which may potentially be derived from local food systems. National Restaurant Association, (2014). Many academics tried to define local products. Michael S. Hand (2010) define, "local" generally refers to food sourced from nearby farms and producers. Proximity between consumers and producers is an essential component of any local food supply chain, yet the structure of these supply chains can take numerous forms. According to recent researches "Local food", "local food movement" or "locavores" are a movement which aims to connect food producers and food consumers in the same geographic region, in order to develop more self-reliant and resilient food networks; improve local economies; or to have an impact on the health, environment, community, or society of a particular place. The demand of local products depends on many variables. According to the recent bibliography those variables are: desire for freshness; support for the local economy and traditions, reduced transportation and processing affecting climate change, lower cost, a relationship with farmers; food safety; improved nutrition; better flavor; and a backlash against feelings of alienation and disconnection from the land; farmers receiving fair share of economic returns; maintaining local farmland; The economic, environmental, and health impacts of local and regional food systems depend on how consumers' purchasing decisions are altered. Implications for marketing and public policy strategies to promote organic and local foods include: emphasizing taste, nutrition, value, children, and enjoyment of cooking for rational consumers; and emphasizing health, fitness, and freshness, and providing ethnic foods for adventurous consumers (Yuko Onozaka et al.2010; Giovannucci, Daniele, Elizabeth Barham, Rich Pirog 2009; University of Minnesota Extension ,Introduction to Local Food ; Roslynn Brain, 2012; [Cong Nie , Lydia Zepeda, 2011).

 Young-Chool Choi and Hak-Sil Kim (2015) claim that Local food policy focuses on 'locality' and is based on factors such as selling products in the same area and maintaining trust between producers and consumers on the basis of intimate social contacts. The previous definitions are focused on the same direction. For that reason it is believed that the Future of the Local Food Movement Nationally, all signs point to a trend of continued growth in demand for local food products (National Restaurant Association, 2014). According to Ray (1999), the endogenous approach towards the socio-economic development of rural areas focusing on both local population and local resources has been gaining widespread acceptance as a more effective way towards a robust sustainable development policy compared to its sectoral, exogenous counterpart.

Given the current market-oriented development framework, the local social and economic development level may present a challenge and a potential opportunity for specific rural regions. In this context, endogenous local investments towards capitalization on local primary products can stimulate the development of a region. (G. Theodosiou et al. ,2010). Producer creates a direct contact with the consumer. The application of the principles of direct marketing is indispensable. Consumers likely are most familiar with direct marketing supply chains. All the case studies of direct marketing supply chains involved farmers who sold locally produced foods at roadside stands and farmers' market. However, farmers' markets are not the only or even most important outlet for direct marketers. Michael S. Hand(2010). The small food stores in rural areas lacked healthy food options largely because storeowners perceived that their customers would not purchase healthier items and due to challenges with distribution. Conversely, studies reporting on small food stores in urban areas suggest challenges with transportation and safety concerns. (C.A. Pinard, 2016).

The direct marketing allows local food producers to retain most, if not all, of the revenue from the retail sale of their product; they can receive up to seven times greater net revenue on a per unit basis from selling locally than in conventional markets (King et al. 2010)- [King, R.P., M.I. Gomez, and G. DiGiacomo. 2010).

Some of the advantages on healthy consuming of local Foods, are presented on the essay of Mohammad H Forouzanfar,2015). The interest on local foods is highly positive on the last few years and also the number of producers has increased. More over the demand on such products has increased. The research question on that field is if local foods are more expensive than non local foods (non-local counterpart). Rich Pirog, Nick McCann (2009) found that during peak season, local produce items found at farmers' markets were competitive with same non-local items found at supermarkets. The vegetable price observations in our study were made during the height of the Iowa growing season (July to August) when these items were in plentiful supply by multiple vendors at farmers' markets.

It is suggested that the patterns of food purchasing revealed, with local food figuring more highly than organic, illustrate a defensive politics of localism rather than a strong turn to quality based around organic and ecological production (Michael Winter 2003).

The consumption of Local Food in Greece

The factors that influence people in Greece to buy Hellenic food are: (a) product's features (b) psychological issues, (c) economic issues. Furthermore, cluster analysis was employed to classify consumers with similar buying behaviour towards Hellenic food, and identified three groups of consumers: (a) those that support the National Economy, (b) those who are influenced by psychological issues and (c) opportunists.Lambros Tsourgiannis et al. 2014.

Research methodology
The research is based on primary data collected with the use of a survey. The survey was delivered to the individuals through telephone interviews. The period for the research that took place on Panhellenic level, was from 2 November until 5 December. The sample used for the present research was 671 adults, residents of Greece. The research strategy on first level had interviews on the 13 regions of Greece and on second level the distinction on rural and urban centers of those 13 regions. All of the individuals responded on the survey were considered as representative of the population of the area. The chance of those individuals

that answered the survey not to be residents on that regions is not significant and does not affect the results research. The frame of the data collection is the data provided by the OTE, the Greek national communication provider It is worth mentioning that on the international literature a similar research method is used and is proved that there is no correlation between the names chosen randomly and the consumer behavior (*Oppenheim, 1992, . Stathakopoulos _in Greek, 1997*).

In the present research the technique of analogue sampling was used in layers (multistage sampling) and an effort was made to approximate the population by region, leaf and age. Thus, the sample of 740 consumers was aggregated. Regarding the total population of the country, and their distinction by region, age and age, the 2011 National Statistical Office of Greece (NSSG, 2011) was used. Sampling unit was considered to be a person who corresponds to each telephone number. The sampling was carried out in two stages. The first applied the multistage sampling with proportional sample distribution between the Regions, where each region was considered to represent a layer. During the second stage of sampling, a random number of consumers based on sex, age and urbanity was randomly assigned to each region / layer. By organizing the sampling it was considered that a representative sample of the total population to be investigated was selected. Based on the organization of sampling, it can be assumed that the total sample of the 740 individuals gathered corresponds to a population with similar characteristics, where its magnitude varies within the range required by multistage sampling (Stathakopoulos _in Greek *1997:219*). The drafting of the questionnaire started in September 2016 and was completed one month later. After writing, he was tested on a sample of fifty people. The compilation of the questionnaire was based on the study of the relevant literature, since of course the necessary modifications were made in order to meet the specific purposes *(Oppenheim, 1992. Δαουτόπουλος, 2000. Javeau, 1996. Καραμέρης, 1996. Σιάρδος, 1997. Κυριαζή, 1998).*

TABLE: THE VARIABLES	VARIABLES	CODES
PAPERS/STUDIES/REPORTS		
1. Martinez, Steve, et al. Local Food Systems: Concepts, Impacts, and Issues, ERR 97, U.S. Department of Agriculture, Economic Research Service, May 2010.www.ers.usda.gov 2. Mariana Carvalho Menezes, Bruna Vierade Lima Costa et al. 'Local Food environment and fruit and vegetable consumption An ecological study'. Preventive Medicine Reports 5 (2017) 13–20 journal homepage: http://ees.elsevier.com/pmedr 3. Eimear Keanea,b,, John Cullinanc, Catherine P. Perrya,b, Patricia M. Kearneya, Janas M. Harringtona, Ivan J. Perrya, Richard Layted,e Dietary quality in children and the role of the local food environment SSM - Population Health https://doi.org/10.1016/j.ssmph.2016.10.002 Volume 2, December 2016, Pages 770–777 https://www.cambridge.org/core/journals/american-journal-of-alternative-agriculture/article/consumers-preferences-for-locally-produced-food-a-study-in-southeast-missouri/2D966F11E3E2BF161C3559F12D7C0C60#	The concept of local nutrition products.	VAR 2,
1. Giovannucci, D., E. Barham, and R. Pirog. 2010. "Defining and Marketing 'Local' Foods: Geographical Indications for U.S. Products," Journal of World Intellectual Property, Special Issue: The Law and Economics of Geographical Indications, Vol. 13, March 2010. Giovannucci, D., E. Barham, and R. Pirog. 2010. "Defining and Marketing 'Local' Foods: Geographical Indications for U.S. Products," Journal of World Intellectual Property, Special Issue: The Law and Economics of Geographical Indications, Vol. 13, March 2010. 2. Nigel Key Local Foods and Farm Business Survival and Growth March 07, 2016 https://www.ers.usda.gov/amber-waves/2016/march/local-foods-and-farm-business-survival-and-growth/		VAR3, VAR 4
1. Rural Development Report 2016. IFAD, investing in rural people. 2016 by the International Fund for Agricultural Development (IFAD) Printed by Quintily, Rome, Italy, September 2016 2. Nigel Key Local Foods and Farm Business Survival and Growth March 07, 2016 https://www.ers.usda.gov/amber-waves/2016/march/local-foods-and-farm-business-survival-and-growth/ 3. Sarah DeWeerdt 'Is Local Food Better? WORLDWATCH INSTITUTE VISION FOR A SUSTAINABLE WORLD Published in World Watch Magazine, May/June, Volume 22, No. 3http://www.worldwatch.org/node/6064	Price,markets and assessment of typical regional products	VAR 5, VAR9, VAR 10

4. Cheryl Brown Consumers' preferences for locally produced food: A study in southeast Missouri DOI: https://doi.org/10.1079/AJAA200353 American Journal of Alternative Agriculture Volume 18 Issue 4 December 2003, pp. 213-224		
1. Success Factors of the Local Food Movement and Their Implications: The Case of Wanju-gun, Republic of Korea Young-Chool Choia*, Hak-Sil Kima Procedia Economics and Finance 23 (2015) 1168 – 1189 2nd GLOBAL CONFERENCE on BUSINESS, ECONOMICS, MANAGEMENT and TOURISM, 30-31 October 2014, Prague, Czech Republic. 2. "The Local Food Movement Benefits Farms, Food Production, Environment." The Local Detroit: Greenhaven Press, 2010. At Issue. Food Movement Gale Opposing Viewpoints in Context . Web. 11 Feb. 2011. Document URL: http://ic.galegroup.com/ic/ovic/ViewpointsDetailsPage/Viewpoin tsDetailsWindow?di splayGroupName=Viewpoints&prodId=OVIC&action=e&windows tate=normal&am p;catId=&documentId=GALE%7CEJ3010722203&mode=view&use rGroupName=adam	Price, assessment of typical regional products	VAR 5, VAR6
1. Mariana Carvalho Menezes, Bruna Vierade Lima Costa et al. 'Local Food environment and fruit and vegetable consumption An ecological study'. Preventive Medicine Reports 5 (2017) 13–20 journal homepage: http://ees.elsevier.com/pmedr 2. Donatella Priviteraa, Francesco Saverio Nescib ' Globalization vs. local. The role of street food in the urban food system' 2nd International Conference 'Economic Scientific Research - Theoretical, Empirical and Practical Approaches', ESPERA 2014, 13-14 November 2014, Bucharest, Romania Procedia Economics and Finance 22 (2015) 716 – 722 3. Yuko Onozaka, Gretchen Nurse, and Dawn Thilmany McFadden. LOCAL FOOD CONSUMERS: HOW MOTIVATIONS AND PERCEPTIONS TRANSLATE TO BUYING BEHAVIOR. CHOICES. Agricultural and Applied Economics Association. The magazine of food, Farm and Resources Issues. 1st Quarter 2010/ 25(1).**Local Food Consumers: How Motivations and Perceptions Translate ...**	Factors affecting the local products market	VAR 7 VAR8 VAR9
1. Gill Seyfang Ecological citizenship and sustainable consumption: Examining local organic food networksJournal of Rural Studies https://doi.org/10.1016/j.jrurstud.2006.01.003 Volume 22, Issue 4, October 2006, Pages 383–395 2. Lambros Tsourgiannis. Anastasios Karasavvoglou. Christos Antonios Tsourgiannis. Giannoula Florou. Theodosios Theodosiou, Stavros Valsamidis. Factors Affecting Consumers in Greece to Buy During the Economic Crisis Period Food Produced Domestically in Greece https://doi.org/10.1016/S2212-5671(14)00046-X Procedia Economics and Finance Volume 9**, 2014, Pages 439-455** http://www.sciencedirect.com/science?_ob=ArticleListURL&_me thod=list&_ArticleListID=-1200265658&_sort=r&_st=13&view=c&md5=f2beb69b0d9bcc68 cd3da26665c57e8f&searchtype=a	Knowledge of local products	VAR 11 VAR12

3. CREATIONS,FOOD,CRAFTS,IDEAS Products Per Region : Thessaly http://www.greekcreations.gr/Thessaly/		
1. WORLD ECONOMIC FORUM Which countries spend the most on food? This map will show youhttps://www.weforum.org/agenda/2016/12/this-map-shows-how-much-each-country-spends-on-food/ 2. Local food From Wikipedia, the free encyclopedia **Benefits of eating local. Environmental impact** https://en.wikipedia.org/wiki/Local_food 3. C.Clare Hinrichs The practice and politics of food system localization https://doi.org/10.1016/S0743-0167(02)00040-2Volume 19, Issue 1, January 2003, Pages 33–45. http://www.sciencedirect.com/science/article/pii/S074301670200402 4. Transportation Costs Resourceshttp://landstewardshipproject.org/stewardshipfood/tools/forfarmers/understandingyourtransportationcosts/transportationcosts 5. LARISSA CHAMBER Local Products-Rural Economy-(Τοπικά Προϊόντα-Αγροτική Οικονομία) http://www.larissa-chamber.gr/index.php?obj=a70ef651f1086ff9 6. CREATIONS,FOOD,CRAFTS,IDEAS Products Per Region : Thessaly http://www.greekcreations.gr/Thessaly/	Consideration of consumers	VAR 12, VAR 13

Results

For the field research, consumers were asked to fill a questionnaire in both urban and rural areas of Greece. Interviewees were selected randomly. In total, 671 questionnaires were completed on a face-to-face basis during the period of 2 November until 5 Dicember 2017.

Table 1 gives an overview of the sample characteristics. It consists of 44% of female against 56% of male. Around 50% of the respondents are less than 35 years old, with a mean age of 38 years (Std. dev = 12,732) while a relative difference is observed between males and females' age. Examining the place of residence, there is no significant differences as regards gender.

Table 1: Overview of the sample characteristics

	Male	Female	Total
Sample size	378 (56%)	168 (44%)	671
Mean age (St.Dev)	40 (12,9)[a]	35 (12,0)[a]	38 (12,7)
Place of residence (%)			
Athens / Thessaloniki	24,9[b]	23,9[b]	24,4
Other urban centres	66,4[b]	61,8[b]	64,4
Rural areas	8,7[b]	14,3[b]	11,2

[a] Significant difference in age (Mann-Whitney U Test: Z= 5,264, p-value < 0.0001)

Consumption behavior of Traditional Local Foods (TLF)

Few respondents are declaring not consuming traditional local foods while most of them (near 60%) buy regularly (at least once a week) such products even if the majority of such consumers consider that this type of products are more expensive than industrial ones (Table 2). As regards gender, there is no significant difference while the frequency of consumption is increasing with age. More than three-quarters of those aged 60 years and over are regularly consuming local foods. This type of consumption is clearly more frequent in rural areas comparatively to the two major metropolises of Greece as well as the other urban centers.

Consequently, the most typical profile of traditional local foods' consumers is a relatively old person (male or female) living in rural areas or small provincial cities. This result suggests that producers of typical local foods still have a large market's segment to conquer, especially the youngest population (less than 44 years old) living in urban areas. It also appears that producers could increase their production without major risk due to the fact that only 40% of the respondents are considering that there is satisfactory availability of such products on the market.

Table 2: Frequency of local foods' consumption

	Rarely		Occasionally		Regularly		Total Sample	
	Nb[a]	%	Nb	%	Nb	%	Nb	%
Total respondents	57	8,5	217	32,3	397	59,2	671	100,0
% of consumers considering local foods more expensive	77%		71%		58%		64%	
Gender[1]								
Men	38	10,1	117	31,0	223	59,0	378	100,0
Women	19	6,5	100	34,1	174	59,4	293	100,0
Age[2]								
< 30 years old	27	13,2	59	28,8	119	58,0	205	100,0
30 – 44	21	7,9	95	35,8	149	56,2	265	100,0
45 – 59	8	5,2	53	34,4	93	60,4	154	100,0
>= 60	1	2,1	10	21,3	36	76,6	47	100,0
Place of residence[3]								
Athens / Thessaloniki	19	11,6	63	38,4	82	50,0	164	100,0
Other urban centers	36	8,3	132	30,6	264	61,1	432	100,0
Rural areas	2	2,7	22	29,3	51	68,0	75	100,0

(a) Number of respondents by category
(1) Chi-square = 2,994 (dl=2), p-value = 0,224
(2) Chi-square = 16,274 (dl=6), p-value = 0,012
(3) Chi-square = 10,957 (dl=4), p-value = 0,027

Consumers' perception as regards the Traditional Local Foods

Evaluating the characteristics of the TLF on a Likert-scale 1 to 5, the consumers - regardless gender, age and consumption's frequency - attribute the highest scores (greater than 4) to

the two items which concern the contribution of these products to the local economy and society. They also perceive the TLF as healthy products with taste and nutritional value (items with value around 3,7). At the contrary, the evaluation of the aspect is relatively low (table 3). Generally, values affected by women are significantly higher than those attributed by men excepting two items (taste and Environmentally friendly product). There is a clear difference of evaluation between the youngest consumers and the older ones, the latter presenting a more positive perception of the TLF's specificities.

Table 3: Perception of consumers as regards the TLF

	Healthy food	Better taste	Contribution to local tradition and history	Contribution to local economy	Environmentally friendly product	High nutritional value	Safety and certification	Better appearance
Total	3,70	3,66	4,05	4,25	3,37	3,68	3,21	2,90
Gender								
Men	3,62	3,62	4,00	4,19	3,34	3,65	3,06	2,81
Women	3,81	3,72	4,12	4,33	3,42	3,72	3,40	3,02
p-value (*)	,011	,202	,046	,009	,378	,462	,000	,006
Age								
< 30 years	3,79	3,56	3,91	4,23	3,38	3,51	3,29	2,81
30 - 44	3,59	3,61	4,06	4,20	3,30	3,65	3,12	2,87
45 - 59	3,72	3,81	4,17	4,37	3,42	3,87	3,15	2,96
>= 60	3,91	3,96	4,19	4,26	3,62	3,98	3,55	3,30
p-value (*)	0,039	0,002	0,016	0,187	0,131	0,001	0,020	0,011
Frequency of local foods' consumption								
Rarely	3,42	3,32	3,98	4,12	3,00	3,21	2,77	2,44
Occasionally	3,78	3,83	4,04	4,21	3,45	3,85	3,23	2,94
Regularly	3,70	3,62	4,07	4,29	3,39	3,66	3,26	2,95
p-value (*)	,028	,000	,735	,216	,003	,000	,002	,001

(*) p-value associated to the Mann-Whitney test

Factors influencing the consumption of TLF

Respondents had to evaluate on a Likert-scale 1 to 5, seven factors that could influence their purchasing behavior. The most important factor, especially for women, is the ingredients that compose the product (mean value around 4) while external aspects as appearance and packaging have relatively low importance (items with mean < 3). Whatever the profile of the consumer, there is no significant difference as regards the appearance while packaging is a little more important for consumers aged from 30 to 59 years (Table 5).

Once again, it is possible to verify that the purchase of TLF is considered as a behavior contributing to strengthen the local economy, especially for the oldest and those that consume regularly these products. It also seems that the possibility to develop a personal relationship with producers tends to increase the consumption's frequency (Table 5).

Table 4: Evaluation of factors affecting the consumption of TLF

	Appearance	Packaging	Ingredients	Production's process	Link with local tradition	Relationship with producer	Strengthening the local economy
Total	2,85	2,84	3,93	3,18	3,17	3,00	3,49
Gender							
Male	2,86	2,88	3,83	3,09	3,15	3,07	3,42
Female	2,84	2,78	4,06	3,30	3,20	2,90	3,59
p-value (Mann-Whitney test)	,710	,227	,001	,056	,649	,087	,037
Age							
< 30 years old	2,84	2,62	3,86	3,37	3,05	2,81	3,57
30 - 44	2,85	2,94	3,92	3,05	3,15	3,05	3,38
45 - 59	2,94	2,95	4,11	3,11	3,16	2,91	3,46
>= 60	2,70	2,77	3,68	3,36	3,85	3,81	3,87
p-value (Mann-Whitney test)	,421	,001	,025	,034	,000	,000	,018
Consumption's frequency							
Rarely	2,84	2,84	3,65	2,68	2,56	2,74	3,14
Occasionally	2,91	2,98	3,96	3,00	3,00	2,82	3,21
Regularly	2,82	2,76	3,95	3,35	3,35	3,13	3,70
p-value (Mann-Whitney test)	,469	,020	,223	,000	,000	,007	,000

Assessment of consumption's frequency of TLF

The assessment of the impact of factors affecting the consumption's frequency is achieved through regression analysis in which the dependent variable is a categorical one with more than two levels (rarely, occasionally and regularly) and the independent variables are the factors being derived from the completion of the questionnaire as described above. Since the phenomenon under study is a categorical outcome with more than two discrete outcomes, multinomial logistic regression is considered as the most appropriate (Bishop, 2006). The main assumption of such model is that the relationship between a set of variables and the ratio of the probability of an event occurs, against the probability of a reference event, is linear.

With logistic regression, it is finally possible to estimate the impact of selected factors and variables on the probability for consumers to purchase TLF according to different frequencies. For easier adjustment of the model, the log odds ratio is preferred as an independent variable, called logit. The model is solved by the method of maximum likelihood (Norusis, 2005). Due to the fact that the dependent variable (CF = consumption's frequency) is a categorical one with three discrete outcomes, the multinomial logistic regression estimates two models (one for rare consumption and one for occasional consumption) having as referent category, the

regular consumption. Consequently, the equation for the two models is written in terms of the logit of each one of the two outcomes examined:

$$\ln\left(\frac{p_i}{p_.}\right) = a_0^i + a_1^i X_1 + a_2^i X_2 + \cdots. + a_k^i X_k + \varepsilon^i$$

With pi = probability of the event i to occur (i= 1 for rarely and 2 for occasionally)
p. = probability of the referent event (regularly)
X_j (j=1 … k) is the set of independent variables

The independent variables are composed of two categories. The first one concerns the consumers' profile (gender, age and place of residence) while the second one is derived from the questions included in the questionnaire and having as target to detect the main characteristics and factors influencing the decision to consume TLF. In order to reduce the number of independent variables to a limited number of pertinent factors, an Exploratory Factor Analysis (EFA) was implemented. The internal consistency of the consumers' responses has been preliminary examined through the alpha Cronbach test. With a value of 0.751 (greater than the critical value of 0.700), the a-Cronbach coefficient confirms the reliability of the data which are suitable for Factor analysis.

The results of EFA with varimax rotation are summarized in Table 5. Three main factors have been extracted, representing 63% of the total variance. The first one refers to the perception of TLF as healthy and safety food with high nutritional value, the second one concerns the positive impact of TLF on the local economy while the third one reflects the relative importance of TLF's external appearance.

Table 5: Exploratory Factor Analysis

Items	H^2	Factors extracted		
		Perception of TLF	Contribution to local economy	External appearance
High nutritional value	.671	.814		
Environmentally friendly product	.576	.746		
Healthy product	.565	.734		
Better taste	.576	.709		
Safety product	.547	.693		
Link with local tradition	.785		.819	
Strengthening local economy	.768		.801	
Production' s process	.676		.755	
Relationship with producers	.546		.550	
Packaging	.845			,918
Appearance	.831			,906
% of total variance		29.9		
Cronbach's alpha		.801	.724	.823

The overall evaluation of the multinomial logistic regression is presented in Table 6. The value of the Likelihood Ratio Test (105.083) exceeds the critical value of the X^2 distribution. Thus, the null hypothesis that there is no difference between the model without independent variables (only intercept) and the model with independent variables is rejected at a

significance level < 1%. This suggests the existence of a relationship between the frequency of TLF's consumption and the selected independent variables.

Table 6: Overall evaluation of the MLR

Model Fitting Information				
Models	-2 Log Likelihood	Likelihood Ratio tests		
		Chi-square	df	p-value
Intercept only	1187,739			
Final	1082,657	105,083	14	,000
Likelihood ratio tests for independent variables				
Intercept	1082,657	0,000	0	
Perception of TLF	1104,077	21,420	2	,000
Contribution to local economy	1121,665	39,008	2	,000
External appearance	1088,930	6,273	2	,043
Age	1095,343	12,687	2	,002
Place of residence	1092,636	9,979	4	,041
Expensive product	1092,015	9,358	2	,009

Moreover, the model fits quite well the data with an overall percentage of well predicted values around 72%, clearly higher than the proportional by chance accuracy rate of 58%[4]. Examining the likelihood ratio test relative to each independent variable, it is possible to admit the existence of an overall relationship between each independent variable and the TLF's consumption frequency. This overall relationship does not mean that each independent variable is a significant predictor for the two pairs consumer's groups defined by the dependent variable.

The detailed results of the model for the two alternative outcomes are presented in Table 7. It is necessary to mention that the variable gender was finally omitted from the regression because it was never significant (p-value > 0.05) and did not differentiate the respondents with rare and occasional consumption from those with regular consumption.

Table 7: Multinomial Logistic Regression

CF[a]		B	Std. Error	Wald	df	p-value	Exp(B)
Rarely	Intercept	-2,282	,895	6,504	1	,011	
	Healthy perception of TLF	-,388	,136	8,133	1	,004	,678
	Contribution to local economy	-,686	,160	18,333	1	,000	,504
	External appearance	,122	,155	,621	1	,431	1,130

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[4] Taking into account that the proportion of consumers for each group of frequency is: 0.085, 0.323 and 0.592 respectively, the proportional by chance accuracy rate = 1.25 x $(0.085^2 + 0.323^2 + 0.592^2)$ = 0.577 (57,7%).

		B	S.E.	Wald	df	Sig.	Exp(B)
	Age	-,048	,014	11,329	1	,001	,953
	Residence place = 1	1,855	,783	5,609	1	,018	6,392
	Residence place = 2	1,213	,756	2,572	1	,109	3,363
	Residence place = 3	0^b			0		
	TLF more expensive = 1	,779	,347	5,034	1	,025	2,180
	TLF more expensive = 0	0^b			0		
Occasionally	Intercept	-,778	,388	4,017	1	,045	
	Healthy perception of TLF	-,268	,095	7,907	1	,005	,765
	Contribution to local economy	-,480	,093	26,795	1	,000	,619
	External appearance	,225	,091	6,152	1	,013	1,252
	Age	-,008	,007	1,154	1	,283	,992
	Residence place = 1	,391	,321	1,481	1	,224	1,478
	Residence place = 2	,054	,289	,035	1	,852	1,055
	Residence place = 3	0^b			0		
	TLF more expensive = 1	,453	,189	5,735	1	,017	1,572
	TLF more expensive = 0	0^b			0		

a. The reference category is: Regularly.

b. This parameter is set to zero because it is redundant.

From the above table, the main results are the following:
- The healthy perception of TLF and the recognition that they strengthen the local economy are significant for the two groups (rarely and occasionally) differentiating them for the group of regular consumers.
    - For each unit increase in the healthy perception, the odds of the group that rarely consumes TLF decreased by 32,2%[5] while the odds of the group that occasionally consumes TLF decreased by 23,5%. In other terms, the higher is the healthy perception, the more likely the respondent is a regular consumer of such foods.
    - Concerning the recognition of the TLF's contribution to local economy, similar results are obtained. For each unit increase in this recognition, the odds decreased by 49,6% for the consumers that rarely purchase and by 38,1% for the occasionally consumers. Consequently, the higher is the healthy perception, the more likely the respondent is a regular consumer of TLF.
    - The external appearance does not differentiate the consumers that rarely purchase TLF from the regular consumers (p-value > 0.05) while it differentiates the consumers that occasionally purchase TLF from the regular ones, the latter giving less importance to the external appearance of foods (for each unit increase of this factor, the odds of occasional consumers increased). The better is the appearance, the more likely the occasional consumer seems to be sensitive to this characteristic.
    - Age and place of resident are significant only for the first group. The probability for a respondent to consume rarely against regularly is decreasing with age while it clearly

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[5] The decrease is calculated through the formula: Exp(b) − 1. For the Healthy perception of TLF, the decrease is (0.678 - 1) = -0.322 (32,2%) for the 1st group and (0.725 − 1) = -0.275 (27,5%).

increases for consumers living in the two main urban centers as well as in the medium-small cities of the country.

- Finally, survey respondents who consider that TLF are more expensive that the industrial ones are more likely to purchase rarely and occasionally TLF: the ratio of the relative risks of consuming rarely over regularly is exp(B) = 2,18 and the same ratio of consuming occasionally over regularly is 1,57.

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