

IMPACT OF FOOD LABELING ON CONSUMERS BUYING DECISION (GEORGIAN CASE)

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ABSTRACT

Labeling is a universal phenomenon for the characterization of food products. The paper studies the role of food labeling in consumer behavior in Georgian Market. The main focus is on the awareness of consumers about food labeling, which is presented, as the most important issue of social marketing. The current study evaluates the impact of food labeling on consumer buying decision. To determine the attitude of Georgian consumers to food labeling, we conducted a marketing research. The study revealed the strong relationship between interest and awareness about food labeling, as well as among awareness, reliability and satisfaction about food labeling and consumer buying decision.

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Introduction. Many factors affecting the changes in the physical, mental and social status of the population. Modern marketing became as social values-driven action, rather than a specific company's customer-oriented strategy (Blair, 1995). Social marketing focuses on the target audience, the long-term demand for the public utility customer behavior command. There are many works and study about successful social marketing campaigns (Donovan, 2011; Evans, 2006; Hastings at al., 2004; Hastings and Haywood, 2008; French and Apfel, 2014; Glanz at al., 2008; Lefebvre, 2013). Social marketing campaigns based on the triangle of social interventions: education, marketing, and law. Social marketing uses education as one of the important tools for increasing awareness of the population Education relies on sending messages to inform or/and persuade the target audience to adopt the desired behavior voluntarily, but does not provide direct or/and immediate benefits. The favourable environment is vital to support and promote behavior change of individuals (Rothschild, 1999). There's a lack of appreciation among government and private sector, many campaigns often are unable to use social marketing approaches due to not well understanding the importance of the issue. There are many academic publications on the public health topic, social marketing experts have underlined that simply providing nutrition information without helping consumers interpret the information is unlikely to effectively encourage most consumers to make healthier choices (Hieke and Harris, 2016). Social marketing uses traditional marketing instruments to promote healthy attitudes and behaviors (Lee and Kotler, 2011). One of the important factors of changing healthy behavior is increasing awareness and knowledge in food labeling among the general public.

Most of the population in the world use the labels on food packaging to make healthier choices. Labeling provides consumers with information they are entitled to, and as labeling interventions are being pursued, they should be implemented in the most useful and cost-effective manner. Food labeling can help the consumers in the case if they have the knowledge or motivation to use the information, which may or may not be in a format they can understand (Rotfeld, 2009). For improving the healthy choice of the consumer, it is important to get the consumer into the habit of checking the label. It is important to get the consumer into the habit of checking the label. Social marketing interventions and initiatives, that focus on food and nutrition skills not only improve knowledge, competence and attitudes, but may amplify the impact of other policies, such as nutrition labeling, and help to reduce inequalities. Many investigations in this field demonstrated, that successful habit change depended on a deep understanding the target audience. They are influenced by many sectors of society, including families, community organizations, health care providers, faith-based institutions, businesses, government agencies, the media, and schools (Wechsler at al., 2004). Barriers faced consumer in this regard are the following: education level, low awareness of food labeling, low income and time scarcity. The ability to choose prepackaged food based on information obtained on its label requires knowledge and ability to read, understand and interpret information (Naidoo and Wills, 2000; Jacobs at al. 2010).

Georgian National Health Strategy recognizes nutrition, as a priority in public health care issue. It is urgent to provide such public health policy, that has the effect of improving the availability, affordability and acceptability of healthy behavior of the consumers. One of the significant actions in this regard is raising public awareness on food labeling there is a significant progress in terms of food safety and nutrition policy in Georgia (National Nutrition Study in Georgia, 2016; Repila, 2017). However, the country still faces some serious challenges in this field. The majority of the consumers are not satisfied with the food labeling in the local market. It's important to elaborate national food safety strategy and nutrition policy to respond to the current challenges of Georgia. Obviously, implementation of the obligations according the Association Agreement with EU is significant for Georgia, which requires the concerted effort of governments, private sector and civil society for encouraging healthy behavior for wellbeing of the population. It should be noted that the consumer perception regarding social marketing intervention is very positive. After increasing awareness of consumers of food labeling, they pay attention to the quality, design and innovation of food products, as well as promotion strategies such advertising, public relations and sales promotion. Social Marketing interventions will help to elaborate food standards of health products, to create an enabling institutional environment for successful implementation of nutrition policy and healthy behavior change of the consumer.

The challenges of Social Marketing issues were analyzed at the Marketing Department of Tbilisi State University (Apil at al., 2008; Todua, 2012; Todua and Jashi, 2013). Research on the attitude of Georgian consumers to foods was investigated too (Meskhia, 2016; Todua, Babilua and Dochviri, 2013; Todua and Dotchviri, 2015a; Todua and Dotchviri, 2015b; Todua, Gogitidze and Phutkaradze, 2015; Todua, Mghebrishvili and Urotadze, 2016; Mghebrishvili and Urotadze, 2016; Todua, Gogitidze and Phutkaradze, 2017; Todua, 2017). Despite some works undertaken by Georgian scientists on the Social Marketing, it is necessary to conduct a comprehensive research on this issue. The given study about the influence of food labeling on Buying Decision of Georgian consumers will good contributing to improving food labeling, provide education, as well develop policy on food labeling.

Research Methodology. Qualitative and quantitative methods have been chosen for studying and respectively, the study consisted of two steps. At the first step have been choosing the focus group technique for the qualitative survey and hypothesis formulation. In the second step were conducted online and face to face survey respondents through the country. A systematic random sampling method was used. In order survey sample size to be an accurate representative of the total number of Georgian population we employed stratified selection approach. This method assumes division of the entire population sample into a number of homogenous layers (strata), subsequently sampling a prearranged number of units from each stratum, proportionally to its size (Malhotra, 2008). Application of the stratified sampling technique ensures various clusters of population to be represented in the sample in the right proportion. In order to define the right survey sample size we employed formula developed by (Belyaevsky, Kulagina and Korotkov, 1995):

$$n = \frac{t^2 \times \delta^2 \times N}{t^2 \times \delta^2 + \Delta^2 \times N}, \quad (1)$$

where: n – stands for sample size, t – value of the t-statistic for a given confidence level and an infinite number of degrees of freedom (df); δ^2 - variance of the control variable in the population; Δ - margin of errors; N – population size.

As for the reliability level, its two dimensions are examined in conducting a marketing research: 95 % or 99 %. We took the 95 % reliable probability, relevantly $t = 1.96$ (Malhotra, 2008). It is possible to utilize findings from previous researchers to derive the variance of the control variable in a population of interest; however, no consistent historical data is available on the portion of the Georgian consumer's attitude towards food labeling. Therefore, it is recommended to accept the highest conceivable variation that would occur if there were an equal split between pro-labeling (50 %) and anti-labeling (50 %) adoption (Golubkov, 1998). Margin of errors is set to be equal to 3 %. This is a common precision level used in similar studies (Iadov, 1995). Considering the above-mentioned data and the fact that the major part of consumers of food products are people who are over 18 years old, the number of whom according to the State Statistics Department of Georgia is 2784 thousand people in our case it will be:

$$n = \frac{1,96^2 \times 2500 \times 2784000}{1,96^2 \times 2500 + 3^2 \times 2784000} = 1066,7$$

The study was conducted among 1122 consumers, from the geographical area of Georgia's largest cities: Tbilisi, Kutaisi, Batumi, Sighnaghi, Gori, Zugdidi, Senaki, Martvili, including 401 men and 721 women (see table 1).

Table 1. Sample structure according to age and occupation

AGE	MEN									WOMEN								
	Worker	Specialist	Entrepreneur	Supervisor	Student	Soldier	Unemployed	Pensioner	TOTALLY	Worker	Specialist	Entrepreneur	Supervisor	Student	Unemployed	Pensioner	Housewife	TOTALLY
18-25	66	24	2	10	87	1	17	-	207	120	26	4	16	119	24	1	5	315
26-35	40	23	1	13	1	3	5	-	86	78	34	2	18	2	4	-	5	143
36-45	13	7	6	2	-	2	-	-	30	37	20	4	7	1	3	-	12	84
46-55	15	7	4	5	-	4	4	-	39	47	23	3	8	1	8	1	15	106
56-65	6	6	1	4	-	1	-	3	21	15	6	1	-	-	5	9	6	42
65 >	1	-	-	2	-	-	-	15	18	3	2	-	1	-	-	22	3	31
TOTALLY	141	67	14	36	88	11	26	18	401	300	111	14	50	123	44	33	46	721

Source: own elaboration.

The research tool we chose a questionnaire that consisted of several structured questions. The questionnaire contained information on the consent and confidentiality of the respondent, as well the study explanation and the filling instructions. A five-point Likert scale was employed (Malhotra, 2008). The self-administered survey method was used to avoid errors caused by the subjectivity of the interviewer. Based on this the survey results were analyzed using statistical software SPSS (version 21.0) for windows. Along with research methodology we used variance analysis method – ANOVA (Malhotra, 2008). Numerous hypotheses were formulated, focusing on the relationship between food labeling and buying decision of consumers.

H1: Interest positively impacts on food labeling awareness of consumers;

H2: Awareness about food labeling positively impacts on buying decision of consumers;

H3: Reliability about food labeling positively impacts on buying decision of consumers;

H4: Satisfaction about food labeling positively impacts on buying decision of consumers.

Research Results. Our marketing research made it clear that the majority of surveyed respondents (83 %) is possessed basic information about food labeling. The study reveals, that food labeling increases consumer's interest, awareness and reliability which leads to customer satisfaction, but their level is rather low (See Figure 1). At that, The greater part (51 %) of the respondents hesitates to determine the positive characteristics of food labeling and refrains from answering the question. 19 % of the respondents consider that the positive side of food labeling may be regarded the fact that this product is identified. 15 % of respondents consider that the labeled food product is distinguished by its improved quality and 13 % of them consider that it promotes purchase motivation. The fact that labeling is useful for health is supported by only 2 % of the surveyed respondents. Most of the respondents (50 %) receiving essential information regarding food labeling from internet resources, 27 % - from mass media, 13 % - from relatives and word of mouth, 8 % - from special literature. 3 % of the respondents to do this use different methods.

Conducted analysis of variance in order to verify the hypothesis of interest. One Way ANOVA F-Tests used to understand the interaction between the independent variables and the dependent variables. At first, investigated how the Interest influences on food labeling awareness of consumers. The findings indicate the coefficient of Interest is significant at the 5 % level, meaning

Interest is a significant determinant of consumers` awareness about food labeling (F=8.041, p=0.005). H1 has been supported, thus it indicates that the consumer has more interest, if one is more awareness about food labeling (see Table 2).

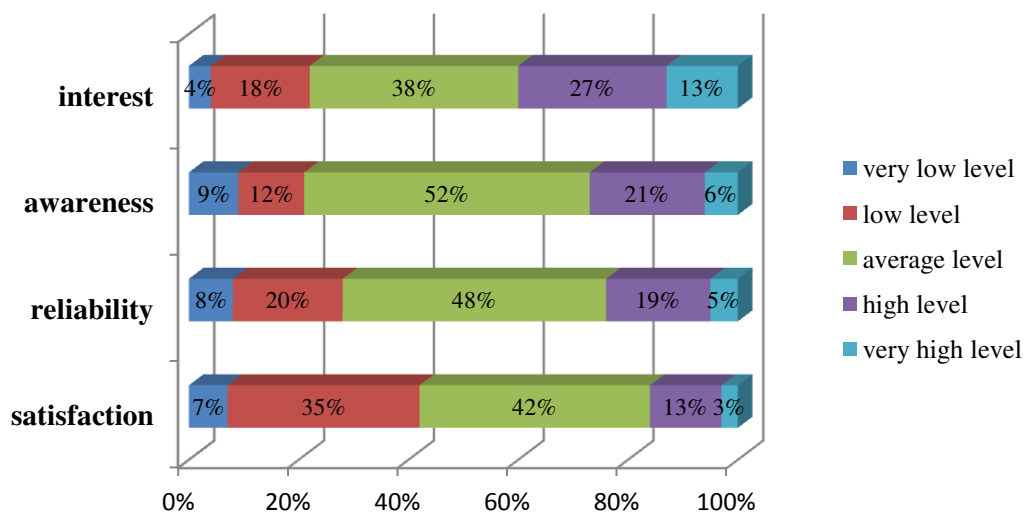


Fig. 1. Consumers` interest, awareness, reliability and satisfaction regarding to food labeling (in %)

Table 2. Impact of interest on food labeling awareness of consumers

Estimated Marginal Means					
Dependent Variable: <i>food labeling awareness</i>					
	Sum of Squares	df	Mean Square	F	p
Interest	2416317.818	1	2416317.818	8.041	.005
Error	288161592.170	959	300481.327		

P<0.05 means that the differences between the groups studied are statistically significant.
Source: own elaboration.

One Way ANOVA F-Test has been used to check awareness level about food labeling impacts on buying decision of consumers (see Table 3). The results suggest that awareness plays an important role in buying decision of consumers (F=7.683, p=0.000).

Table 3. Impact of food labeling awareness on buying decision of consumers

Estimated Marginal Means					
Dependent Variable: <i>buying decision</i>					
	Sum of Squares	df	Mean Square	F	p
Awareness	16159212.544	7	2308458.935	7.683	.000
Error	288161592.170	959	300481.327		

P<0.05 means that the differences between the groups studied are statistically significant.
Source: own elaboration.

In order to test the third hypothesis employed ANOVA. The ANOVA test illustrates that reliability about food labeling is an important factor with regards to buying decision of consumers. F-test = 9.631 (p=0.000) is significant at the 5 % level. Consumer`s reliability about food labeling influence on the buying decision of consumers (see Table 4).

Table 4. Impact of reliability about food labeling on buying decision of consumers

Estimated Marginal Means					
Dependent Variable: <i>buying decision</i>					
	Sum of Squares	df	Mean Square	F	p
Reliability	14.651	3	4.884	9.631	.000
Error	543.101	1071	.507		

P<0.05 means that the differences between the groups studied are statistically significant.
Source: own elaboration.

Analysis of the relationship between satisfaction about food labeling and the consumer buying decision revealed that the relationship is significant at the 5 % level. Based on F-statistics ($F=4.429$, $p=0.001$) the H4 hypothesis is supported satisfaction about food labeling influence on buying decision of consumers. This relationship could be confirmed (see Table 5).

Table 5. Impact of satisfaction about food labeling on the consumer buying decision

Estimated Marginal Means					
Dependent Variable: <i>buying decision</i>					
	Sum of Squares	df	Mean Square	F	p
Satisfaction	13.477	6	2.246	4.429	0.001
Error	543.101	1071	.507		

$P < 0.05$ means that the differences between the groups studied are statistically significant.

Source: own elaboration.

Conclusions. The study explores the significance of consumers' interest, awareness, and reliability and satisfaction level of food labeling. Also shown consumer ability to interpret food labeling information while making purchasing decisions regarding to food products. This study found, that consumers have a certain view about food labeling and most of the Georgian consumers are aware of the importance of food labeling. From the study, it has become obvious that, in general, the Georgian consumers' attitude to labeling is positive, but their level of food labeling awareness is rather low.

On the basis of the study, it is established that the level of consumer awareness about food labeling is greatly influenced by information sources. Most of the respondents receiving essential information regarding to food labeling from internet resources, relatively fewer respondents get information from special literature, mass media and word of mouth.

According to consumers, main requirement of labeling is that the information in it should be presented clearly. In turn, awareness effects on consumers perception about the importance of labeling. Labeling helps Georgian consumers in making a buying decision of food products. Research shows that there is a close relationship between interest and awareness about food labeling, as well as among awareness, reliability and satisfaction about food labeling and consumer buying decision.

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