

# Assessing the situation of food and beverage enterprises regarding the implementation of the quality management systems (Case of Tirana/Albania)

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**Abstract:** The purpose of the study is to examine the current situation in the food processing sector in Tirana/Albania regarding the quality management systems and the availability of information regarding quality and safety of the food and beverage products, in decision-making for improving the quality of the products. The specific goal of the study is to provide information for policy-makers in the field of agro-industry (food industry), on one hand, and on the other hand, also to provide some information, related to the quality assurance systems (QA), for the managerial staff of food industry enterprises to help them in orienting their decisions towards improving the quality management. A stratified random sampling was applied for selecting the sample of enterprises 35 out of 120 (official number from the Ministry of Agriculture Food and Consumer Protection in Albania) with the number of employees more than four. We constructed a questionnaire and a face to face interview was conducted for gathering the data. A descriptive statistics and regression methodology was used for the study in order to present and describe a picture of the food and beverage industry in Tirana district. We draw a general conclusion that there is an association between applying the quality management standards and operational markets. The test analysis shows that there is a significant association between applying the quality management standards and operational markets, the Fisher's exact test  $0.001 < 0.05$ . Only a small percentage of enterprises (around 23% out of 35 included in the survey) have established the quality management systems in Tirana, while 77% do not apply these standards, despite the source of information gathering that all enterprises orient their production towards the consumer preferences.

**Key words:** food and beverage industry, processing enterprises, quality and safety standards

In the last decade, quality has become of the outmost importance to the society. Consumers have become more conscious of quality, and organizations are now lay stress more on their overall quality performance instead of their financial performance alone. The most drastic change in the quality thinking is probably the change from the production-oriented to customer-oriented concepts. Moreover, integrative approaches, system thinking, the focus on advanced technologies and the belief in human capacities have had a considerable impact on the current quality management (Schiefer 2002)

Quality has become a vital distinctive feature for competition in the world market of food products. To obtain a good quality end product, quality is more and more managed along the whole food chain from the supplier of raw materials to the consumption (Morath 2008). Striving for quality is not a free choice. Customer understanding of food quality and the ultimate concern for health and food safety force

the actors in agribusiness and food industry to use quality management as a strategic issue in innovation and production (Luning et al. 2002).

Although before the 90s there existed a good tradition, the current industry of the food and beverage processing is a relatively new industry, established mainly in the last 15 years. Exploiting all the possibilities and the resources and overcoming the difficulties faced during development, it has always managed to satisfy the quantitative needs of the Albanian consumers.

At present, the most important and delicate problem related to the food products and beverages is the quality and safety of these products (avoiding elements in the content of these products that damage and endanger health). This problem is becoming more sensitive as the food and beverages industry is starting to prepare for introducing its products in a larger and more organized way into the foreign markets, but firstly in the European market.

Food safety in Albania is improving, but the pace of improvements is slow, when considering the progress achieved in other development indicators and the income growth. Many food chains, particularly the meat and dairy products, are risky, which shows the slow movement of this sector comparing to other sectors of the Albanian economy, like the construction and services. However, even in the worst periods experienced after the beginning of the economic transition, no major food-borne diseases epidemics were recorded, even if the food-borne diseases remain an important public health issue (Civici 2003). In most cases, the abundant use of preservative agents and the prudent and conservative consumption habits of customers have contributed to reduce the short-term risks.

Small producers had (and still have) a little knowledge about the food quality and safety standards and requirements and they are not in the condition to apply the food safety and quality management schemes (World Bank 2007; TNA 2010). The scarce knowledge of food processors about the QA schemes, assessed by the 2007 World Bank study, was confirmed in 2010 by the SME (Small Medium Enterprises) Training Need Assessment performed by the EU. The limited progress achieved in these three years in this field shows the importance of a substantial awareness campaign addressed to the agri-food SME.

Food industry in Albania has to achieve the quality standards in order to be competitive in the future open export markets (while aiming to enter the EU) (Decolli 2005). This research will consist of the identification of level of the implementation of these quality standards in food and beverage industry in the Tirana district, the problems that this industry faces in this region, and it will help to identify the incentive policies to support the managerial staff of enterprises implementing successfully these quality management systems. A large number of enterprises in the food industry suffer from the lack of information in the field of quality management and they need the theoretical and practical training in this field.

Based on the fact that the agriculture and food industry sector is the largest contributor in the Albanian economy (20.8% of GDP in 2011, INSTAT 2012), the governmental policies in Albania aim at a further development of this sector. This study investigates the current situation in food and beverage processing enterprises in the Tirana district/Albania with a special emphasis on the quality standards and quality improvement towards consumer preferences. The situation is elaborated using a descriptive statistical analysis on data gathered by the field survey using questionnaires.

## OBJECTIVES

The purpose of this study is to evaluate and describe the current situation in the food processing sector in Tirana/Albania regarding the quality management systems and the information regarding quality and safety of the food and beverage products. The overall objective of this research project is to assess the degree of implementing the quality management systems by the food processing industry Tirana. The study goes further and tries to explore the relation between applying the quality management standards and operational markets.

The specific goal of this study is to provide information for the policy-makers in the field of agro-industry (food industry), on one hand, and on the other hand also to provide some information related to the quality assurance systems (QA), for the managerial staff of food industry enterprises to help them in orienting their decisions towards improving the quality management.

## PROCEDURES AND METHODOLOGY

A descriptive methodology was used for this study in order to present and describe the picture of the food and beverage industry in the Tirana district. A survey was administered to enterprises operating in the Tirana district identified by the Ministry of Agriculture Food and Consumer Protection (MoAFCP). The term 'survey' is commonly applied to a research methodology designed to collect data from a specific population, or a sample from that population, and typically utilizes a questionnaire or an interview as a survey instrument (Robson 1993).

### Questionnaire design

To achieve the objectives of this study, a face to face interview questionnaire was utilized. The questionnaire was the product of the literature review and discussion with the people with experience in the field of questionnaire design. The first section of the questionnaire aims at getting information about the customer orientation. This section addresses the issues about the source of information that processing enterprises are using for determining the consumer demand with regard to quality. The second section of the survey refers to standard measures for the quality safety. This section consisted of descriptive questions related to the kind of standards applied to the enterprise and standard measures used by the

enterprise. The respondents were asked whether they use the quality management standards measures like the hygienic sanitation regulation, the HACCP (Hazard Analysis Critical Control Point) and the ISO standards, in their production activities. If yes, they were asked to give the kind of standard measures and some standards elements that they use. This section also contained questions related to the EU standard measures, time and cost of applying these standard measures. Managers and owners were asked also if they carry out standard measures for all their products or only for some of them. In the same section, the respondents were asked to state the most incentive factors for the quality improvement. Factors including consumer pressure, price advantages, threatening for price decreasing, hope for competition advantages, own motivation and social image were used.

### Implementation of the survey, data collection and data analysis

Face to face interview questionnaires were conducted for collecting the data. According to Dillman (1978), the face-to-face interviews survey method enables for the possibility of obtaining somewhat more complete and accurate results than the other survey methods, but only if the interviewers are well-trained and consistent. Using mailed questionnaires in the case of Albania is impossible due to the lack of network and communication skills via mail. A pre-contact was done at the beginning with managers or owners of the selected food processing enterprises by phone. The date and location of the face-to-face interview questionnaire were decided via phone calls.

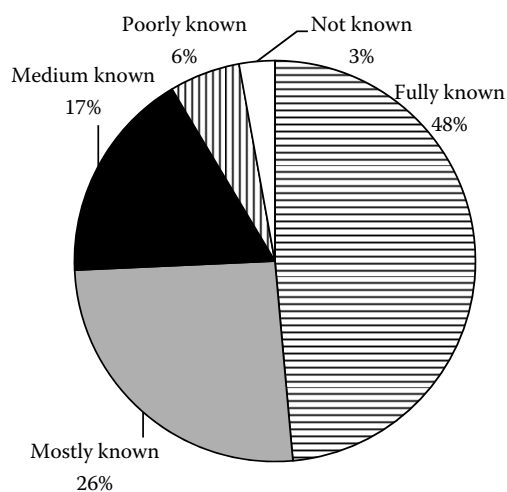


Figure 1. The level of knowing the EU legislation regarding food and beverage quality and safety

Source: Kapaj (2011)

In order to ensure the clarity and reliable data, all face-to-face interviews were done by the pre-trained staff. Most questions in the questionnaire have been closed-ended. A code system was developed to make the data entry process easier. The data were entered into the Microsoft's Excel spreadsheet program. The accuracy of the data entry was checked by the frequency counts of each category. The methodology used consisted in the estimation of frequencies, charts and descriptive statistics such as percentage, crosstab and also some analytical association between the variables, which were calculated by using the SPSS computer program (Field 2006). The Fisher test has been used to determine the significance of the association between the categorical variables.

### RESULTS AND RESEARCH OUTCOMES

The 35 selected enterprises, which represent 30% of the total number of enterprises in Albania, were asked about their levels of knowing the EU legislation regarding the quality and safety of products (Figure 1) (Henry 1990). Around 48 % responded that they knew them very well and 26% knew them mostly. The percentage that is the most important is the rest, which is 26% of the enterprises that have only a moderate or no at all information regarding the EU legislation. Compared with another study done by Decolli in 2005, our research shows an increase in the percentage of enterprises knowing the EU legislation by 17% in 2010. That is a positive trend which shows that the enterprises are aware of the importance of knowing these regulations, necessary for entering regional and in the future European markets. It is important to underline that there are medium and large-scale enterprises that have the information about the EU legislation. On the other hand, some of the medium and mainly the small scale firms do not have any information about the EU legislation.

Enterprises were asked whether they apply the quality management systems. In the Table 1, there are shown the results. From the table, we see that 25% of the enterprises that apply the quality management standards are operating in the local market and 75% which operate in the national markets in Tirana apply these standards. Also 88.9% of the enterprises that do not apply these standards are operating only in the local markets in Tirana, while the remaining 11.1% are operating also in the national markets through the whole Albania. From the numbers mentioned, we can draw a general conclusion that there is an association between applying the quality management standards and the operational markets.

To verify that conclusion, we have run in the SPSS the crosstab analysis and the statistical Fisher test analysis. The Fisher test expressed the significance of the association between two categorical variables. If it is less than 0.05, then the association is significant.

The test analysis shows that there is a significant association between applying the quality management standards and the operational markets, The Fisher's exact test  $0.001 < 0.05$ . That means that the more the enterprises expand and grow their markets (operating in larger than local markets), the more likely is that

Table 1. Relation between the operation markets and the level of applying the standards (SPSS table). Applying management standards vs. operational markets cross tabulation in %

Applying management standards			
Operational local markets (74.3%)		operational national markets (25.7%)	
Yes	no	yes	no
25.00	88.90	75.00	11.10

Source: Kapaj (2011)

Table 2. Assessing the strength of association between applying the management standards and operational markets (SPSS table)

	Symmetric measures		
	value	signification	
		approx.	exact
Nominal by nominal			
Phi	-0.614	0.000	0.001
Cramer's V	0.614	0.000	0.001
Contingency coefficient	0.523	0.000	0.001
N of valid cases	35		

Source: Kapaj (2011)

Table 3. Sources of gathering information regarding consumer preferences (SPSS table)

Information gathering	Responses (%)
Company surveys	56.5
Decision-making by participation	21.7
Statistical information	10.9
Nothing	2.2
Other sources	8.7
Total	100.0

Source: Kapaj (2011)

they will apply the quality managements systems in their organization.

To see how strong this significant association is, we looked at the symmetric measures table produced by the SPSS (Table 2). The contingency coefficient is 0.523, what represents a moderate association between the operational markets and the necessity of applying the quality management systems.

An important element that determines the implementation of the Quality Management Standards is the demand (in terms of quality) from the consumer side. In this regard, gathering the information on consumer preferences is crucial. To determine this, the enterprises were asked for the ways of gathering the information from consumers. The purpose of this question was to see the quality and the extent of information that the enterprises use to evaluate consumers' preferences towards their products.

Table 3 shows that 56.5% use the company surveys for gathering information regarding consumer preferences. From the experienced research team which carried out the interviews, it was realized that within the phrase the "company survey", the firms mean not scientific surveys but a discrete information gathered by the retail sellers of the companies in the outlets owned by the firms. So, it is not a real scientific survey and as a consequence, the results may not be accurate. 21.7% of the respondents practice the decision-making by participation, around 11% are using statistical information from the statistical institution, which are mainly government institutions, and the rest is using nothing or other sources. As a possible answer in the questionnaire, there was the "scientific studies from universities". It is not shown in the frequency table because no one was using this kind of information regarding consumer preferences.

The companies were asked whether they want to invest in training their employees with respect to quality and safety. The results in the Figure 2 show their willingness to invest in this direction.

Around 85% of the enterprises included in the survey expressed their willingness to invest in training while 12% will not. To determine the factors that influence the lack of training, the companies were asked to state the main constraints regarding their efforts in improving the employee's skills with regard to quality and, as a consequence, the quality of their products.

As shown in the Figure 3, more than 74% of the enterprises included in the survey stated that the lack of financial means is the main constraint for training in the field of quality and safety and for the skills renovation to face the quality challenge. On the other hand, nearly 26% have chosen other reasons

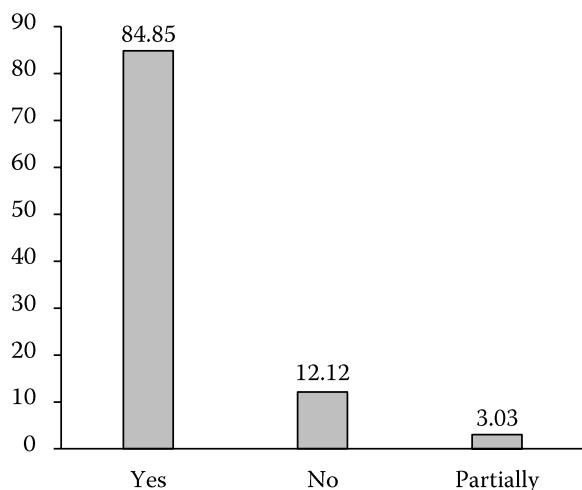


Figure 2. Willingness to invest in training in the field of the product quality and safety

Source: Kapaj (2011)

like the lack of expertise, the lack of trainers, etc. They stated that they have the willingness to invest into the technological renovation and training in the field of quality and safety, but they do not have the required resources (financial means) for doing so.

## DISCUSSIONS AND CONCLUSIONS

The EU legislation, dealing with the quality aspect of food and beverages, generally is well known in the food and beverage enterprises in Tirana, Albania. 48% of the enterprises interviewed have a full knowledge about this legislation while 26% have mostly known the EU legislation. Only 3% of them do not know anything about the EU legislation.

Referring to the overall objective of this research, that is to assess the degree of implementing the quality management systems by the food processing industry in Tirana, we can conclude that only a small percentage of enterprises (around 23%) have established the quality management systems in Tirana, while 77% do not apply these standards. As we showed, there is a positive and significant relationship between applying the quality management standards and the operational markets. Those enterprises that operate in the national market are more likely to implement the quality management standards in comparison with those operating in the local markets. From this association, we can say that being large (in terms of operating in bigger markets) requires further steps in improving the quality and safety of the products. Also, the operation in large markets demands a serious commitment with respect to consumers' preferences

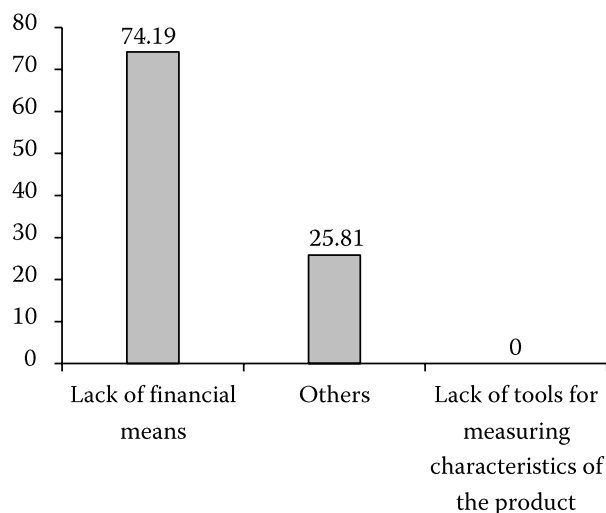


Figure 3. Constraint factors for the training and technology renovation to face the quality challenges

Source: Kapaj (2011)

towards the quality and safety of food products. On the other hand, this relationship reveals the necessity of enforcing these standards in local markets.

Generally, the food and beverage processing enterprises in Albania are not using scientific studies (studies from universities, NGOs, international associations etc.) for gathering the information about consumer preferences with regard to quality. That shows an absent link between the scientific bodies (universities) and the business sector. Promoting these links and the ways of promotion can be an open topic for the further research and discussion. Company surveys meaning gathering information about consumers preferences regarding quality and safety were used by 56% of the enterprises, 22% practice decision-making by participation by including the employees in the management decisions on quality, around 11% are using statistical bulletins and the remaining 11% are using other sources, like personal contacts, the information from sales persons etc.

Relying on our survey, 85% of the enterprises expressed their willingness to invest in training and in new technologies in the field of product quality and safety, while 12% did not. However, as we discovered, there are some constraint factors that prevent the enterprises from investing in training and skills renovation. 74.2% of the enterprises interviewed think that the lack of financial means is the major factor. Enterprises must more seriously address the issue of investing in training their employees, not only to express the willingness to do so, but taking concrete actions. These trainings could be organized within or outside the enterprise. Besides the knowledge indirectly connected with the quality and safety of

the products, the employees, especially those of the sector of the production and quality control, must acquire a more thorough and extensive knowledge in the field of quality and safety, according to the levels and in the interest of their job position. They must gradually place the quality axis into the centre of the development of their enterprises.

The willingness of enterprises to invest in training is lacking financial resources, a gap which can be narrowed by the help of governmental agencies. These agencies, in order to increase the level of awareness and the preparation of the food businesses regarding food quality and safety, must assure a knowledge transfer support scheme to this sector. The support might consist in the food quality and safety related training sessions, co-financed mostly by the governmental agencies and the businesses themselves.

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