

RESEARCH ARTICLE

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Analysis of Consumer Awareness and Perceptions about Food Safety in Tirana, Albania

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Abstract

This is an exploratory study based on a structured survey aimed at assessing Albanian consumer awareness about food safety assurance, standards and institutions. This paper analyzes the Albanian consumer perceptions, awareness and information about safety of food products. According to the research findings, about 30 percent of respondents perceive meat as unsafe; meanwhile 20 percent of respondents perceive dairy products as unsafe. There is a much higher distrust in relation with salami products – about 80 percent of the respondents perceive salami as unsafe. Approximately 80 percent of consumers stated that they are not aware of HACCP, 56 percent are not aware of ISO, and 52 percent do not know the institution accountable for food safety (National Food Authority). Awareness, information and promotional programs can improve consumers' behavior with regard to food safety and reduce the public health risk.

Key words: Food safety, dairy products, meat products, consumers, perception, standards.

1. Introduction

The last two decades have brought about major changes to European consumer behavior, [27] including increased food safety concerns related to agriculture production, food processing and distribution practices, the trade openness and a continuous change of both consumer needs and expectations for processed and convenient food products. The increased awareness about food safety, as well as changes in dietary and consumption patterns have attracted interest in studying dairy products and fresh meat consumption preferences [11,2].

Food safety concerns have triggered extended research with respect to various issues, such as the role of labeling, traceability systems, food safety institutions and monitoring, involving consumers' perceptions about food safety. In the beginning of 1990s, safety was included in marketing theories under the so called credence attributes [1]. Safety in both developed and developing countries is an important, but not easily estimated, attribute due to the existence of information asymmetry (ibid). Many studies assert the role of institutions in mitigating the

scarce information and promoting safety by providing trust and information through certification and labeling [30].

In developed countries, various studies confirm that, in the consumers' perception, public and private sector are the main source of safety assurance [3]. In developing and transition countries (including Albania), food safety standards are scarcely enforced by both public and private sector. Currently, Albania is experiencing serious concerns related to food safety and its enforcement by the state; thereby engendering consumers' distrust and insecurity, especially for livestock products that are particularly exposed to safety threats. Albania is facing serious problems with the national food safety governance system in terms of legislation, institutional capacity, infrastructure, law enforcement, as well as related private investments, which effect consumers' real and perceived safety risks.

The private sector has not reacted adequately to the increased consumers' concerns about food safety and quality attributes, by developing its own mechanisms. Alternative systems of safety and quality certification are not widely diffused in this sector in Albania. Moreover, consumers (as a third party) or

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their representing entities, although formally established, have not been successful yet to drive the business towards introducing trustful certification schemes.

In this context, consumers' attitudes and perceptions play a crucial role for ensuring the effectiveness of food quality and safety labeling, since uninformed and distrustful consumers may hinder the usefulness of the implemented policies. The objective of this study is to analyze consumers' perception about food safety and quality, as well as buying behavior for food products in Tirana (with focus on livestock products), within the context of weak food safety monitoring and enforcement system.

Key research questions:

- What are the consumer awareness and perceptions about food safety standards and related institutions?
- What are the consumer perceptions and awareness about current levels of food safety for livestock products?

This paper is organized in five sections. The following section consists of a review of food safety situation and food safety institutional framework in Albania. Third section describes the methodological procedure implemented for studying consumer awareness about the safety of food products. The fourth section presents the results, followed by conclusions and recommendations for both producers and policymakers.

2. Food safety situation and institutional framework in Albania

2.1 Food Safety situation in Albania

In the past decade, Albania, similar to other South-Eastern Europe, has experienced important transformations in the government system. The rapid change from centralized to a market-based economy has affected food production, consumption patterns and health system, thereafter exposing the population increasingly to the threats for their health [31].

Food-borne diseases caused by microbiological contamination are one of the major public health challenges in Albania [33]. Brucellosis, particularly in people, which is transmitted through contact with animal tissue or through the ingestion of contaminated livestock (by) products, has increased significantly. Especially problematic is brucellosis in small ruminants (sheep and goats), which is widespread throughout Albania, thereby reaching a prevalence of

10 percent in several districts, such as Saranda and Gjirokastër [33].

Several studies have identified not only the problems in the Agricultural Health and Food Safety System in general, but also the ones mostly related to the meat and milk products specifically. The main contamination in milk and cheeses remains *Staphylococcus aureus* [29, 13], whereas *Escherichia coli* is an important bacterial pollution indicator present in fresh milk [20]. The uncontrolled movement of animals, lack of application of sanitary and quarantine rules, as well as the low level of education and technical skills of farmers and other actors in the value chain, are some of the main reasons behind this situation [33].

2.2 Food Safety Institutional Framework in Albania

The Food Safety System in Albania consists of three institutions: Ministry of Agriculture (Ministry of Agriculture full name was Ministry of Agriculture, Food and Consumer Protection (MAFCP) until 2013 and as of 2013, following institutional changes, it is named Ministry of Agriculture, Rural Development and Water Administration (MARDWA)), National Food Authority (NFA) and Municipal Units. Ministry of Agriculture is mostly responsible for the official control for protection of animals' health [19], plants and ensuring human health from animal-borne and food-borne diseases [18]. During 2008, food safety system has been reformed based on the farm-to-fork approach. In the context of EU legal approximation, a new Law on Food was prepared [10]. The Food Law is not fully enacted and limited coordination between municipal units and NFA has resulted in overlapping in meat control and certification [19].

NFA is set up as a public institution under the responsibility of Ministry of Agriculture and operates in accordance with Article 62 of the Law no. No 9863 of 28.01.2008 "On Food" and of the Council of Ministers Decision No. 1081, date 21/10/2009 "On Organization and Functioning of NFA". The main target of NFA is the control and inspection, risk assessment and communication, for the whole area of food safety, animal health and plant protection in Albania.

Municipal units are responsible for veterinary-sanitary control of animals before, during and after the slaughter, and veterinary certification in accordance with the requirements set forth in the law. The main duties for these institutions are the regulation and

inspection of: (i) food establishments, (ii) imported foods, (iii) food export and (iv) pesticides and pest control operators [5].

The food safety system in Albania has recently been reformed and is facing challenges as the country is in the process of improving the infrastructure and methods to empower the food control system. An important duty is the harmonization of the food and nutrition legislation in line with EU regulations and the Codex Alimentarius [28]. Another task is to fill the gap or avoid overlapping that may occur among the various responsible organizations involved. Various studies and assessments emphasize the fact that food safety in Albania lacks the adequate legal and institutional structure affected by the low awareness among consumers and policymakers regarding food safety. The main problems regarding food safety are:

- lack of bylaws that regulate the coordination and allocation of tasks and responsibilities for adequate implementation of the Food Law (Law “On Food” amended by Law no. 10137/09, regulates the main aspects relevant to food production, mostly in the perspective of food safety. It sets the general rules to be followed in food production and represents the legal basis for a policy thrust towards formalization of agro-processors). So far, for products such as fresh and processed fruit and vegetables, and Medicinal and Aromatic Plants (MAPs) there have not been defined comprehensive Minimum Technical Requirements (related to food safety), but previous norms regulate some safety and quality aspects – the Minimal (Safety) Technical Requirements defining the requirements in collecting and processing the food products and the methods to be used in processing and analyzing samples of these products, and the Minimal (Quality) Technical Requirements, defining the characteristics of the product required for grading (size, defects, maximum share of products in a lot that can be non compliant with the grade etc.).

- poor enforcement due to low cooperation and communication between competent authorities of food safety system at central level, as well as between central authorities and field offices in charge of legislation enforcement. The main issues relevant to the Law on food are related to the need for a gradual enforcement of the existing rules (most processors would be shut down if they have to comply with HACCP principles). This is a frequent issue with all agro-processing subsectors, but with higher intensity

in milk (for every formalized processing unit there are two or more informal ones) and meat.

- Incomplete food quality legal framework. The food quality legislation needs continuous revision. Amendments to the law on industrial property rights referring also to geographical indications were enacted in May 2014. Recognition in the market is essential for the consumers to purchase guaranteed quality products. The issue poses problems to the companies that want to promote their products and it creates unfair conditions for market competition. Feedback and monitoring is also obsolete.

There are limited funds for the Food Safety and Nutrition System for research, laboratory reagents and consumables for diagnosis. There is a lack of a clear chain of command and insufficient functioning of the Food Safety System. The government is updating the food safety system to prevent conflicts of interest. Some are starting to use a risk-based approach, to improve their alert systems, to increase communication and interaction with consumers and to invest in capacity-building and improvement of laboratories [11]. Such conditions are reflected to both business and consumers. However there is limited understanding about consumer awareness regarding food safety.

3. Methods and procedures

This is an exploratory study, aimed at assessing consumers’ awareness and perception about food safety. This survey provides insight into the gap in food safety information at consumer level as seen from different points of view. A structured questionnaire was developed to assess consumers’ general perception about dairy and meat products safety. A focus group with food marketing, food safety and veterinarian experts was set up in order to emphasize the key issues to be observed by the survey. Focus group results were considered relevant as to formulate the main questions of the questionnaire. There were conducted 300 interviews with randomly selected consumers in different market sites of Tirana – the largest urban area in Albania, consisting of ca 30% of Albania’s population [16]. The capital’s population is extremely diverse in terms of culture, religion and income and Tirana’s market is considered as the most attractive one, in Albania. The survey was conducted by trained graduate students in 2012, using face-to-face interviews, under the supervision of the authors of this paper.

Interviews were structured containing nominal and Likert scale questions, to assess consumer perceptions. The questionnaire consisted of questions about interviewee socio-economic profile, perceived levels of quality and safety by type of food products and retail outlets, as well as awareness about food safety related standards and institutions. Data were subject to descriptive statistical analysis using SPSS.

4. Results

4.1. Perceived level of safety for meat and dairy products

Less than 20% of the interviewees perceive meat products as safe or very safe, about 50% have a

neutral view, whereas the remaining (almost 30%) perceive meat products as unsafe. Regarding dairy products, the perception of safety is somehow different compared with meat products – about 27% of the interviewees perceive dairy products as safe or very safe, meanwhile about 20% of them perceive dairy products as unsafe. There is a much higher distrust for salami products – almost 4/5 of interviewees perceive salami as unsafe and only less than 8% of them perceive salami as safe or very safe (Table 1).

Table 1: Perceived level of safety for meat, dairy and salami products

Product/ Level of perceived safety	Meat		Dairy		Salami	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
1 Not at all safe	28	9.3	22	7.3	127	42.3
2	61	20.3	38	12.7	109	36.3
3	152	50.7	159	53.0	42	14.0
4	46	15.3	65	21.7	20	6.7
5 Very safe	13	4.3	16	5.3	2	0.7
Total	300	100.0	300	100.0	300	100.0

Source: Field survey results

4.2 Food safety perceptions and retail outlets

Most consumers (61%) state that buying dairy products at supermarket is safer than buying them somewhere else, 18% state that it is safer to buy

directly from farmers, whereas 13% state that it is safer to buy directly from factory outlets. 4% of consumers consider the open market as the safest outlet, and only 3% of them consider the convenience shops as the safest outlet (Table 2).

Table 2. Level of safety in relation with the type of retail outlet

Source of safety gurantee	First choice		Second choice		Third choice	
	Freq.	%	Freq.	%	Freq.	%
Supermarket	184	61%	61	20%	31	11%
Open market	12	4%	22	7%	37	13%
Convenience Shop	10	3%	96	32%	51	18%
Farmer	55	18%	58	19%	53	18%
Factory outlet	39	13%	63	21%	116	40%
Total	300	100%	300	100%	288	100%

Source: Field survey results

4.3. Food safety standards and institutions

Consumers were asked to state if they know (or if they are aware of) the main food safety related standards (ISO and HACCP) and for the existence of NFA, which was established 3 years before this consumer survey took place (as already mentioned in

the second Section, NFA is responsible for food safety control and enforcement). Most consumers state that they do not know about HACCP and ISO standards – 80% and 56%, respectively (Table 3). Most consumers state that they are not aware of the existence of NFA- 52%.

Table 3. Answers to the question “Do you know/are you aware of ?”

Answer	HACCP		ISO		NFA	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Yes	60	20.0	131	43.7	144	48.0
No	240	80.0	169	56.3	156	52.0
Total	300	100.0	300	100.0	300	100.0

Source: Field survey results

4.4. Food safety guarantee

36% of respondents identify the acquaintance with the producer as the main source of safety-related guarantee, and about 1/3 of them declare “familiarity

with the origin of the food product” as the main source of safety guarantee. Few consumers (9 % of the respondents) consider state authorities as the main source of meat safety guarantee (Table 4).

Table 4. Main sources of safety guarantee

Sources of safety gurantee	First choice		Second choice	
	Freq.	%	Freq.	%
Acquaintance with the producer	107	36%	23	9%
Familiarity with the origin	95	32%	54	21%
Packaging	31	11%	44	17%
State authorities	26	9%	74	29%
Acquaintance with the retailer	33	11%	59	23%
Other	3	1%	2	1%
Total respondents	295	100%	256	100%

Source: Field survey results

4.5. Information about food safety

36% of respondents identify retailers as the main source of information about food safety, about

21% of them use internet to obtain food safety related information and only 5% consult experts for this purpose (Table 5).

Table 5. Answers to the question “Which are the sources of information about food safety?”

Answer	Frequency	Percent
Colleagues/friends	45	15.0
Internet	62	20.7
Experts	16	5.3
Sellers	108	36.0
Newspapers	12	4.0
TV	32	10.7
No information	18	6.0
Other	7	2.3
Total	300	100.0

Source: Field survey results

5. Discussion of the results and conclusions

Several studies have identified the serious problems that Albania is facing with regard to national food safety control system, particularly in meat and milk products. Food-borne diseases caused by

microbiological contamination are one of the major public health challenges. The uncontrolled movements of animals, malfunctioning of sanitary and quarantine rules, as well as the low level of farmers’ education and technical skills, are some of the main reasons behind this situation [32]. These identified food safety

problems are affected by legal and institutional gaps, such as incomplete legislation, poor law enforcement due to the low level of cooperation and communication between competent authorities, as well as limited human and infrastructure resources of institutions in charge of food safety.

Even though the safety conditions of dairy and meat products are far from being ideal in Albania, most consumers are happy or neutral about the level of safety – less than 1/3 of the interviewees perceive meat and dairy products as unsafe. There is a high distrust for salami (meat byproducts). Consumers are not satisfied and would probably benefit from the assurance of a higher food safety. It is advisable that a more efficient and reliable signal of safety (and quality) be available, especially for the consumer groups concerned about current situation with meat safety. As government strengthens public food safety monitoring and implementing capacities, producers (both individuals and associations) have to consider the implementation of safety and quality certification schemes.

A system of food traceability should be established following the best practices provided by developed countries. It is also necessary to promote consumer awareness for issues related to food safety, especially regarding to the meat chain, thereby promoting close cooperation with retailers (including butchers in the case of meat products), as a highly important marketing channel conducive to the effective transfer of information. In addition, media communication is very important for shaping consumer awareness with regards to safety towards fresh meat.

This paper has several limitations. **First**, it is based on a survey developed in 2012. In the mean time, ongoing institutional and legal changes involving both the private sector and the market, might have affected also real and perceived food safety situation. Therefore, it would be necessary to replicate a similar survey in the near future, to assess the evolution of consumers' food safety related awareness and perceptions. **Second**, this paper relies on descriptive statistical analysis. Even though the last one provides for a clear picture of consumers' perceptions regarding relevant food safety issues and institutions, further in-depth explanatory analysis would be useful and can be subject of another paper in the future.

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