SAFETY AND QUALITY IN MILK PROCESSING COMPANIES IN ALBANIA

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Abstract

The trading market is changing every day. This is why safety and quality in consumer products represent a major issue in designing processes. Thus companies are forced to design management systems keeping in mind product safety and quality.

This paper aims to study the milk processing companies in Albania and their management system, but with a focus on two elements: processes and people. The study is of great interest as the milk processing industry is very important for the Albanian economy. It's an everyday challenge for the dairy companies to stay in the market. This is why it is so important for them to know and employ some important elements in their management system that have a great impact on product safety and quality, two key elements today. The objectives of the study are to:

- Analyze the importance of product safety and quality in the Albanian economy and milk processing industry

- Study the realities of practices in the Albanian milk processing companies as those practices impact safety and quality.

Data generation was performed by collected through a face-to-face interview methodology using the questionnaire. The questionnaire was distributed at the milk processing companies that are active in Albania. All questions were measured in the line with 5-point Likert Scale (from 1-never to 5-always). The research data were analyzed by SPSS 20.0 statistical programme.

By the data processing we get some important information. So the practices with employees (especially training) have important relevance on the company performance. By the other hand, infrastructure and methods don't have an important statistically impact on continuous improvement. In fact the data process-ing tells us that the companies don't implement effective and efficient operations.

According to the results obtained, comments and recommendations will be made. The recommendations can be useful for the companies to improve their activities on processes and people, in order to gain competitive advantage in the market.

Key words: Food Safety and Quality, Diary, Management system.

1. Introduction

With the rapid globalization effect, Albanian companies are faced with a changing competitive environment. Nowadays Albania is pretending to be part of the European Union, so companies seek to adopt and implement a set of successful management practices that will make them able to respond proactively to the dynamic domestic and international market. Every company is trying to market safe and quality products. Different authors have different views about quality but all agree that quality management has positive effect on company performance. The success of quality management as a management approach results in improvements in processes, communication, productivity, and product quality and customer satisfaction [1, 2]. Quality management is an all-inclusive philosophy that includes everyone and every process. In this paper we'll present some elements of quality management and their implementation in the Albanian milk processing companies. The milk processing industry is one of the most important sectors for the Albanian companies. Just to mention here that 10% of the employees in the processing sector work in the milk processing companies [3]. It comprises 48% of the all investment done in agro-industry [3], which tells us that businesses invest for improvement in their companies.

The questions to be answered in this paper were:

- Do the milk companies implement the practices of human management?

- Do the milk companies implement the quality management practices for improving operations?

- Do the HRM and operations practices have any effect on continuous improvement of operational performance?

Human resource management (HRM) is very important on quality management in order to produce a safe product. The practices on HRM are essential in order to gain effectiveness and efficiency. As described by Al-Swidi and Mahmood [4], investments on human resources improve the organizational performance. They can be considered as a long term asset. But in order to offer a safe product with quality, it is very important to verify the quality of processes in the company. As described by Anvari and Moghimi [5], competitive ability of an organization depends on its ability to implement the right methods and techniques for process development. If the processes are documented and measured continually, companies can realize optimum control of them. This is why it is important for the companies to implement the operation practices. But it is also important to assess the effect that these practices have on the performance of milk businesses.

For the study, structured questionnaires are distributed to managers of 65 businesses that operate in the Albanian market/milk processing sector. In truth 69% of these businesses have more than 5 years in the market, which tells us they have consolidated their position in the market and engage in fixed approaches for getting competitive advantage. As described by Osmani [6], the criterions for sample evaluation are: a) the selection chances, b) the selection implementation, and c) low cost. This is why the questionnaire was considered adaptable as a means to gather the data in the market, using a simple random sampling.

For the questions the study employs the Likert scale with answers varying from 1 (never) to 5 (always). The data are processed via SPSS 20 (Statistical Package for the Social Sciences, version 20). Every group of questions was analyzed in order to get the variables needed for further investigation. To evaluate the relationship between variables we performed the multiple factor analysis. By the data analysis we get a statistically important positive relationship between HR practices and continuous improvement of performance and the companies with more employees get more advantage of their resources.

2. Materials and Methods

The present study is conducted in Albania; the focus is on milk processing companies. We obtained main data by distributing the questionnaires to the managers of 65 diary companies. 77% of the companies are small companies (let's mention here that 91% of the Albanian companies are small as by INSTAT - Albanian Institute of Statistics [7]). As it would be difficult to get feedback from the managers if e-mail, post or any other mean were used, we preferred to interview the managers personally. This is why we got a 100% feedback from the questionnaires distributed. The questions asked were adopted from the literature and respondents were asked to respond to the statements using a five-point Likert scale ranging from never, which is weighted as 1, to always, weighted as 5. Factor analysis and reliability analysis were used in order to determine the data reliability for Human Resource practices and operation practices. The variables with good coefficients are evaluable for further analysis. When doing the factorial analysis, a coefficient greater than 0.4 (Stephens *et al.*) [8] is considered acceptable. The credibility of the data is evaluated by the Cronbach Alpha coefficient where the value of 0.6 or greater is considered valuable. Every analysis is calculated also using the KMO (Kaiser-Meyer-Olkin) index for measuring the sampling adequacy (values greater than 0.5 are considered acceptable). The Barlett test also evaluates the correlation between variables in order for the model to be adequate. These test results are important statistically if $p<0.5$, a situation where all items are perfectly correlated with themselves and have some level of correlation with the other items (if they are not correlated with the other items then they can't be part of the same factor).The method used to identify the factors is Principal Component Analysis, followed by orthogonal rotation (varimax) which improves the interpretation of the variables and maximizes their factorial loadings, minimizing the loading of other factors. As accepted by Ledesma and Valero-Mora [9], the factors with eigen value ≥1 are good for further analysis. By the factor analysis we've got the "Practices with the employees" seen in two directions F1 - "Employees encouragement for improvement and decision-making" and F2 - "Training as an important concept for the learning organization". Their factor loading and Cronbach Alpha are sufficient to continue with the data analysis. The practices on operations is seen as F3 - "Infrastructure and methods on quality management", also acceptable for further analysis.

H1: The practices with employees and operations are implemented in the diary sector in Albania

To test this hypothesis it is calculated the mean of the answers for every factor. As the mean for each factor is greater than 3 (for F1, F2, F3 respectively 4.10, 3.30 and 4.55), we can say that the hypothesis is verified.

H2: F1, F2, F3 have a positive effect on "Continuous improvement of the performance"

A corelation analysis on the factors is performed to test the hypothesis. The three factors (F1, F2, and F3) are considered as .independent variables in the correlation analysis. As dependable variable is "Continuous improvement of the performance". The correlation analysis shows that the independent variables have positive effect on the dependant variable, but to get further evidence on the nature of the relationship between variables, the multiple factorial regression analysis is implemented, where it's used the method backward in order to eliminate the variables statistically not important for the model.

Table 1 shows the results of the regression analysis (Dependent variable is "Continuous improvement of the performance") where the adjusted R^2 is 0.528 indicating that 52.8 per cent of the variation in Continuous improvement of the performance can be explained by employees' encouragement for improvement and decision-making and training. These two variables have a significant and positive effect on continuous improvement. The standardized coefficients (β) indicate the contribution of every variable in the model. As we see from the table above, the variable "infrastructure and methods on quality management" is pulled out from the model as it is not important statistically. So H2 is partially supported (only for F1 and F2).

Table 1. Regression coefficients

Model	B	SE B	β	Sig.
Employees encouragement for improvement and decision-making	.253	.130	.199	.057
Training as an important concept for learning organization	.618	.104	.609	.000

For analyzing if it is any difference in the performance of the businesses regarding their experience in the market, we employ the analysis of variation (ANOVA). So with this analysis we want to test the hypothesis:

H3: The company that gains experience in the market also improves its elements of performance.

As it is shown by Table 2, the companies that have more experience in the market increase their efforts for improving the performance. In order to verify if the change between groups is important statistically, we realize a post hoc test, as it is the Bonferoni procedure, by which if p < 0.05 the change is statistically important and if p ≥ 0.05 the change is not statistically important. By the test results show that the change of the performance of the companies that have 2-5 years of experience by them and those that have more than 5 years of experience is statistically important, which means that the hypothesis is verified only for companies that have more than two years experience in the market.

Table 2. One-way ANOVA for the experience of the company

Factor		SS	df	MS	F	Sig
Continual Improvement of the performance	Between groups	10.892	2	5.446	5.149	.009
	Within groups	65.577	62	1.058		
	Total	76.468	64			

3. Results and Discussion

Results of this study indicate that practices with the employees (the two factors) have a positive and important relevance on the company performance. Training as an important factor has the greatest impact as compared to the other practice with employees. This supports the argument by Sun and Cheng [10] who explain that small companies tend to rely on traditional incentives and suggestion systems, while Käser [11] mentions that employees can be "used" as an important element on quality practices implementation.

The fact that by the multi-factorial regression, "infrastructure and methods" don't have an impact statistically important on continuous improvement tells that small business make all by their own, have their own methods and don't rely very much on the models given to managers in order to improve their efficiency. As discussed by Käser [11] the managing models are suitable for large businesses, whereas small businesses find their own model, one more suitable for their size and organization. The information got by the data processing tells us that the companies don't have effective and efficient practices with operations even if they try the best.

ANOVA between continuous improvement and company experience tells us that when gaining experience, the companies make more efforts in improving their operational performance. This is perhaps because managers are more careful to find the right strategies to stay competitive in the market. As described by Llaci [12] the managers take more training by themselves or try to get a productive team around them.

4. Conclusions

- The study explores the relationship between quality and safety practices and company performance.

- Results show that the companies in the diary sector implement the practices with employees and oper-

ations, where the first ones have a positive effect on continuous improvement of the performance, but the second ones not. So we can say they have to try their best and make improvements on infrastructure and methods used.

- The companies with less than 2 years of experience don't do enough for continuous improvement of the performance. Perhaps this happens because when the companies enter the market, they have a lot of problems to stay competitive and make a try to do their best, but that is not enough.

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