

The Role of Food Labeling on Consumers' Buying Decision: Georgian Case

Nugzar Todua

II. LITERATURE REVIEW

Abstract—The paper studies the role of food labeling in order to promote healthy eating issue in Georgia. The main focus of the research is directed to consumer attitudes regarding food labeling. The methodology of the paper is based on the focus group work, as well as online and face to face surveys. The data analysis has been provided through ANOVA. The study proves that the impact of variables such as the interest, awareness, reliability, assurance and satisfaction of consumers' on buying decision, is statistically important. The study reveals that consumers' perception regarding to food labeling is positive, but their level of knowledge and ability is rather low. It is urgent to strengthen marketing promotions strategies in the process of implementations of food security policy in Georgia.

Keywords—Food labeling, buying decision, Georgian consumers, marketing research.

I. INTRODUCTION

THERE are many factors that influence consumer behavior. Currently, marketing increasingly focuses on the social values of consumers and not the company's strategic goals [1]. Therefore, the focus of social marketing is the long-term needs of target consumers and changes in their behavior [2]. A lot of scientific works have been done regarding social marketing campaigns in this field [3], [4]. Studying the problems of social marketing, researchers especially emphasize the fact that consumer awareness plays an important role in making a purchasing decision [5]. Therefore, companies must provide such information to consumers that will help them in the buying decision-making process [6], [7]. From this point of view, it is very important to form an environment that must take into account the adaptation of changes in consumer behavior [8]. There is 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 [9].

Social marketing uses traditional marketing instruments to promote healthy attitudes and behaviors [10]. One of the important factors of changing healthy behavior is increasing awareness and knowledge in food labeling among the general public.

Nugzar Todua is with the Marketing Department, Ivane Javackisvili Tbilisi State University, Tbilisi, 0179 Georgia (phone: 995593321655; fax: 995322300032; e-mail: nugzar.todua@tsu.ge).

Food labeling is an important component of food industry, which has a strong influence on the purchasing decisions of the consumers. Food label directly impacts on the consumers' behavior, encourages them to receive the relevant nutrition information regarding healthy products. Many researchers identified that a well-informed target audience effectively uses the text of the product to buy a product, which may or may not be in a format they can understand [11]. The food labeling represents a big source for the users to improve the healthy eating behavior, it requires increasing the responsibility of policymakers at all levels of the government. Many stakeholders, government agencies, business, educational institutions, civil society and media influence on the elaboration of public health policy [12]. Low awareness of food labeling and inadequate income of the population prevents them from making a purchasing decision on healthy products [13]. The ability to choose prepackaged food based on information obtained on its label requires essential knowledge and skills to read, understand and interpret information [14].

According to the Georgian National Health Strategy, assuring food safety and promoting a healthy environment became priorities for the country, but the substantial improvement has not been achieved yet [15]. In the frame of the Association Agreement with EU and DFTCA, many initiatives should be implemented to encourage food safety and nutrition policy in Georgia, in order to better reflect the needs and interest of the consumers [16]. The Association Agreement with EU and DCFTA should facilitate promotion of export and food safety of Georgian products in order to better reflect the interest and demand of consumers [17]. It is urgent to create a favorable environment for the implementation of commitments of DFTCA, close collaborate with different stakeholders to provide effective nutrition policy and healthy behavior changing of the consumers [18].

The role of social marketing interventions to change consumer perceptions regarding a healthy eating issue is very impressive. Social marketing uses different instruments to increase awareness of the consumers on food labeling After obtaining the essential information about nutrition content, consumers pay more attention to the quality, design and innovation of food products, as well as marketing promotion strategies such as advertising, public relations and sales promotion [19].

Georgian scholars have conducted investigations about the behavioral attitude and perception of the consumers regarding healthy eating campaigns in the country [20]-[22]. Despite some progress in this field, this issue remains very critical. It

is urgent to involve all interested stakeholders in these processes to promote healthy behavior change initiatives through social marketing.

III. RESEARCH METHODOLOGY

Qualitative and quantitative methods were selected to accomplish the objectives of the study. The study consisted of two steps. In the first step, qualitative research has been provided by the focus group technique and elaborated hypothesis for further working. Three focus groups have been selected. Based on the theoretical materials of different aspects of consumer behavior, discussions are conducted to reveal behavioral perception of Georgian consumer regarding food labeling. With the help of the moderators, the participants of the focus groups better clarified the research tasks and actively engaged in the discussion. The participants in the group were recommended to communicate with each other, share attitudes and give frank opinions on the topics presented to them by the moderator or the generated by the dynamics of the group. There was no need to reach a consensus.

In the second step, quantitative research (online and face to face survey) was conducted according to a specially designed questionnaire that consisted of several structured questions. A five-point Likert scale was employed [22]. The self-administered survey method was used to avoid errors caused by the subjectivity of the interviewer. A systematic random sampling method was used. The confidence interval is 95% and the margin of errors is set to be equal to 4%. 482 men and 723 women were participated in the survey. The results were analyzed through using statistical software SPSS (version 21.0) for windows. Along with research methodology we used variance analysis method – ANOVA [22]. 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: Assurance about food labeling positively impacts on buying decision of consumers;
- ✓ H5: Satisfaction about food labeling positively impacts on buying decision of consumers.

IV. FINDINGS

The research calcified that the majority of respondents (83%) have basic information regarding 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 Fig. 1). At the same time, 51% of the respondents not clearly 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. Half of the respondents consider that they usually receive essential information about food labeling from internet, 27% from mass media resources. 12% of respondents prefer to have information from friends and relatives, 8% from special literature. 3% of the respondents have no answer in this regard.

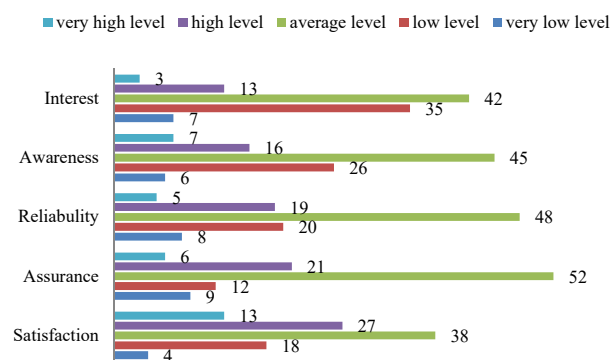


Fig. 1 Levels of interest, awareness, reliability, assurance and satisfaction of consumers' regarding to food labeling (in %)

The above formulated hypotheses have been tested through analysis of variance. For this purpose we have used One Way ANOVA F-Tests. First of all we have determined the interrelationship between interest and food labeling awareness of consumers ($F=4.064$, $p=0.001$). The findings revealed that interest of consumers strongly influenced on the awareness of food labeling (see Table I).

TABLE I
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	21.086	5	4.217	4.064	.001
Error	843.675	813	1.038		

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

One Way ANOVA F-Test has been used to check awareness level about food labeling impacts on buying decision of consumers (see Table II). The results suggest that awareness plays an important role in buying decision of consumers ($F=2.244$, $p=0.003$).

TABLE II
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	18.207	16	1.138	2.244	.003
Error	543.101	1071	.507		

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

In order to test the third hypothesis, we employed ANOVA. The ANOVA test illustrates that reliability about food labeling is an important factor with regards to buying decision of consumers. F F-test = 9.631 (p=0.000) is significant at the 5% level (see Table III). Therefore H3 hypothesis is confirmed.

TABLE III
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.

One Way ANOVA F-Test has been used to check assurance level about food labeling impacts on buying decision of consumers (see Table IV). The results suggest that assurance plays an important role in buying decision of consumers (F=6.644, p=0.000).

TABLE IV
IMPACT OF ASSURANCE 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
Assurance	84.224	25	3.369	6.644	.000
Error	543.101	1071	.507		

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

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) it can be claimed that H4 hypothesis is supported (see Table V). Therefore it indicates the satisfaction of consumers about food labeling impact on their buying decision.

TABLE V
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	.001
Error	543.101	1071	.507		

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

V. CONCLUSIONS

The study explores the significance of consumers' interest, awareness, and reliability and satisfaction level of food labeling. The research revealed not sufficient ability to interpret food labeling information while making purchasing decisions. 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. On the basis of the study, it is confirmed that the level of consumer awareness about food labeling is greatly influenced by information sources. Most of the respondents receive essential information regarding to food labeling from the internet resources, relatively few respondents get information from special literature, mass media and word of mouth. According to consumers, the main requirement of labeling is that the information in it should be presented clearly. In turn, awareness effects on consumer perception about the importance of 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. This paper will be a valuable resource for academicians, practitioner marketers and policy makers working on healthy eating issues.

ACKNOWLEDGMENT

The paper based on the project "Influence of Food Labeling on Changing Consumer Behavior (in the context of the association of Georgia with the European Union)" conducted at the Marketing Department of Ivane Javakhishvili Tbilisi State University.

REFERENCES

- [1] J. E. Blair, "Social marketing: consumer focused health promotion," *AAOHN Journal*, vol. 43, no. 10, pp. 527-531, 1995.
- [2] R. J. Donovan, "The role for marketing in public health change programs," *Australian review of public affairs*, vol. 10, no. 1, pp. 23-40, 2011.
- [3] W. D. Evans, "How social marketing works in health care," *BMJ: British Medical Journal*, vol. 332, no. 7551, p. 1207, 2006.
- [4] G. Hastings, M. Stead, and J. Webb, "Fear appeals in social marketing: Strategic and ethical reasons for concern," *Psychology & Marketing*, vol. 21, no. 11, pp. 961-986, 2004.
- [5] J. French, and F. Apfel, "Social marketing guide for public health program managers and practitioners," technical report, Stockholm: ECDC, 2014.
- [6] K. Glanz, B. Rimer, and Th. Viswanath, "Health behavior and health education: theory, research and practice," 4th ed., San Francisco: John Wiley & Sons, 2008.
- [7] R. C. Lefebvre, "Social marketing and social change: Strategies and tools for improving health, well-being, and the environment," San Francisco: John Wiley & Sons, 2013.
- [8] M. L. Rothschild, "Carrots, sticks, and promises: A conceptual framework for the management of public health and social issue behaviors," *The Journal of Marketing*, pp. 24-37, 1999.
- [9] S. Hieke, and J. L. Harris, "Nutrition information and front-of-pack labeling: issues in effectiveness," *Public health nutrition*, vol. 19, no. 12, p. 2103-2105, 2013.
- [10] N. Lee, and P. Kotler, "Social marketing: influencing behavior for good," 4th ed., Los Angeles: Sage, 2011.
- [11] H. J. Rotfeld, "Health information consumers can't or don't want to use," *Journal of Consumer Affairs*, vol. 43, no. 2, pp. 373-377, 2009.
- [12] H. Wechsler, M. L. McKenna, S. M. Lee, and W. H. Dietz, "Role of schools in preventing childhood obesity," *The State Education Standard*, vol. 5, no. 2, pp. 4-12, 2004.
- [13] J. Naidoo, and J. Wills, "Foundations for Health Promotion," 4th ed., Elsevier Health Sciences, 2016.
- [14] S. A. Jacobs, H. de Beer, and M. Larney, "Adult consumers' understanding and use of information on food labels: a study among consumers living in the Potchefstroom and Klerksdorp regions, South Africa," *Public health nutrition*, vol. 14, no. 3, pp. 510-522, 2011.
- [15] "National Nutrition Study in Georgia," Tbilisi: OXFAM Georgia, 2016.
- [16] J. Repila, "South Caucasus Food Security Learning Summary: How to support national influencing using a multi-stakeholder approach,"

Tbilisi: OXFAM Georgia, 2017.

- [17] A. R. Apil, E. Kaynak, and N. Todua, "Georgian consumers' evaluation of products sourced from a geographically close proximity country," *Journal of Euromarketing*, vol. 17, no. 3-4, pp. 199-218, 2008.
- [18] C. Jashi, and N. Todua, "Behavior change through social marketing (Georgian case)," In *Abstract Book of World Social Marketing Conference*, Toronto, 2013, pp. 95-97.
- [19] N. Todua, P. Babilua, and T. Dochviri, "On the Multiple Linear Regression in Marketing Research," *Bulletin of the Georgian National Academy of Sciences*, vol. 7, no. 3, pp. 135-139, 2013.
- [20] N. Todua, and T. Dochviri, "On the Marketing Research of consumer prices and inflation process," *British Journal of Marketing Studies*, vol. 3, no. 2, pp. 48-57, 2015.
- [21] N. Todua, T. Gogitidze, and B. Phutkaradze, "Georgian Farmers' Attitudes Towards Genetically Modified Crops," *Economics World*, vol. 5, no. 4, pp. 362-369, 2017.
- [22] N. K. Malhotra, "*Marketing research: An applied orientation*," 5th ed., Pearson Education India, 2008.

Nugzar Todua graduated from Ivane Javackisvili Tbilisi State University, Faculty of Commerce (1986). He has PhD degrees in technical Sciences at the Moscow State Institute of Commerce (1990) and Doctor of Economics Sciences at the Georgian Institute of Economic and Social Problems (1995).

He is a Head and Full Professor of Marketing Department, School of Economics and Business, Ivane Javakhishvili Tbilisi State University, Tbilisi, Georgia.

He is interested in following areas: Consumer Behavior, Marketing research, Social Marketing, International Marketing. He is member of Senate of Tbilisi State University (2006), Georgian Economic Scientific Academy (2000) and International Social Marketing Association (2013).