

Assessing Consumer Information Seeking Behavior on Food and Nutrition in Sri Lanka

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ABSTRACT

The objectives of this study were recognize the sources where Sri Lankan consumers get information about food and food safety; to Find out how they want to have more information about the food and food safety, and to determine the relationship between the source of information and the socio-economic characteristics of the consumers. Using the seven sources of information, two indices, namely *Mean Source Score (MSS)* and *Media Responsiveness Index (MRI)* were developed which describe how important each of these sources of information for consumers to get information about food and food safety. A sample of 500 consumers were randomly selected and interviewed using a semi-structured questionnaire at Puttalam and Kurunegala districts in Sri Lanka from July to August in 2006. The Ordered Logistic Regression Technique was used to estimate the coefficients of the model, to which five levels for the dependent variable was derived using the range of values of MRI. The results based on the MSS indicate that consumers are being received information mainly from television, friends and newspapers but television becomes the most popular source of information about food and food safety further it was founded consumers did not believe information from grocery vendors and they want to have more and more information from Doctors and Scientists. The statistical outcome shows that age, gender, level of education, level of income, living area and the house hold size haven't significant impact on this information seeking behavior. It suggests that television is the most suitable media for deliver the information of food and nutrition. So government should create policies to make reliable people on information available in television.

KEYWORDS: Consumers Behavior, Food and Food Safety, Sources of Information.

INTRODUCTION

Simply by considering consumer's own behavior, it can be recognized that they make an enormous range of judgments when purchasing any product. In the case of foods, which are purchased on a regular basis and are relatively cheap, their judgments are rapid and frequently not subject to a process of conscious thought. Instead they behave in a somewhat scripted fashion. That is to say consumers have an inbuilt set of behavior patterns that they carry out almost automatically. Those judgments have been derived and defined by the simple frequency of the operation they carry out. There appear to be two types of properties are measured when choosing a product. They are intrinsic and extrinsic qualities. The intrinsic properties relate to the product's appearance and remembrance of comparable performance in terms of flavor, texture etc. In addition however consumers superimpose on these qualities their expectations of its performance, their own habits of use and any information they have acquired on its price, its market position and the influence of its brand image through advertising. So to become a successful product in the market place it should fulfill both intrinsic and extrinsic properties. So the media coverage of food and food security is more affected for the consumer buying behavior (Hester *et al.*, 2000).

Although households are flooded with information through dozens of TV channels, plenty of newspapers, journals and radio the public is said to be poorly informed on many important issues (Mccluskey *et al.*, 2004). Extensive media coverage of

possible risks can lead to decreased demand. For example, Johnson shows how media coverage of product contamination by the pesticide ethylene dibromide (EDB) resulted in important disruptions in the market for grain products.

In hindsight, analysts argue that the media confused a long-term cumulative effect with imminent danger, resulting in unnecessary panic and losses (Negin, 1996). Traditional economic thinking about the media and the market for information is that readers demand accurate information and media providers supply it through markets (Coase, 1974). The introduction of new goods however creates disequilibrium (Bresnahan *et al.*, 1996). This in turn creates a demand by economic agents for objective information to assist in making decisions on adoption and use (Schultz, 1975). The consumer's challenge is to sort through the various, competing and sometimes conflicting, sources of information.

Newspaper, TV, radio and other media simultaneously decide what (which issues) to report, how that is in which format (such as pictures, interviews, text) and which aspects (such as positive and negative aspects).

Media Coverage and GM Food

From 1996 to 2002, the acreage of transgenic crops increased 35-fold worldwide from 1.7 million hectares in 1996 to 58.7 million hectares in 2002 (Anon, 2003). By considering GM food, there is evidence that this broad and often negative media coverage of GM food has raised public awareness, influenced public perceptions and altered the public

agenda on Genetically Modified (GM) foods in Europe and elsewhere (Bauer *et.al*, 2002). This is not surprising as over 90% of consumers receive information about GM food primarily through the popular press and television (Hobon *et.al.*, 1993). While Sri Lankan government has imported GM food, the consumer response to GM food products has varied. Gaskell et al studied sources of difference in the acceptance of GMF between the United States and Europe and found (i) the level of trust in government, which provides information and supervises food safety, is higher in the United States and (ii) the quantity of media publications is significantly more influential in Europe. In contrast two international environmental NGOs, Greenpeace and Friends of the Earth, have distributed negative information through web sites, press release and demonstrated claiming risks to human health, environment and biodiversity. They also claim that consumers have the right to know with respect to GM labeling and that new technology benefits only large multinational and not consumers (Anon, 2001).

Though most countries have only ordered the labeling of food items to ensure they are Genetically Engineered (GE) free, Sri Lanka has gone one step further by banning all types of GE foods in 2001. The regulation made by the Ministry of Health, Sri Lanka, banning the sale of Genetically Modified (GM) foods, that was scheduled to come into effect May 1, 2001, and postponed to 1 September 2001, has been deferred indefinitely (Anon, 2002).

Media Coverage in Sri Lanka

Although GM food is made a large effect for consumers and farmers in the world, there are very little amount of people know about GM food in Sri Lanka. It is mostly because of the lack of information, which is covered by the media or attitude of consumers about the information that are given by the media. The Table 1 shows the mass media coverage in Sri Lanka for the last 4 years.

Table 1 - Mass media usage over the years in Sri Lanka:

Source of Media	2001	2002	2003	2004
News Papers('000)				
Daily	143	146	151	165
Weekly	104	106	112	120
T.V. Channels	9	9	9	9
Radio Channels	21	21	21	21

Source: Central Bank 2005

During the fast two decades, much of the work undertaken for the benefit of the people in developing countries like Sri Lanka has concentrated on the generation of knowledge on food and food safety. Particularly through agricultural research and new technologies. Recently some attention has also been given to the imparting of information, technology and

knowledge about food and food safety developed for the rural and urban population using channels such as radios, televisions, newspapers, posters, extension agents etc. to mete out instructions with no feed back expected.

The specific objectives of this study are, therefore to recognize the sources where Sri Lankan urban and rural consumers normally get information about food and food safety and find out how they want to have more information about food and food safety & whether & how that behavior is correlated with their socio-economic characteristics (i.e. age, gender, income, level of education, household size and living area)

METHODOLOGY

The study was methodically developed to hypothesize that the consumer information seeking behavior is associated with their demographic and economic characters. However, quantifying of such behavior is associated with a number of difficulties, including "unobservability" (Hair, 1995) and "Subjectivity" (Buchanan, 1969) of behavior amongst the individuals. To resolve the difficulties, researchers have resorted to alternative ways of developing appropriate techniques to avoid losing too much information.

For the purpose of this analysis, a "Mean Source Score" (MSS) has been developed, which was calculated by aggregating the scores given by all respondents (Ni, where i =1, 2...n) to all sources of information and dividing it by number of respondents in the sample(Ni).The value of MSS will in turn depend on the size of the scale used to get scores, for example for a five-point likert scale it will be ranged from 1 (min) to 5 (max) .

With that, another index can be developed, namely "Media Responsiveness Index" (MRI) to analyze the consumer information seeking behavior with their demographic and economic characteristics. The formulation of the MRI was based on the equation shown below.

$$MRI = \sum Ni / aX$$

In the equation, the term Ni denotes the score given to sources by the respondent i (i =1, 2, 3 ...n) on the likert scale and aX is the "Maximum potential score" that can be obtained by a respondent, which in turn be used to normalize the value of index.

Specification of the Empirical Model

With MRI of a consumer was taken as the dependent variable, the following empirical model was constructed to find out whether there is any significant relationship between the consumer information seeking behavior and their socio economic characteristics.

$$MRI_i = \alpha_1 + \alpha_2 * AGE_i + \alpha_3 * GEN_i + \alpha_4 * INC_i + \alpha_5 * LA_i + \alpha_6 * EDU_i + \alpha_7 * HHI_i + \epsilon_i$$

Where,

AGE = Age (less than 30 Years=1; greater than 30 Years=2)

GEN = Gender (male=1; female=2)

INC = Monthly Household Income (less than 15000Rs=1; more than 15000Rs=2)

EDU = Level of Education (beyond the Ordinary Level=1; up to the Ordinary Level=2)

HH = Household Size (less than 3=1; more than 3=2)

LA = Living Area (rural=1; urban=2)

Data Collection and Analysis

A questionnaire-based survey was conducted with a sample of 500 consumers selected randomly to reflect the various socio-economic characteristics in the Puttalam and Kurunegala district in Sri Lanka over the period of July to August in 2006. The respondents were asked to indicate their preference (reliability) about each source of information on a five point likert scale (Oppenheim 1992) in which "most important" are placed at one extreme (5) and most unimportant" at the other (1). The Ordered Logistic Regression technique was used to estimate the coefficients of the empirical model (Borooah, 2002 & Pampel, 2000)

RESULTS AND DISCUSSION

Descriptive Statistics of MSS

The Mean Source Scores (MSS) calculated for each source of information is reported in Table 2. According to the results, mostly all consumers get information from Television (3.64) other than that Friend (2.27) newspapers (2.09) and radio (2.02). Normally they have got very least amount of information from Doctors and Scientists.

They are expected more and more information from Doctors (4.86) and Scientists (4.74) and from Television (3.81) they do not like to get information from Grocery Vendors (1.72).

Table 2 - MSS for sources of information:

Source	MSS	
	Current Source	Expected Source
Newspaper	2.09	3.27
Friends	2.27	3.15
Television	3.64	3.81
Doctors	1.89	4.86
Scientists	1.03	4.74
Radio	2.02	3.04
Grocery Vendors	1.99	1.72

Estimates from Ordered Logistic Regression (OLR)

The logged odds from OLR calculated for seven explanatory variables are report in table 3 and Table 4. According to those results, there is no significant difference among independent categories, which are age groups, income groups, household groups, gender groups and living area groups.

Table 3 - Results from Ordered Logistic Regression for current sources:

Variable	Estimate	Standard Error	Significance
Living Area	0.383	0.253	0.130*
Age	0.251	0.282	0.373*
Income Level	0.129	0.253	0.624*
Sex	-0.544	0.274	0.047*
House Hold Size	0.063	0.536	0.907*
Education Level	0.461	0.283	0.104*

Notes: * denote statistical non significance at 5%

All categories' consumers get information on same media and seeking information from same sources.

Table 4 - Results from Ordered Logistic Regression for expected sources:

Variable	Estimate	Standard Error	Significance
Living Area	-0.315	0.252	0.210*
Age	0.195	0.280	0.485*
Income Level	0.041	0.262	0.875*
Sex	0.157	0.270	0.560*
House Hold Size	0.200	0.535	0.708*
Education Level	-0.448	0.283	0.113*

Notes: * denote statistical non significance at 5%

CONCLUSIONS

This study assesses consumer's information seeking behavior on food and nutrition. The outcome of analysis that based on two indexes, namely *Mean Source Score* (MSS) and *Media Responsiveness Index* (MRI), and an Ordered Logistic Regression analysis to quantify consumer behavior in this respect suggests that the relative importance of these sources not varied with respect to socio-economic characteristics of consumers.

Most of consumers are being received information mainly from Television, Friends, and Newspapers and they mostly seeking information from doctors, scientists and television. The Television becomes the most popular source of information about food and nutrition. According to the results it was founded consumers did not believe information from Grocery Vendors.

There is no significant impact on information seeking behavior of consumers based on the age, gender, and level of education, household size, income and living area. The results suggest that, if some producer or seller wants to give information of their product's nutritional value or increase the demand for that product they should use Television as source. So the Government has to make appropriate policies to Television Programs relate with food and nutrition, to make their information more reliable and accurate.

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