

FACTORS INFLUENCING CONSUMPTION OF ORGANIC FOOD IN ROMANIA

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Abstract:

Food consumption patterns are rapidly changing nowadays as a result of environmental issues, concern about the nutritional value of food and health issues. Issues such as quality and safety in food attract consumer interest in organic food that is free from pesticides and chemical residues (Childs and Polyzees, 1997; Zotos et al., 1999; Baltas, 2001; Fotopoulos and Krystallis, 2002).

The purpose of this study is to gain knowledge about the demographic characteristics of respondents and about factors that influence purchase decision of organic food consumers in Romania. The research method used was online survey. A structured questionnaire was used which employed with true-false questions, multiple-choice questions and Likert scale questions. A convenience sample was used for this research.

Key words: organic food, organic consumer, demographics profile, factors, purchase behaviour

JEL classification: D12, M30

INTRODUCTION

A review of the literature on organic food consumption shows that most authors have focused specifically on the description of organic food consumers, have examined consumer perception, factors that facilitated or hindered consumption, consumer attitudes and motivation for buying or not buying such products.

Various researchers aimed to distinguish organic consumers by looking at the demographics characteristics like age, sex, income, presence of children and education. Classifications can be diverse depending on the researchers. Most studies use terms of regular and occasional buyers (Davies et al., 1995; Zanolli and Naspetti 2002) while other uses terms; unaware consumers, unaware non-buyers, buyers of organic food.

The purpose of this study is to gain knowledge about the demographic characteristics of respondents and about factors that influence consumers purchase decision in Romania.

LITERATURE REVIEW

ATTITUDE

Consumer behavior towards organic food results from a series of attitudes which are linked by a complex set of ideas, motivations and experiences. Consumer attitudes are between pleasant and unpleasant, positive or negative orientation to organic food. Several studies have concluded that the reasons why consumers buy organic food are: organic food is safer, healthier, have better quality, they taste better, have higher nutritional value and are more environmentally friendly. The high price, low income, low availability, poor appearance and design packages are considered barriers against consumption of organic food (Wier and Calverley, 2002; Zanolli et al., 2002; Radman, 2005; Robles et al., 2005; Padel and Foster, 2005; Zakowska, 2007).

CONCERN FOR HEALTH

Concern for health is considered subjective intention or motivation of an individual to improve their health. Previous studies have shown that the most important reason to purchase or consume organic food seems to be concern for health (Tregear et al., 1994; Huang, 1996;

Schlegelmilch et al., 1996; Hutchins and Greenhalgh, 1997; Wandel and Bugge, 1997; Von Alvensleben, 1998; Magnusson et al., 2001; Squires et al., 2001, Padel and Foster, 2005).

ENVIRONMENTAL CONCERN

Consumer concern for ecology is directly related to their willingness to buy organic foods. Although not a priority issue, has a significant effect on consumption of organic food (Kristensen and Grunert, 1991; Tregear et al., 1994; Von Alvensleben, 1998; Schifferstein and Oude Ophuis, 1998).

Organic foods are obtained by means of environment-friendly production and processing, so that environmental concern is expected to have positive effects on purchase of these products.

KNOWLEDGE ABOUT ORGANIC FOOD

Knowledge about organic food refers to the extent that consumers have strong cognitive structures related to this area (Grunert and Grunert, 1995). Knowledge about organic food is expected to have a positive effect on how a person perceives a proper diet and on consumption of organic food (Peter et al., 1999). In addition, knowledge about organic food probably have a negative effect on a person's level of skepticism (Szykman et al., 1997).

THE THEORETICAL MODEL PROPOSED

Based on literature review, below is outlined a theoretical model (Figure 1) to highlight the factors that influence purchase decision of organic food consumers in Romania.

The theoretical model shows hypothetical relationships between the factors attitude, concern for health, environmental concern, knowledge about organic food and organic food consumption (purchase frequency).

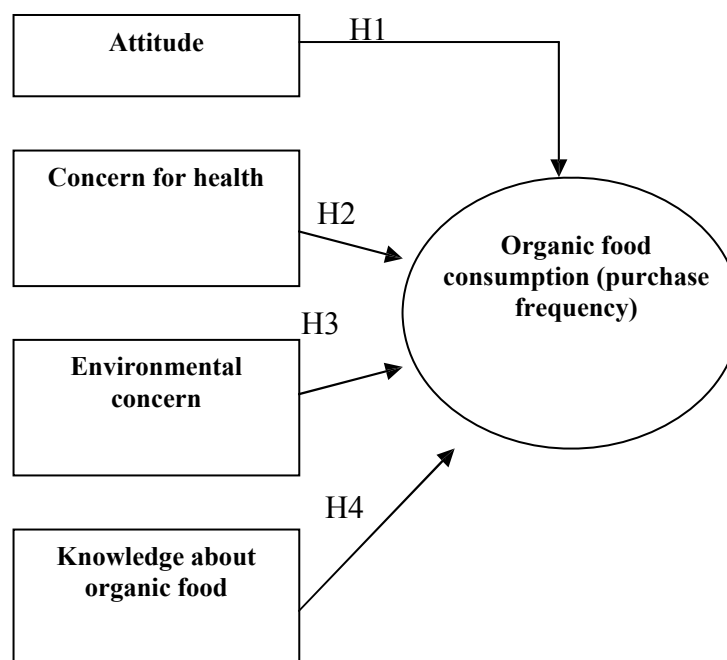


Figure 1. Theoretical model proposed

METHODOLOGY

As shown in the theoretical model proposed research hypotheses for this study are listed as follows:

- H1 There is a positive relationship between attitude and frequency of consumption of organic food
- H2 There is a positive relationship between concern for health and frequency of consumption of organic food
- H3 There is a positive relationship between environmental concern and frequency of consumption of organic food

H4 There is a positive relationship between level of knowledge about organic food and organic food consumption frequency

The research method used was online survey. A structured questionnaire was used which employed with true-false questions, multiple-choice questions and Likert scale questions. The design of the questionnaire was developed using tools provided by the site <https://students.sgizmo.com>. A pretest of questionnaire was conducted with 10 respondents prior to avoid ambiguous wording and inapplicable questions in the questionnaire.

A convenience sample was used for this research. Convenience sample consists of all customers or potential customers (individuals) enrolled in the database of one company from Romania who sells organic food.

Data collection period was between 1 to 20 December 2011. A total of 110 questionnaires were completed during this period. To gather and analyze data collected, SPSS 14 was used. For all analyzes conducted was considered significant probability level of <0.05 . Frequency counts and Descriptive statistics were used to summarize respondent answers.

Reliability Analysis was conducted to measure confidence or consistency (degree of correlation between items) for attitude, concern for health and environmental concern. Internal consistency (Cronbach's alpha coefficient) of the three variables measured is 0.898 for attitude, 0.787 to 0.801 for concern for health and environmental concern. For each of the three variables, Cronbach's alpha coefficient is greater than 0.700 (acceptable limit - Nunnally, 1978) which means that the instrument is reliable.

Linear Regression was used to analyze relationships between independent variables (attitude, concern for health, environmental concern, and knowledge about organic food) and the dependent variable (purchase frequency).

FINDINGS

DEMOGRAPHICS PROFILE OF OVERALL SAMPLE

The sample consists of 60 women (54.5%) and 50 men (45.5%). Age group under 25 is the largest (37.3%), followed by age group between 36 and 45 (22.7%), at the opposite pole there are over 66 years age group formed by 2 respondents (1.8%). High school group is the largest (40%) followed by university graduates group (28.2%). The number of unmarried is higher (51.8%) than those married (45.5%). Most respondents have children to support (61.8%) and most families have 3 members (29.1%). Regarding the occupation of respondents, most have a job (58.2%). Personal income of most people is up to 2,000 RON (less than 500 RON - 36.4%, between 500-999 RON - 14.5%, from 1000 to 1499 RON - 20% and between 1500 to 1999 RON - 16, 4%). Monthly household income of most respondents is between 500 and 2499 RON.

From 110 respondents, 22 replied that they had never bought organic food products which are considered non-buyers. Of the 88 buyers (80%), majority (44.5%) rarely buy organic food.

Table 1. Demographics profile of overall sample

Variables		Frequency	%
Gender	Male	50	45,5
	Female	60	54,5
Age	25 or under	41	37,3
	26 - 35	19	17,3
	36 - 45	25	22,7
	46 - 55	17	15,5
	56 - 65	6	5,5
	66 or above	2	1,8
Education	Primary school	3	2,7
	Secondary school	11	10,0
	High school	44	40,0
	Undergraduate	31	28,2
	Postgraduate	21	19,1

Marital Status	Single	57	51,8
	Married	50	45,5
	Others	3	2,7
Children in household	Yes	42	38,2
	No	68	61,8
Members in household	1	5	4,5
	2	24	21,8
	3	32	29,1
	4	28	25,5
	5	15	13,6
	> 5	6	5,5
Occupation	High school student	3	2,7
	Student	17	15,5
	Employee	64	58,2
	Unemployed	20	18,2
	Retired	6	5,5
Monthly personal income (RON)	less than 500	40	36,4
	500-999	16	14,5
	1000-1499	22	20,0
	1500-1999	18	16,4
	2000-2499	6	5,5
	2500-2999	3	2,7
	3000-3499	2	1,8
	3500-3999	1	0,9
	4000-4499	1	0,9
	4500-4999	1	0,9
	5000 or more	0	0
	Monthly Total Family income (RON)	less than 500	5
500-999		23	20,9
1000-1499		20	18,2
1500-1999		23	20,9
2000-2499		18	16,4
2500-2999		7	6,4
3000-3499		4	3,6
3500-3999		1	,9
4000-4499		6	5,5
4500-4999		2	1,8
5000 or more		1	,9
Frequency of consumption		Never	22
	Seldom	49	44,5
	Sometimes	17	15,5
	Usually	12	10,9
	Always	10	9,1
Consumption of organic food	Buyers	88	80,0
	Non-buyers	22	20,0

DESCRIPTIVE STATISTICS FOR THE INDEPENDENT VARIABLES

Table 2. Descriptive Statistics for the independent variables

Variable	Mean
Attitude	General 3,24 Buyers 3,45
Concern for health	3,20
Environmental concern	3,40
Knowledge about organic food	Scores 4,97

Most respondents have a positive attitude towards organic food. Negative attitudes, such as fact that it is difficult to identify organic food, that organic food labels are confusing or the fact that there are not so many sales points for organic products are barriers to consumption. The high price, low availability and poor appearance - can be viewed as general barriers against consumption of organic food (Vindigni et al., 2002; Zanolli et al., 2002).

Overall mean scores of 4.97 for answers on knowledge about organic food indicate rather a lack of information in the correct identification of organic food. Lack of knowledge leads to confusion about organic food which may determine potential customers not to buy these products (Verdurme et al., 2002; Worner and Meier-Ploeger, 1999).

Overall mean for concern for health is 3.20 which suggests a fair level of care for health of respondents. People eat organic food to improve health, or at least to keep it. Attitude to protect their own health is based on: avoiding pesticides and fertilizers, eating more minerals and vitamins from fruits and vegetables (Zanolli et al., 2002; Padel and Foster, 2005).

Overall mean for environmental concern is 3.40 which indicates a moderate to high degree of concern. This conclusion was reached by other researchers (Fotopoulos and Krystallis, 2002).

THE RELATIONSHIP BETWEEN ATTITUDE AND PURCHASE FREQUENCY

Linear regression was used to test the relationship between attitude and purchase frequency. Notice (Table 3) that the estimated slope ($B = 1.937$, $p < 0.001$) and adjusted $R = 0.767$ which indicates a strong positive relationship between the two variables. The independent variable attitude is a good predictor for the dependent variable (purchase frequency). Therefore hypothesis H1 is confirmed.

Table 3. Linear regression between attitude and purchase frequency

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3,839	,336		-11,431	,000
	Attitude	1,937	,102	,877	18,969	,000
adjusted R = 0,767						

THE RELATIONSHIP BETWEEN CONCERN FOR HEALTH AND PURCHASE FREQUENCY

As can be seen, linear regression was used to test the relationship between health concerns and purchase frequency. Observe (Table 4) that the estimated slope ($B = 1.889$, $p < 0.001$) and adjusted $R = 0.760$ which indicates a strong positive relationship between the two variables. The independent variable health concern is a good predictor for the dependent variable purchase frequency. Therefore hypothesis H2 is confirmed.

Table 4. Linear regression between concern for health and purchase frequency

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3,612	,333		-10,855	,000
	Concern for health	1,889	,102	,872	18,469	,000
adjusted R = 0,760						

THE RELATIONSHIP BETWEEN ENVIRONMENTAL CONCERN AND PURCHASE FREQUENCY

Linear regression was also used to test the relationship between environmental concerns and purchasing frequency. Observe (Table 5) that the estimated slope ($B = 1.725$, $p < 0.001$) and adjusted $R = 0.787$ indicates a strong positive relationship between the two variables. The independent variable environmental concern is a good predictor for the dependent variable purchase frequency. Therefore hypothesis H3 is confirmed.

Table 5. Linear regression between environmental concern and purchase frequency

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3,426	,297		-11,547	,000
	Environmental concern	1,725	,086	,888	20,106	,000
adjusted R = 0,787						

THE RELATIONSHIP BETWEEN KNOWLEDGE AND PURCHASE FREQUENCY

To test the relationship between knowledge and purchase frequency linear regression was used. Observe (Table 6) that the estimated slope ($B = 0.321$, $p < 0.001$) and adjusted $R = 0.344$ which indicates a moderate positive relationship between the two variables. The independent variable knowledge is a good predictor for the dependent variable frequency of purchase. Therefore the hypothesis H4 is confirmed.

Table 6. Linear regression between knowledge and purchase frequency

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,851	,231		3,681	,000
	Knowledge	,321	,043	,586	7,519	,000
adjusted R = 0,344						

CONCLUSIONS

Most respondents have a positive attitude towards organic food. People who have a greater concern for health and environment and people who have a higher level of knowledge about organic food have a higher purchase frequency.

This study provides a preliminary analysis of the proposed theoretical model defines organic food consumption. Variables attitude, concern for health, environmental concern, and knowledge about organic foods have a positive relationship with purchase frequency. These variables are good predictors for the purchase frequency of organic food.

LIMITATIONS AND FURTHER RESEARCH

This research focuses on variables attitude, concern for health, environmental concern, and knowledge about organic foods in relation to the frequency of organic food consumption. However, it may have ignored other possible factors that could be analyzed. Our study shows the need for further research to better understand the organic consumer in Romania. Knowing the characteristics of individuals who purchase organic food is a critical part of the organic food consumption analysis. Yet, a key question still remains as why customers buy or not buy organic

food in Romania. Further research should extend this study and determine other factors that influence consumers' purchase decision.

It is expected that organic food production in Romania and worldwide will increase. It is therefore necessary to conduct further research to generate insights into understanding organic food consumer and marketing system in which consumer must make purchasing decisions.

Future research will be useful in helping consumers, retailers, and producers to understand what organic means in the public sphere. Research can also inform the industry and policy makers on what marketing strategies will be useful in educating and informing the public.

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REFERENCES

1. Baltas, G. (2001), *Nutrition labeling: issues and policies*, European Journal of Marketing, Vol. 35 No. 5, pp. 708-21.
2. Childs, N. and Polyzees, G.H. (1997), *Foods that help prevent disease: consumer attitudes and public policy implications*, Journal of Consumer Marketing, Vol. 14 No. 6, pp. 433-47.
3. Davies, A., Titterington, A.J. and Cochrane, A. (1995), *Who buys organic food? A profile of the purchasers of organic food in N. Ireland*, British Food Journal, Vol. 97 No. 10, pp. 17-23.
4. Fotopoulos, C. and Krystallis, A. (2002), *Purchasing motives and profile of the Greek organic consumer: a countrywide survey*, British Food Journal, Vol. 104 No. 9, pp. 730-65.
5. Hughner, Renee Shaw, McDonagh, Pierre Prothero, Andrea, Shultz II, Clifford J., Santon, Julie (2007), *Who are organic food consumers? A compilation and review of why people purchase organic food*, Journal of Consumer Behaviour, Mar-June 2007, Vol. 6 Issue 2/3, pp. 94-110.
6. Joris Aertsens, Wim Verbeke, Koen Mondelaers, Guido Van Huylenbroeck, (2009) *Personal determinants of organic food consumption: a review*, British Food Journal, Vol. 111 Iss: 10, pp.1140 - 1167
7. Krystallis, Athanasios; Chryssohoidis, George (2005), *Consumers' willingness to pay for organic food: Factors that affect it and value*, British Food Journal; 107, 4/5; pp. 320
8. Magnusson MK, Arvola A, Hursti U, Aberg L, Sjoden P. 2003. *Choice of organic food is related to perceived consequences for human health and to environmentally friendly behaviour*, Appetite, Vol. 40, Nr. 2, pp. 109-117.
9. Makatouni, A. (2002), *What motivates consumers to buy organic food in UK? Results from a qualitative study*, British Food Journal, Vol. 104 Nos 3/5, pp. 345-353.
10. Padel, Susanne and Carolyn Foster (2005), *Exploring the gap between attitudes and behaviour: understanding why consumers buy or do not buy organic food*, British Food Journal; 107, 8; pp. 606-626
11. Wier, Mette and Carmen Calverley (2002), *Market potential for organic foods in Europe*, British Food Journal; 104, 1; pp. 45.
12. Yiridoe, Emmanuel K. Bonti-Ankomah, Samuel and C. Martin, Ralph (2005). *Comparison of consumer perceptions and preference toward organic versus conventionally produced foods: A review and update of the literature*. Renewable Agriculture and Food Systems, 20, pp 193-205
13. Zanolli, R. and Naspetti, S. (2002), *Consumer motivations in the purchase of organic food*, British Food Journal, Vol. 104 No. 8, pp. 643-653.
14. Zotos, Yorgos., Ziamou, Paschalina (1999), *Marketing Organically Produced Food Products in Greece*, Greener Management International, Spring 99, Issue 25, p91.