COMMODITY SCIENCE IN RESEARCH AND PRACTICE

CONSUMER PROTECTION AND SATISFACTION

EDITED BY ANDRZEJ CHOCHÓŁ

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Contents

Rerum cognoscere causas at valorem...

Highly developed countries are characterised by a considerable supply of goods and services on the market. Healthy competition should eliminate low quality products from it. This is, however, a complex and permanent process, just to mention the fact that the market, especially its global dimension, is constantly flooded by a stream of new manufacturers and distributors offering their innovative products.

Before they are verified by the market, a great deal of consumers is exposed to purchasing goods and services of unsatisfactory quality and often even defective or hazardous.

The problem of quality of goods does not refer only to highly developed countries, but all countries and every economy. It requires thorough analyses considering the special character of this diversity.

The monograph presented to the Reader consists of a dozen or so chapters, in which the Authors from different places of the world present their standpoints, analyses and scientific achievements related to the broadly understood area of consumer and protection satisfaction. It is also one the titles in the "Commodity Science in Research and Practice" publishing series.

The book is designed mainly for academics and students exploring this discipline of knowledge as well as practitioners professionally dealing with creation of quality and commodity protection.

Dear Reader, I wish you would consider the book an interesting read, a source of knowledge and an inspiration for creative work.

Andrzej Chochół

FRL INSTRUMENT - POLISH SAMPLE

Urszula Balon, Joanna Dziadkowiec, Tadeusz Sikora

Department of Quality Management, Cracow University of Economics
dziadkoj@uek.krakow.pl

Introduction

The FRL instrument was developed by MAPP – the centre for research on customer relations in the food sector. MAPP is a part of School of Business and Social Sciences (Aarhus University, Denmark) and carries out research on the development, marketing and distribution of foods.

In 1993 they conducted the research to develop an instrument that can measure food-related life style in a cross-culturally valid way. To this end, they collected a pool of 202 items, collected data in three countries (Dennmark, United Kingdom and France), and have constructed scales based on cross-culturally stable factor patterns. These scales were been subjected to a number of tests of reliability and validity. Finally they created the food-related lifestyles instrument - a 69-item questionnaire measuring 23 lifestyle dimensions in five major life domains, including ways of shopping, cooking methods, quality aspects, consumption situations, and purchasing motives [Grunert at all, 1993]. Next step was applying the set of scales to a fourth country (Germany), in order to further test the cross-cultural validity of the instrument [Brunso&Grunert, 1995].

Because of initial analyses of cross-cultural validity as well as its intra-cultural stability came to positive conclusions, the instrument were successfully applied over the years to various European and non-European food cultures [Sholderer at all, 2004]. A large number of MAPP projects was focused on cross-cultural comparisons, the analysis were applied i.a. in Great Britain [Grunert at all, 1995c; Bredhak&Grunert, 1997; Sholderer at al., 2002], Germany [Grunert at all, 1995b; Bredhal&Grunert, 1997], Spain [Bredhal at all, 1996], Denmark [Brunso at all, 1997], France [Bredhal&Grunert, 1997; Grunert at all, 1995a; Bredhal at all, 1996]. The final version of FRL instrument was proposed in 2004, as the result as of cumulative comparative analysis data collected in 5 countries [Sholderer at all, 2004].

Currently, over 20 years after the publication of the first concept, FRL remains the most commonly used tool for consumer research in all areas related to food and nutrition. According to Science Direct database there are over 50 thousand of publication, in which the FRL concept tool was used at least as one of the elements of the research. The popularity of the FRL concept is confirmed by the number of citations – according to Publish or Perish database, the basic papers about FRL instrument were cited a total of 289 times, including 229 positions refers to the first publications on tools FRL [Grunert at all, 1993; Brunso&Grunert, 1995], and 60 to the new version of the tool cross-culturally validated in 2004 [Sholderer at all, 2004].

The purpose of the present paper is to apply the FRL instrument to study Polish food related lifestyles

Material and methods

The basic instrument used in survey was the 69-FRL questionnaire, consisting of 23 scales with three items each (Sholderer at all, 2004]. Only one scale was slightly modified – according to the results of a Polish pilot study, the item "I prefer fresh products to canned or frozen products" were split into two separate items: "I prefer fresh products to canned products" and "I prefer fresh products to frozen products" (table 1). All items are rated on 5-point Likert-type scale. In addition, the questionnaire contained demographic data.

Table 1. FRL questions

I. Ways of shopping	
Importance of product information	
Z1	To me product information is of high importance. I need to know what the product contains.
Z2	I compare product information labels to decide which brand to buy.
Z3	I compare labels to select the most nutritious food.
Attitudes to advertising	
Z4	I have more confidence in food products that I have seen advertised than in unadvertised products.
Z5	I am influenced by what people say about a food product.
Z6	Information from advertising helps me to make better buying decisions.
Enjoyment from shopping	
Z7	Shopping for food does not interest me at all.
Z8	Shopping for food is like a game to me.
Z9	I just love shopping for food.
Specialty shops	
Z10	I like buying food products in specialty stores where I can get expert advice.
Z11	I do not see any reason to shop in specialty food stores
Z12	I like to know what I am buying, so I often ask questions in stores where I shop for food.
Price criteria	
Z13	I notice when products I buy regularly change in price.
Z14	I look for ads in the newspaper for store specials and plan to take advantage of them when I go shopping.

Z15	I always check prices, even on small items.
Shopping list	
Z16	Usually I do not decide what to buy until I am in the shop.
Z17	Before I go shopping for food, I make a list of everything I need.
Z19	I make a shopping list to guide my food purchases.
II. Ways of cooking	
Interest in cooking	
G1	I do not like spending too much time on cooking.
G2	I like to have ample time in the kitchen (for cooking/preparing meals).
G3	Cooking is a task that is best over and done with.
Looking for new ways	
G4	I look for ways to prepare unusual meals.
G5	Recipes and articles on food from other culinary traditions make me experiment in the kitchen.
G6	I like to try out new recipes.
Convenience	
G7	We use a lot of ready-to-eat foods in our household.
G8	Frozen food account for a large part of the food products I use in our household.
G9	I use a lot of mixes, for instance baking mixes and powder soups.
Whole family	
G10	The kids or other members of the family always help in the kitchen; for example they peel the potatoes and cut the vegetables.
G11	My family helps with other mealtime chores, such as setting the table and doing the dishes.
G12	When I do not feel like cooking, I can get one of the other members of my family to do it.
Planning	
G13	I always plan what we are going to eat a couple of days in advance.
G14	What we are going to have for supper is very often a lastminute decision.
G15	Cooking needs to be planned in advance.
Woman's task	
G16	It is the woman's responsibility to keep the family healthy by serving a nutritious diet.
G17	Nowadays the responsibility for shopping and cooking ought to lie just as much with the husband as with the wife.
G18	I consider the kitchen to be the woman's domain.
III. Purchasing motives	
S1	Being praised for my cooking adds a lot to my self-esteem.
S2	I am an excellent cook
S3	Eating is to me a matter of touching, smelling, tasting and seeing, all the senses are involved. It is a very exciting sensation.
	Security
S4	I only buy and eat foods which are familiar to me.
S5	I dislike everything that might change my eating habits.
S6	A familiar dish gives me a sense of security.
	Social relationships
S7	I find that dining with friends is an important part of my social life.
S8	Over a meal one may have a lovely chat.
S9	When I serve a dinner to friends, the most important thing is that we are together.
IV. Quality aspects	
	Health
Q1	To me the naturalness of the food that I buy is an important quality.
Q2	I try to avoid food products with additives.
Q3	I prefer to buy natural products, i.e. products without preservatives.

	Price/quality relation
Q4	It is important for me to know that I get quality for all my money.
Q5	I compare prices between product variants in order to get the best value for money.
Q6	I always try to get the best quality for the best price.
	Novelty
Q7	Well-known recipes are indeed the best
Q8	I love to try recipes from foreign countries.
Q9	I like to try new foods that I have never tasted before.
	Organic products
Q10	I make a point of using natural or ecological food products.
Q11	I always buy organically grown food products if I have the opportunity.
Q12	I do not mind paying a premium for ecological products.
	Taste
Q13	Enjoying the taste of food products is important to me when I am eating
Q14	It is important to me to be able to eat delicious food on weekdays as well as weekends
Q15	I enjoy a good meal.
	Freshness
Q16	I prefer fresh products to canned or frozen products.
Q17	It is important to me that food products are fresh.
Q18	I prefer to buy meat and vegetables fresh rather than frozen.
Q19	I prefer to buy meat and vegetables fresh rather than canned.
V. Consumption situations	
Snacks versus meals	
K1	I eat before I get hungry which means I am never hungry at mealtimes
K2	In our house, nibbling has taken over and replaced set eating hours.
K3	I eat whenever I feel the slightest bit hungry.
Social event	
K4	Going out for dinner is a regular part of our eating habits.
K5	I enjoy going to restaurants with my family and friends
K6	We often get together with friends to enjoy an easy-to-cook, casual dinner.

Source: based on: Brunso & Grunert, 1995; Dziadkowiec, 2013; Sholderer at al., 2004; *Consumer segments…*, 2008

Data collection process consisted of two steps. In the first step data was collected by personal interviewers, a quota samples based on major demographic and geographical criteria, in the second stage the on-line survey was used. After rejection of incomplete on-line surveys (about 10%), the finally sample size was 948 (413 results for personal interviews and 513 for online survey). Demographic profile of the sample surveyed is presented in table 2.

Results and discussion

Ways of shopping

Product information are considered by the respondents when shopping for food, most of them agree that it is important to know what the product

Table 2. Demographic profile of the sample surveyed

Variable	Percentage	Variable	Percentage
Gender		Education	
Female	67,51%	Higher	62,24%
Male	29,54%	Technical	13,92%
No answer	2,95%	Secondary	14,03%
		Proffesional	6,54%
Age		Primary	0,32%
20-34	46,84%	*No answer*	2,95%
35-45	33,33%	Number of persons in the household	
46-64	13,08%	1	11,39%
pow. 64	3,80%	2	24,16%
No answwer	2,95%	3	22,57%
		4	22,78%
Occupational status		5 and more	16,14%
Student	18,35%	*No answer*	2,95%
Self-employement	4,54%	Number of children in the household	
Full time	55,38%	None	39,87%
Part time	6,96%	1	40,96%
Retired	6,96%	2	40,77%
Unemployed	4,75%	3 and more	18,27%
No answer	3,06%	*No answer*	2,95%

Source: own research

contains. Product information is also widely used to compare one product with another. Many of the respondents claim that they are influenced by what other people say about a product, but not by advertisements. Many of the consumers do not enjoy shopping for food. This is also the case with regard to specialty food shops, most of respondents do not see any reason to shop in specialty food shops.

Polish consumers seem to be price conscious, they generally check prices and notice when products change the prices. They often make a list before they go food shopping, but also often shop spontaneously, without planning (Fig.1.).

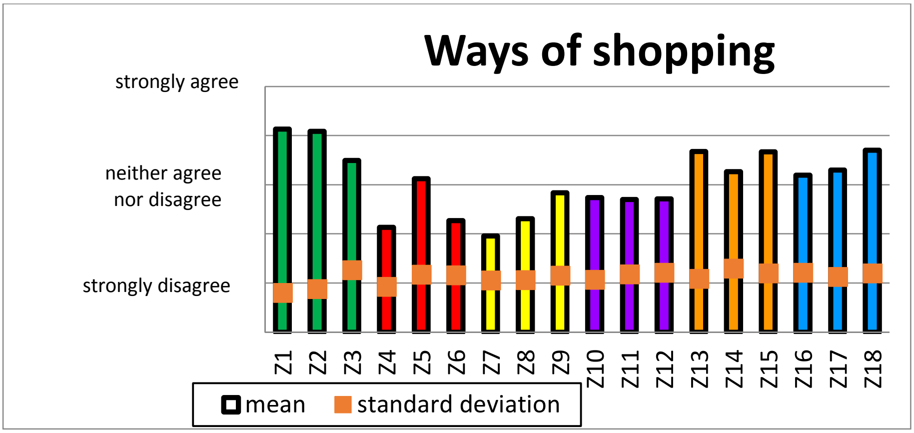

Figure 1. Construct „Ways of shopping" - results

Source: own research

Cooking methods

The majority of respondents have positive attitude to cooking and they rather do not agree that cooking is just something to get over and done with. Respondents are interested in seeking out new methods of cooking, in trying new recipes and in looking out for new recipes and ideas. A contrary they are not interested in using ready-to-eats and pre-packed foods. Polish consumers rather disagree that that the woman is responsible for food shopping, cooking and the health of the family. They believe that responsibility for cooking ought to lie just us much with the man as with a woman. Most respondents declare that meals are not planned in advance and the supper is very often a last minute decision (Fig. 2.).

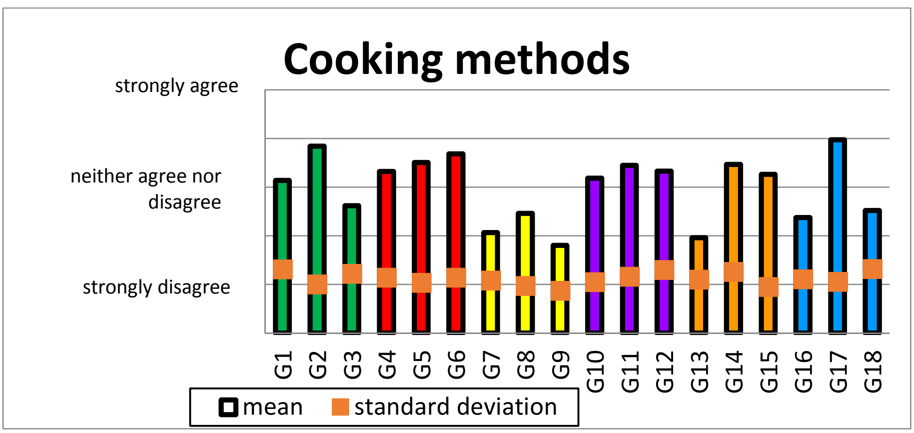

Figure 2. Construct „Coocking methods" - results

Source: own research

Purchasing motives

Self-fulfilment through food play an important role in the lives of Polish consumers. They generally rather agree that being praised for their cooking is important to them, although they are rather do not regard them as excellent cooks. A majority indicate that meals are important in the context of their social lives and that dinning with friends is a good opportunity to spend some time together. The issue of security is rather not important for surveyed respondents, they have no problem with unfamiliar foods and they rather do not agree that they dislike everything that might change their eating habits (Fig. 3).

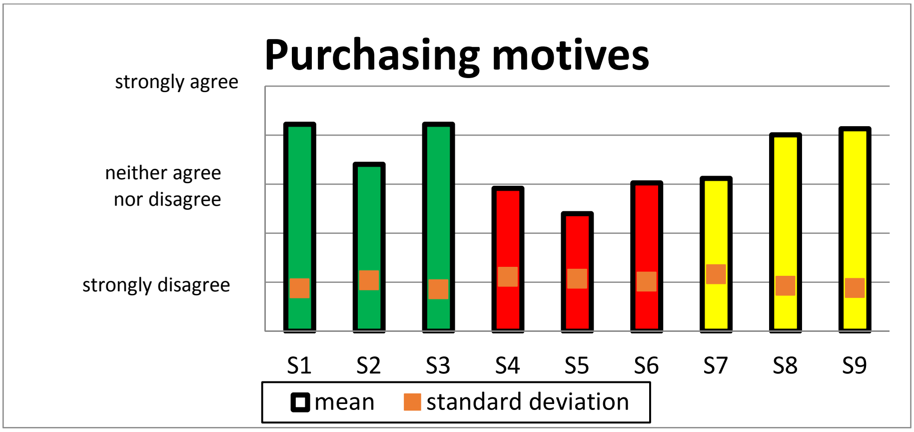

Figure 3. Construct „Purchasing motives" - results

Source: own research

Quality aspects

All quality aspects seem to be important for Polish consumers. In the issue of health aspect of food they declare that naturalness of the food is an important quality and that they try to avoid food products with additives. The price/quality relation, health and freshness are also important quality attributes for Polish consumers, but they are not for buying organic products. The respondents are rather not interested in novel aspects of foods eg. in trying recipes from other countries or trying new food products (Fig.4).

Consumption situations

Surveyed respondents rather are not snacking food consumers – they often eat whenever they feel the slightest bit hungry, but snacking do not replaced set eating hours. Polish consumers enjoy going to restaurants with friends, but rather do not eat out regularly (Fig. 5.).

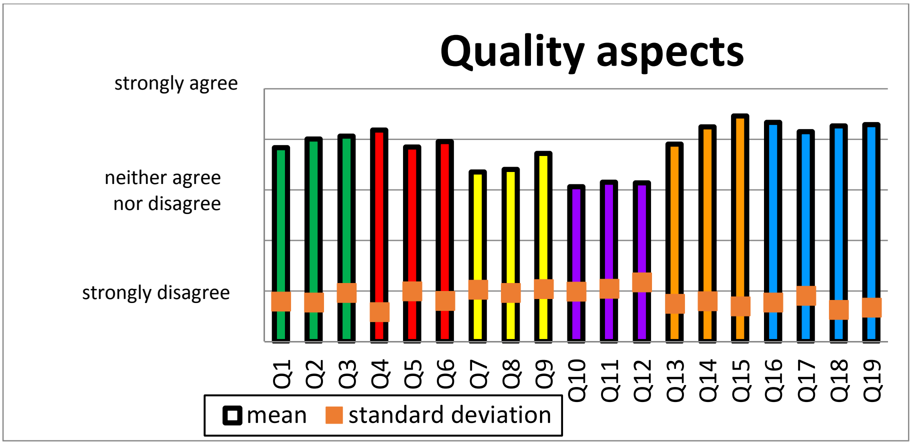

Figure 4. Construct „Quality aspects" - results

Source: own research

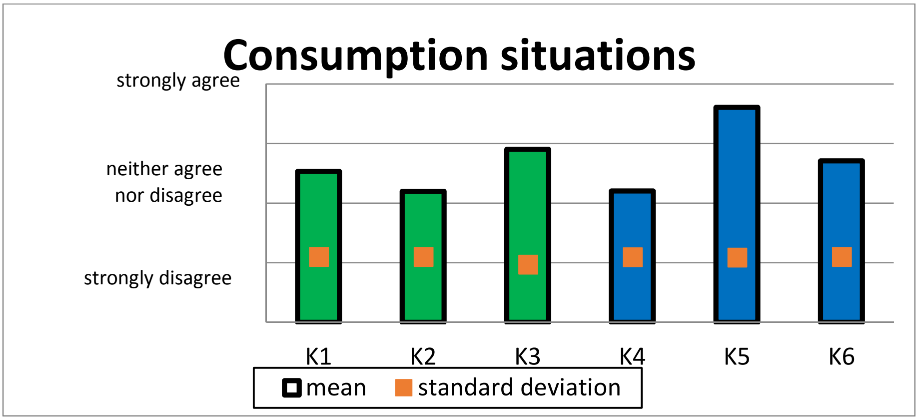

Figure 5. Construct „Consumption situations" - results

Source: own research

Conclusions

This study provides an insight into the lifestyles of food consumers in Poland; the results confirm that FRL is an affective instrument to food related life styles, the overall characteristic of Polish food consumers is defined in five research constructs: cooking methods, purchasing motives, quality aspects and consumption situations.

The results of the study will be used as a basis for more extensive examinations of differences and similarities between Polish food consumers, according to the methodology proposed by the authors of FRL instrument. Next steps of analysis could be e.g. identyfing the food related lifestyles of

Poles, based on pre-defined, verified theoretically and practically constructs and dimensions of FRL instrument, identifying the differences between consumers, conducting the segmentation of Polish food consumers.

This study provide a new ability to study food related lifestyles, preferences and behaviors in Poland. Using the verified, cross culturally tested instrument seems to be a good way not only to get a reliable results, but, most importantly, it allows to create the basis to cross-cultural comparisons.

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THE APPLE JUICES MARKET– CONSUMERS BEHAVIOUR AND SENSORY ACCEPTANCE

Marta Czarnowska, Sylwia Kemska, Joanna Michalak, Monika Urbaniak, Elżbieta Gujska

Department of Commodity and Food Analysis,
Faculty of Food Science, University of Warmia and Mazury in Olsztyn
marta.czarnowska@uwm.edu.

Introduction

Diet has a huge impact on occurrence of civilization diseases, including cardiovascular diseases and cancers. Vegetables and fruits are of particular importance in the prevention of these accidents. According to the recommendations of the World Health Organization, fruits and vegetables should be eaten at least five times a day (WHO, 2004). Poles usually choose apples which have a high content of biologically active compounds. It has long been known that apples favorably affect the functioning of the whole organism. Still up to date remains the saying "An apple a day keeps the doctor away". Apples can be consumed in various forms, including processed products like juices and nectars (Oszmiański, 2009). Fruit juices, in terms of the properties and composition, are the most similar to the natural fruit (Hoffmann, 2011).

In the past few years in Poland, the production of juices and nectars is the most dynamically developing branch of vegetables and fruits processing. It is a very prospective industry (Płocharski et al., 2013b). Polish juice industry currently occupies a prominent position in the European Union. Companies from Poland are well known in European countries, especially of Central - Eastern Europe. These companies for many years proceed a policy of expansion (Pawlak, 2013). Moreover, Poland is the largest producer of fruits in Europe, most of which are apples. In 2008 a record amount, compared to previous years, of 2 830.9 tons was produced. Poland is the third producer of apples in the world. The leaders are China and the United States (Trojanowicz, 2009). By contrast, in the amount of concentrated apple juice production, Poland ranks second after China (Nosecka, 2004; Dziwulski, 2011).

In retail manufacturers offer wide range of juices, nectars and drinks, including functional products. There are many types of juice, depending on the adopted criterion. For example, due to the type of intermediates - natural juices, freshly squeezed (NFC), and made from concentrated juice can be mentioned. Due to the use of thermal processes - pasteurized and unpasteurized, so-called one-day juice. In contrast, in terms of appearance and consistency there are puree, naturally turbid and clear juices (http://www.kups.org.pl).

The Regulation of the Minister of Agriculture and Rural Development (2003) sets out the requirements on the quality of commercial fruit juices produced in Poland. Fruit juices are divided into:

a) natural juices (NFC-Not From Concentrate) obtained by squeezing fruit tissues and then subjected to pasteurization; known as pressed juice; turbid or clear.
b) concentrated fruit juice obtained from raw juice by removing part of the water in the process of evaporation, osmosis, reverse osmosis or freeze.
c) juices made from concentrated juice FC (From Concentrate), obtained by restoring the flavor and the addition of amount of water removed during thickening. Due to the large number of processes used in their production, juices made from concentrate are significantly different from the raw material in terms of taste and aroma (Hoffmann, 2011).

According to Płocharski et al. (2013a), in 2007-2010 the consumption of juices and nectars in Poland amounted to about 20 l per capita. This is near the average consumption in the EU, which is 22.7 l (Strojewska, 2012). Nowdays, the steady increase in the consumption of fresh and naturally turbid juices is observed. From several different types of apple juices offered in retail, consumers are increasingly choosing those of a low degree of processing, such as natural turbid juices, because of their high nutritional and health values (Płuciennik et al., 2011). This shows that the behavior of consumers on the juice market is increasingly dependent on their growing awareness of the connection between the nutrition and health (Kowalczuk, 1999). In addition, a growing demand for new kinds of puree and turbid juices, such as "smoothie" or sodas juices - "schorle fruit" is noticed. Manufacturers are trying to meet the changing expectations of consumers (Mitek and Gasik, 2012). However, still, the most popular among consumers are juices made from concentrate with most preferred flavors of orange and apple.

According to Baryłko-Piekielna et al. (2002), the main factors influencing the consumer choice of a certain juice product, are the sensory quality, such as taste, smell, color and clarity. In addition to the sensory properties, the impact on the juice purchasing decision have also the type of packaging, price and consumer habits. Kowalczuk (1999) pays also special attention to the complex determinants of consumers behavior on the market of fruit juices, including apple and vegetables juices. Factors influencing consumers consumption and purchasing habits of these products are divided into: motivating (nutritional value, taste and brand loyalty), stimulating (advertising, availability, sales, promotion). Until quite lately the author also noticed the limiting factors, such as low awareness of the nutritional value and price. At that time Kowalczuk (1999) suggested to support the general nutrition education. This will help to increase consumer awareness about the benefits of fruit juices consumption, which are, for example, high contents of essential nutrients (micro and macro elements, vitamins, polyphenols and other ingredients). These compounds provide proper functioning of the whole organism. What is more, juices help digestive processes and quench thirst (Cichoń, 2000). Despite emerging opinion on juices high-calorie value and their impact on obesity, it should be noted, that a moderate juice intake of 200 ml per day, do not affect weight gain and should be an important component in the everyday diet (Markowski et al., 2012).

In a free trade economy, product not meeting consumers requirements is eliminated from the market. Hence, it is important to monitor constantly consumers behavior and study the sensory acceptance of products. Therefore, the aim of the study was to evaluate consumers behavior on the apple juice market and to examine their sensory acceptance of selected apple juices available in retail.

Material and methods

Questionnaire

The survey was carried out among a group of students from the University of Warmia and Mazury in Olsztyn. The study involved 98 respondents. The research tool was a questionnaire consisting of two parts. Part I included questions about gender and monthly income of the respondents. Part II consisted of six closed questions concerning the habits associated with apple juices consumption and purchasing. The questions were designed in the way to assess consumers attitudes in relation to apple juice. Respondents could choose one answer. The survey was anonymous. The questionnaire was developed based on the available literature, Baryłko-Piekeilna and Matuszewska, 2009; Babicz-Zielińska et al., 2008. The results of the survey were presented graphically (Fig. 1-3).

Assessment of the sensory acceptance of selected apple juices using a hedonic scale

Test material were three different apple juices: 1 - freshly squeezed, unpasteurized in a glass bottle of 250 ml; 2 - pressed (NFC - not from concentrate), pasteurized in laminate cardboard of 1 l; 3 - made from concentrate, pasteurized juice in laminate cardboard of 1 l. All juices were purchased in retail chains in Olsztyn. Selected products, in accordance with the declaration of the manufacturer on the product package, were analyzed during shelf life, immediately after opening.

Assessment of the sensory acceptance of apple juice was performed with scaling method using a 9-point hedonic scale. The scale was in the form of nine linked squares with the terms of individual quality levels: 1 – *I particularly do not like*, 2 – *I do not like very much*, 3 – *I do not like*, 4 –*I do not like a little*, 5 – *I neither like nor dislike*, 6 – *I like a little bit*, 7 - *I like*, 8 – *I like very much*, 9 – *I particularly like*. After each juice sample examination, respondents marked degree of acceptance of each product characteristic, and had possibility to serve their comments. The results were recorded on the assessment card. The evaluation was conducted by a team consisting of 98 students who knew the principles of sensory analysis and take part in such experiments earlier. Juice samples were analyzed in the laboratory of sensory analysis. The participants received properly prepared coded juices samples in glass containers in an amount of about 20 ml. The following juices characteristics were tested: color, taste, smell and clarity. The evaluation was conducted in accordance with the requirements of Polish Norm PN ISO 6658:1998. Sensory analysis. Methodology. General guidelines.

Results and discussion

First part of the research consisted of the survey on the apple juice drinking and purchasing habits of almost 100 students from the University of Warmia and Mazury in Olsztyn. In the second part, the same group took part in the consumer acceptance assessment of three selected apple juices (1-made from concentrated juice, pasteurized; 2-freshly squeezed, unpasteurized; 3-pressed, pasteurized) using 9–point hedonic scale.

Conducted surveys have shown that participated students very rarely drink apple juices, despite their nutritional value (Fig. 1). As many as 35.7% of respondents declared that they drink apple juices not often than twice a month.

Kowalczuk (1999) states that the frequency of consumption of fruit juices is highly dependent on the demographic and economic characteristics of respondents, such as gender, age and their income. Results of the studies conducted by the author presents, that that women are more likely than man to drink fruit juices. Age also plays an important role. Juices are the most popular among young people, under 25 years of age. According to the above and the results of obtained results, it can be concluded, that the main reason for such a rarely apple juices consumption, is the low income of the interviewed students and relatively high prices of these products. The income of majority of respondents (92.9%) was in the range of 800 - 1500 PLN. What is more, up to 39.8% of respondents declared that the choice of apple juice is primarily guided by the price (Fig. 2). The type of juice (freshly squeezed, from concentrate, pasteurized, etc.), as confirmed by more than 30% of respondents, is also one of the most important factors when making decision to purchase juice. Next significant factor for 26.5% of respondents is a brand of apple juice. This is also confirmed by the results obtained by Ucherek (2011). When asked about consumers' opinion about the main factors determining the choice of fruit juice, 24% of respondents indicated that it was the product brand.

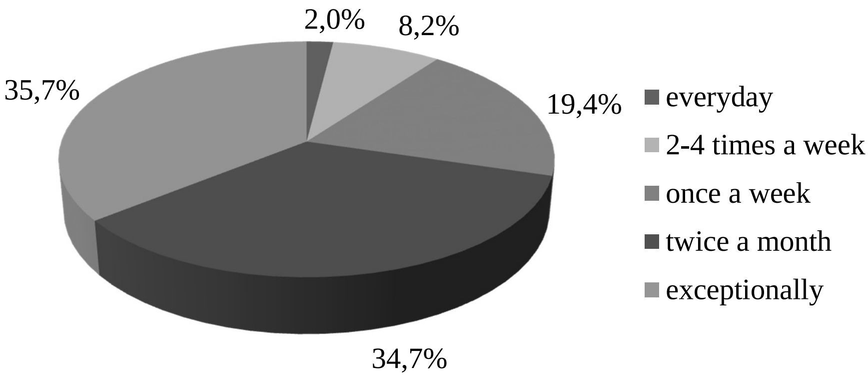

Figure 1. The frequency of apple juices consumption by respondents

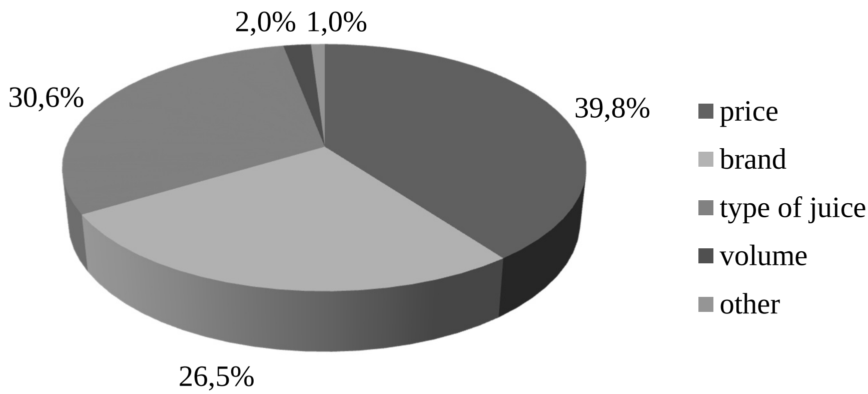

Figure 2. Factors which influence respondents choice of the particular apple juice

In turn, the most common factor, which influence respondents choice of the particular apple juice (42.9% responses) is the taste (Fig. 3). This is confirmed by the results of a study conducted by Kowalczuk (1999). Taste is one of these factors, which has a huge impact on the purchasing decisions of consumers. As showed by the author, it is especially important for young people under 25 years of age, which corresponds to the age of the students who took part in our survey. Unfortunately, only 12% of respondents declared that they buy juice for health reasons (Fig. 3). This can result from low knowledge of students about the beneficial effect of apple juice compounds on the human organism.

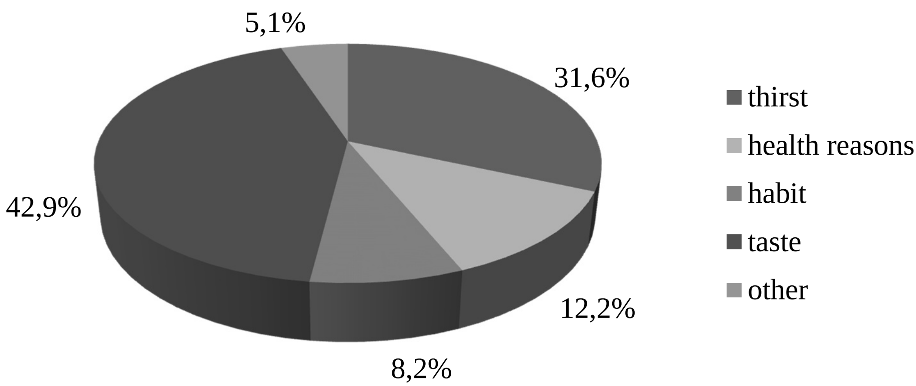

Figure 3. The reasons why respondents buy apple juices

The results shows that respondents prefer those juice packaging which is laminate cardboard (75.5% responses) with a capacity of 1 l (58.2%). This may result from the convenience of using this type of packaging material. It is lighter than glass bottles (24.5% responses) and is not as susceptible to mechanical damage as glass. In the studies conducted by Ucherek (2011) of consumer demands on the quality of fruit juices and their packaging, it was indicated that over 80% of respondents of 25 years of age tend to choose just pack "carton". The most common place of apple juice purchasing by the surveyed students in our questionnaire, was a supermarket. Over 60% of respondents prefer this place. This may be due to lower product prices and frequent promotions compared to local shops.

Assessment of the sensory acceptance of selected juices by students shows that apple juice from concentrate received the highest average rating of acceptance - 6.5 (Fig. 4). This means that evaluators put this product between definitions “I like" and "I like very much".

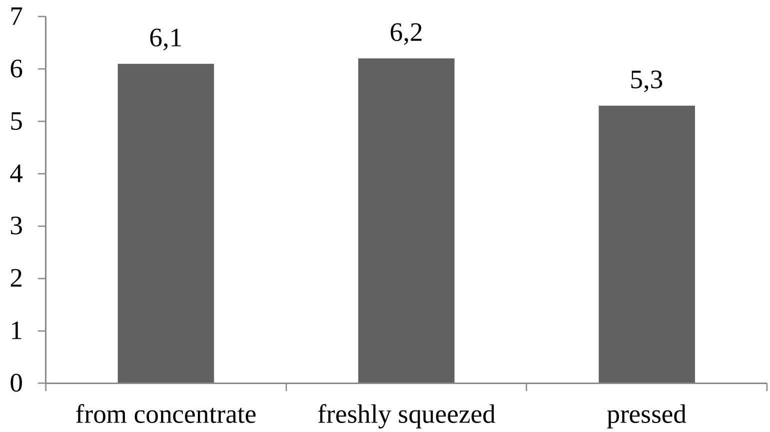

Figure 4. Overall rating of apple juices acceptance

At the same time, the apple juice from concentrate received the highest rating of consumers acceptance of clarity, which is 6.8 (Fig. 5). Students during the sensory evaluation, could also write down their comments on the quality parameters of tested juices. They usually described the clarity of juice from concentrate as clear, without sediment, without clouding. Based on the obtained results it can be concluded that consumers prefer clear apple juices without suspensions, turbidity, and natural sediments. This may be due to their habits. This is also confirmed by a study conducted by Kowalczuk (1999). Products made from concentrated juices are the most popular among Poles. Therefore, the sensory attributes of these products are well known to consumers.

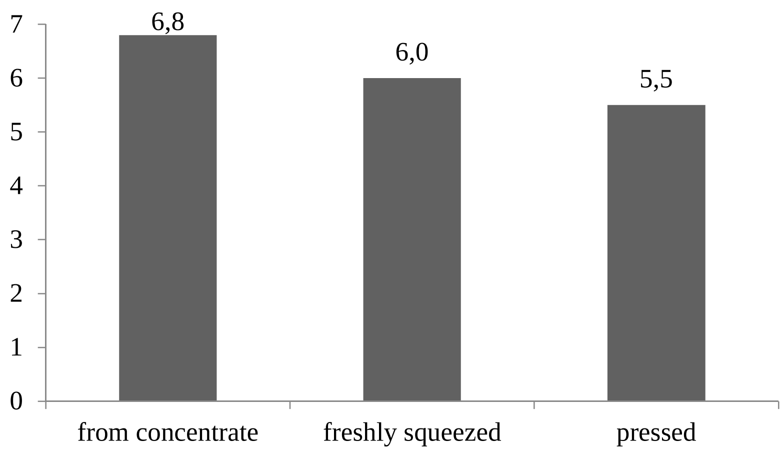

Figure 5. The assesment of clarity acceptance of selected apple juices

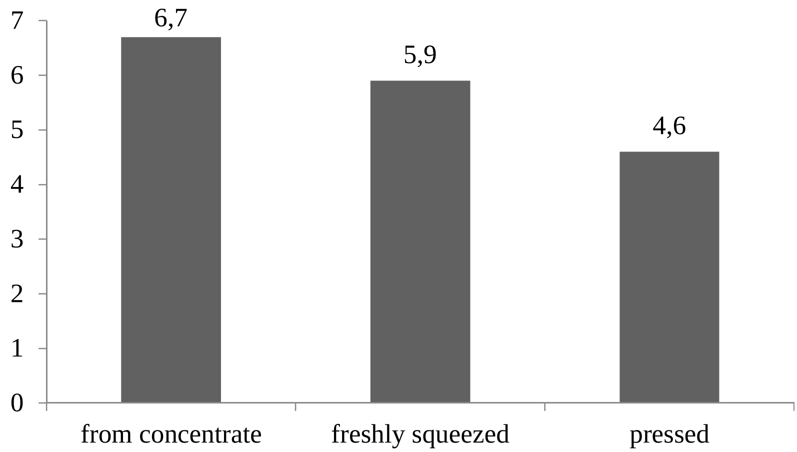

Figure 6. The assesment of color acceptance of selected apple juices

The juice from concentrate also received the greatest acceptance of the color, at the level of 6.7 (Fig. 6). The results suggest, that the evaluators prefer apple juice with an intense, expressive, dark-yellow color. The discussed juice received similar ratings of acceptance of taste (Fig. 7) and smell (Fig. 8) to the tested freshly squeezed juice. However, respondents, when describing their opinions about the taste of juice from concentrate, often found it slightly sour, little sweet, quite artificial. The aroma was described as pleasant enough but artificial and little natural. Students preferred more the natural flavor and smell of fresh apples.

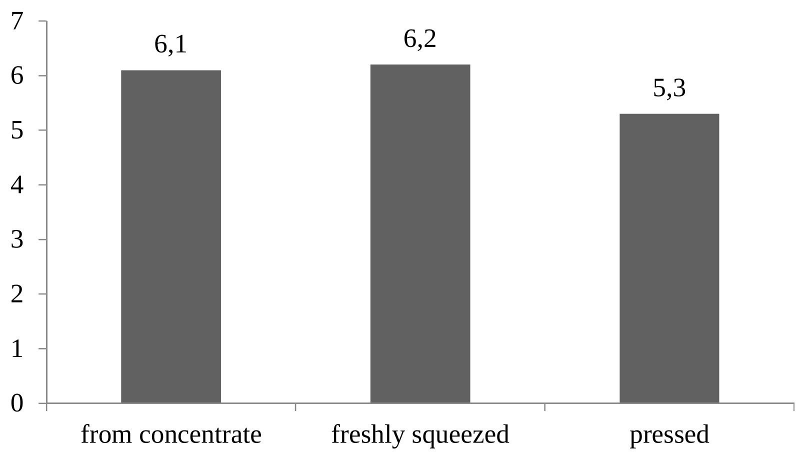

Figure 7. The assesment of taste acceptance of selected apple juices

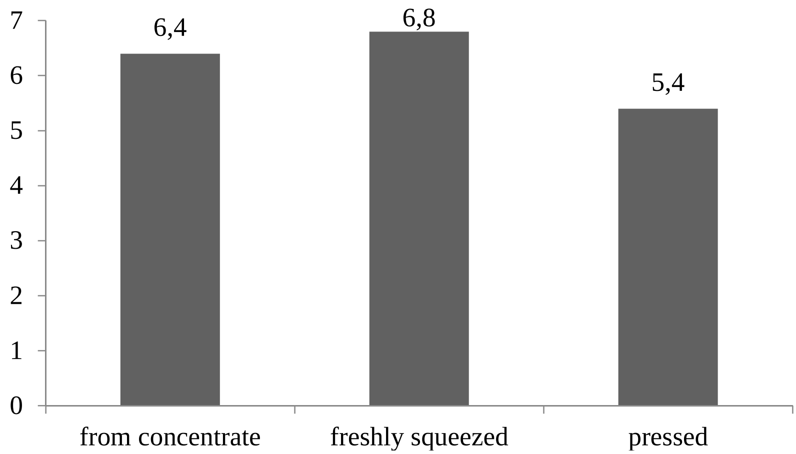

Figure 8. The assesment of smell acceptance of selected apple juices

Second place, in terms of general sensory acceptance, with the rating of 6.2 received freshly squeezed juice (Fig. 4) which corresponded to the definition “I like”. Taste at the level of 6.2 (Fig. 7), and smell – 6.8 (Figure 8), were evaluated as for the apple juice from concentrate or even a little bit higher. Most evaluators stated that the freshly squeezed juice is characterized by gentle, natural, pleasant taste of fresh apples. Similar opinions occurred regarding aroma of this juice. The rating for color acceptance was at the level of 5.9 and ranked the fresh juice after juice from concentrate and before the pressed one (Fig. 6). Evaluators identified fresh juice color as: clear, straw-colored, not much similar to apple juice. Many students declared that the freshly squeezed juice with its appearance and color resembles the juice of citrus fruits. In a study conducted by Pyryt and Romińska (2010), sensory characteristics of fresh unpasteurized apple juices were evaluated using a five-point method. The results obtained by authors indicated a very high acceptance of these products smell (4.6) and taste (4.0). Lower degree of acceptance received the color of the fresh juice (3.5). The evaluators found that it significantly differed from the natural color of raw apple juice. In our study students commented also on the fresh juice clarity. The obtained rating (6.0) would certainly be higher if there were no turbidity and sediment (Fig. 5).

Among the tested products the pressed apple juice received the lowest rating of general sensory acceptance, 5.2 (Fig. 4). This value corresponds to the definition "I neither like nor dislike". At the same time, this product received the lowest ratings in all others evaluated sensory characteristics, such as taste, smell, color and clarity. Taste acceptance rate was only 5.3 (Fig.7), while the smell - 5.4 (Fig. 8). The evaluators defined taste and smell of pasteurized pressed juice as unpleasant, artificial and not like the aroma and flavor of apples. As for the color, rate of acceptance was only 4.6 (Fig. 6) because of its brightness, paleness and low intensity. Using definitions of the hedonic scale, the color of the pressed juice was between the statements: "I do not like a little" - "neither like nor dislike". Also, the clarity of this juice was not willingly accepted (5.5) due to its very rare, watery appearance (Fig. 5).

Conclusions

In recent years the apple juice market in Poland has strongly developed. At the moment manufacturers offer a wide range of different types of juices. Consumers are increasingly choosing naturally turbid fresh juices, both pasteurized and unpasteurized.

According to the conducted studies, the main reason for apple juice seldom consumption in the group of students, seems to be their low income and relatively high prices of these products. Unfortunately, students do not appreciate the health benefits of fruit juices, which may result from their lack of knowledge. This indicates the need for nutrition education from an early age.

Respondents appreciate the natural and pleasant taste and aroma of freshly squeezed apple juice. However, due to the habit of drinking clear and of intensive color juices they still prefer and choose more often products made from concentrate.

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STUDY ON THE ACCESSIBILITY OF CONSUMER ATTITUDES TOWARDS THE ATTRIBUTES OF TOILET SOAP PERCEIVED IN A PURCHASING SITUATION

Stefan Doroszewicz, Anna Zbierzchowska

Department of Market, Collegium of Management and Finance, Marketing and Quality, Warsaw School of Economics
sdoros@sgh.waw.pl

Introduction

When processing information connected to choosing a product from a set of offers available to consumers and then purchasing it, one of the stages of this process is forming attitudes (Cunningham, Packer, Kesek & Van Bavel 2009; 485) towards specific elements of such set. In a situation when consumer perceives the offered products, the premises used to form attitudes towards the perceived object are the default values invoked from consumer's memory and situational factors (Boehner & Waenke 2004; 102) – attributes of the context of the perceiving situation, external stimuli influencing consumer in the particular purchasing situation. The final choice and the purchasing decision will be therefore influenced by the ease of forming attitudes, including accessibility of the default values.

If processing information about the perceived product demands little cognitive involvement from the consumer, then forming his or her attitudes towards the product value is usually automatic (Kolańczyk 1997; 78). In consequence, decision-making in the purchasing situation takes place almost unknowingly for the consumer, and the formed attitude towards the product is defined mostly by the emotional dimension. From the organization's perspective, getting to know the factors conditioning the process of forming attitudes towards the designed product, including those influencing ease of forming attitudes, seems to be a crucial question for the potential market game. Finding an accurate solution for this problem is difficult, as apart from the overt attitudes, defined basing on direct consumers' declarations, there are also latent attitudes in play. These are unconscious emotions and convictions, sometimes unavailable due to peripheral path of information processing.

Original methodology for measuring and classifying the level of ease of forming attitudes was developed at the Department of Quality Management at Warsaw School of Economics (Doroszewicz 2010). Those methods were used in 2011 to conduct a study on ease of forming consumer attitudes towards attributes defining perceived value of toilet soap (Doroszewicz, Kobylińska, Miller & Zbierzchowska 2011). Ease of forming consumer attitudes towards chosen attributes describing one dimension of the value – the quality of toilet soap, i.e. towards its colour, scent, shape and appearance, as well as towards its packaging, was analysed and system of classification was drawn up. It was demonstrated that when it comes to how easily consumer attitudes are formed, packaging is categorized as "very high", colour and appearance as „high" and scent and shape as "moderate". Basing on the results of the study, it was established that packaging is the crucial external stimulus – a premise decisive when it comes to the purchasing decision about toilet soap. Colour and appearance of toilet soap were classified as premises of secondary order. As a result, a research problem was formulated, concerning the ease of forming consumer attitudes towards chosen attributes of toilet soap packaging, in order to identify a specific feature of packaging – a stimulus which constitutes the very high accessibility of consumer attitudes towards product packaging.

The aim of identifying an attribute X_i of toilet soap packaging - a product purchased in a situation of consumer's low cognitive engagement, towards which buyer shows the highest level of ease of forming attitudes, is to reveal a key premise of automatic processing of information in the situation of choosing a product, and in consequence of purchasing toilet soap by consumers. This kind of knowledge cannot be overestimated when actions are being taken to design accurately quality of toilet soaps distributed mostly in supermarket chains.

Identifying that feature was the specific object of this study. Basing on the results of the study on the ease of forming consumer attitudes towards attributes of various products in situations of little cognitive involvement, the following working hypothesis was proposed:

„The attribute of toilet soap packaging towards which consumers show the highest level of ease of forming attitudes is the dominant colour".

The object of the study

The object examined during the study in question is packaging, the value of which (examined from the point of view of consumer's needs and demands) is analysed during the purchasing process. Packaging is a ware existing on the market as an integrated element of the product for purchase. In the enterprise packaging plays many important functions, especially in the sales and distribution processes: it protects the product and secures its quality, facilitates transportation process and storage and functions as a marketing instrument, closely connected with marketing communication.

Packaging is treated here as an important promotion instrument and a source of marketing communication. Information directed to consumer is transmitted using verbal communications, in a written form, and nonverbal – in forms of drawings, photos, graphics and company logos.

In general, packaging perceived in its entirety, is a specific type of medium for consumer - communication formed by the producer, concerning most often the packaged product or the company itself. The perceived quality of packaging influences the perception of quality and assessment of the product that is purchased. Packaging can strengthen or even create product quality (good, desired), its usefulness, cost-effectiveness, ecological properties or other qualities of the product, as expected by consumers (Zbierzchowska 2012; 24).

The specific object of the study in question is packaging of toilet soaps available on the Polish market, positioned as products of everyday use and frequently purchased. The choice of the study subject was determined by the ease of assessing its dimensional characterization perceived by consumers. Toilet soap packaging should be a relatively easy object of assessment as toilet soap is a frequently purchased product, perceived mostly through its packaging, conditioned by low cognitive engagement in purchasing decision.

Taking into consideration the results of research carried out at the Department of Quality Management at Warsaw School of Economics in previous years (Doroszewicz, Zbierzchowska & Kobylińska 2003), (Doroszewicz, Kobylińska, Miller & Zbierzchowska 2011) it was assumed that the dimensional characterization of toilet soap packaging perceived by consumers and conditioning its perceived quality, is defined by the following dimensions:

– dominant colour of the packaging front – X_1,
– lettering of the packaging front – X_2,
– symbolism of the packaging front - X_3.

The following other packaging attributes can also be considered: susceptibility to manipulate the packaging, aesthetics, protective function, guarantee of the contents staying intact, informational aspect.

A set of 7 toilet soap packagings (m=7) was chosen for the study, all the soaps being available on the market in Warsaw – in supermarkets in the southern part of Warsaw and in the city of Piaseczno. The chosen brands and their unit prices are presented below:

A – Nivea – 2,49 PLN, B – Luksja 1 – 1,39 PLN, C – Fa – 2,29 PLN, D – Luksja 2 – 1,29 PLN, E – Dove – 3,29 PLN, F – Soap Bar – 0,99 PL, G – Palmolive – 1,89 PLN.

When the object of the study is a packaged toilet soap perceived in a purchasing situation, the perceived value of the product can be generally presented in a form of the following predicate**:**

$$W(Q, M, C),$$

where: W – value, Q – quality, M – brand, C – unit price.

In this work the object of the direct measurement were consumer preferences towards value, unit price and brand of the soap, as well as towards the given packaging attributes, i.e. attributes $X_{i=1,3}$.

Samples for the study were prepared from packaging fronts, so that they independently presented the above-described features of the dimensional characterization of the packaged soap value, i.e. attributes $X_{i=1,3}$, price C and brand of the soap, represented by its logo X_4. The samples were therefore a source of stimuli mirroring soap quality W and k=4 chosen attributes of toilet soap packaging: dominant colour X_1, symbolism X_2, packaging lettering X_3 and soap brand represented by its logo X_4. It was assumed that a sample should emit only one stimulus, so that in the following sessions of the study consumers perceive independently four above-mentioned attributes and value W. In consequence, in case of m=7 packagings and k=4 attributes 28 rectangular samples were created, mirroring the dimensions of packaging fronts, and including specific graphic elements closely mirroring specific attributes of original packaging. In the case of consumer preference towards value W, sample had a form of a packaged toilet soap accompanied by detailed unit price. The purpose of the study was to conduct a covariation analysis generally described by the following predicate:

$$W(X_1, X_2, X_3, X_4, C).$$

The object and the methodology of the study

The object of the study were attitudes towards specially prepared samples of 7 packaging fronts presented to consumers. Consumers then formed their attitudes towards pairs of samples differing in relation to a certain attribute, f.i. X_1, W etc. Consumers decided which of the samples in the pair they preferred. Taking into account the number of elements of the study object m=7, the number of variables describing the object k=4 + 1 (attributes $X_{i=1,4}$ and value W; preferences towards price pairs, for obvious reasons, are not a subject of this study), every consumer who took part in the study formulated 99 attitudes towards various variants of the assessed samples combinations.

To achieve the intended goal of the study, a study scheme was put into work, as presented in Figure 1.

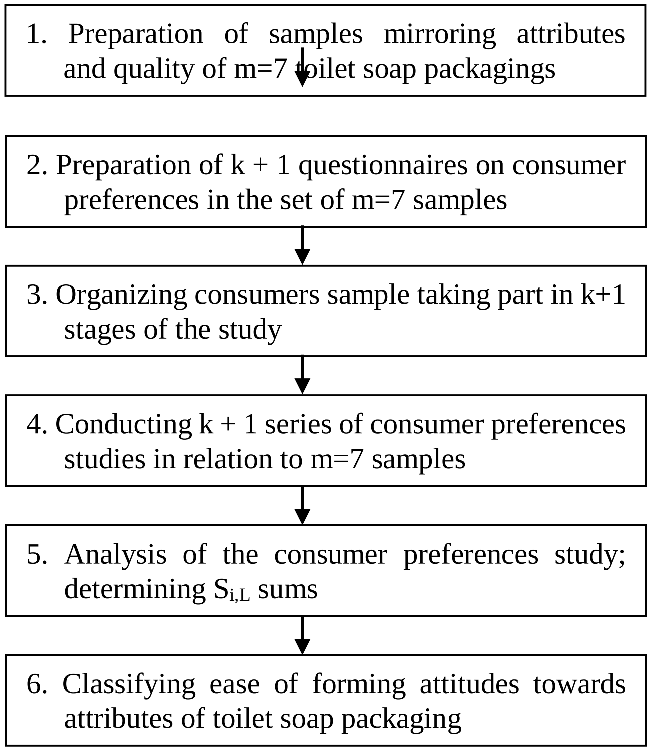

Figure 1. The scheme of the study conduct, directed towards classifying ease of forming consumer attitudes towards chosen attributes of toilet soap packaging.

Source: author's own materials

At the first stage of the study, samples mirroring k=4 chosen attributes of toilet soap packaging were prepared. According to the above-mentioned premises, samples were prepared in a specific way, the packaging fronts being scanned in order to eliminate any additional elements other than those mirroring the given attributes, f.i. logo of the brand X_4.

At the second stage, questionnaires were drawn up to study consumer preferences towards individual variables from the above-mentioned predicate. The task of the respondent was to fill in a matrix of paired comparisons of samples mirroring the given stimulus *(Paired Comparison Analysis) (Dobrowolska 2012).*

At the third stage of the study, a purposive sample of 24 people from the consumers population was constructed.

At the fourth stage of the study, five assessment sessions were conducted at intervals of c.a. one week, in the following order:

1. study of preferences towards dominant colour X_1 of packaging
2. study of preferences towards symbolism X_2 of packaging
3. study of preferences towards lettering X_3 of packaging
4. study of preferences towards brand X_4 of toilet soap
5. study of preferences towards value W of toilet soap.

The authors of this work took part in each session, being responsible for explaining the aim of the study, the object of the assessment and the rules for filling in the paired comparison matrix. The assessment was made in the home setting.

At the fifth stage of the study, $S_{i,L}$ inversion sums were determined for orderings of seven samples, made one by one by the consumers in relation to specific attributes $X_{i=1,4.}$ Those orderings were in turn made in relation to previous ordering made by the consumer basing on the assessed value W of the toilet soap (L=1÷24 – assessing individual index).

At the sixth stage, the distribution of $S_{i,L}$ sums was analysed, and basing on the results, a classification of levels of ease of forming consumer attitudes towards specific packaging attributes $X_{i=1,4}$ and towards price of toilet soap was made.

Analysis of the study results

In Table 1 the values of $S_{i,L}$ inversion sums are presented, as determined basing on the assessments made by consumers from the sample in relation to attributes $X_{i=1,4}$. In order to analyse the differentiation of the mean values of inversions sums of orderings presented in Table 1, a univariate analysis of variance was made. The results of this analysis are presented in Table 2, where – SS = total variance, MS = inter-group variance, F = Fisher exact test, p = probability of sampling error. The results presented in Table 2 suggest that in the set of $S_{i,L}$ values, at the level of significance α=0,05, the differentiation is statistically significant.

In Figure 2 the character of the identified differentiation is illustrated. The chart suggests that the $S_{i,L}$ sums differentiation is determined by variable X_4 – the brand of the soap.

Basing on the results presented in Table 1, a classification was made of the ease of forming attitudes towards attributes $X_{i=1,4}$. The numbers $n_{j=1,3}$ of inversion sums belonging to the appropriate variability range $S_{i,L}$ are presented in Table 3.

Table 1. The values of $S_{i,L}$ inversion sums of orderings, determined basing on the assessments made by respondents from the sample in relation to attributes $X_{i=1,4}$

ID of the respondent	$S_{i,L}$ inversion sums of orderings			
	X_1	X_2	X_3	X_4
IW	-15	-2	-6	9,8
MW	-5	7	9	18,2
BK	5	1	9	15,4
IF	-2	4	2	17,03
LK	6	2	14	12,83
MZ	-8	13	5	11,2
TJ	9	-1	11	4,2
RK	9	4	12	17,27
WD	7	-10	-10	7
LP	13	11	-5	14
MJZ	0	-2	-2	5,6
AM	-3	5	9	18,2
AP	6	4	-6	14,47
JP	3	-3	8	18,2
SL	15	-9	6	21
MD	-11	11	3	11,2
WA	14	6	8	3,97
MU	9	17	5	12,6
PM	6	-6	4	4,2
MR	2	4	3	8,4
BC	10	4	-4	16,57
PZ	3	-3	-5	18,2
SW	13	-11	3	12,6
MID	12	15	13	21

Source: author's own materials

When the number of the samples that are subject to comparison is m=7, the variability range of the inversions sums of orderings is $-21 \leq S_{i,L} \leq 21$. According to the rules of the proposed methodology of classifying levels of ease of forming attitudes, the object of the analysis are the numbers of $S_{i,L}$ sums belonging in three separate variability ranges of those sums, as defined in the heading of Table 3. In the case of the consumers sample n=24, the criteria numbers of $S_{i,L}$ sums are respectively: for the range $10{,}5 \leq S_{i,L} \leq 21$ - $n_2^*=0{,}25n=6$, for the range $0 \leq S_{i,L} \leq 21$ - $n_1^*=0{,}5n=12$ and for the range $-21 \leq S_{i,L} < 0$ - $n_3^*=0{,}5n=12$.

Table 2. The results of the analysis of variance; dependant variable: mean inversions sums of orderings in question; independent variable: attributes category $X_{i=1,4}$

Univariate analysis of variance					
	SS	**Degrees of freedom**	**MS**	**F**	**p**
Intercept	3245	1	3245	65,57	0,00000
Attributes category $X_{i=1,4}$	1704	3	568	11,48	0,00000
Error	4553	92	49,5		

Source: author's own materials

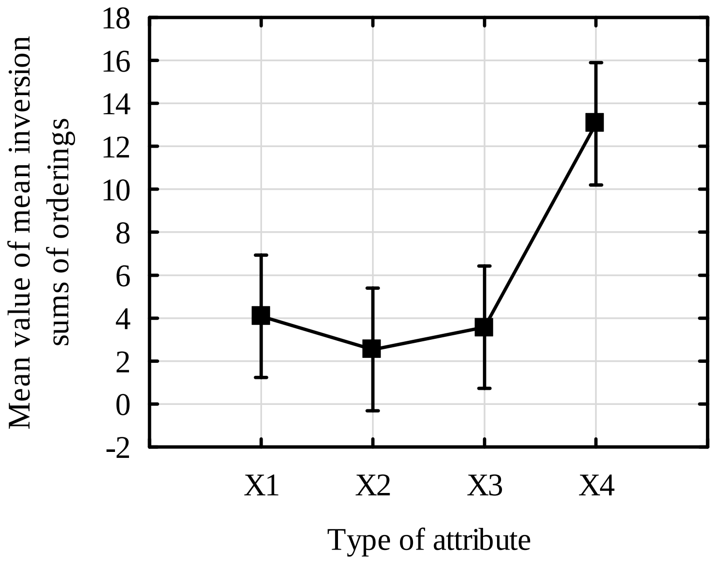

Figure 2. Chart illustrating differentiation of the mean value of inversions sums of orderings in question.

Source: author's own materials

Table 3. The number $n_{j=1,3}$ of $S_{i,L}$ sums belonging respectively to the variability ranges $10{,}5 \leq S_{i,L} \leq 21$, $0 \leq S_{i,L} \leq 21$ and $-21 \leq S_{i,L} < 0$

Attribute X_i	$n_{2(Si,L\geq10,5)}$ in the range $10{,}5 \leq S_{i,L} \leq 21$	$n_{1(Si,L\geq0)}$ in the range $0 \leq S_{i,L} \leq 21$	$n_{3(SiL<0)}$ in the range $-21 \leq S_{i,L} < 0$
Dominant colour X_1	5	18	6
Symbolism X_2	5	15	9
Lettering X_3	4	17	7
Brand X_4	15	21	0

Source: author's own materials

The classification of the levels of ease of forming attitudes is made using χ^2 test to verify following statistic hypothesis at the level of significance α=0,05:

$$H_0: n_{1(Si,L\geq0)} = n_1^*$$
$$H_1: n_{1(Si,L\geq0)} > n_1^*$$
$$H_0: n_{2(Si,L\geq10,5)} = n_2^*$$
$$H_1: n_{2(Si,L\geq10,5)} > n_2^*$$
$$H_0: n_{3(Si,L<0)} = n_3^*$$
$$H_1: n_{3(Si,L<0)} > n_3^*$$

Rejecting hypothesis H_0: $n_{1(Si,L\geq0)} = n_1^*$ and accepting hypothesis H_1: $n_{1(Si,L\geq0)} > n_1^*$, while simultaneously rejecting hypothesis H_0: $n_{2(Si,L\geq10,5)} = n_2^*$ and accepting hypothesis H_1: $n_{2(Si,L\geq10,5)} > n_2^*$, means that ease of forming consumer attitudes towards the given attribute X_i is considered very high. No grounds for rejecting hypothesis H_0: $n_{2(Si,L\geq10,5)} = n_2^*$, while simultaneously rejecting hypothesis H_0: $n_{1(Si,L\geq0)} = n_1^*$ and accepting hypothesis H_1: $n_{1(Si,L\geq0)} > n_1^*$, means that accessibility of consumer attitudes is considered high. No grounds for rejecting hypothesis H_0: $n_{1(Si,L\geq0)} = n_1^*$ means that accessibility of consumer attitudes is considered moderate. No grounds for rejecting hypothesis H_0: $n_{1(Si,L<0)} = n_3^*$ means that accessibility of consumer attitudes is considered low. Rejecting hypothesis H_0: $n_{3(Si,L<0)} = n_3^*$ and accepting hypothesis H_1: $n_{3(Si,L<0)} > n_3^*$ means that accessibility of consumer attitudes is considered very low.

In Table 4 the verification results for the above-mentioned hypothesis for specific attributes $X_{i=1,4}$ are presented. The critical value of χ^2 test for the degree of freedom ν=1 and the level of significance α = 0,05 is $\chi^2_{(\alpha=0,05,\nu=1)}$=3,84.

Table 4. The verification results for the hypotheses on the significance of differences in numbers of $S_{i,L}$ sums – obtained and criteria-related; classes (levels) of ease of forming attitudes towards attributes $X_{i=1,4}$

Attribute X_i	H_0: $n_{2(Si,L \geq 10,5)} = 6$		H_0: $n_{1(Si,L \geq 0)} = 12$		H_0: $n_{3(Si,L<0)} = 12$		Class of ease of forming attitudes
	χ^2_{obl}	p	χ^2_{obl}	p	χ^2_{obl}	p	
Dominant colour X_1	$n_2 < 6$	-	3,000	0,083	$n_3 < 12$	-	Moderate
Symbolism X_2	$n_2 < 6$	-	0,750	0,386	$n_3 < 12$	-	Moderate
Lettering X_3	$n_2 < 6$	-	2,083	0,149	$n_3 < 12$	-	Moderate
Brand X_4	13,5	0,0002	-	-	-	-	Very high

Source: author's own materials

The results presented in Table 4 suggest that consumers show high level of ease in forming attitudes towards brand of toilet soap, represented in the packaging by its graphic sign (logo). As for other attributes of packaging that were the object of scrutiny in this study, ease of forming consumer attitudes towards them was moderate. The working hypothesis that "the attribute of toilet soap packaging towards which consumers have the highest level of ease in forming attitudes is the dominant colour', was therefore negatively verified. Dominant colour is not the attribute towards which consumers show the highest level of ease in forming attitudes. That role is played by the brand of toilet soap, represented by its graphic sign (logo) presented in the packaging. This could be linked to the notion and definition of the brand itself, which suggest that consumers perceive brand also through the attributes of the product, packaging and price. Therefore brand, especially its image, is a more complex notion, while the brand logo evokes certain ideas and associations in consumer's consciousness. Deep awareness of the brand is defined by high probability that the brand would be easily evoked from the memory; it constitutes therefore a dimension towards which consumers show the highest level of ease of forming attitudes.

In Table 5 the values of $S_{C,L}$ inversion sums of orderings made in relation to the value W (organized references) and price C of the toilet soaps included in the study are presented.

Table 5. The values of $S_{C,L}$ inversion sums of orderings made by n=24 consumers in relation to the value W (organized references) and price C of the toilet soaps included in the study

ID of the respondent	$S_{C,L}$	ID of the respondent	$S_{C,L}$
IW	- 7	**AP**	- 12
MW	- 18	**JP**	- 17
BK	- 15	**SL**	- 11
IF	- 8	**MD**	- 15
LK	- 8	**WA**	- 8,33
MZ	- 13	**MU**	- 11
TJ	3	**PM**	3,67
RK	- 10	**MR**	- 4
WD	- 16	**BC**	- 8
LP	- 15	**PZ**	- 13
MJZ	- 10	**SW**	- 11
AM	- 21	**MID**	- 21

Source: author's own materials

The numbers of $S_{C,L}$ sums belonging to the above-mentioned variability ranges are presented in Table 6.

Table 6. The numbers of $S_{C,L}$ sums belonging respectively to the variability ranges $10,5 \leq S_{C,L} \leq 21$, $0 \leq S_{C,L} \leq 21$ and $-21 \leq S_{C,L} < 0$

Attribute	$n_{2(Si,L\geq 10,5)}$ in the range $10,5 \leq S_{C,L} \leq 21$	$n_{1(Si,L\geq 0)}$ in the range $0 \leq S_{C,L} \leq 21$	$n_{3(SiL<0)}$ in the range $-21 \leq S_{C,L} < 0$	$n_{2(Si,L\geq 10,5)}$ in the range $10,5 \leq S_{C,L} \leq 21$
Price C	0	2	19	0

Source: author's own materials

The verification results for the above-mentioned hypotheses on the significance of the difference of the obtained and criteria-related numbers of $S_{C,L}$ sums, and the matching class (level) of ease of forming consumers' attitudes towards price of toilet soap, are presented in Table 7. The critical value of χ^2 test for the degree of freedom ν=1 and the level of significance α = 0,05 is $\chi^2_{(\alpha=0,05,\nu=1)}=3,84$.

The results presented in Table 7 suggest that formally the level of ease of forming consumer attitudes towards unit price of toilet soap is very low. In reality, diversifying among numerical values is very easy, therefore it can be assumed that soap price is not taken into consideration by consumer while making a purchasing decision.

Table 7. The verification results for the hypotheses on the significance of the difference of the obtained and criteria-related numbers of $S_{C,L}$ sums; class (level) of ease of forming attitudes towards price of toilet soap

	H_0: $n_{2(Si,L\geq 10,5)} = 6$		H_0: $n_{1(Si,L\geq 0)} = 12$		H_0: $n_{3(Si,L<0)} = 12$		Class of ease of forming attitudes
	χ^2_{obl}	p	χ^2_{obl}	p	χ^2_{obl}	p	
Price C	$n_2 < 6$	-	-	-	4,083	0,043	Very low

Source: author's own materials

Conclusions

Basing on the conducted study and analysis, the following conclusions were drawn:

1. The attribute of toilet soap packaging towards which consumers show the highest level of ease of forming attitudes is brand, represented by its logo in the packaging.
2. The level of ease of forming attitudes by consumers towards toilet soap brand, perceived as the logo in the packaging, is classified as „very high".
3. The level of ease of forming consumer attitudes towards other attributes of toilet soap packaging included in the study, i.e. dominant colour, symbolic and lettering, is diverse and classified as "moderate".
4. The working hypothesis was verified negatively, as it was found out that dominant colour of toilet soap packaging is not the attribute towards which consumers show the highest level of ease of forming attitudes.
5. Price of toilet soap is not a premise taken into consideration by consumer while making a decision about purchasing toilet soap.

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THE ROLE OF INNER COATING AS A MEANS OF ENSURING ALUMINUM BEVARAGE CAN SAFETY

Stanisław Hornik, Katarzyna Polarska

Department of Industrial Commodity Science,
Faculty of Commodity Science, Cracow University of Economics
horniks@uek.krakow.pl

Introduction

The first types of metal packaging designed for food products were introduced in 1810. They were heavy, difficult to open, but they fulfilled their primary task well enough – they protected the content. The idea to put beverages into metal cans came many years later. Beverage cans were introduced in the USA in the 30ties of the 20th century. They did not look any similar to what we call a beverage can nowadays – they were much heavier than the contemporary cans and their shape was closer to a bottle. In order to open such a can, one needed a special opener which was informally called - a church key. Despite all those shortcomings, the early cans quickly became very popular – the first canned beer called *Krueger's Beer* was sold in its first year on the market in as many as 200 million cans and that happened in 1935. However, the production technology was overly complex and it soon became unprofitable. Innovations were desperately required (Feldman 2010).

In 1951 a typical beverage can weighed only 83 g and was made of so-called black tinplate. In 1953 a white tinplate became commonly used, since it was more resistant to corrosion and, eventually, five years later aluminum cans were introduced (Dobrowolski 2004).

At the beginning of the 60ties of the 20th century a new technology was developed which enabled opening the cans without having to use any additional devices such as openers or church keys. A lift-tab, which was a strip of metal attached to the can lid, was a smart innovation and then in 1974 it was even improved by a ring-pull tab. That technique has been used ever since. Over the years, research was carried out in order to reduce the weight of a can. In 1971 the technology of necking was modernized which led to the reduction of a typical can's diameter in its upper part to only 62 mm, which of course led to the reduction in the diameter of the lid. Such can was made of two, not as previously three, parts and weighed only 38 g. Scientific and technological progress allowed to introduce more modern solutions. A modern beverage can is made of white tinplate and weighs ca. 21 g or, most commonly, is made of aluminum and then weighs only 10 g (330 ml). The wall thickness is 0,097 mm, less than the thickness of human hair. Such a large reduction in material and an increase in the recycling rate for aluminum and steel have caused that with the same amount of material three times more beverage cans are produced than only three decades ago. A continual increase in the importance of packaging can be easily observed (Hornik, Orzeł 2006, Krawczak 2011). The packaging market in the world is expected to grow in the coming years. The forecasts show that its value in 2016 is likely to amount to 820 billion dollars. There are also constant changes and improvements in the materials used in packaging. This is illustrated in fig. 1.

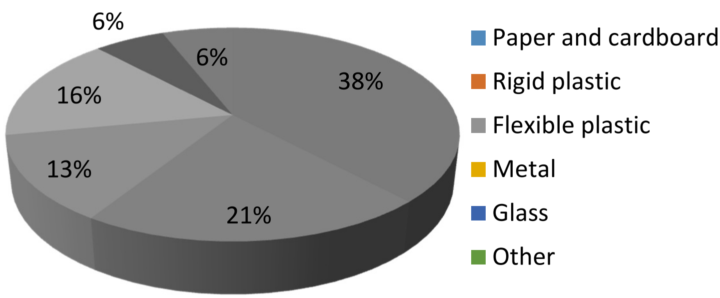

Figure 1. The share of different materials used in packaging production

Source: [http://www.plastech.pl/]

The annual global growth of the packaging industry is estimated to be 3%. According to forecasts, the greatest increase in the market share should be observed in rigid plastic and cardboard packaging. A strong increase in demand for rigid packaging is mostly a result of the development of beverage and cosmetics industries (Luberda 2006, Pogorzelska 2008).

Modern beverage cans

Aluminum beverage cans are produced with the use of draw and wall ironing method (DWI). Aluminum tinplate of appropriate thickness goes from the tray directly under vertical press. The press extrudes cups, which are then pumped through a horizontal press called *bodymaker* (as it builds up the 'body' of the can). The diameter of the cup is reduced and the walls gradually expand and become thinner. The next stage of production is profiling the bottom of the can and cutting the uneven edge on the top of it. After cutting, the can is then cleaned and coated. The edge of the bottom is covered with UV varnish, and the entire center of the can with paint primer. Then, the can goes to the printer where lithographs are printed on the outside of the can. The offset technique is applied, in other words the images are transferred from flat print with the use of rubber matrix, which is a cylinder covered in rubber. The center of the can is coated with a layer of internal lacquer. The lacquer is then fixed in a stove at a high temperature. The coated can goes to the *necker* where a neck is formed with a diameter smaller than the can's, as well as a flange to which the lid will be attached. At this stage, the can is ready and after passing all quality control procedures it goes to the pallet and then to the recipient – a beverage producer. Beverage cans are generally used in beer and soda pop industries. In Poland there are two large beverage can manufacturers: CAN-PACK S.A. and Ball Packaging Europe Sp. z o.o. (Dobrowolski 2007, Luberda 2006, Pogorzelska 2008). The aggressiveness of beverages, and thus the degree to which it may affect the package, depends on several factors e.g. the content of: alcohol, carbon dioxide, tartaric acid or fruit load. It can also be affected by oxygen, dyes, sulfur compounds and trimethylamine. The least aggressive are classic beers with a low alcohol content and milk drinks. The most aggressive are juices and beers with addition of fruit juices, as well as sports drinks and energy drinks, wines and wine-based products. All those beverages were divided into four categories according to an increasing degree of their impact on cans (Czerniawski, Grabowska & Jakowski 2000, Żak 2010).

General characteristics of the paint and lacquers used in aluminum beverage cans

An aluminum beverage can is coated on the outside and the inside. However, the paint used is different because it serves different purposes. Not only the construction differs, but also the methods of curing coatings – in case of the outer coating it is a thermosetting process in an oven heated to 120-170 ºC or by UV radiation; in case of the inner coating – fixing with a hardener after previous evaporation of the solvent. This study focuses mainly on inner coating (and thus on epoxy resins which are the main component of lacquers used for inner coating), which plays an important role in ensuring the product safety (Huber, Ruiz & Chastellain 2002, Macias 2011).

Requirements regarding inner coating lacquers used in food contact packaging

A large amount of food and drink products which are packed in cans and a fact that placing on the market a can without inner coating would pose a great risk to human health has led to an increase in research conducted with a primary aim to create a perfect coating. A substance, which would make a good component of such a coating needs to meet a number of requirements: it has to be resistant to deterioration, versatile, easy in application, resistant to stresses arising during the can manufacturing process, and thus – gaining consumer acceptance. Resistance to deterioration is a factor that is extremely important in order to maintain the safety of the product inside the can. The effectiveness of the coating is maintained when it forms an impermeable barrier to gases, liquids and ions. Each food or drink product has its characteristic degree of impact on the packaging in which it is kept. The paint coat must be resistant to the impact of the product and separate the product from the metal layer forming the can (Lakind 2013, Żak 2010).

Another important factor is versatility. Both food and drink products have a wide range of possible effects on packaging. Therefore, from the economic point of view, it is crucial to produce a can that is suitable for as many types of products as possible. The resin used to form the inner coating should interact with the contents, considering that products show varying degrees of aggressiveness. An important factor determining the usefulness of the resin in protective coating is also its ease of application. A resin with good application properties is thus easy to use and adherent to the metal substrate.

Poor adhesion may cause damage to the coating and lead to the product's contact with the metal layer, which in turn may trigger chemical reactions thus changing sensory attributes of the product or damaging the can. Another factor is resistance to stress. The resin used for inner coating must have good flexibility and toughness. Some stages of the production process expose the coating to large stresses. The resin layer has to go through all these processes intact. Loss of continuity (cracking, peeling) is inadmissible (Dobrowolski 2004, Żak 2010).

The functions of inner coating in aluminum beverage can

Inner coating protects not only the integrity of the can, but the sensory attributes of the product (such as taste, aroma) as well. It also adds to the aesthetic aspect of the product. The key function of the inner coating is, therefore, to ensure the integrity of the can and to prevent the contact of the product inside the can with the metal layer, which may result in the product being affected by microorganisms. The coating must provide a long-term, oftentimes for several years ahead, protection against food contamination in order to meet ever increasing consumer expectations in terms of the length of product life. The strength of the coating should be sufficiently high to ensure the safety of cans during transport and storage. The can, and therefore also the resin layer, must be resistant to factors such as changes in temperature and possible mechanical damages during transport. It is also extremely important to make sure that sensory attributes of the product remain unchanged. Interaction of the beverage and the metal layer may change the flavor of the product making it unacceptable to a consumer. Food contamination may result in the withdrawal of the entire batch of products from the market and distribution, as well as have a negative impact on brand image. Materials intended for food contact must not transfer to the food product in a way that changes the product's organoleptic characteristics and manufacturers are held liable if they fail to comply with existing regulations in this issue. The inner coating is also important for aesthetic reasons. The coating is used not only to improve the design of the can but of course to preserve the product stored inside intact. They also prevent any interactions between the sulfur compounds, which usually are an ingredient of canned beverages, and the metal substrate (Hornik, Orzeł 2006, Krawczak 2011). These interactions may lead to the formation of compounds such as iron sulfides or tin sulfides which is absolutely unacceptable. Summing up, the technology of production of cans is inextricably linked to the chemistry of the inner coating. It is impossible to produce a can which meets all the requirements without the use of an appropriate coating. The inner coating protects the content of the can from changes in taste. Thus, the possibility of contamination of food by a can is reduced to zero, which guarantees the product safety – a particularly important issue from the consumer's perspective – and an appropriate level of quality of manufactured goods – which is essential for the producer (Huber, Ruiz & Chastellain 2002, Macias 2011).

Inner coating and product safety

Most consumers do not realize the impact of cans in ensuring their own safety. Cans allow sterilization of the product previously packaged in them and therefore add to the product's safety. The inner coating eliminates the possibility of interaction between the can's content and the metal layer. The coating prevents contamination of the product, especially by microorganisms. Epoxy resins have been used in metal can coating for many years, and their safety has been scientifically and formally proven by many global institutions. However, speculations have arisen recently regarding the possibility of migration of hazardous contents of coatings to food during the process of product packaging.

Epoxy resins are characterized by the highest degree of compliance with the requirements of the most importance for coatings – they are resistant to destruction, easy to apply and have a minimal environmental impact. Nowadays, there is a number of other materials used for coating. They, however, are characterized by poorer properties than epoxy resins and hence, cannot be used as substitutes (Hornik, Orzeł 2006, Huber, Ruiz & Chambellain 2002).

One of the most popular types of coating without Bisphenol A is an oleo-resin. Such coating can be used with completely non-aggressive products such as beans. Another well-known technique is laminating with polyethylene terephthalate, called PET. This method is very popular in Japan where it is used in 40% of food products. Innovative approach and constant developments in this area have led to intensive research works being undertaken on a new generation of coatings. New coatings are regularly tested, those containing epoxy resin, as well as those of another type. However, development of a brand new coating is not a particularly easy task. The choice of coating is affected by many factors, such as the type of product for which the packaging is designed, the specifics of sterilization processes, the type of metal substrate, the parameters used in the can production process. Most important, however, is the need to ensure the highest level of product safety. The product safety cannot be compromised while trying to find alternative methods of packaging (Pogorzelska 2008, Tkaczyk, Wasiak 2007).

The average period of time needed to implement the new specifications for the coating and metal packaging is, therefore, long and includes processes such as working on a new coating, then testing and finally launching it on the market. It usually takes from 4 up to 7 years. Packaging manufacturers are required to provide a safe and consumer-friendly product and cannot take the risk of hazarding with the product safety by introducing untested or not approved materials. A new product that is launched on the market must meet all the requirements and comply with several regulations (Dobrowolski 2007, Lakind 2013).

Research

Research materials and methods

Three tests were carried out – firstly, a sulfate test was conducted, then the tightness of inner coating was measured and finally, a visual assessment of the state of the bottom and side surface of the can was performed. The tests were carried out in the Beverage Can Plant in Brzesko, a company which belongs to CAN-PACK S.A. In each test 150 samples were examined. All samples were aluminum beverage cans. They were all ready-made products that had gone through all stages of the production process. The samples were chosen based on two criteria. Firstly, the individual number of the production line on which they were produced, and thus 50 cans from line 2, 50 cans from line 3 and 50 cans from line 9 were tested. Secondly, the *bodymakers* used in production. The samples were chosen from among all bodymakers operating on every given line (line 2 – 5 bodymakers, line 3 – 7 bodymakers, line 9 – 8 bodymakers). Each bodymaker was connected with several other inner coating machines (called *fishers*)

Research methods

A 24-hour sulfate test

The aim: to provide the required tightness of inner coating. Copper sulfate makes the places, where the inner layer of paint was too thin, clearly visible. Discontinuities on the side surface of the can visible to a naked eye are presented in fig. 2.

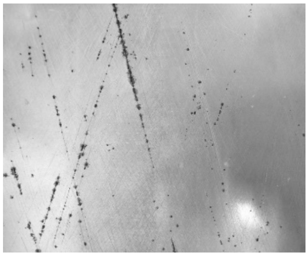

Figure 2. Discontinuities on the side surface of the can after the sulfate test

Source: own work

Inner coating tightness test

The aim: to ensure health safety of the product stored in a can. Equipment: handheld instrument for measuring current Sencon Enamel Rater II, a container with a solution of sodium chloride 1%, test samples after the previous 24-hour sulfate test. Additional remarks: the device operates on the principle of closed circuit. A perforation of the bottom of the can is tantamount to failure to meet the quality requirements. The higher the score, the greater tightness of the coating.

A visual assessment of the state of the bottom and side surface of the can

The aim: to identify the causes of defects in the inner coating. Equipment: scissors, camera, microscope, tested samples. The results were also documented photographically, vide: (fig. 3) and via microscopic images (fig. 4).

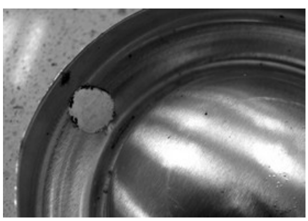

Figure 3. Perforation of the bottom of the can

Source: own work

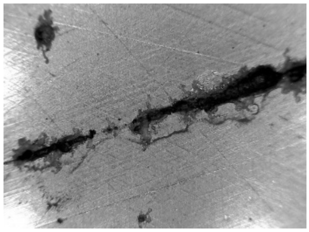

Figure 4. Microscopic view of linear and point discontinuities

Source: own work

Results and discussion

Tightness test results

For the cans from line 2, the average tightness score of inner coating was 62,72 mA. The standard deviation is on the level of 30,13 mA, which means that the obtained individual results differ in the level of tightness. The smallest observed value of the current was 13,33 mA and the highest - 167 mA. The dispersion of the results is, therefore, quite large. The distribution of the results of each bodymaker and fisher for cans from line 2 is presented in fig. 5.

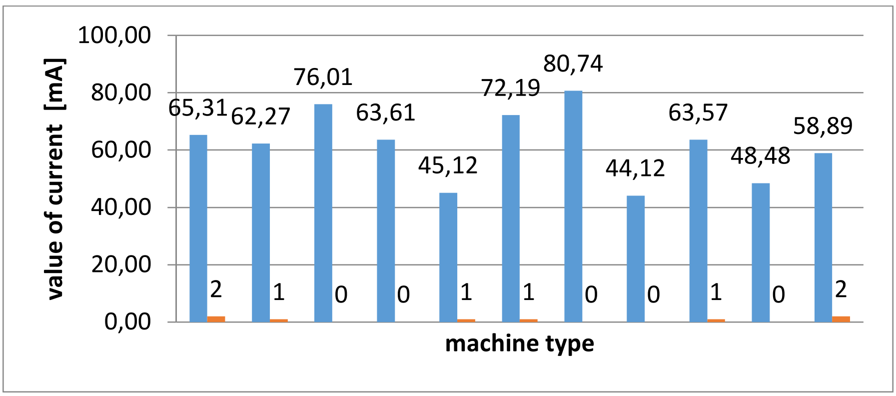

Figure 5. The tightness scores for inner coating in cans from line 2 depending on the type of the machine (bodymakers – bar no. 1-5, fishers – bar no. 6-11; blue color – the average value of currents, red color - perforation of the bottom of the can)

Source: own work

It can be observed that bodymakers no. 1, 3 and 4, as well as fishers no. 1, 2 and 4 are clearly above the average, whereas bodymakers no. 2 and 5, and fishers no. 3, 5 and 6 are below the average. Moreover, in cans built on bodymaker no. 1 the bottom had a double perforation. The same happened with the cans sprayed by fisher no. 6. Single perforations occurred with bodymakers no. 2 and 5 and fishers no. 1 and 4. In order to improve the quality of manufactured cans, the settings of bodymaker no. 1 and fisher no. 6 should be closely checked.

For the cans from line 3, the average tightness score of inner coating was 69,29 mA. The standard deviation is on the level of 26,87 mA , which means that the obtained individual results differ in the level of tightness.

The smallest observed value of the currents was 22,9 mA and the highest – 163,9 mA. The dispersion of the results is, therefore, quite large, but relatively smaller than on line 2.

The distribution of the results of each bodymaker and fisher for cans from line 3 is presented in fig. 6.

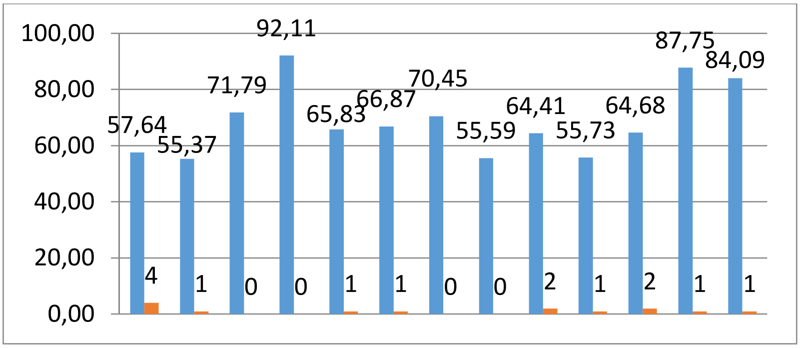

Figure 6. The tightness scores for inner coating in cans from line 3 depending on the type of the machine (bodymakers (bodymakers – bar no. 1-7, fishers – bar no. 8-13; blue color – the average value of currents, red color - perforation of the bottom of the can)

Source: own work

It can be observed that bodymakers no. 3, 4 and 7, as well as fishers no. 5 and 6 are clearly above the average, whereas bodymakers no. 1, 2, 5, 6 and fishers no. 1, 2, 3, 4 are below the average. Moreover, in cans built on bodymaker no. 4 the bottom had a quadruple perforation which should be understood as an alarming situation. A double perforation occurred in cans sprayed by fisher no. 2 and 4. Single perforations occurred with bodymakers no. 2, 5, 6 and fishers no. 5 and 6.

For the cans from line 9, the average tightness score of inner coating was 53,26 mA. The standard deviation is on the level of 15,18 mA , which means that the obtained individual results differ in the level of tightness.

The smallest observed value of the currents was 24,95 mA and the highest – 89,4 mA. The dispersion of the results is, therefore, the smallest among all tested lines.

The distribution of the results of each bodymaker and fisher for cans from line 9 is presented in fig. 7.

It can be observed that bodymakers no. 2, 3, 5, 6 and 7, as well as fishers no. 3, 4, 5 and 7 are clearly above the average, whereas bodymakers no. 1, 4, 8 and fishers no. 1, 2, 6 and 8 are below the average. Moreover, in cans sprayed on fisher no. 1 the bottom had a quadruple perforation which should be understood as an alarming situation. A double perforation occurred in cans built by bodymaker no. 5. Single perforations occurred with bodymakers no. 1, 2, 4, 6 and fishers no. 4 and 6.

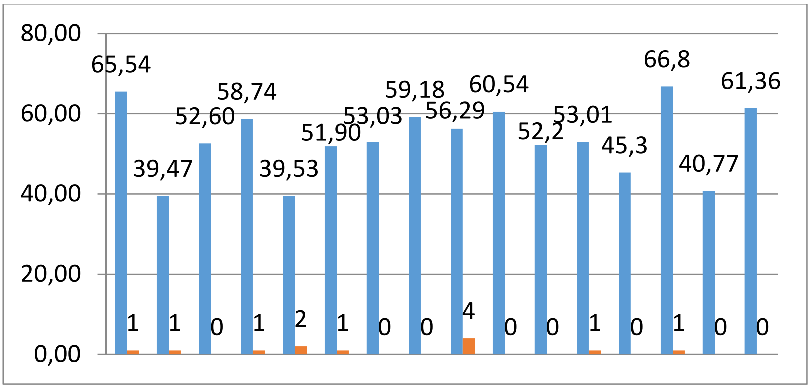

Figure 7. The tightness scores for inner coating in cans from line 9 depending on the type of the machine (bodymakers - bar no. 1-8, fishers – bar no. 9-16; blue color – the average value of currents, red color - perforation of the bottom of the can)

Source: own work

Tightness test results – overall analysis

The overall tightness test results on all lines are satisfactory. There were, however, several incidents of perforation which proved existing defects of inner coating. This happened 17 times, and the perforated cans account for 11% of all tested samples. The number of perforations in case of cans from each production line is shown in fig. 8.

Statistical parameters for each production line are shown in fig. 9.

It can be observed that the greatest dispersion of the results was in samples from line 2 (standard deviation of 30,13 mA), the smallest dispersion of the results was in samples from line 9 (15,18 mA). The maximum value in lines no. 2 and 3 were larger than 160 mA, and in case of line no. 9 the value was much lower, which also affected standard deviation. The minimum value was distinctively different in line 2 (13,33 mA). The average scores in each line were between 53,26-69,29 mA.

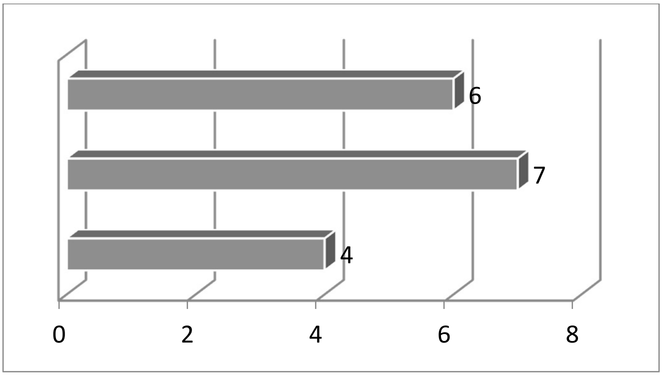

Figure 8. The number of perforations in case of cans from each production line (horizontal axis – the number of perforations; vertical axis – production line no. 2, 3, 9)

Source: own work

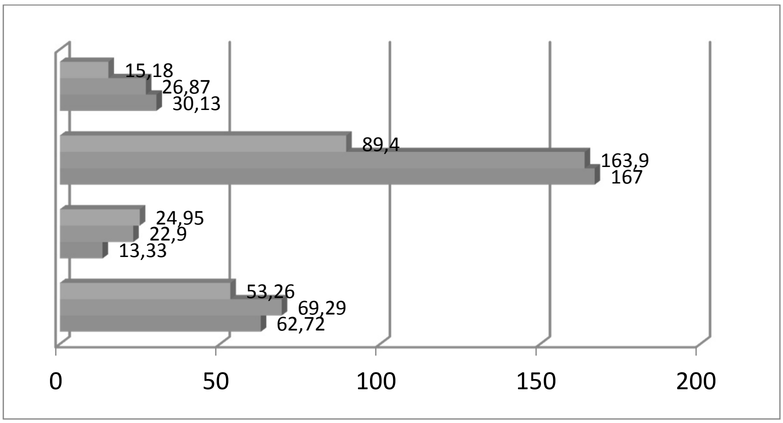

Figure 9. Selected statistical parameters of inner coating tightness test for samples from each examined production line (horizontal axis – value; vertical axis – arithmetic mean, minimum, maximum, standard deviation; blue color – line 2, red color – line 3, green color – 9)

Source: own work

Visual assessment – discontinuity points

The visual assessment included the bottom and the side surface of the cans. Possible types of discontinuities to observe were point and linear ones, from among which the point discontinuities are considered less harmful and those were the discontinuities mostly found during the test. The number of discontinuities depending on each production line is shown in fig. 10 and their distribution in fig. 11.

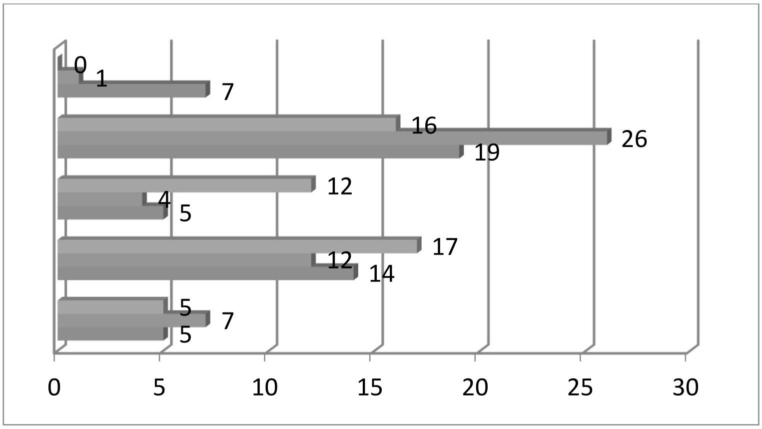

Figure 10. The number of discontinuity points in cans from each examined production line (horizontal axis – the number of cans; vertical axis – from bottom to top: level 1 (1–10), level 2 (11-20), level 3 (21–30), level 4 (31-50), level 5 (50+); blue color – line 2, red color – line 3, green color – line 9)

Source: own work

It can be observed that a minor level of discontinuity points is unavoidable. It is, however, important to realize that by the proper application of inner coating it is possible to minimize this number.

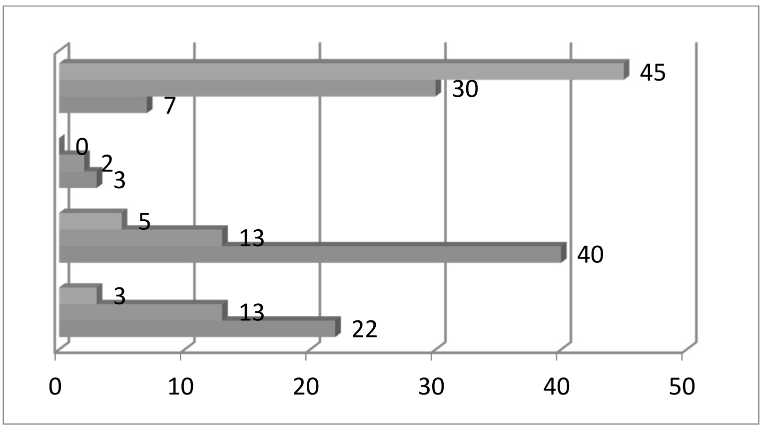

Figure 11. The distribution of discontinuity points in cans from each production line (horizontal axis – the number of cans; vertical axis – from bottom to top - location of discontinuity points: level 1 – side, level 2 – pocket, level 3 – center, level 4 – entire area; blue color – line 2, red color – line3, green color – line 9)

Source: own work

It can be noticed in fig. 11 that the distribution of discontinuity points was different in each production line. In case of lines 3 and 9, most of discontinuity points were observed in the bottom area. The cans from line 2, had mostly discontinuity points in the bottom pocket. It is important to check the fishers from line 2 in order to ensure full spray-on even in the pocket or any other less accessible places. The next figure presents the number of discontinuity points on the side surface of the can.

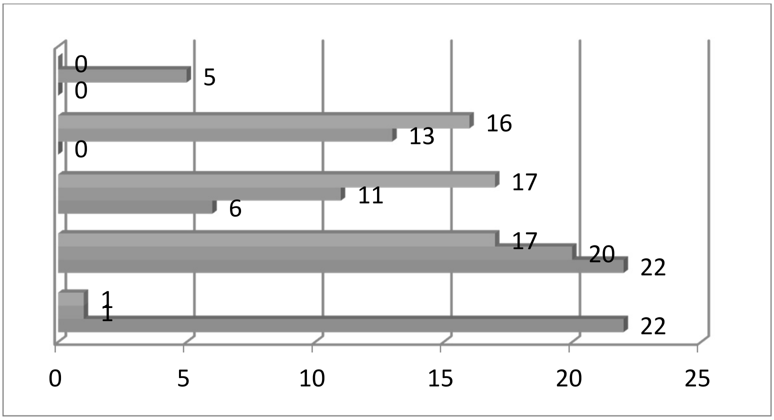

Figure 12. The number of discontinuity points on the side surface of the cans from each examined production line (horizontal axis – the number of cans; vertical axis – from bottom to top - location of discontinuity points: level 1 (1-10), level 2 (11-20), level 3 (21-30), level 4 (31-50), level 5 (50+); blue color – line 2, red color – line3, green color – line9)

Source: own work

In case of line no. 2, the discontinuity points were present in majority of cans (88%) within the range of 1-20, which is a relatively good result. In case of line 3, the observed range was 11-20, which proves that the distribution of coating was very good. The cans from line no. 9 were characterized by a larger number of discontinuity points on the side surface, their range was 11-30. Such score is still acceptable, although it is the worst among all examined production lines. From among the cans produced on line no. 3, 10% were qualified as containing a lot of (50 or more) discontinuity points, whereas among the cans from lines 2 and 9 there were no scores of 50 or more present. Cans from each of the lines showed the greatest numbers of discontinuity points on the side surface. The cans from line no. 2 had a large number of discontinuity points at the lower and in the central parts of the side surface. The fishers from line 2 should be adjusted accordingly so that the coating was distributed more evenly.

Visual assessment – linear discontinuity

Another type of discontinuity that can be detected on an aluminum beverage can is a linear discontinuity. Their presence may be a sign that some of the parameters of inner coating might not be set properly. The aim should be to eliminate all existing discontinuity lines. It can be observed that such discontinuities were present in cans from all examined production lines. Among cans from line no. 3 – they were observed as many as 7 times, line no. 9 – 4 times, line no. 2 – once only. It should also be added that discontinuity lines of relatively large size were only observed in samples from line no. 3, which follows that the fishers from that line should be checked and adjusted. Linear discontinuities were observed mostly on the side surface of the cans (92%), there was only one discontinuity at the bottom of the can.

Conclusions

1. On analyzing the data obtained from the inner coating tightness test it can be concluded that bodymakers did not work well on any of the production lines. However, the overall level of results was satisfactory. In order to achieve a better product quality it is important to introduce some minor adjustments.
2. A close check and adjustment of the bodymaker 1 from line no. 3 and the fisher 1 from line no. 9 is vital, since these two machines generated too many defects.
3. The analysis of visual assessment results leads to a conclusion that fishers did not work properly on any of the production lines. The overall level of obtained scores was satisfactory. There are, however, some necessary improvements and adjustments that should be implemented in order to ensure better product quality (such as even distribution of inner coating). Such an approach should eliminate the coating defects in the form of linear and point discontinuity and thus ensure full consumer safety.
4. It is worth remembering that high-quality inner coating is of key importance to obtaining a fully safe product. Any defects of inner coating cannot be ignored and the reasons for their occurring should be a subject of constant interest and analysis for the manufacturer of modern beverage cans.

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MEASURING THE PERFORMANCE OF CULTURAL SERVICE COMMODITY: LESSON FROM AVIGNON, CHUNCHEON AND GEOCHANG INTERNATIONAL FESTIVALS

Jieun Jung[1], Sukekyu Lee[2], Jiyoung Jung[1]

[1]*Da vinci Innovative Artist RDG, Sungkyunkwan University*
jejung@skku.edu
[2]*Department of Business Administration, Sungkyunkwan University*

Introduction

Cultural service commodity is beginning to magnify after getting involved in the creation society of the 21st century. The local fair, one of the culture service products, is taking an important role as a main resource that engenders the development and succession of traditional culture.

Cultural service commodity, such as the ones examined in this study, play a significant role in the construction of local history, politics and community philosophy. They also become a method for the local ones to become global ones, as they are often utilized to attract international tourists. Thus, many cities around the world are actively developing and managing cultural service commodities that emerge within the context of the local community. One example is that of the Avignon Summer Festival, located in the small historic City of Avignon, Southern France. Cultural products such as the Avignon Festival have also been initiated in Korea. The two examples that the author examines in this study are the ‘Chuncheon International Mime Festival’ and the 'Geochang International Festival of Theatre'. Both are hosted as outdoor events. Overall, this study analyzed the significant characteristics concerning the effective management measures for local-based cultural service commodities, which ultimately encourage globalization.

Theoretical background

Festival as a cultural service commodity

Cultural service commodity is a main source that allows for the development and succession of local traditional culture. Moreover, it has a traditional meaning that represents every region. More recently, such commodity emphasizes the management of local service products as a role of promoting local image and creating economical profits. Thus, many countries around the world are recognizing the importance of local service products and thereby acting as a central role for the development of local culture. Avignon Festival, held in the French Vatican garden, has historical meanings; about to have its 68th anniversary this year, this festival is one of the representative cases for local festivals. Avignon Festival provides the audience with opportunities to enjoy excellent arts culturally isolated areas and fosters a cultural main base in many regions, except Paris.

Nowadays, all of the local governments in Korea hold various cultural service commodities; currently, there are also about 1,000 local festivals being held regionally. However, there are many similar festivals being held by local officials, resulting in many problems. Many local-based service products, such as the Avignon Festival, which were created natively over many years in harsh circumstances are being held in Korea. The Geochang International Festival of Theatre is associated with nature in small cities and the Chuncheon International Mime Festival is comprised of an organization with local residents and volunteers. It also develops a program independently. Both cultural service commodities will have their 26th anniversary this year. However, through this study's interview, the parties that participated in the Chuncheon International Mime Festival stated that there are other concerns regarding the cultural service products, which had already become a representative cultural product of the Korean local service commodity. " A long-term plan is needed to make the global leading cultural service commodity, such as the Avignon Festival, more globalized," they added.

Therefore, this study attempts to provide implications regarding the current image and developing ways of Chucheon cultural service commodity and that of Geochang based on the characteristics coming from Avignon cultural service commodity, which leads to globalization for the locals.

The analyzed matters of this study are as follows. First, the characteristics, which originate from Avignon Festival regarding the management measures to go abroad, will be analyzed. Avignon Festival is stated as a representative case among cultural service commodities. Second, future ways and analysis of the current situation will be provided by a comparative analysis of the characteristics of Chuncheon International Mime Festival and Geochang International Festival of Theatre, which are representative Korean cultural service products, through one of the French cultural service products, Avignon Festival.

Material and methods

A qualitative analysis was carried out through in-depth interviews and focus group interviews. The interviews were conducted from 19 Jul 2012 to

20 Jan 2014, involving ten participants divided into two groups: 'cultural service commodity management specialists' and 'cultural service commodity consulting specialists'. Further, the collected unintervened data materials (2012~2013 IN/OFF Avignon Festival brochure, Chuncheon International Mime Festival brochure, picture of site and Geochang International Festival of Theatre) are used in this study. Participants of in-depth and focus interview are listed in <Table 1>.

Table 1. Participants of in-depth and focus interviews

Year	Form	Field	Participant
2012 (1ST)	IN-DEPTH INTERVIEW	Cultural Service Commodity Management	Chairman of off Avignon Festival
2013 (2ND)	IN-DEPTH INTERVIEW	Cultural Service Commodity Management	Head office of International Child Youth Theatre Association Corp. (Former) Chairman of the Board
			Art director of Chuncheon International Mime Festival
		Cultural Service Commodity Specialist	Professor of B university located in Chungnam area
			Professor of H university located in Seoul area
			Monthly magazine of specialized in festival Chairman of Chamsali Inc..
			Monthly magazine of specialized in festival Chief editor of Chamsali Inc.
	FGI	Cultural Service Commodity Management	Team leader of promotion & marketing, vice-chairman of Chuncheon International Mime Festival.
2014 (3RD)	IN-DEPTH INTERVIEW	Cultural Service Commodity Management	Executive chairman of Geochang International Festival of Theatre

And used analysis of face-to-face talk data from Seidman (2009) and 'typical analysis' and 'analytic analysis' from Hatch (2008). 'Typical analysis' and 'analytic analysis' of Hatch (2002) are types of analytical methods for qualitative analysis. And those analysis categorized various factors regarding phenomena which is still under study. Moreover, Seidema's (2006) analysis of the interviewed materials provides guidelines for all of the procedures, from data collection to analysis. As a result, each characteristic from Avignon Festival (historicity, operability (sponsor structure), friendship, placeness, economic feasibility), Chuncheon International Mime Festival (systemicity (volunteer works), friendship, economic feasibility, deviance (randomness)) and Geochang International Festival of Theatre (plcaness, economic feasibility, deviance (randomness), environment effect) are analyzed, as in <Figure 1>.

Figure 1. Results of analyzed categories from Geochang International Festival of Theatre, Avignon Festival and Chuncheon International Mime Festival

Management measures to become globalized cultural service commodity

Successive management measures of French cultural service commodity (Avignon Festival)

Historicity, operability (sponsorship), affinity, creativity and economic feasibility have appeared as the representative characteristics of Avignon Festival, which is one of the French representative cultural service commodities. Historicity is the most important factor from the management measure of cultural service products for local globalization.

I believe that a few basic characteristics are needed for festivals to become globalized. The first is historicity… In other words, historicity, which has a metaphorical meaning, is needed, I guess… second one is locality and it needs to be well applied. Of course, festivals are progressed in the relevant areas so basically, they have locality. However, locality should be interconnected with historicity. (In-depth interview with professor from H University)

The area of Avignon is entirely surrounded by solid walls. 1.3 million visitors from all around the world visit this area because the festival, as a cultural product, is hosted in Avignon, which has a historical meaning, not as in areas such as the French representative capital. The characteristic of the Avignon Festival to become globalized as a cultural product comes from the management measures led by the people through making private donations as well as from a subsidy from the government.

Devotional efforts from Jean Vilar made Avignon Festival to become one of the world's best drama festival…And for the Off Avignon Festival, performers use their own money to participate in the festival. Performers apply through the organizing committee of Off Avignon Festival. The organizing committee helps them to use a minimum amount of expense to make brochures, etc. (In-depth interview with professor from B University) Most Korean local festivals are supported by the Korean government and local government. Further, they are concerned about the festival's future, nowadays. Such changes are needed. For example, festivals should be led by ordinary people and the local government only gives them little support indirectly. (In-depth interview with chief editor from Chamsali Co., Ltd., festival specialized monthly magazine)

All participants from the in-depth interviews mentioned that the biggest problem is that festival management measures are led by the government becuase festivals are one of Korea's culture service products.

Korean local festivals have structures that hardly continue its traditions. Moreover, the current situation of festivals continues to be changed by the government nowadays. That is why it is hard to go abroad as a local culture product. (In-depth interview with Assife, former chairman of the organization)

To solve the above problems, the national and local government provide budget supports and guarantee tenure to the art supervisor of festivals. However, they should not be involved in methods of organization for the program.

Implications about Korean cultural service commodity (Chuncheon International Mime Festival)

The characteristics that appeared in Chuncheon International Mime Festival, which is known as a Korean representative cultural service commodity, are systemicity (volunteer work), affinity, economic feasibility and deviability (incollectability). All Korean cultural arts are concentrated in the metropolitan areas. After developing the cultural products that can represent the Chuncheon area, Chuncheon Mime Festival came into the world.

I will introduce the background of why the Mime Festival came to Chuncheon 25 years ago. In that time, all Korean cultural art service products were concentrated in Seoul. Thus, I started this project with the thought of going to Chuncheon and hosting a festival, and making that area one of Korea's cultural cities. (In-depth interview with art director of Chuncheon International Mime Festival)

Systemicity (volunteer work) is the biggest characteristic of Chuncheon International Mime Festival, which is a representative cultural product service of Chuncheon. There are about 100~200 volunteers in Chuncheon International Mime Festival every year. Volunteers take a role as a publicity envoy and also conduct real practices. Volunteers of Chuncheon International Mime Festival are called 'Ggebi', representing the hobgoblin from a hobgoblin performance. Hobgoblin performance is a main event at the Chuncheon International Mime Festival, which has a strategic factor to imprint a festival image into the young people. (Hyun Ho Yoon, 2011)

There are about 20 staffs working at the Chuncheon International Mime Festival and 12-13 inner staffs. The rest are volunteers named Ggebi. They instruct visitors who come to the festival and also sell tickets. Ggebi staffs take on very important roles related to all parts of the festival. (Focus group interview with staffs from Chuncheon International Mime Festival)

As stated above, Avignon Festival, a French representative cultural product, only concentrates on private and government supports. Further, it has characteristics of giving artistic authority to art directors. It is the 26th anniversary for Chuncheon International Mime Festival, which is a representative cultural service commodity of Chuncheon. However, it is currently experiencing some difficulties due to the absence of art directors.

We are recently in danger. I've been managing the Mime festival for 25 years and promoted it to the Chuncheon area. I also highlighted it as one of the Korean representative culture products and made it one of the top 3 mime festival. However, the committee of Chuncheon thinks of our festival as just one of the festival among hundreds. They seem to judge the authority of Chuncheon International Mime Festival's art director with political measures, not with structures, such as giving full support to Jean Vilar or providing authority delegation. It is the most difficult time for the Chuncheon International Mime Festival since its opening. (In-depth interview with art director of Chuncheon International Mime Festival)

Therefore, to make Chuncheon International Mime Festival as one of the Korean representative cultural service commodities, the tenure of the art director should be guaranteed and a long-term plan is definitely needed in order to secure volunteer workers and make them potential customers of the festival.

Implications about Korean culture service product (Geochang International Festival of Theatre)

Characteristics of Geochang International Festival of Theatre, stated as a Korean representative cultural service commodity, are placeness, economic feasibility, deviability (performance) and environment effect. Geochang is one of small farming and culture isolated area in Korea. With Sooseungdae which has beautiful scenery as the center, Geochang International Festival of Theatre came into the world to make small city called Geochang one of cultural cities. Geochang International Festival of Theatre makes people to get out of their life for the moment and express themselves through drama which is a culture service product. And it makes people to experience themselves and also makes it possible that people experience widely about society through their role in drama.

Korean cultural service commodities are primarily concentrated in Seoul. I think it contributed tremendously to the development of cultural awareness among people and made them feel an interest regarding cultural products, called drama, by experiencing an expansion of wide space , which dramas have, through festivals hosted in small city called Geochang. (In-depth interview with the president of Geochang International Festival of Theatre)

It is the 26th anniversary for Geochang International Festival of Theatre this year, and it is lead by a private art group not by the government. It is also composed of a cooperative relationship of administrative supports from the government, natural resources and artistic base of the locals. Moreover, it also has the characteristics of a local festival, tour festival and art performance festival, as is is one of Korea;s cultural service products. However, the development of the tour travel contents plans needs to be conducted through a foreign exchange in order to globally introduce Avignon Festival and Chuncheon International Mime Festival.

There are not enough art performance festivals among Korean cultural service commodities. Geochang Geochang International Festival of Theatre is one of the representative cases. I think the festival will become much bigger if we pave the right ways for the Geochang International Festival of Theatre. (In-depth interview with representative of festival specialized monthly magazine called ChamsaliCo., Ltd.) Network between festivals should be made in order to become well known all over the world. It is very important to visit festival sites, which represent foreign culture service products, and experience those things through a natural exchange of contents. (In-depth interview with Assife, former chairman of the organization)

In the in-depth interviews, economic feasibility stood out as a similar characteristic of festivals as a culture service product. For the Avignon Festival, there are reports that the festival brought in 13 million Euros in a year. Moreover, Geochang International Festival of Theatre could indirectly bring in approximately 34 billion won to Korea’s economy.

The cultural service commodity of festival brings enormous economic effects to the city Avignon. In particular, commercial workers in this city earn more than half of their total income only in a month during this festival. (In-depth interview with Chairman of off Avignon Festival)

Conclusions

The summary of results for this study are as follows.

First, the biggest reason for Avignon cultural service commodity's globalization is the active support from the government (national and local governments) and private donations (companies). Avignon cultural service commodity today, which has a philosophical background of 'art regionalization', was completed after Jean Vilar was entrusted with full power, except for financial support from the government. And those are the most important part what Korean local-based cultural products should have changed in the future. Participants of in-depth interviews from this study selected official-oriented managing ways as the most biggest problem for the current Korean cultural service commodity. Thus, the Korean government should take a role of helping Korean local service products to take root by giving them the financial support and allowing them to have an intrinsic identity led by cultural service commodity specialists (private). "Local-based cultural service products are taking very important role because direct financial ripple effect and indirect effects like development of life quality can be found by them," according to the president of Geochang International Festival of Theatre, who participated in an in-depth interview.

Second, Avignon Festival is the world’s best drama cultural product achieved by the coexistence of 'In performance' and 'Off performance' over time ever since it began in 1947. It is the 26th anniversary for the Korean Chuncheon International Mime Festival this year. It has been selected as the best commodity of culture and tourism, and is known as one of the top three mime festivals in the world. However, lately, this festival is facing many troubles due to the absence of an art director. Therefore, it is time for a tenure guarantee for art directors and long-term plans, which will allows the establishment of independent programs such as 'In performance' and 'Off performance' of Avignon Festival. The most remarkable part of Chuncheon cultural service commodity is the organization structure using volunteer workers. Systems that can engender these volunteers to become potential audience as well as to secure them should be established.

Third, Avignon Festival is held in Avignon city, which is surrounded by ramparts registered in UNESCO world heritage. Avignon Festival was created by Jean Vilar, an art director. He made this festival in order to provide opportunities for Avignon residents living in culturally isolated areas.

Subsequently, Avignon cultural service commodity represents the areas known as Avignon and developed that area as one of the French culture cities. Geochang International Festival of Theatre is one of the culturally isolated areas and came into the world with Sooseundae, which has beautiful landscape. Geochang International Festival of Theatre will have its 26th anniversary this year. Moreover, it was selected as one of the promising culture tourism festivals in 2014 at first, and is now in its settling stage to become one of the representative cultural service commodities in the Geochang region. Geochang International Festival of Theatre should also make systems for securing convenient performance stages to use along with independent programs to become a similar festival like the Avignon Festival, which draws tourists from all around the world, not just local residents. Avignon cultural service commodity still arranges living places for artists and audiences, and places efforts to make cultural service products that everyone can enjoy.

This study analyzed the characteristics of managing methods from an Avignon cultural service commodity, which is one of the representative globalization leading local-based cultural products. Further, based on those information, this study found moving ways and current image of Geochang International Festival of Theatre and Chuncheon International Mime Festival which is one of representative Korean cultural service commodity. Therefore, this study will be considered for use in sites of local-based cultural products and academic studies for culture arts, tourism fields, etc.

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THE RELATIONSHIPS BETWEEN CONSUMPTION EMOTIONS AND RETAILER ATTRIBUTES AND PATRONAGE INTENTION: FOCUSED ON MEDIATING EFFECTS OF PERCEIVED RISK

Shisok Kim, Kwangeun Jeong

[1]*Business Administration, PaiChai University.*
ssk6144@pcu.ac.kr

Introduction

We have gained many benefits from the advanced technology like the Internet. However, we have been confronted with many risks and uncertainties when we launch purchasing behaviors on the Internet shopping. The internet channel takes deep roots on our market. Especially we utilize its convenience and strong points. Traditional local stores with online channels, pure online channels, SNS (Social Network Service), mobile shopping, app shopping, social commerce, etc are well-known for consumers' channel choice alternatives. These channels have been rapidly grown up together with technological innovations. Consumers have experienced a variety of shopping channels by the advanced technologies. On the other hand, a variety of risks and uncertainties such as performance, financial, psychological, social risks, etc. hamper consumers' continuity of using shopping channels.

We are intrigued to find out how to reduce consumers' risk as they launch buying behaviors. After reviewing the past literature findings, we attempt to adapt those findings and researchers' insights to the current markets dominated by the online transactions. In a broader perspective, the antecedents of customers' patronage intention should be reassured to reduce the risk of transaction. Therefore, we suggest some propositions as follows.

Firstly, retailers' attributes are verified to know consumers' inclination to choose as a favorite channel. Due to the technological innovation, we have developed a lot of shopping channels. The convenience of the internet and mobile tools are representative factors for the technological development. Secondly, consumers' consumption emotions and personal characteristics should be handled to find out the importance of choosing right channels for purchasing goods and services. Either positive consumption emotions or negative consumption emotions affect patronage intent.

Our research will start from Bauer's classical theory of perceived risk. Many researchers contributed their findings on verifying the effects of perceived risks on consumers' buying behavior. Among them, we focus on consumers' cognitive structure which causes retailer attributes and consumption emotion to play pivotal roles on patronage intent. This causality is meditated by the perceived risks.

We focus on the retailer attributes and consumption emotions as antecedents of patronage intent. The construct of perceived risks is influenced by the positive and negative emotional experiences. As a result, the degree of perceived risk is either increased or decreased accordingly. Thus, high levels of positive feelings are associated with low levels of perceived risk and vice versa.

Retail attributes such as convenience, perceived value, product assortment, order service, retailer reputation, security/ privacy, and information service, etc are included in the transaction of the online shopping channel. We propose that these attributes affect consumers' perceived risks. In this study, the relationship of perceived risks and both consumption emotion and retailer attributes is verified to find out consumers' inclination to become patrons for the companies.

Consumption Emotion

Two superordinate constructs such as positive and negative affect consist of emotional concepts. Five basic emotion levels such as joy, love, sadness, anger, fear are underlying two constructs (Shaver et al. 1987). We used the typology of emotion items by Shaver. According to the applicability of consumption emotion, both positive and negative emotion of six emotion terms such as joy, pleasure and delight (positive) and worry, irritation, and disappointment (negative) are adopted. Consumers' positive and negative emotional factors are significantly contributed to the mediated effects of perceived risk (Pieters and Van Raaij 1988). The role of emotions is contributed to the patronage intention. There are some linkages among the positive and negative consumption emotions, the products' importance, perceived risk and retailer attributes especially involved in online shopping channel.

Arjan Chaudhuri (1997) found that the characteristics of the product class affect the nature of the cognitive (the product importance) and emotional (positive and negative) response to the determination of overall perceived risk. The level of perceived risk is typically related to that of search efforts. To date there are two methods of approaches in consumer behavior. One is the information processing approach (Bettman, 1979), in which consumer behavior consists of objective, rational and problem solving. The other is the emotional, experiential approach, where consumer behavior is regarded as the pursuit of subjective, emotional and symbolic consumption experiences (Holbrook and Hirschman, 1982).

The emergence of the Internet or online channel allows consumers to shop with convenient time and place. The internet channel has been influenced by the risks associated with shopping. Buying something without touching or feeling and being unable to return makes consumers uncomfortable. If products fail to meet consumers' expectations, they perceive risks. Income constraints as well as time constraints affect consumer's inclination to seek to find better channel to gain their wants and needs. Although in-store shopping channel may have sales assistants to consult consumers' ideal purchasing, online shopping channel offers convenience to browse products. In contrast, it is convenient for the online shopping like telephone shopping, it has suffered from the uncertainty and variance. "The higher the consumer's perception of the risk associated with shopping on the Internet, the higher would be their perception of the variance or uncertainty in the benefits derived" (A. Bhatnagar, S. Misra and H. Raghav Rao , 2000).

Retailer Attributes

We have researched on the marketing literature to construct the conceptual development of retailer attributes. First of all, we should take heeds on consumers' shopping orientations and motives for retail shopping channels. Mathews, Slocum, and Woodside (1971) identified three types of shopper orientations such as an apathetic shopper, an economic shopper and a personalizing shopper. An apathetic shopper seeks to find easy ways to minimize shopping efforts. Therefore, he/she is concerned about delivery service, return and exchange of purchased goods, time to get to a retail store, walking between stores, convenient public transportation and merchant assortments. An economic shopper is concerned with both price and quality. Thus, they are inclined to seek to find attributes such as variety and range of prices and quality, dependable guarantees, variety of styles and sizes, bargains, quality of goods, and cost of transportation to shop. A personalizing shopper is concerned about the personally related atmosphere such as places to eat lunch, convenient hours, facilities for children, the people who shop at a retail store, place to meet friends, and chance to get away from home for a while (Mathews, Slocum, and Woodside, 1971).

For the shopping motives, there are functional and nonfunctional motives identified by Eastlick and Feinberg (1999). Tangible retailer attributes are involved in the functional motives. For example, they involve perceived value, order services and convenience. Intangible attributes are involved in the nonfunctional motives. For instance, there are company responsiveness and reputation (Eastlick and Feinberg, 1999)

Furthermore, consumers' motives in the context of retail store shopping involve economic role enactment, choice optimization, negotiation, affiliation, and sensory stimulation (Westbrook and Black, 1985). In the context of Internet shopping, minimized search cost is prominently identified by Bakos (1999). Such Internet shopping attributes as perceived value and quality of products, responsiveness of the retailer, convenience provided to customers, company reputation, customer service, information and order services provided, merchandise assortment, salesperson interaction, shopping from home, and economic utility are found in the research of Girard, Silverblatt and Korgaonkar (2002).

Perceived Risk

Bettman (1973) identified two categories of perceived risk such as inherent and handled risk. Inherent risk mentions the risk inherent in a product class or product choice risk, while handled risk refers to the risk in the buying situation or brand choice risk within a product class. Jacoby and Kaplan developed the perceived risk sale consisted of five components such as financial, performance, physical, psychological and social.

Perceived risk refers to "the expected negative utility that consumers can associate with the purchase of a particular brand or product" (Dunn, Murphy, and Skelly, 1986, p. 205). For example, consumers perceive the higher risk for the products. Then they usually use in-store shopping conditions more than the online stores. Forsythe and Shi (2003) found the lower the risk perceived by consumers, the higher their acceptance of the online shopping mode.

In order to make purchases over the Internet we should type in our credit card number and personal information. Even though this information will not be used in unauthorized or fraudulent ways, we perceive considerable risks. Through the news broadcast, we have learned many hackers stole our personal information and transaction specifications with other providers. Therefore, it is important to find the effective way to build trustworthiness between the providers and consumers. Especially, in computer-meditated environments, it is particularly difficult (Nasquin and Paulson, 2003)

Patronage Intent

Wang et al.(2006) maintained how consumers' cognitive style and involvement level interact with each other. Those factors impact on consumers' decision behavior. Brand loyalty, perceived risk and website patronage are involved in the process of decision-making. Two factors of website patronage such as switching barriers and satisfaction were identified by Balabanis et al (2006). The impact of switching barriers varies at different level of consumer satisfaction. Customers' familiarity with a website and the degree of perceived usability affects consumers' patronage intention. The more consumers are familiar with websites, the more frequently they are prone to use the Internet shopping channel (Flavian et al, 2006). Gruen et al (2006) found the effects of a specific form of electronic word-of-mouth.

Material and Methods

The purpose of this research is the pretest survey for the main research to find out the relationships of the product classification of SEC product classes such as search, experience, and credence products related to the meditated effects of perceived risks on patronage intention in the Korean market. SEC product classes were previously attempted to test its appropriateness for the product classification by Arjan Chaudhuri (1997). In this pretest, we didn't conduct the classification procedure for SEC product classes because of the ambiguity of inherent product characteristics. It is hard to extract the clarified differences among product classes according to the exemplified product brands.

Survey and sample characteristics

A survey was conducted to the undergraduate students in the classrooms. In total, 94 respondents completed the questionnaire and considered as useable. Of these respondents, 55 percent were male. Of these respondents, 75 percent aged from 18 to 24. All the respondents are university students. 48 percent students are unemployed and 40 percent are employed as a part time job. Their average income is no more than 1 million Korean won per month. 42 percent of the respondents were spending an average of 310,000 -400,000 Korean won.

Research Model

Both consumers' consumption emotions and retailer attributes play presumed roles in anticipating consumers' patronage intention. Along the path, perceived risk is meditated between consumers' cognitive value such as consumption emotions and retailer attributes and patronage intention.

Table 1. Characteristics of samples

Sample Characteristics		Number of respondents	%
Sex	Male	55	58.5
	Female	39	41.5
Age	18~24	75	79.8
	25~29	19	20.2
Monthly Income	less than 1million won	40	42.6
	100~ 150	3	3.2
	150~200	2	2.1
	more than 300	1	1.1
	no income	48	51.1
Monthly Pocket-money	less than 100,000 won	4	4.3
	100,000~300,000 won	29	30.9
	310,000~500,000 won	42	44.7
	more than 500,000 won	19	20.2

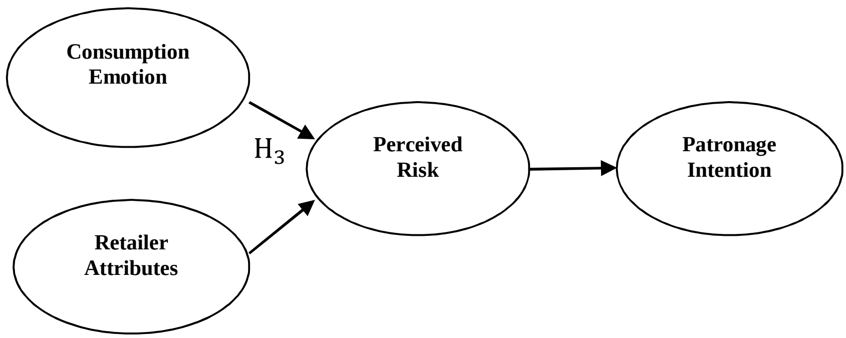

Figure 1. Research model

Results and discussion

Our objective was to verify a reliable and validate measures for each of the antecedents of patronage intent. Following Churchill's (1979) suggestions, once the presumed constructs were identified, we produced a pool of items for each construct. A sample of 94 students was chosen to answer the questionnaire. Each construct of antecedents and patronage intent was measured by a multi-item scale with a 5-point Likert-type response format (fully disagree to fully agree).

Table 2. Measures of the Presumed Constructs (translated from original Korean items)

Construct	Number of items (extracted items)	Code name	Measured items
Consumption Emotion	**7**	E	1. Enjoyment 2. Excitement 3. Satisfaction 4. Worried 5.Frustrated 6.Forgetting the time passing by 7.Excursion from routine daily activities
Retailer Attributes	**7(5)**	R	1. Easy to return or exchange 2. Various product assortments 3. Trustworthiness in products or service 6. Possibility to shop at any time 7. Satisfied at familiarity of the design of online store
Perceived Risk	**7(5)**	PR	1.Performance risk 3.Social risk 4.Time risk 5.Psychological risk 6.Physical risk
Patronage Intention	**5**	PI	1.Intent to use online shopping in the future 2.Intent to revisit the sites I used 3.Spread positive recommendation(WOM) 4.Recommend websites for someone 5.Use more than present usage

As the primary criteria, Cronbach's alpha was used to evaluate each scale, which measures the internal consistency of a scale (Carmines and Zeller 1979). We limited each scale to improve the level of reliability according to the alpha if item deleted. However, owing to the lack of respondents' number, at least 200 respondents are necessary for the suitable analysis. The number of 94 samples is not suitable for the satisfactory analysis but meaningful for the pretest within the recommendable sample range from 50 to 100 observations.

For reliability purposes, each construct had no less than three items. The Cronbach's alpha values don't proved so satisfactory except two constructs such as retailer attributes (.7376) and patronage intention (.8317). Other constructs result in consumption emotions (.6433), perceived risk (.5367). To test simultaneously trait and discriminant validity we undertook a factor analysis of the items using all 94 observations. We used principal component analysis.

Factor analysis with a varimax rotation procedure was employed to identify underlying dimensions of consumers' cognitive value such as consumption emotions and retailer attributes. Then the reliability test was used to test the internal consistency for extracted constructs. Confirmatory factor analysis was employed to test the validity of the scales in measuring specific constructs of the measurement model and Fornell and Larker's (1981**)** guidelines were applied.

Table 3. Descriptive Statistics

Constructs	Measured Items	Mean	Standard Deviation	Number of observations
Retailer attributes	Easy to exchange	2.86	1.16	94
	Product assortment	3.89	.78	
	Trust	3.28	1.00	
	Convenience	4.42	.76	
	Easy to order	4.30	.77	
	Information search	3.70	.94	
	Layout	3.65	.89	
Consump. Emotions	Enjoyment	3.86	.69	
	Excitement	3.22	.86	
	Satisfaction	3.70	.65	
	Immersion	3.23	1.14	
	Arousal	2.77	1.17	
Perceived risk	Performance risk	3.06	.82	
	Social risk	3.27	.89	
	Time risk	3.12	.99	
	Psychological risk	3.29	.84	
	Physical risk	3.19	.90	
Patronage Intention	Intention to patronage	3.74	.84	
	Intention to revisit	3.85	.76	
	Positive word-of-mouth	3.70	.77	
	Intention to recommend	3.43	.98	
	Intention to reuse	3.30	.85	

Conclusions

Consumers' consumption emotions such as positive or negative experiences will determine the intention to use the same providers repeatedly as patrons. The convenience and useful information search contribute to consumers' confident shopping behaviors. The importance of choosing right channels for purchasing goods and services affects consumers' patronage intention. The retailer attributes and consumption emotions as antecedents of patronage intention play a pivotal role in consumer behavior. Perceived risk meditates the relationships between them. Therefore, marketing managers should make great efforts to reduce the perceived risk and uncertainties.

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COMPARISON OF CONSUMER SHOPPING BEHAVIOUR OF ORGANIC FOOD IN SLOVAKIA AND ABROAD

Alica Lacková, Marta Karkalíková

Department of Commodity Science and Product Quality,
Faculty of Commerce of the University of Economics in Bratislava,
alica.lackova@euba.sk

Introduction

Continuous pollution of the environment, reduction of biodiversity and increased amount of allergic a oncological illnesses leads people to realize and understand the amount of significance of the ecological agriculture focused on creating sustainable and ecologically balanced agriculture system based on preserving the environment and using the resources and the country in a maintainable way. It presents perspective method of management, which is developing in almost every country in the world, while the share of the land cultivated ecologically grows constantly.

In order to develop the ecological agriculture, EU created Environmental Technologies Action Plan (ETAP) which, among other things, deals with ecological food and agriculture. This plan set the foundations for review and rework of legislation of The Community in the area of ecological agriculture, as well as for campaign for its propagation and production of organic food, which was launched by the European Commission in July 2008. The role of ETAP was judging the situation in the field of ecological agriculture and setting of foundations for the policy for its development, major benefits and global conception. It reports the data concerning the development of ecological agriculture and also the information about the organic food market and ecological logo as marketing tool.

People realize more and more the importance of ecological agriculture and many different organizations and institutions focused on supporting it are being created. In some countries, the pressure comes from the customers and farmers, for example Czech Republic (Václavík and collective, 2008). In other countries, which include Slovakia, it is mostly the pressure from the government institutions.

In Slovakia, the ecological agriculture is also one of the possible options for the solution of the impact agriculture has on environment, as well as the solution in the economic and social fields, as it creates new market with bio products and organic food, new job opportunities, helps with the development of rural areas and with preserving of all parts of environment.

Ecological agriculture started developing in Slovakia since the year 1991, building on the foundations, experience and development trends of Western European countries, which have 15 to 20 years longer history in this field (Proková – Mališová, 2009).

Before year 2000, the production of organic food in Slovakia was nonexistent, but the continuous increase in the amount of ecologically cultivated soil led to increase in the amount of bio products processed into organic food. However, larger amount of organic food appeared in Slovak shops only in the recent years. Aside from specialized stores offering products intended for healthy diet, the organic food can be now also found in hypermarkets and supermarkets, it can also be bought via internet stores and the organic food can be also bought in some of the smaller grocery shops.

The aim of this paper is to analyse the current situation on the organic food market and to highlight some of the problems in this area by comparing the shopping behaviour of Slovaks living in Slovakia and in Luxembourg.

Materials and methods

The theoretical materials regarding this topic were researched mainly by the analysis method, aside from other complementary scientific methods which were also used. Using this method, all the available theoretical knowledge, gathered from both domestic and foreign sources, was analysed i.e. divided and subsequently examined in detail. The material from internet sources originates from information available on websites of European Commission, ministries and other government institutions.

The analysis method was also used to process information gathered with the help of questionnaire, which was used for customer survey focused on investigating the differences between shopping behaviour of Slovaks living in Bratislava and shopping behaviour of Slovaks living in Luxembourg. Survey was performed by standardized questioning through internet questionnaire in months February and March 2014. The questionnaire was sent to 140 respondents (70 to respondents from Bratislava and 70 to respondents from Luxembourg). It was comprised from four main questions concerning organic food and questions concerning the characteristics of respondent.

Mathematical and statistical methods were used to determine the absolute and relative amounts and the average amount from the data gained with the survey. The program Microsoft Excel was used to process the information and to create graphs.

Results and discussion

Organic food market

The biggest market for organic food is the European market. It represents 54 % of global sales of organic food (Willer, Yussefi-Menzler & Sorensen, 2008). It is followed by North America (43 %) and the market of other continents amounts only to 3 %. In some European countries, amounts to more than 4 % from the overall food sales. In Austria, Denmark and Switzerland it represents more than 5 %. In the counties of southern, central and eastern Europe is the amount lowest: customers in these countries buy the least organic food, because of this organic food amounts to less than 1 % from overall food sales (Bharathi, Ananthnag & Nagaraja, 2014). In the new countries of EU, from central and eastern Europe, it represents around 2 %. Organic food market is in the case of these countries only developing, while the mentioned countries generally export unprocessed harvest (resp. livestock) to countries of western Europe, from which they then import processed organic food. Said countries belong to those, where the consumption of ecologic products on one citizen is highest and where the difference between the price of conventional food and organic food is in case of many kinds of organic food around 20 % less than weighted average of the European Union. One of the reasons are cheaper distribution expenses, because it is cheaper to transport large amount of organic food along with conventional food to large distribution centres and later to large retail chains, than transporting small amount of food to many smaller specialised stores. In the case of an increase in demand for organic food, which would also result in increase in their selection on the market, it could be expected, that the organic food would become more affordable because of lower distribution costs (Suprapto, Wijaya, 2012). Currently, it is probably one of the factors of the success in the case discount stores such as Lidl, Aldi and Plus, which offer interesting prices and have large market share in organic food sales. However, the leader of the European market is retail chain Tesco with over 700 types of organic food of the Tesco Organic brand.

Ecological agricultural production in the Member States of EU – 27 is governed by the principles and rules established in European legal framework, namely in the regulations of the Council and European Commission, which are in Slovakia supplemented by the of regulations the law number 189/2009 Z. z. about ecological agricultural production, which came into effect on 1 June, 2009.

In the framework of the abovementioned law, the whole chain of ecological agricultural production is subject to clearly defined criterias and strict rules. GMO is completely forbidden in the ecological agriculture and according to new regulations, this prohibition has also been extended on the substances produced from GMO. Herbicides are completely excluded from ecological agriculture. From the long lists of plant protection products in Member States of EU, only small amount is permitted in ecological agricultural production. These criteria have to be followed by the ecological producers (they are systematically controlled). That means the ecological products are the guarantee of the absence of GMO both in agricultural products and in final the organic food, which is consumed by the customer. The label BIO is also a guarantee of the absence of residues of chemical substances used for plant protection. The absence of the residue of pesticides in organic food is another of the basic differences between organic food and conventional, non organic food (Vojtková, 2009).

According to law no. 189/2009, organic food on the Slovak market must comply with the following regulations:

- the title must contain the term „BIO"
- numerical code SK-02-BIO of control and certification organization Naturalis SK (since 1 July, 2010 mandatory change to SK-BIO-02),
- logo of Slovakia for ecological agriculture,
- some products are also marked with the logo of EU for ecological agriculture in English and Slovak language (until 1 July, 2010 placing of the logo was mandatory for certain products) and the country of origin.

In Slovakia, organic production has mainly focused on the types of crops, which are simpler to process and where greater experience in manufacturing and marketing was available, as well as sufficient mechanization. Considerable impulses, in times when the production was beginning, were government subsidies in years 1991-1992. Slovakia mostly produces plant commodities, organic food of animal origin is produced in lesser amount. Many bio products are exported to western Europe, but the amount is gradually decreasing. In the beginning of this century, most of organic food was exported, but currently the amount of exported food is much smaller (accurate statistics are not available).

Most of the production is exported to Germany and Czech Republic, followed by Austria and Hungary. Livestock is exported only as non-organic production (mainly Easter lambs). Most exported are grains, milk (for example, large amount of raw milk is exported to Czech Republic), asparagus and other vegetables, herbal teas, legumes and oilseeds. Although in recent years we can observe great increase in ecological agriculture in Slovakia, the producers should try more to push their products on the Slovak organic food market. That would make the price more acceptable for customers, which could lead to increase in demand for organic food.

The issues of Slovak food market

In terms of the development of the organic food market in Slovakia, the greatest problem is the lack of interest from the side of food production companies when it comes to processing of the relatively small amount of organic products produced by ecological agriculture, as well as insufficient demand from the customers. Demand for organic food is affected by many problems. One of these problems is lack of producers, who would produce organic food for Slovak market, and because of this most products of sufficient quality have to be imported. The result is the tendency for the prices to be unreasonably high, which could in the case of imported goods lead to prices so high customers wouldn't buy it.

Slovakia also lacks wholesale, which would purchase Slovak organic food and then distribute it. Most of the products are imported from Czech Republic, second is import from Austria and Germany and the lowest amount is supplied by domestic suppliers. This has to do with the fact, that Slovakia has only small amount of bio farms which do not have production lines, packaging plants and lack effective distribution system while having minimal or no propagation. Many of them do not even have their own websites. Because of this, most of the harvested crops and livestock are exported abroad, where they are processed, and then return in the form of final product with unreasonably high price, as was mentioned before. Insufficient amount of Slovak organic food producers is also one of the reason for the limited selection of organic food on Slovak market.

The selection of all organic food (not only Slovak) is noticeably smaller than in Czech Republic or western European countries. For example, the Naturata bio stores in Luxembourg offer, aside from standard organic food, weighted cheese, fresh meat, weighted olives and fresh bakery products, all in bio quality. The freezers also contain frozen fruits and high amount of semi products. Hypermarkets Auchan and Cactus have whole shelves filled with organic food and freezers filled with semi products. In Luxembourg, bio eggs can be bought in most cases even in regular grocery stores, in Slovakia it can sometimes be a problem to find them even in supermarkets or hypermarkets.Some Slovaks buy organic food in Austria or Czech Republic.

Slovak stores do not offer sufficient amount of fresh bio vegetables, bio meat and bio eggs. Bio quality semi products are also lacking on Slovak market. Propagation of organic food is also insufficient. Slovak customers are not informed about ecological agriculture and organic food. There is lack of pamphlets, sample tasting and advertisement from both producers and sellers. For example, in Luxembourg, the Cactus hypermarket regularly gives information about organic food into magazine, which is distributed to households weekly, and which informs the customers about the products and discounts. Although there was some progress in this area in the recent years, it wasn't sufficient.

The result of the survey focused on comparing the shopping behaviour of Slovaks living in Slovakia and in Luxembourg.

Several surveys were made, which were comparing the frequency of purchasing organic food depending age, education, income, residence and similar. According to a survey made by the organization Incoma Research, only 2% of Slovak citizens buy organic food regularly, while in Czech Republic it is 5% of the citizenry. It is considerable difference, even more so if we take the geographical closeness and cultural similarities into account Conditions for buying organic food are also different, because Czech Republic has better propagation and support of ecological agriculture, which also means higher amount of producers and products. We have decided to make survey that has not been done yet - comparison of shopping behaviour of Slovaks living in Bratislava and Slovaks living in Luxembourg, with the aim to find out if the shopping behaviour in regards to organic food are similar or not if they live in different countries which have different conditions for buying organic food.

The data was gathered by using internet questionnaires, which were evaluated and processed by statistical methods.

Based on the data, we can conclude, that organic food is, in both Bratislava nd Luxembourg, bought by women with age between 30 - 39 years, college or university degree and higher income.

In Luxembourg, organic food is regularly bought by 21,4% of Slovak respondents (graph 1) compared to 7,1% of Bratislava respondents (graph 2), which is three times more They are bought occasionally by half (exactly 50%) of the Slovak respondents living in Luxembourg and by 24,3% of Slovaks living in Bratislava. In Luxembourg, only 5,7% of respondents does not buy them, while in Bratislava, 38,6% of respondents does not buy them. Most of Bratislava respondents stated the main reason for not buying organic food is the unreasonably high price (44,4%) and lack of information about them (25,9%). Small amount of respondents (7,4%) does not believe organic food is healthier than conventional food, or they do not care.

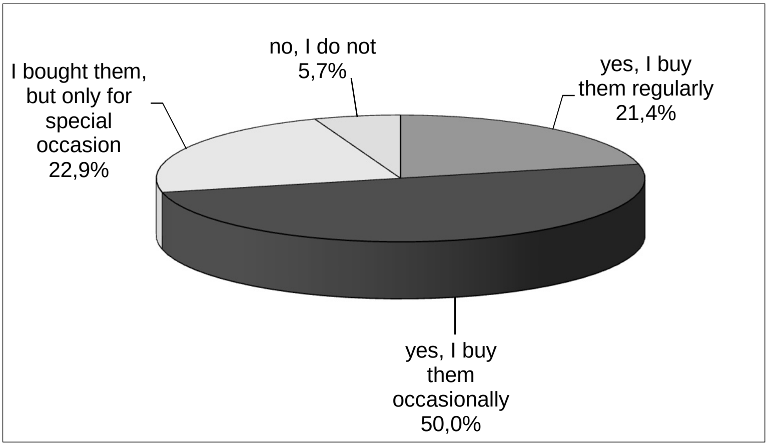

Figure 1. Frequency of purchase of organic food of Slovaks living in Luxembourg

Source: Own study

The difference between the results of Incoma Research, 2,2% of Slovak respondents purchasing organic foor regularly, and our result, 7,1% of domestic respondents purchasing organic food regularly, was caused by the fact, that most of our respondents live in capital city, while Incoma Research did their survey nationwide. There were also differences in the amount of respondents, we had 140 and Incoma Research had 1000 respondents. However, survey of this magnitude was not viable for us because of the high amount of time required to complete it. Considerable is also the fact, that most of our respondents had higher level of education.

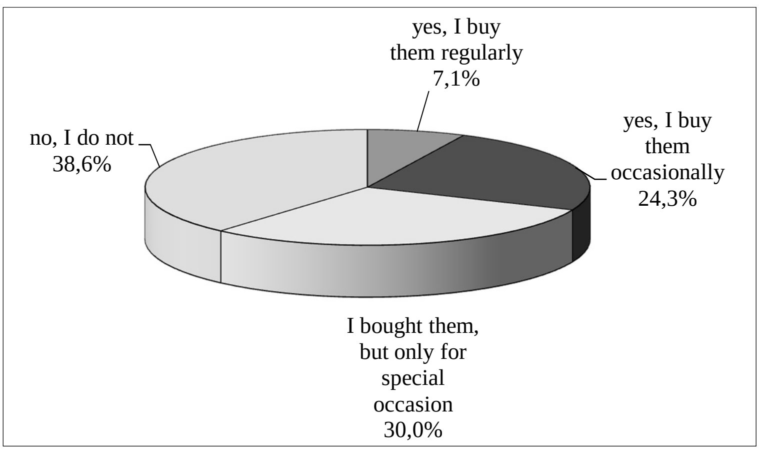

Figure 2. Frequency of purchase of organic food of Slovaks living in Bratislava

Source: Own study

From the survey findings it is apparent, that the reason for the considerable difference in the shopping behaviour is, aside from the higher income, also the fact Luxembourg has much better marketing of organic food and the selection is incomparably better. The Luxembourg market also has specialised Naturata stores with wide selection of organic food of different brands.

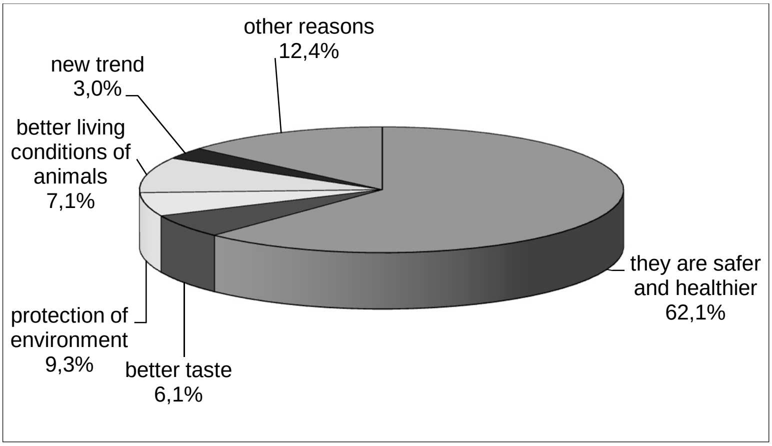

Figure 3. Main motive for purchase of organic food of Slovaks living in Luxembourg

Source: Own study

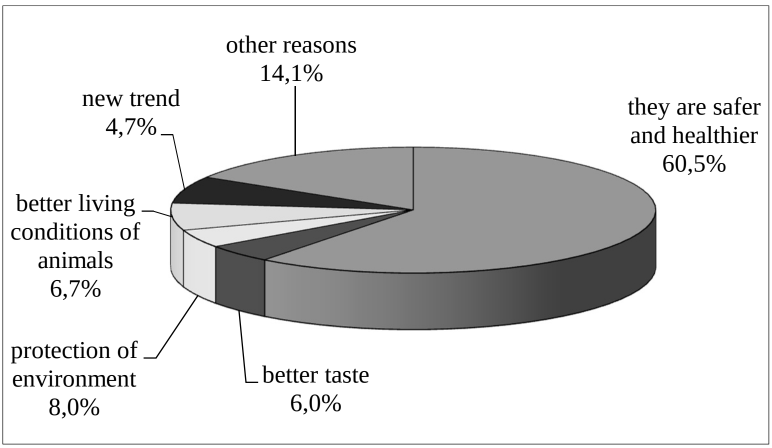

Figure 4. Main motive for purchase of organic food of Slovaks living in Bratislava

Source: Own study

Regarding the motives for purchase of organic food (graphs 3 and 4), the results are almost the same in both groups of respondents, showing the same pattern as other European surveys. First most important motive is safety and health, second is the protection of environment, third is the better living conditions of animals and fourth are better sensoric traits.

The fact, that it is a fashion trend matters only to minimal amount of respondents. In case of other reasons, respondent mostly stated, that it was a coincidence (mostly those who bought, or buy organic food on occasion), but also curiosity, prefering smaller producers over bigger companies, support of regional producers, only for kids, discount on organic food, support of domestic distributor, fearm of GMO, inability to find equivalent, the feeling of satisfaction for doing something good for themselves.

In Slovakia, the most frequently bought organic food (graph 5) are fruits, vegetables, milk and dairy products. The least bought is infant food, which is cause by the small amount of respondents with children. If we disregard infant food, which is very specific kind of product, the least bought are bio eggs and bio meat. Bio quality meat and meat products are available only in minimal amounts and even then, the price is very high. Bio eggs are somewhat more affordable than meat and they are sold by

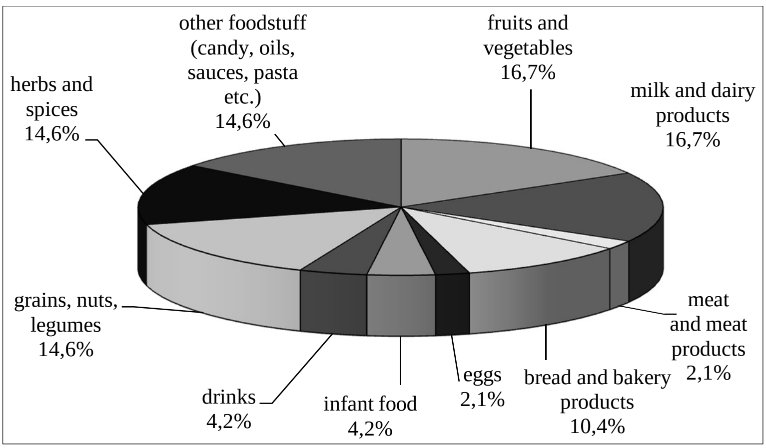

Figure 5. Percentage of the most bought organic food – Bratislava

Source: Own study

Tesco retail chain (country of origin: Hungary). The situation of respondents living abroad is the exact opposite – the most purchased organic food are bio eggs. Up to 31,8% of respondents buys them often (graph 6), while on Slovak market it is only around 2,3%. Second most bought organic food on Luxembourg market are fruits, vegetables, milk and dairy products. The least bought are again infant food, spices, meat and meat products.

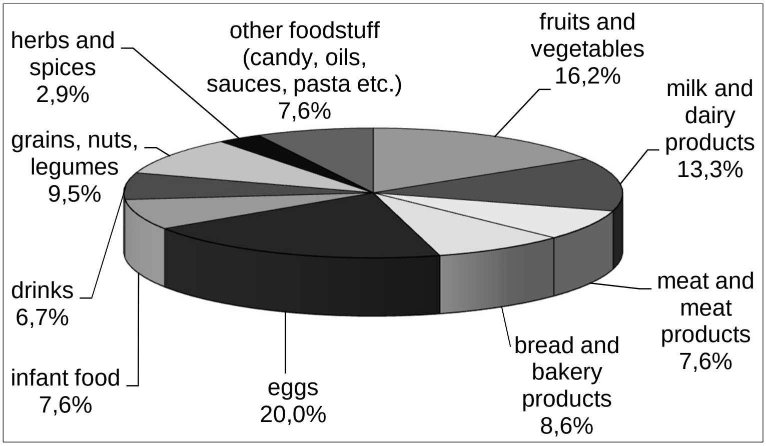

Figure 6. Percentage of the most bought organic food – Luxembourg

Source: Own study

The survey of shopping behaviour of Slovak respondents has confirmed the assumption, that Slovaks are interested in buying organic food, but they lack information, the selection is too small and the prices are too high.

We conclude, that there is potential for increase in sales of organic food on Slovak market which should be properly taken advantage of. It is recommended for organic food producers and sellers to improve marketing communication in this area. It is needed to inform the customers about organic food, highlight their quality, explain the principles of ecological agriculture and its benefits. It is also needed to hear the requirements of customers and to react to them.

It is very important to increase the amount of Slovak producers of organic food as well as to increase their sales on domestic market. It is one of the options how to decrease the price of organic food while also widening of the selection on the Slovak market.

Conclusions

Problem of the Slovak organic food market is the export of bio products, as well as lack of domestic producers and distributors of these products. Most of the organic food is imported from abroad, mainly from Czech Republic, what unreasonably increases the price of the productsThe Slovak market of organic food offers smaller selection of products and the prices are very high. Aside from that, the propagation of organic food is still lacking both from the side of sellers and government institutions, although there was some progress in recent years.

In conclusion, the positive factors affecting the organic food market are the higher quality of said products (without GMO, synthetic additives and similar) and the environmental friendliness (preserving biodiversity, no soil pollution and similar). Negative also affect the demand, as it was stated above, it is mostly the higher price when compared to conventional food, lower availability, limited selection and lack of marketing communication focused on their propagation.

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REGULATIONS RELATING TO THE CONTAINED USE OF GMOS ON THE EXAMPLE OF A PHARMACOLOGICAL RESEARCH INSTITUTION - CASE STUDY

Tomasz Lech

Department of Microbiology, Cracow University of Economics,
lecht@uek.krakow.pl,

Introduction

The dynamic development in the field of biotechnology has enabled improvement of utility organisms, such as microorganisms, plants and perfecting, by genetic modification. The application of genetic engineering for improving organisms has allowed to improve their desired features in a much shorter time than it would be achievable using traditional breeding (Niemirowicz Szczytt 2012). A genetically modified organism (GMO) is defined as an organism different to a human organism that has been altered by a process which does not occur naturally in mating or natural recombination (Act on genetically modified organisms of 2001). Food manufacturers consider genetically modified organisms as a possibility to increase food production and lower costs as much as possible. The aim of plant modification is to obtain types that are resistant to pests, crop protection chemicals, drought and other types of environmental stress with increased prolificacy (Ahmad et al. 2012). Genetically modified microorganisms conduct effective fermentation processes or produce given proteins on a larger scale (Grajek and Schmitd 2006). The aim of modifying animal organisms is to obtain species or breeds that gain weight faster, are resistant to diseases, give more milk or for increased production, e.g. of meat or milk (Vazquez-Salat et al. 2012). An important aspect in genetically modified organisms is their use in the pharmaceutical industry to produce biopharmaceutic substances (hormones, enzymes or antibodies) as well as in scientific research aiming at developing new medicines for human diseases or creating novel solutions in transplantology (Kuiper et al. 2001, Michalik and Modzelewska 2011). However, producing genetically modified food or releasing genetically modified organisms to the environment is controversial and raises social anxiety and objections. This is predominantly associated with low social awareness concerning GMOs, but also with a few studies that clearly present the influence of genetically modified food on human health as well as the impact of genetically modified organisms on the environment safety (Frewer et al. 2004, Scipioni et al. 2005). Due to the rapidly developing industry using GMOs and growing social anxiety associated with it, developing and implementing legal regulations became essential. The contained use of GMOs, which frequently takes place in academic and research facilities, appears to be a slightly different issue. Usually, the aim of such research is to develop novel pharmaceutical agents needed for treating human diseases or discovering mechanisms of diseases etc. Conducting research with the contained use of genetically modified organisms is associated with the necessity of preparing adequately secured laboratories which prevent unintended release of GMOs to the environment as well as developing procedures for basic handling of genetically modified organisms and training employees. All requirements are included in legal regulations, both European and Polish ones.

Legal regulations

Legal acts associated with GMOs include international ones, such as the Convention on Biological Diversity from Rio de Janeiro and Cartagena Protocol, European Union legislation - Directives and regulations of the Commission, as well as Polish domestic regulations - acts and ordinances (Anioł et al. 2002).

Convention from Rio de Janeiro

One of the first legal documents that became the basis for creating a system of regulations concerning genetically modified organisms was the Convention on Biological Diversity from Rio de Janeiro dated 5 June 1992. The convention draws attention to the particular value of biological diversity in the natural environment and human life. It also mentions the issues related with sustained use of the environment and its genetic potential and emphasises the need for protection of environmental biodiversity which is the responsibility of all countries, particularly on their own territories. In addition, the Convention obliges countries to conduct studies on biological diversity in order to protect it by implementing remedial measures, increasing social awareness and introducing appropriate procedures aiming at eliminating unfavourable factors that affect the environment (Zimny and Zimny 2007). Poland ratified the Convention from Rio de Janeiro in 1996.

Cartagena protocol

The Cartagena protocol was prepared in 2000. It regulates the legal aspect of biological safety associated with transfer and handling of living genetically modified organisms (LMO). It is also an extension to the provisions of the Convention from Rio de Janeiro (Bartoszewski 2012). The objective of the Cartagena protocol is to contribute "... *to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health, and specifically focusing on transboundary movements."* Among other things, this protocol provides guidelines for procedures of issuing consents to transporting living genetically modified organisms, potential exceptions, risk assessment and control or the need to undertake extraordinary measures in the case of unintended LMO movement. It must be emphasised that this document also mentions the problem of social awareness concerning the use of genetically modified organisms and the need to spread knowledge in this subject (Cartagena Protocol 2000, Journal of Laws of 2004, No. 216, item 2201).

GMO legal regulations of the European Union

The legislation in the European Union concerning genetically modified organisms was prepared according to the highest global standards in order to fully regulate all issues associated with GMOs. When issuing directives, regulations, opinions and guidelines, the European Union regulates the legal aspect of GMOs in all member states and at the same time, gives them freedom in the manner of their implementation (Zimny and Zimny 2007). Since there is a great number of documents that thoroughly regulate various aspects related to GMOs, in this article only the most important ones are mentioned and briefly described. The regulations on the contained use of GMOs are presented in greater detail.

Directive 2009/41/EC is one of the most important directives that regulate issues associated with the contained use of GMOs. It was created on the basis of Directive 98/81/EC amending Directive 90/219/EEC concerning the contained use of genetically modified microorganisms. The current Directive 2009/41/EC on the contained use of genetically modified microorganisms also concerns plants and animals. It clearly regulates issues associated with culturing, using, transporting, storing and disposing of genetically modified microorganisms so as to avoid any hazard for human health and environmental safety. It also includes guidelines concerning the level of precautions that must be adopted in laboratories where genetically modified microorganisms are used. They were divided into four categories based on the level of hazard. Moreover, the Directive defines the manners of risk assessment, procedures for preparing emergency plans in case of unintended release of GMOs to the environment and transferring reports to the supervising bodies (Bartoszewski 2012, Directive 2009/41/EC).

The issues of deliberate release of genetically modified organisms to the environment are regulated in Directive 2001/18/EC. This document is primarily based on the principle of caution. Its provisions and regulations aim at minimising hazard for human health and excluding negative effects on the environment. This Directive contains guidelines concerning deliberate release of GMOs to the environment for experimental purposes (part B of the Directive) and deliberate release of GMOs to the environment in order to introduce products to the market (part C of the Directive). It also determines requirements concerning risk assessments. Moreover, it regulates the issues associated with monitoring released GMOs, including their impact on the environment (Zimny and Zimny 2007). The rules and regulations concerning marketing of genetically modified food and feed products were described in greater detail in the Regulation No 1829/2003 of the European Parliament and of the Council as well as in the Regulation No 1830/2003 of the European Parliament and of the Council. The latter mainly concerns labelling food, feed and GMO products as well as monitoring their circulation (Bartoszewski 2012).

GMO legal regulations in Poland

The basic Polish legal document concerning genetically modified organisms is the Act on genetically modified organisms of 22 June 2001. This act extensively regulates issues associated with the contained use of genetically modified organisms, deliberate release of GMOs to the environment for purposes other than marketing, marketing GMO products, exportation and transit of GMO products as well as responsibilities of the government administrative authorities competent for GMOs. Under the Act, the government administrative authority competent for GMOs is the Minister in charge of the environment whose responsibility is, among others, to grant proper consents associated with deliberate release or contained use of GMOs, to issue permits concerning marketing, circulation and transport of GMOs, to gather and exchange information as well as coordinate control and monitoring of activities associated with GMOs (Act on genetically modified organisms, 2001). The actions specified in the Act are coordinated and carried out in the Ministry by the appointed GMO Team. In conducting tasks specified in the Act, Convention from Rio de Janeiro, Cartagena Protocol and Regulations of the European Union, the Minister of the Environment closely cooperates with the Minister of Agriculture and Rural Development as well as the Chief Sanitary Inspectorate. The aim of all the provisions in the Act is to ensure biological safety as well as protect the environment and human health in the context of using genetically modified organisms (Dalbiak, Zimny and Zimny 2007).

The issues related to marketing genetically modified food in Poland are regulated in the Act on safety of food and nutrition of 25 August 2006 as well as in Regulation No 1829/2003 of the European Parliament and of the Council on genetically modified food and feed, and Regulation No 1830/2003 of the European Parliament and of the Council concerning the traceability and labelling of genetically modified organisms (Dalbiak, Zimny and Zimny 2007, Bartoszewski 2012). Moreover, in order to clarify selected issues the following ordinances were implemented, including secondary legislation: the Ordinance of the Minister of the Environment of 8 July 2002 regulating issues connected with risk assessment, the Ordinance of the Minister of the Environment of 29 November 2002 on specifying the list of pathogenic organisms and their classification, the Ordinance of the Minister of the Environment of 6 June 2002 on templates of applications for consents and permits to conduct actions associated with genetically modified organisms, the Ordinance of the Minister of the Environment of 21 February 2002 on detailed manner of operation of the Commission for GMOs, and the Ordinance of the Minister of the Environment of 15 April 2004 on customs offices competent for importing or exporting GMO products (GMO Team – Ministry of Environment).

Contained use of GMOs

Contained use means "any action that consists in genetic modification of organisms or culture, storage, transportation, destruction, disposal of or any other activity involving a GMO, with applied protections such as enclosed installations, premises, or other physical barriers to effectively restrain the contact of GMOs with human beings or the environment" (Act on genetically modified organisms of 2001). Chapter 3 of the Act of 22 June 2001 on genetically modified organisms includes 21 articles that regulate legal aspects associated with the contained use of GMOs, which requires the consent of the Minister of the Environment. The Act contains a section which includes the categorisation of activities associated with the contained use of GMOs based on the degree of hazard for human health and the environment, i.e.:

a) category I – activities which present no hazard,
b) category II – activities which present a minor hazard,
c) category III – activities which present a moderate hazard,
d) category IV – activities which present a considerable hazard.

The classification of activities is based on hazard assessment conducted prior to lodging an application for consent to the contained use of GMOs. The template for the application is provided in the Ordinance of the Minister of the Environment of 6 June 2002 on templates of applications for consents and permits to conduct activities associated with genetically modified organisms (Dz. U. [Polish Journal of Laws] of 2002 No 87, item 797). The application form filled in in an appropriate way should include information about a GMO user, their headquarters and a person directly responsible for the contained use of GMOs as well as information on the planned use of GMOs. Moreover, it should contain their characteristics, including information on the host organism from which genetic material was obtained, recipient organism, vectors and constructs as well as traits enabling identification of the modified organism. The application should also provide information on planned protective measures concerning containment, safety measures during work with GMOs as well as guidelines on handling of biological waste products. Moreover, the document should also include hazard assessment in the context of human health and the environment conducted in the scientific manner in accordance with guidelines and using modern research methods. Finally, the application should include an emergency plan in case of a failure resulting in uncontrolled release of GMOs to the environment. Such a plan should be adjusted to the hazard category and should include guidelines concerning appropriate actions that must be undertaken in order to remove or minimise the implications of the failure (Anioł et al. 2002).

Article 18 of the Act on genetically modified organisms obliges a GMO user to observe the principles of good laboratory practice and general safety rules, which include: „

– maintaining the workplace at the lowest possible level of exposure to effects of GMOs,
– applying technical means of control at the source of hazard, if necessary, and providing employees with protective clothing and appropriate equipment,
– performing regular checks of equipment functionality and installation safeguards,
– performing regular checks of GMO presence outside the contained use zone,
– providing proper training for employees,
– establishing biological safety units for category II, III, and IV,
– enforcing internal safety regulations for employees,
– placing biological hazard signs where necessary,
– prohibiting mouth pipetting at workplace,

– keeping effective disinfectants and specifying disinfection procedures in case of GMO dissemination,
– disposing of waste products in a manner protecting human health and life as well as the environment, in particular ensuring secured waste storage areas and, if necessary, storage areas for contaminated laboratory equipment and other materials” (Act on genetically modified organisms).

Since it is mandatory to draw up internal regulations and procedures concerning work with the contained use of GMOs, this paper analyses an example of internal regulations concerning GMOs based on good laboratory practice introduced in a scientific research facility.

Work safety instructions concerning biological material, including genetically modified organisms

Such instructions should contain general principles of a given scientific research facility with detailed procedures concerning handling of biological material, including GMOs, at all stages of work. It should be emphasised that, according to the Act on genetically modified organisms (of 22 June 2001, Art. 18), handling of biological material should involve the principles of Good Laboratory Practice. These principles and guidelines are also mentioned in European Directive of the Council No 99/11/EC of 8 March 1999.

1) *Aims*

   The first paragraph of the instructions should clearly and precisely specify the aims of the document and legal regulations based on which it was prepared.

2) *General principles of work in the facility*

   This part of the instructions should include principles concerning work in a given organisational unit, particularly:

   a) information concerning the need for training employees who will work with biological material;
   b) a plan and scope of training employees (information on potential hazards associated with GMOs) at all stages of work with GMOs and the entire personnel i.e. employees having direct contact with living genetically modified animals, employees having contact with biological material (conducting tests, analyses, transporting samples) as well as employees responsible for cleaning rooms where GMOs are used;
   c) a list of trained employees with appropriate examinations conducted who are allowed to work with biological material and GMOs;
   d) a schedule of checks conducted in laboratories and rooms beyond the contained use zone in case of contamination with modified genetic material;

e) registration of working time of employees handling GMOs;

f) the following procedures:

 - Staff hygiene procedure - should contain information about the necessity to observe hand hygiene and a description of a hand-washing technique which should also be present at the sink in the laboratory;
 - Protective clothing procedure - defines the necessity to wear protective clothing and adopt adequate precautions in conducting individual activities (using disposable gowns, rubber gowns, protective eyewear, masks with or without filters, disposable gloves etc.);
 - Procedure for washing and disinfecting surfaces and equipment in rooms of contained use of GMOs - it should specify the type of chemicals, appropriate working dilutions and the manner of disinfecting taking into account staff safety.
 - Procedure for handling of unused or unneeded biological material, including GMOs - it should contain guidelines on how to protect unused biological material - pack it, label it and store it until a company responsible for utilising such material arrives.
 - Procedure for handling of waste products and contaminated disposable materials after conducting experiments - it should contain principles concerning handling of both hazardous and non-hazardous material and specify the manner of its packing, storing and utilising. The packaging used for storing laboratory wastes should be adequately labelled;
 - Procedure for marking rooms - should include rules concerning marking rooms in accordance with adequate guidelines;
 - Procedure for checking functionality and tightness of installations - this procedure should be implemented by adequately trained and prepared technical services.

3) Principles of working with biological material, including GMOs

This part of the instructions should include general principles and guidelines for safe work with biological material and genetically modified organisms.

a) Each employee conducting experiments should be trained and familiarised with the procedures concerning work with biological material, including GMOs. In particular, they should be aware of potential risks associated with tested material.

b) The staff should have knowledge concerning the principles of good laboratory practice that is needed for working in a given position.

c) Employees should use protective clothing and adopt other precautions required in their positions.

d) Unauthorised persons should not enter rooms for the contained use of GMOs.

e) All rooms where studies with the use of biological material, including GMOs, are conducted should be marked in a proper way.

The further part of the instructions should provide general recommendations and guidelines concerning preparing work stations, performing basic research activities, maintaining work stations clean and acting after the conclusion of research activities.

f) Working with genetically modified laboratory animals - requires adjusting animal houses and laboratories, including the usage of appropriate barriers and adopting appropriate precautions depending on the hazard category. The application for consent to the contained use of GMOs should include a description of protective measures adopted together with a plan of the building where the rooms for breeding and experimenting on GMOs are marked.

g) Work stations should be prepared in such a way to enable easy cleaning (wall and table top finishing). Laboratories should contain only equipment used for analyses to enable easy cleaning and disinfecting both the surfaces and research equipment. At the work station, there should be a container for biological waste products, which will be utilised by professional companies.

h) It is important to have descriptions of conditions and manner of collecting test samples so as to prevent their contamination and minimise the risk for employees. Particular caution must be exercised while collecting samples from laboratory animals. This stage requires using appropriate protective clothing and gloves. The biological samples collected should be adequately secured, i.e. placed in a tight container for transport to the laboratory.

i) During laboratory tests, general principles of safety and good laboratory practice should be observed. Protective measures adopted by employees should be adjusted to conducted tests. Following contact with biological material, gloves should be considered contaminated and should be utilised in a proper container. Cleanliness of protective clothing should also be cared for. Contaminated clothing should not be hanged up together with the clean one.

j) Work with biological material requires caution and concentration. It is also important to remember and master procedures aiming at preventing contamination (using taps, door handles or equipment). Biological material pipetting may only take place with the use of automatic pipettes. The Act on genetically modified organisms prohibits mouth pipetting when working with GMO material. Attention should be paid to the manner of putting test-tubes, caps and plugs aside. Moreover, due to the possibility of spilling substances or producing aerosols, samples should be centrifuged in locked test-tubes.

k) If biological material, including genetically modified material, is spilt, this site should be disinfected with a rapidly acting chemical agent, then the site should be rinsed with water and dried. Own safety should be borne in mind (gloves or tweezers should be used to collect glass).

l) When the work has been finished, one should remember to secure biological material in an appropriate way. Material for further analyses should be placed in a tightly locked container labelled with a proper description and/or pictogram and stored in an appropriate temperature. Unused and unneeded biological material should be utilised in accordance with adopted procedures (e.g. dead animals should be packed in plastic bags in the right colour and frozen until an appropriate company responsible for their utilisation arrives). Desk tops and laboratory equipment (e.g. pipettes) should be disinfected and cleaned.

The instructions and procedures concerning handling of biological material, including genetically modified organisms, should be improved together with the development of biotechnology. Both observing and adjusting procedures should be subject to routine controls in order to minimise the risk associated with working with biological material. Such controls should be carried out by external bodies that have a statutory obligation to conduct them.

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THE RELATIONSHIP BETWEEN PERSONALIZED CUES, GOODS CHARACTERISTICS, AND PUCHASE-DECISION

Jaeeun Lee

Business Administration, Shinhan University
adam1521@shinhan.ac.kr

Introduction

This research investigates the roles of goods characteristics and personalized cues in the recommendation context. Using a consumer choice model, the current paper aims to understand consumer's choice under uncertainty. Imitating a typical personalization process used by firms, we conduct experiments on consumer's choice of goods. Findings reveal that personalized cues provide a justification with decision-makers. In addition, the effects of personalized cues on choice are not significant when consumers are familiar with the physical product. Therefor, we show that the acceptance of recommendation vary by the attributes of the goods and personalized cues

Material and methods

Recommendation services

Advances in personalization technologies and analytic methods have enabled firms to offer personalized services and interact with consumers at a low cost and with reasonable accuracy (e.g., Bechwati & Xia, 2003; Crespo *et al*., 2011). From the decision-making perspective, the recommendation services may reduce a large number of alternatives into a few options that match with the individual's preferences. Recommendations also allow individual consumers to obtain goods with the least effort and to overcome the information overload problem (e.g., Chen, Shang, & Kao, 2009).

Past research examined the effect of personalized recommendation on decision outcomes from information processing perspective (e.g., Tam & Ho, 2006) and the relationship between individuals and the recommendation agent (see Xiao & Benbasat, 2007 for a review). Although personalized recommendations are expected to be beneficial, recommendations might be perceived as a threat to the person's freedom of choice (Fitzsimons & Lehman, 2004; Lee, & Sanford, 2010).

Psychological reactance

When individuals' freedom is threatened or restricted, peoples are motivated to restore their freedom. This motivational state is known as psychological reactance (Brehm and Brehm, 1981). If people think their free choice is threatened by external influence, they consider the thought or behavior more critically. Because psychological reactance is a motivational state, it can directly affect related behaviors and attitudes. Empirical studies on psychological reactance have been performed in marketing contexts: e.g., the negative effect of unsolicited advice on decision making (Fitzsimons & Lehmann, 2004) and reactance against the firm's relationship marketing (Dholakia, 2006; Wendlandt & Schrader, 2007).

Studies on technology-based services focus on the negative impacts of psychological reactance. Threat to future usage decreases the intention to use recommendation services (Lee & Lee, 2009). Psychological reactance also increases the denial of compromise option in the recommendation context (Lee *et al*., 2010). Because Lee *et al*.'s study focus on the compliance to the compromise alternatives, it is not clear that the effects of psychological reactance in the various choice sets.

Conceptual model

When consumers choose unfamiliar or newly introduced goods, they are influenced not by the well-defined existing preferences but by a constructive process (Bettman, Luce, & Payne, 1998) using the situational and available cues. Because consumers seek justification for their choices (Simonson, 1989; Simonson & Tversky, 1992), the personalized cues provided in recommendations might be a useful input to their decision making process. Therefore, we propose that personalized cues affect the choice of goods.

In the recommendation context, the decision makers may think that their free behavior is influenced by external forces. In this situation, they are motivated to restore their restricted freedom and reject the recommended offers (e.g., Lee & Lee, 2009; Lee *et al*., 2010). Therefore, we posit that individuals' perception of a threat to their freedom will affect their choice of what to purchase.

Because the effects of recommendation vary by the characteristics of goods (Lee *et al*., 2010), we tested the choices of three goods. Also, product quality is an important factor in consumers' choice decisions. Therefore, we expect that characteristics of goods will also play an important role in our study context.

Experiment

A total of 353 students at a large university in South Korea (average age = 21.9, SD = 2.47) participated in the experiment with the course credits. They were assigned to one of four conditions: no cue condition (*N* = 105), high-quality goods condition (*N* = 83), middle-quality goods condition (*N* = 84), and low-quality goods condition (*N* = 81). In the experimental condition groups (high / middle / low-quality offer condition, *N* = 248), we administered a personality test by using the short form of Big Five personality dimensions in the International Personality Item Pool (IPIP: Buchanan, Johnson, & Goldberg, 2005). One week later, the reports of personality test with the subject's name were returned to the person along with a recommendation for which quality level to choose from for the three goods types: Internet Protocol Television (IPTV) services, laptop computer, and alkaline battery. Recommendations were made randomly and personality test results were never considered. Based on the recommendation, they were instructed to choose one from high, middle, and low quality options for each of the three alternatives. Participants in the control (no cue condition) group were also presented with the three choice tasks. They did not take the personality test and made their choice in the absence of recommendation.

Because IPTV services were not yet activated in Korea, participants were relatively unfamiliar with the services when compared with laptop computers and alkaline batteries, which are frequently tested in the consumer decision-making context (e.g., Heath & Chatterjee, 1995). For all tasks, the choice alternatives were composed of three non-dominating options: high-quality with high-price, middle-quality with middle-price, and low-quality with low-price. Participants were informed that the quality scores in the choice task scenarios were obtained from Korean Consumer Reports(Figure 1).

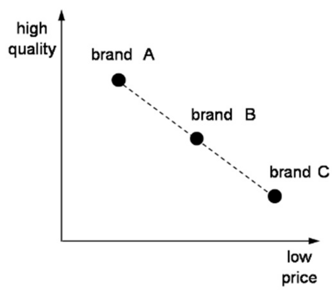

Figure 1. Baseline choice set

Threat to freedom, the degree to which individuals think their free choice is threatened, was adapted from past studies (Lee & Lee 2009; Lee *et al*., 2010) and measured by three, seven-point Likert-type items: recommending IPTV (laptop computer or alkaline battery) brand A (B or C) to me ‘restricts my choice’, ‘hinders in my choice’, and ‘intervenes in my free choice’. For the product category manipulation, purchase decision involvement, defined as the extent of interest and concern that a consumer brings to bear upon a purchase-decision, was adapted from Mittal (1995) and measured by three seven-point Likert-type items: ‘I choose <goods> very carefully’, ‘<goods> I buy matters to me a lot’, and ‘choosing <goods> is an important decision for me’.

The sample group was composed of one hundred sixty-three males (46.2%) and one hundred ninety females (63.8%). Among them, seventy-five students (21.2%) of the sample group said that they had experience with IPTV services. One hundred sixty-nine students (47.9%) had an experience purchasing a laptop computer. They also reported that they purchase on average one alkaline battery per month.

Results and discussion

The manipulation for personalized cues was tested by two items. First, the item ‘the professor knows me well’ was analyzed. There was a significant difference ($t = 2.66$, $p < 0.01$) between the personalized cue condition (M = 3.61, SD = 1.45) and the no cue condition (M = 3.16, SD = 1.49). Second, the item ‘the professor knows my preference for goods’ was analyzed. There was a significant difference ($t = 2.10$, $p < 0.01$) between the personalized cue condition (M = 3.38, SD = 1.54) and the no cue condition (M = 3.00, SD = 1.64). The score of purchase-decision involvement was 5.63 (SD = 1.08) for laptop computer, 3.79 (SD = 1.29) for IPTV services, and 2.88 (SD = 1.39) for alkaline battery. The differences among goods categories were significant (laptop computer and IPTV: $t = 23.3$, $p < 0.01$, IPTV and alkaline battery: $t = 10.5$, $p < 0.01$, laptop computer and alkaline battery: $t = 28.9$, $p < 0.01$, paired-*t*). Therefore, the manipulation of the present experiment was successful.

We compared the level of psychological reactance by goods category. The average score of psychological reactance was 4.01 (SD = 1.63) for laptop computer, 3.78 (SD = 1.71) for IPTV services, and 2.89 (SD = 1.57) for alkaline battery. The differences of psychological reactance among goods categories were significant (laptop computer and IPTV: $t = 2.26$, $p < 0.01$, IPTV and alkaline battery: $t = 8.84$, $p < 0.01$, laptop computer and alkaline battery: $t = 10.5$, $p < 0.01$, paired-*t*). However, psychological reactance according to the quality of goods (high / middle / low) was not different for laptop computer (F (2,245) = 0.47), IPTV (F (2,245) = 0.88), and alkaline battery (F (2,245) = 0.85).

To investigate the choice differences between the baseline set (no cue condition) and the recommendation-included set (personalized cue condition), we conducted Chi-square analyses. The choices of IPTV services, laptop computer, and alkaline battery are shown in Tables 1 to 3, respectively. The choice rates of IPTV in the baseline condition were 26.7% for high-quality goods, 51.4% for middle-quality goods, 14.3% for low-quality goods, and 7.6% for no choice. When high-quality goods were recommended, the choice of high-quality goods (42.2%) was higher than in the baseline condition (26.7 %, χ^2 (1) = 5.00, p = 0.03). Also, the differences of choices between recommended situation and baseline condition were significant when middle-quality (χ^2 (1) = 6.00, p = 0.01) and low-quality goods were offered (χ^2 (1) = 5.60, p = 0.02, Table 1).

Table 1. IPTV choices

condition		choice				total
		high-quality	middle-quality	low-quality	no choice	
baseline choice	count	28	54	15	8	105
	%	26.7	51.4	14.3	7.6	100
recommending high-quality goods	count	***35****	34	5	9	83
	%	***42.2***	41.0	6.0	10.8	100
	Δ %	***15.5***	-10.5	-8.3	3.2	
	χ^2 (1)	***5.00***	2.04	3.33	0.59	
	χ^2 sig.	***0.03***	0.15	0.07	0.44	
	Fisher's sig.	***0.03***	0.19	0.10	0.46	
recommending middle-quality goods	count	14	***58****	5	7	84
	%	16.7	***69.0***	6.0	8.3	100
	Δ %	-10.0	***17.6***	-8.3	0.7	
	χ^2 (1)	2.70	***6.00***	3.43	0.03	
	χ^2 sig.	0.10	***0.01***	0.06	0.86	
	Fisher's sig.	0.12	***0.02***	0.10	1.00	
recommending low-quality goods	count	13	33	***23****	12	81
	%	16.0	40.7	***28.4***	14.8	100
	Δ %	-10.6	-10.7	***14.1***	7.2	
	χ^2 (1)	3.00	2.10	***5.60***	2.47	
	χ^2 sig.	0.08	0.15	***0.02***	0.12	
	Fisher's sig.	0.11	0.18	***0.03***	0.15	

* acceptance of recommended offer

Table 2. Laptop computer choices

condition		choice				total
		high-quality	middle-quality	low-quality	no choice	
baseline choice	count	38	46	16	5	105
	%	36.2	43.8	15.2	4.8	100
recommending high-quality goods	count	**_30*_**	38	12	3	83
	%	**_36.1_**	45.8	14.5	3.6	100
	Δ %	**_0.0_**	2.0	-0.8	-1.1	
	χ^2 (1)	**_0.00_**	0.07	0.02	0.15	
	χ^2 sig.	**_1.00_**	0.79	0.88	0.70	
	Fisher's sig.	**_1.00_**	0.88	1.00	1.00	
recommending middle-quality goods	count	19	**_45*_**	17	3	84
	%	22.6	**_53.6_**	20.2	3.6	100
	Δ %	-13.6	**_9.8_**	5.0	-1.2	
	χ^2 (1)	4.08	**_1.78_**	0.81	0.16	
	χ^2 sig.	0.04	**_0.18_**	0.37	0.69	
	Fisher's sig.	0.06	**_0.19_**	0.44	0.74	
Recommending low-quality goods	count	13	43	**_22*_**	3	81
	%	16.0	53.1	**_27.2_**	3.7	100
	Δ %	-20.1	9.3	**_11.9_**	-1.1	
	χ^2 (1)	9.32	1.58	**_4.00_**	0.12	
	χ^2 sig.	0.00	0.21	**_0.05_**	0.72	
	Fisher's sig.	0.00	0.24	**_0.07_**	1.00	

* acceptance of recommended offer

As shown in Table 2, the baseline choices for a laptop computer were 36.2% for high-quality, 43.8% for middle-quality, 15.2% for low-quality, and 4.8% for no choice. Whereas recommending a low-quality laptop computer increased the choice rate compared to baseline choice rate (χ^2 (1) = 3.99, p = 0.05), the same pattern was not found when high-quality goods (χ^2 (1) = 0.00, p = 0.10) and middle-quality goods were offered (χ^2 (1) = 1.78, p = 0.18). For the alkaline battery choices (Table 3), the baseline choices were 32.4% for high-quality, 33.3% for middle-quality, 32.4% for low-quality, and 1.9% for no choice. A significant difference was not found when a high-quality alkaline battery was offered (χ^2 (1) = 1.11, p = 0.74) compared to a middle-quality battery (χ^2 (1) = 0.26, *p* = 0.61). However, recommending a low-quality alkaline battery increased the choice rate compared to the baseline rate (χ^2 (1) = 9.04, *p* = 0.00).

Table 3. Alkaline battery choices

condition		choice				total
		high-quality	middle-quality	low-quality	no choice	
baseline choice	count	34	35	34	2	105
	%	32.4	33.3	32.4	1.9	100
recommending high-quality goods	count	***25****	25	30	3	83
	%	***30.1***	30.1	36.1	3.6	100
	Δ %	***-2.3***	-3.2	3.8	1.7	
	χ^2 (1)	***0.11***	0.22	0.29	0.52	
	χ^2 sig.	***0.74***	0.64	0.59	0.47	
	Fisher's sig.	***0.75***	0.75	0.64	0.66	
recommending middle-quality goods	count	17	***31****	33	3	84
	%	20.2	***36.9***	39.3	3.6	100
	Δ %	-12.1	***3.6***	6.9	1.7	
	χ^2 (1)	3.49	***0.26***	0.97	0.50	
	χ^2 sig.	0.06	***0.61***	0.32	0.48	
	Fisher's sig.	0.07	***0.65***	0.36	0.66	
recommending low-quality goods	count	16	19	***44****	2	81
	%	19.8	23.5	***54.3***	2.5	100
	Δ %	-12.6	-9.9	***21.9***	0.6	
	χ^2 (1)	3.37	2.17	***9.04***	0.07	
	χ^2 sig.	0.05	0.14	***0.00***	0.79	
	Fisher's sig.	0.07	0.15	***0.00***	1.00	

* acceptance of recommended offer

Conclusions

In this experiment, the middle option (brand B) is a relatively safe one due to the price risk compared to high-quality goods (brand A), and the quality risk compared to low-quality goods (brand C). In this regard, brand B may represent an attractive compromise between the two risky options. We observe this in the control condition where the middle-quality options were most favored in IPTV and laptop computer (51.4% and 43.8%, respectively). However, the compromise option is not preferred in the case of alkaline battery which can be viewed as familiar and low-involvement category. For this product category, consumers would feel less risk and would not find a reason for making a compromise.

In all goods categories, when a recommendation is offered, psychological reactance increases with the level of purchase decision involvement but not with the quality of goods. This result suggests that recommending high involvement goods can be perceived as a persuasive attempt to restrict the consumers' freedom to choose during their decision making. Personalized cues increase the acceptance rate of IPTV recommendations for all quality levels compared to the baseline shares. This is in contrast with the cases of laptop computers and alkaline batteries where recommendations were more accepted than the baseline only for the low-quality options. IPTV services are intangible in nature and belong to a less familiar goods category than laptop computers and alkaline batteries. Therefore, the choice task for IPTV services is expected to involve a high level of uncertainty and thus the decision makers are likely to become more reliant on the recommendations than in the choice tasks for the other two tangible product categories.

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EXAMINATION OF THE SATISFACTION OF RUNNING EVENTS' PARTICIPANTS

Jacek Łuczak

Standardized Management Systems Department,
Poznan University of Economics,
jacek.luczak@ue.poznan.pl

Introduction

The growing popularity of running events amounts to an incentive to analyze this phenomenon, as we may observe a constant growth of a few percent in the number of both events and participants on a yearly basis. Statistics shows the adequacy of observation in relation to Poland, Europe as well as other parts of the world. The emotional character of the runs along with the awareness of the necessity to treat the events as a product, or an undertaking, which requires relevant regulations, and also entails some organizational, business and other objectives. Hence, the legitimate attitude to the abovementioned problem is the one that involves proper consideration of the quality of service – a running event – as well as measurement of clients' satisfaction.

In the present article relevant methods of the quality of service measurement are presented along with commentary related to their utility in reference to running events. The paper depicts the results of a preliminary research linked with the cycle of popular events during which the participants' satisfaction factors have been identified. The topic appears to be valid, in particular for a very insignificant number of publications related to this matter, mostly of non-scientific character. Numerous measurements of satisfaction fail to be grounded in research methodologies related to the necessity of defining the research problem, putting forward hypotheses, defining the sample and population, selecting the research method and finally to conducting the research in a way that aims at verifying the proposed hypotheses. The only source of knowledge of running events are Internet portals which present results of biased surveys. Under no circumstances may it become the basis for conclusions or shaping the quality of this type of products in the frames of future events and other undertakings. This source may be seen merely as a subjective evaluation of perceiving selected aspects of a given event.

The preliminary research has been carried out which supported the identification of runners' satisfaction factors. At further stages an international research into running events is planned. The research will embrace three products (running events) of varied level of development.

Attitude towards measuring clients' (running events' participants) satisfaction

By observing the market in Poland and many other countries we may take notice of an extremely dynamic growth of the number of participants. The reasons for this phenomenon are among others: a more significant, in comparison with the past, tendency among Poles to pursue a healthy and active lifestyle, popularity of running in western countries, and the growing availability of high quality footwear, clothes and accessories for runner, and the growing number of sizable running events, and relatively low costs of training, and the lack of strictly established requirements related to arenas. In the last several years the number of running events in Poland has increased every year even by 20-25% (Waśkowski 2014).

Table 1. Number of Participants in the Biggest Runs over 10km in Poland

Name of the run	2011		2012		2013	
	Number of participants	Change in comparison with the previous year	Number of participants	Change in comparison with the previous year	Number of participants	Change in comparison with the previous year
Biegnij Warszawo	8479	20.59%	9773	15.26%	11710	19.82%
Bieg Niepodległości (Warszawa)	6135	6.58%	7209	17.51%	10157	40.89%
Orlen Warsaw Marathon	-	-	-	-	7735*	-
Bieg Niepodległości (Gdynia)	1858	43.36%	2885	55.27%	5594	93.90%
Nocny Bieg Świętojański	1077	31.18%	1950	81.06%	4363	123.74%
Bieg Powstania Warszawskiego	2196	4.67%	2785	26.82%	4055	45.60%
Bieg Europejski	661	1.23%	1589	140.39%	3184	100.38%
Bieg Westerplatte	1175	71.28%	940	-20.00%	2817	199.68%
Mariacka Dziesiątka	1433	10.57%	1936	35.10%	2284	17.98%
Bieg Urodzinowy	200	-47.92%	1485	642.50%	2240	50.84%
Razem:	8600	X	13570	X	54139	X

*Orlen Warsaw Marathon in 2013 was held for the first time.
Source: Polish Association of Running.

Table 2. Number of Participants in the Biggest Halfmarathons in Poland

Name of the run	2011		2012		2013	
	Number of participants	Change in comparison with the previous year	Number of participants	Change in comparison with the previous year	Number of participants	Change in comparison with the previous year
Półmaraton Warszawski	4700	33.22%	7174	53.64%	10074	40.42%
Półmaraton Poznań	3517	42.33%	4409	25.36%	5743	30.26%
Półmaraton Ślężański	1200	24.22%	2953	146.08%	2659	-9.96%
Półmaraton Słowaka	1699	89.41%	2060	21.25%	2035	-1.21%
Półmaraton Philips Piła	2114	22.84%	1933	-8.56%	2431	25.76%
Półmaraton Jurajski	1398	13.47%	1585	13.38%	1420	-10.41%
Półmaraton Marzanny	513	10.80%	1175	129.04%	1702	44.85%
Półmaraton Kościański	914	26.42%	1099	16.79%	1321	20.20%
Półmaraton Gryfa	754	34.64%	831	10.21%	1291	55.35%
Półmaraton Bytomski	832	116.17%	907	9.01%	1198	32.08%
Razem	17461	X	24126	X	29874	X

Source: Polish Association of Running.

Table 3. Number of Participants in the Biggest Marathons in Poland

Name of the run	2011		2012		2013	
	Number of participants	Change in comparison with the previous year	Number of participants	Change in comparison with the previous year	Number of participants	Change in comparison with the previous year
Maraton Warszawski	4061	22.25%	6797	67.37%	8506	25.14%
Maraton Poznań	4629	19.52%	5426	17.22%	5678	4.64%
Maraton Wrocław	2773	37.47%	3900	40.64%	3501	-10.23%
Maraton Kraków	3201	32.44%	3014	-5.84%	4415	46.48%
Maraton Dębno	806	-17.42%	1091	35.36%	1340	22.82%
Maraton Łódź	494	-	1011	104.66%	1016	0.49%
Maraton Katowice	695	26.36%	729	4.89%	829	13.72%
Maraton Gdańsk	587	26.24%	630	7.33%	739	17.30%
Koral Maraton	439	44.41%	485	10.48%	514	5.98%
Maraton Toruński	585	12.93%	450	-23.08%	663	47.33%
Razem	18270	X	23533	X	27201	X

Source: Polish Association of Running.

The measurement of clients' satisfaction is inextricably connected to the standard of services. Therefore, it is necessary to take notice of the quality of a service – in this case organization of a running event - and to define its clients. It may be seen as an oversimplification to assume that participants' satisfaction evaluation is one of the objectives, however, in a broader perspective we may include sponsors, VIPs, invited guests, family of participants and viewers in the group of clients or stakeholders. Defining these problems is related to establishing the research objectives, as we do not conduct the research for its own sake. In all cases the objective amounts to the basis for shaping a running event's quality.

The organizer, in order to meet clients' expectations, at the initial stage of preparation is obliged to identify potential recipients (possibly buyers, users and beneficiaries). At the next stage, it is necessary to define the recipients' needs and requirements. The gathered data is utilized in order to create a product (service) for the fully knowledgeable client. With the view to verify if the actions undertaken are effective, the clients' satisfaction measurement ought to be conducted. The course of the present considerations as well as the actions taken may be understood as a part of comprehensive philosophy related to quality management and process approach. Furthermore, Deming cycle, the icon of TQM, is definitely worth a proper consideration, as it encourages a system approach to organizing running events – in a broader perspective: consecutive editions.

Planning entails development of a running event's conception with its full specification. Accomplishment is the realization in accordance with the initial assumptions, which is followed by verification of its compliance with the model as well as by a proper analysis, in particular of the weakest elements. Moreover, it is significant to plan the next edition of the run. It is also important, at each of the aforementioned stages, to put emphasis on the client.

In general terms an external client is a person who is influenced by a product (service) created by an organization. An external client is not a member of the organization responsible for providing services (manufacturing the product). It also must be indicated that it is necessary to satisfy external clients, i.e. organizers and volunteers, possibly long with contractors (time measurement, photographic services).

An internal client, on the other hand, is an employee or organizational cell participating in the process of providing given services. An internal client takes over the effect of the work done by a different organizational cell and enriches the product (or a service) in order to hand it over to the next client. These actions lead to creation of a value chain at the end of which the recipient is located. Thus, an internal client is simultaneously a supplier for another internal client.

The questions related to research in measuring satisfaction of both clients' and employees' (internal clients) have been of interest of theoreticians and practitioners for many years. The role of a client's satisfaction is strongly emphasized by ISO 9000 standards, TQM philosophy, Six Sigma and the criteria of the European Quality Award as well as its American equivalent – The Malcolm Baldrige National Quality Award. As far as profit-oriented enterprises are concerned, the role of clients' satisfaction is obvious; however, in the public sector (or other non-profit enterprises) clients' satisfaction ought to be a value itself and amount to the main objective of the organization. It is obvious that research in clients' satisfaction should serve as a way of constant self-improvement of the organization (as a means to achieve the assumed objectives) (Kozielski 2011). Increasing the quality of services by improving various areas frequently does not bring expected results. It is so, because enterprises often are not able to identify factors which are significant for clients. The modification of the factors entails the increase in their satisfaction. The dilemma is linked with the running events frequently organized by administrative units, sometimes by commercial organizations in cooperation with administrative structures. It is of no importance who organizes the event, as we deal with a product on the market. It amounts to a serious problem for the administration, because of the specificity of its functioning as well as due to insufficient preparation for providing commercial services. On the other hand, we should remember that, in contrast with the dominating private sector, public sector institutions do not have the comfort to choose or focus on their "favorite" clients (treating them as the target group), both of which bring the most sizable profits. Public administration must take proper care of the whole society, which causes its readiness for providing services for undiversified clients not divided into the better and worse ones.

The public sector is now under significant pressure to meet increasing standards of the private sector. In reference to public administration the information from clients ought to amount to the starting point of defining the directions of improving the services provided.

Research in clients' satisfaction should lead to gaining customers' trust as well as it ought to introduce new adequate solutions taking into account clients' needs and expectations. Consequently, it will result in shaping and improving the administration's image. The research itself appears to be extremely difficult, though. The most significant roadblock is the fact that satisfaction is not a static phenomenon, but evolves in time. Furthermore, satisfaction is frequently the result of both clients' experiences and subjective impressions before, during and after the satisfaction is measured (Kancelaria Prezesa Rady Ministrów 2008). The research problem in this aspect must be focused not only on the results, but, which is more important, on understanding the quality of the service provided by the organizer, comprehending the differences between people observing the quality as well as it must concentrate on the adequacy of research methodologies.

Research conception

The aim of the research in this case is obvious, but, in compliance with the professional research repertoire, it is necessary to develop the research conception. In the frames of the conception the following issues must be defined: the research problem, objectives, proposed theses, assumed hypotheses, the research methodology and tools, the research scenario along with the ways of realizing it.

In the analyzed case the stress may be put on evaluating clients' satisfaction in reference to a single running event or the whole cycle of such events. It is important to define the client – first and foremost we are interested in researching the satisfaction of a running event's participant. Nevertheless, it is crucial to consider whether we may treat all the participants as one body, assuming that their expectations are identical or at least similar. This is obviously a big oversimplification, because it simply does not reflect the reality. Runners' motivations differ. This fact was presented among others in a documentary entitled *The Spirit of the Marathon* from 2007. In the movie each of the six runners - the main protagonists - presents a different motivation for their participation in the run. In a sense, the very location of the run allows us to assume common expectations of participants, but not utterly and not in relation to all events (e.g. local events vs. international renowned marathons). Within this scope, it necessary to be aware of variables as well as of essential solutions at the stage of research planning.

Therefore, it is crucial to put forward research objectives, theses and hypotheses. If this condition is not fulfilled, we are not able to select the proper methodology, which will allow us to verify the three elements.

Moreover, it is also important to be aware of the fact that selecting only one research method may be insufficient in the face of the research objectives, if treated in a broad and serious manner. In the following parts of the present paper research methodologies which may be applied to a research in a runner's satisfaction at various stages of a given event's organization.

Research methods applied to evaluation of clients' satisfaction

The problem of employees' satisfaction has been a part of scientific research in organization and management for many years. There is no single method which may be seen as the most appropriate in order to measure clients' satisfaction, though. The selection of a method is not independent of the reserch problem, the type of the proffered product and the recipient. The most significant methods of examing clients' satisfaction are as follows (Kancelaria Prezesa Rady Ministrów 2008):

Gaining knowledge of the client from the first contact staff – the people who come into contact with the client on a daily basis, they usually know very well what is important for the customer, what they would like to change. They also frequently have the knowledge of the source of customers' dissatisfaction. Therefore, it is justifiable to gather opinions from volunteers, service employees (who provide the runners with explanation of some organizational aspects) and security workers. All of the aforementioned options ask for cautiousness when formulating judgments and making decisions, but they are also a significant signal to carry out in-depth analyses. The method is crucial as it may be used before, during and after the running event. Moreover, its needs a system approach realized on the basis of the research scenario. Not only do we receive information about runners' opinions and suggestions at various stages of the event but also we get personnel's commentary on the suggestions which point at their source.

Survey research – is the most popular method of gathering data related to clients' satisfaction. In a questionnaire questions are arranged in a systematic manner. The questions may be open-ended (giving the freedom of formulating answers) or closed-ended (limiting the answer to one of the options provided in the questionnaire). Survey research allows us to acquire both qualitative and quantitative data. The classical questionnaire is a tool which in practice causes difficulty in application, because of the specificity of a running event. Conducting the survey just after the run allows merely short interviews. Moreover, the participant's result significantly determines the answers. Survey amounts to a basis for many other methods. The preparation of a questionnaire should be preceded by the in-depth analysis of research objectives. Finally, a questionnaire may be used before and after the run as well as it can be applied to various target groups.

Utility tests and Internet resources analysis – are applied in the process of designing new services, in particular the ones provided online. It is the way of measuring the extent to which people can use something (e.g. a website, a computer interface, a document, an appliance) in order to achieve the planned objective. Utility tests aim at observing people who use a given product under realistic circumstances. Despite the fact that this method offers limited possibilities of implementation, it may be used to evaluate the computer application supporting the registration process as well as to asses the website providing the public with information about the event (especially useful in the case of a big running event in which people from different countries are expected to participate). Technical support is then an extremely significant element of a running event.

Ethnography – describes scientific methods of all kinds used in order to comprehend human behavior and culture. It is a research technique which allows a better understanding of clients. It should be taken into account in the case of organizing events with numerous editions and room for progress.

Consultation – a method based on consulting people responsible for providing a service as well as a representative sample of the people who may avail of long-term effects of a given service. Consultation includes various techniques, e.g. direct consultation with the main stakeholders and clients, traditional types of consultation in the written from. Consultation is closely related to benchmarking as the evaluation of opinions and taking into account the most relevant ones amount to its essence. The characteristics presented above allow conscious planning of a running event in its various aspects at the levels the organizers found the most appropriate in reference to the particular run. The level will occasionally be higher than characteristics of other aspects, sometimes identical or purposely lower.

Analysis of complaints and suggestions – complaints and suggestions are a valuable source of information about the elements of both the running event conception and its realization that may be improved. The complaints and suggestions provide information about the clients' varied tastes. Moreover, the research has shown that organization open to receiving and analyzing complaints are able to keep 10% more clients than similar organizations which do not make this type of contact easily accessible (Otto 1999). Ignoring complaints and warranties puts the company at risk of losing the dissatisfied customer as well as of popularizing the negative opinion abut the organizer.

Focus groups – they are used to gather qualitative data. Discussion groups include from 5 to 12 people. One session lasts approximately 2 hours and takes place at a neutral location in order to assure friendly, relaxed atmosphere. A moderator leads the discussion with invited respondents who have been selected according to the criteria embraced within the project objectives. The discussion is led in compliance with the scenario, which has been created earlier to describe the objectives of each stage. The interviews may be supported with some presenting methods (verbal or visual). Such interviews may be held at various phases of the organization of a running event, e.g. at the stage of creating its conception, when we are willing to use the opinions and ideas related to previous editions or linked with other running events. Interviews in focus groups may also be carried out several days after the event (with participants and organizers alike).

Mystery shopping – is a special example of research in clients' satisfaction. Its specific character stems from the fact that we do not gather information from real clients, but we examine the quality of the service and its accordance with given marketing assumptions. The method consists in hiring people who will be acting as customers. These people will evaluate the strengths and weaknesses of the company, its products/services, personnel competence, interior design, uniforms and even the possibility of commuting, cleanness of toilets, and supply.

Citizen/client panels – are occasionally called beneficiary groups. In order to gather the data from the panels various methods may be applied, e.g. panels may be used as the basis for taking samples for the research or as the source of people selected to become members of focus groups (or other qualitative approaches). Panels must be constantly monitored and their members changed so as to maintain the required level of representativeness.

Analysis of employees' absences – one of the ways of reacting to increasing dissatisfaction is an escape. A plausible way of withdrawal is sick leave. The absence is depicted with the help of the absence rate, i.e. the number of an employee's absences since the beginning of their contract. Thus, the absence of regular participants of the run in the next edition is a signal which has to be analyzed.

Client cards – ought to be made public. The client must know what he might expect or demand. Credible information about the client's expectations towards the service contributes to achieving satisfaction related to the service. Hence, it is recommended that clients should be informed in a simple and clear manner about the issues relevant for them.

Personal and telephone interviews – mutual communication allows a better explanation, understanding of the client and more profound research in perception. Personal interviews enable the respondents to describe their experiences linked with the product or the service in detail. Personal interviews may be supported by visual means and provide the researcher with the opportunity to pose more complex questions. Telephone interviews are the usual response to a client's complaint.

Critical case technique – is mostly applied in service-oriented organizations. The commonest form of this technique are report cards in the frames of which clients are asked to write down some positive and negative experiences linked with the organization (experiences that have been etched in their minds). With the use of the method we take notice of the most important elements of the service. Critical cases are occurrences that should be dealt with without delay, because they are crucial for the perception of the quality of provided services.

Customer Satisfaction Research (CSR) – is conducted in two phases: exploratory and diagnostic. During the exploratory phase factors generating satisfaction/dissatisfaction of a given product/service are searched for. The aim of the exploratory stage is identification of the criteria which are taken into account by consumers when they assess their satisfaction. This action allows us to determine the extent to which the objective features of the product/service are favorable in terms of generating satisfaction. During the exploratory phase two types of research are conducted: qualitative and semi-quantitative. The diagnostic phase aims at determining the level of clients' satisfaction. Comparing the level of satisfaction related to our company with the levels achieved by other companies allows us to identify the aspects we are better and poorer at. Consequently, it enables us to shape the organization's image on the market. At this stage personal and telephone surveys are conducted, more rarely by post.

Penalty-Reward Factors – is an interesting method of measurement and evaluation of quality of services, including running events. The key assumption within this research conception is that we may single out quality factors of critical importance. If the factors remain unfulfilled, they cause the dissatisfaction of a runner (Penalty Factors). During the process we should also single out the factors which cause additional satisfaction of the client as well as a higher and more complete perception of quality (Reward Factors). The aim of the research is to identify the "penalty" factors.

Applying the method presented above entails the necessity to divide the clients' requirements into three categories:

- basic requirements,
- reliability requirements,
- special requirements (Stoma 2012).

CIT – **Critical Incident Technique** – is one of the most interesting methods of identifying the reasons for clients' dissatisfaction/satisfaction of proffered services. This technique is related to reconstruction and analysis of key interactions occurring between a running event's participant and a representative of the organizer. All interactions of this type can be evaluated by the customer in a positive or negative manner. From the supplier's point of view some factors may critically influence a success or failure of the people who realize their tasks, i.e. the factors may influence positively or negatively clients' satisfaction of acquiring or using an organization's services.

During a CIT session participants in the run give the direct open interview. They have to describe the critical incidents which occurred during the running event on so-called report cards. Critical incidents are situations which have been etched in a runner's memory. For the runners they play a significant role, sometimes being shocking or admirable. The critical factors may be positive or negative, but runners will first point at the critical factors from their point of view, because of human nature.

A client's evaluation of these situations supports the process of determining typical situations for negative and positive impression of clients. In addition, this method allows us to establish the frequency of their occurrence (Stoma 2012).

TRI:M – the name TRI:M stems from three words: Management – Monitoring – Measurement. The TRI:M method consists of two components. The first one is the Client Satisfaction Index, the other one is a three-dimensional approach which embraces: customer's declared evaluation of importance of a given product's features, real importance of a product's given features, and propensity to remain loyal towards a product (Instytut Badań Rynku i Opinii Publicznej 1998). With the use of this tool we can single out four types of features: motivators – features perceived by the client as important which motivate them to buy the product (these features are worth investing in), hygienic features – important characteristics, but they do not motivate a client to buy the product strongly (necessary, but insufficient; they should be maintained at the appropriate level as we should not forget that focusing investments on them may not increase the sales or even may not stop the decrease), money-savers – we can invest in them, they are perceived by clients as unimportant and not motivating to buy the product, hidden possibilities – features of the product seen by the client as characteristics of low or medium importance, but in reality they greatly influence the buyer's decision (investing in them may cause some leverage over rival companies).

SERVQUAL – consists in measuring the difference between the quality of service perceived by the client and the quality they expect. As a result of numerous researches the authors of SERVQUAL have defined five lacunae related to the quality of services. „Lacunae are caused by differences between the service that the run's organizer thinks they assure and the service provided for runners" (Alexander , Hill 2003).

1. First lacuna – presents the contrast between the runner's expectations and the organizer's idea of clients' needs.
2. Second lacuna – presents the contrast between the organizer's idea of runners' expectations and the specification linked with creating the quality of the event.
3. Third lacuna – presents the contrast between the provided service and the specification linked with creating the quality of services.
4. Fourth lacuna – presents the contrast between the promised service and the one provided by the organizers.
5. Fifth lacuna – the difference between the service that clients expect and the provided one (Łuczak, Matuszak-Flejszman 2007).

Clients while evaluating the quality of services take into account a variety of factors. As the result of the research conducted with the use of focus groups Parasurman, Zeithaml and Berry singled out ten criteria which determine the quality. The criteria embrace the whole process of providing services (Berry, Parasurman, Zeithaml 1985). These characteristics exert the most significant influence over achieving full satisfaction of the client: financial reconstruction of the service, reliability, responsibility, competence, trust, politeness, security, availability, communicativeness, understanding the client (Trawnicka 1997). The questionnaire consists of three parts. The first one researches clients' expectations and comprises 22 questions. Each question is followed by a seven-digit scale which allows the respondents to define their level of expectations towards the services. The second part aims at the measurement of importance of five dimensions of the services. The third part embraces clients' perception of the service provided by the supplier. It consists of 22 questions analogous to the ones included in the first part. The quality of the service is defined as the difference between the third and first parts. Hence, it is understood as the difference between the perceived and expected quality.

Summary

We may observe a significant rise in popularity of running events in the last several years, which has entailed the necessity to organize them at the highest level possible, because of their competitiveness. Simultaneously there are a few runs held (marathons, half marathons and others); hence, the participant increasingly often must choose on the basis of broadly understood quality of these undertakings which is directly related to other participants' satisfaction. Quality is connected to compliance with the given criteria. Before establishing the scope of runners' satisfaction, though, it is necessary to define model quality criteria for an event. These criteria will be diverse and dependent of the specified event as well as runners' profile. The verification of participants' satisfaction requires selecting the research method/methods. The review of a broad spectrum of methods aims at depicting various configurations in reference to different groups of runners at different stages of organizing the event.

A survey with the use of a questionnaire, which is frequently used, tends to oversimplify the research. Hence, the organizer should in a systematic way make effort to define requirements towards the run as well as they ought to measure the participants' satisfaction in order to be able to make decisions related to the next editions of a given event. Client satisfaction measurement is connected with defining who the client is, i.e. mostly a runner, but it should not be forgotten that other participants (supporters, relatives, sponsors) also shape the event. The second group of clients amounts to so-called internal clients, i.e. organizers and volunteers.

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THE INFLUENCE OF COLORS UPON THE QUALITY OF E-LEARNING SPECIFIC COGNITIVE PROCESSES

Irina Maiorescu

Bussiness, Consumer Sciences and Quality Management Department
Faculty of Commerce, Bucharest University of Economic Studies Romania
irina.maiorescu@com.ase.ro;

Introduction

Growing Internet usage and mobile technology applications have a significant impact upon the social, political and economical environment. Because of the dynamic nature of today's economy, of ongoing updates in technology and of the wide accessibility to Internet, knowledge transfer and learning are changing. The European Union considers that education, vocational training and lifelong learning play important economic and social roles. In the European Union, the opportunities for living, studying and working in the various member countries contribute to personal development and to achieving the full European economic potential, in cross-cultural context. As the largest percentages of Internet users and e-learning have proven to come from the strongest world economies, the European Commission encourages and supports the policy cooperation between Member States, as well as funding the educational, vocational and citizenship-building programs, such as the Lifelong Learning Program. The goals for education and training systems refer to:

- Quality − Improving their quality and effectiveness;
- Inclusivity − Ensuring open access to them;
- International Accessibility – Ensuring their opening to the wider world (Eurostat, 2013).

In this context, e-learning comes as a solution for open, cross cultural accessible lifelong learning, contributing along the traditional forms of education to the overall welfare of the economy and society. While vast research has been made and scientific literature is available for the effects of on campus - traditional education upon economy and society, in the field of e-learning the quantification of its effects upon knowledge accumulation and reflection in overall performance and competitiveness of human capital is not easy measureable, therefore only partially quantified. However, their effect cannot be identical, as there are certain differences among them. E-learning being a service virtually delivered through websites and electronic platforms of study, has indeed many advantages, but also weaknesses when compared to the traditional, on campus learning (Onete and Nistoreanu, 2008). Thus, the electronic form of knowledge transfer and learning has lower costs as compared to on campus training; it is flexible, accessible and may be adapted to learner's needs and specific. Despite the critics referring to the lack of human interactivity, the reduced possibilities of getting real-time feedback trainer - learner, communication lacking most of the times the greatest part of its components: non-verbal language, nowadays, accelerated growth of social media users – people, businesses, public institutions, indicate a change in the way of social behavior that makes the population more prone to e-learning (Onete et al., 2013; Dina and Sabou, 2012).

The subjective dimensions of quality in e-learning

In general, when referring to quality, it is widely accepted that this concept refers to the degree of satisfying customers' needs, demands and expectations (ISO 9000: 2005). In the last century the developed countries of the world approached the international markets, through relatively standardized procedures. Technology and science development, as they increased productivity, greatly contributed to this large scale standardization of objects and services (Pamfilie et al, 2012). In a similar way, in the field of education, generally the strongest economies created e-learning solutions fit for the social, cultural and economical particularities of their own nations; these solutions were then imported in other countries, used as they are, without in depth reporting to the specific of social and cultural dimensions (Hermeking, 2005). Finding the vectors of improving e-learning processes, so that they may offer the advantages of traditional – on campus learning, will make this inexpensive way of transferring knowledge be a very good option of personal and continuous development to the low income category of people or to people who have disabilities, providing equity in lifelong learning.

A study shows that quality of the learning in online environment is perceived as very important among medium-sized institutions - academic environment and universities. In a certain way these results are normal, as these organizations place a particular value on the pedagogical process, while other training providing companies from private-sector, very small institutions and learners pay more attention, to the ratio added value received/cost of the training or to meeting the minimum standards. The same study shows that in over half of the organizations analyzed, quality measures are perceived at a very abstract level or as an implicit requirement, while less than 15%

claim to use methods and instruments especially designed for ensuring quality in e-learning products and processes (Ehlers et al. 2005).

The subjective perception of quality in e-learning is strongly related to the degree of meeting the requirements and needs of individuals – learners, not only from the way the electronic platform is designed, but also from the point of view of other social and economical variables influence. Thus, when designing an e-learning platform, along economic, political environments and academic legislation a whole series of elements that influence the users, such as emotional, cognitive, intellectual, psychological and cultural dimensions should be taken into consideration (Pamfilie et al., 2011). Culture is an essential issue when implementing management strategies (Hofstede, 2004; Hall and Hall, 1990) – quality in e-learning making no exception from it.

The elements of design and aesthetics that influence the quality of e-learning platforms refer to form and structure in relationship to functionality, sound and text and color dimensions (Pamfilie and Procopie, 2013). Colour, through its tonality, luminosity and saturation, is one of the fundamental pillars of design and a strong tool for influencing users perception, their emotions and cognitive processes. As studies show, some of the colors bring optimism such as yellow, orange, others favour action – such as red, orange, while some favour the logic and rational part of our brain – such as blue (Madden et al., 2000).

Research regarding the influence of colors upon the quality of online cognition processes: objectives, methodology and results

This research, online questionnaire based, took into account that the aimed objectives may be reached through information about attitudes, assessments and motivations of those investigated. Thus, the studied community is the community of Bucharest Academy of Economic Studies students. A research was performed online among 448 students of Bucharest Academy of Economic Studies of both genders, fulfilling the criteria of significance. The current paper presents partial results of a larger research deployed as part of the doctoral thesis of Maiorescu (2012).

One objective of the research was to discover students' preferences for certain colors while processing problems requiring cognitive processes specific mainly to left cerebral hemisphere - such as mathematic calculus, logical and sequential tests, codes and unfamiliar words processing. The objective was to determine through special designed problems (see Figure 1 and Figure 3) which combination of colors is preferred for solving this type of problems: cold colors combined, warm colors combined or cold and warm colors combined. The research also aimed to identify whether the students spontaneous preference for some colors guides them towards choosing the same for solving the logical problems.

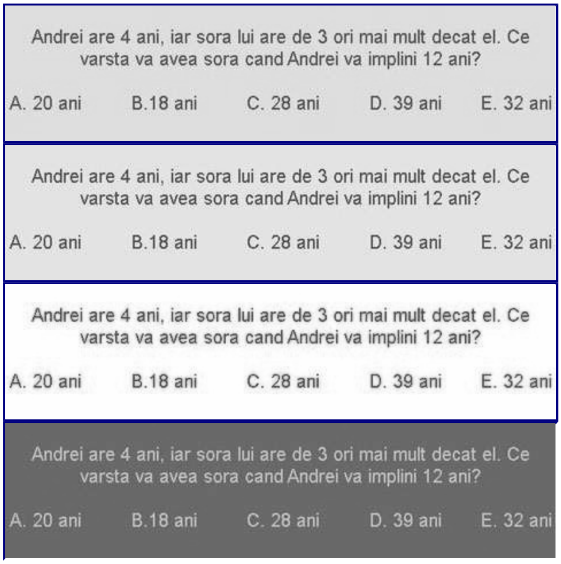

Figure 1. The logical calculus problem presented under various combination of colored text – background

Source: original.

As students were requested at the beginning of this study to order the various spots of colors available, according to their preferences, some of the colors were clearly preferred(such as blue, violet, green, red) while some were obviously less preferred (grey, brown, black). Further on, students were presented two logical math related problems. The problems were presented in boxes containing an identical text, with various colored font against various colored background (see Figure 1). Students were required to choose the box they used for reading and giving solution to the problem and Figure 2 below shows students choices for solving the problem designed under the various combinations of colors.

The results show that the combination blue text (cold color) against grey background (neutral color) is the first choice for solving the problem. As blue is also the most preferred of colors, according to their spontaneous choice the result is rather understandable. However, looking at the combination orange - blue it is obvious that it is an unattractive form of presentation, despite the presence of blue and of the fact that orange was spontaneously more preferred than grey. Although red is a strong color, its combination as text with the white neutral background of the problem was chosen by more than a quarter of respondents. Also the combination of warm colors brow – beige was little preferred. One explanation might be that the amount of a too intense blue background needed for making the orange text legible, was too tiring for the vision. Thus, despite the fact that grey and brown are the least spontaneously appreciated colors, when used as backgrounds with low saturation, they were rather preferred to the intense, saturated blue background. Thus, brown considered unattractive by 62% of the respondents who still chose to solve the problem under this brown – beige (also a light brown) combination.

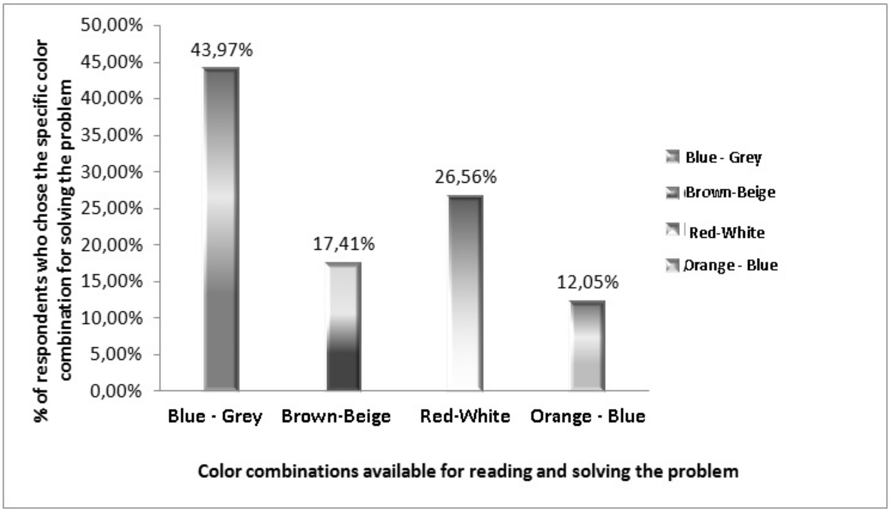

Figure 2. Choices for solving the problem under various text-background color combinations

Source: own research.

Table 1. The distribution of students correct answers within color combination

Colors	Number of options	% of total respondents	Number of correct solving of the problem	% correct solving of the problem/ color combination
Blue - Grey	197	43.97%	173	87.82%
Brown - Beige	78	17.41%	64	82.05%
Red - White	119	26.56%	100	84.03%
Orange - Blue	54	12.05%	39	72.22%

Source: own research.

There are no significant differences among the choices of genders and there was found no association among the individual spontaneous preferences for colors and the choices made for solving the problem. Also, analyzing the proportion of correct answers to the problem in each selected color combination it can be noticed (see table 1) that the lowest percentage is registered in the category of students who chose to solve the problem under orange text – blue background combination.

The problem itself was not difficult for students proficiency, as superior mathematics is studied along the first university year. Also, this is the type of problem children of 12 - 14 years old solve at school usually. Still, there is a difference of 15% in the number of those who chose blue- grey combination and those who chose orange- blue combination.

We further on tested the same cognitive left hemisphere processes, by asking students to solve another problem (see Figure 3).The combinations of colors text – background were: violet – pink (cold colors), blue-orange (cold - warm colors), white-blue (neutral – cold colors), orange- yellow (warm colors), yellow- green (warm- cold colors).

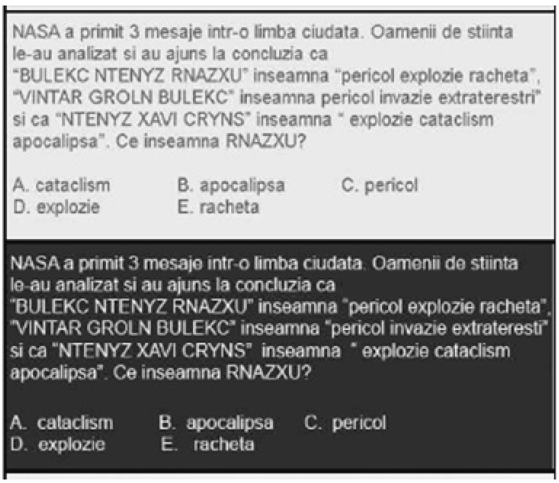

Figure 3. Logical problem presented as combinations of colored text–background

Source: own research.

As the orange-blue combination was reversed (see Figure 3), with intense blue appearing on light orange, more than a quarter of respondents chose it for solving the problem. Also it is noticeable the fact that a similar percentage (see Figure 4) chose the intense blue background with white text.

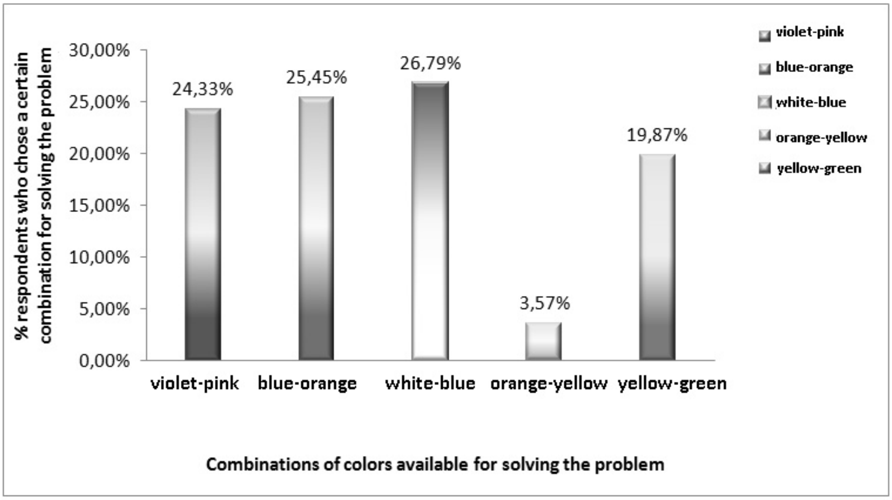

Figure 4. Choices for problem solving under text-background color combinations

Source: according to research.

The possible explanation for this difference registered for the two logic problems might be related to the legibility of text (orange vs. white), as the contrast is poorer in the first case. Another explanation might be that students, during school and high school, learn in classroom by looking at blackboards with white chalk writing, therefore, they are used to this learning and solving problem image, but these possible explanations need further scientific testing.

As it can be noticed, just as the results of the previous problem show, warm colors combination (yellow- orange) are very little preferred for solving problems.

Table 2. The distribution of students correct answers within color combination

Color combination	Number of choices	% of total choices	Number of correct solving the problem	% correct solving per color combination
Violet - Pink	109	24.33%	86	78.90%
Blue - Orange	114	25.45%	102	89.47%
White - Blue	120	26.79%	102	85.00%
Orange - Yellow	16	3.57%	13	81.25%
Yellow - Green	89	19.87%	78	87.64%

Source: own research

In this case there was registered a small difference among the preferences of the genders, as male respondents rather chose cold text against warm backgrounds, while female respondents oriented rather towards cold colors combination (violet – pink and white- blue). The results also show that warm colors combination has the second last percentage of correct solving, the poorest results coming from the violet-pink combination.

Conclusions

E-learning needs to take into account the needs and the desires of users in order to brig quality to life-long learning processes, so required in today's society. There are numerous factors that must be considered when creating an e-learning course and offering it on the platform: social, economical, legal, but also cultural and psychological – cognitive ones. Most of these dimensions should be integrated in the design of the e-learning platform.

As the current paper focuses on the impact of color upon the cognitive processes happening mostly in the left hemisphere of the brain, logical, sequential processes.

The research showed that:

- Blue was a color preferred, regardless of its combination with unattractive colors, as long as the text is legible and it provides a good contrast.
- The contrast is very important, as it is rather preferred a red text (usually not recommended for stimulating intellectual activities) against white background, than not so legible brown against beige or orange against strong blue.
- Generally cold colors (blue, violet, green) are preferred and their combinations with achromatic, neutral colors (white, grey).
- Warm colors (yellow, orange, brown) are little preferred when combined together, but they are accepted when combined with cold colors.
- The highest percentage of correct answers comes from color combinations that contain blue or green, provided that the contrast between text and background is very legible.
- Generally, the spontaneous individual preferences for certain colors, as well as the dislike of other colors are not relevant for choosing the colors combination when solving the problem.

The conclusions of this study are important for both business and academic environment, as it presents the natural links users make when translating an activity into colours through web design.

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THE PERCEPTION OF ACTA IN EU.
A ROMANIAN HIGHER EDUCATION INSTITUTION CASE STUDY

Irina Maiorescu, Răzvan Dina, Mihaela Dobrea

Bussiness, Consumer Sciences and Quality Management Department,
Faculty of Commerce, Bucharest University of Economic Studies
irina.maiorescu@com.ase.ro

Introduction

As the Anti-Counterfeiting Trade Agreement (ACTA) has been set and brought to the public acknowledgement, a series of protests and manifestations against it have risen.

Though supporters of ACTA promoted the necessity of such an agreement in the context of the increased "shadow" trade with counterfeit products and copyrights infringing works (European Commission, 2012), many voices raised arguments against it. The adversaries of ACTA consider that this treaty affects many fundamental rights, including freedom of expression and privacy. These fears were aggravated by the secret nature of negotiations which took place among the most powerful world economies, excluding the developing countries and the general public (European Parliament's Committee on International Trade Workshop, 2012). These prior negotiations comprised also the issue of a form of cooperation between Internet service providers and rights owners in order to remove all infringing works distributed across web. Representatives of different companies from a range of industries, acting as rights owners, requested that the Internet service providers introduce a mandatory filtering of network and stop the citizens' access to Internet on repeated activities that infringe their rights, the Three Strikes - Graduated Response. (Ryan and Heinl, 2010)

As in the other EU countries happened, the Romanians reacted in various ways, as soon as mass-media provoked discussions about ACTA. Though ACTA refers to counterfeiting and distributing rights and patents infringing products and works in general (ACTA, 2011), most of debates referred only to online environment. The Internet Service Providers have openly manifested a negative approval of the treaty, as they believe that ACTA will seek to increase their liability, the user generate content sites will be much affected because of the hosts liability for the content posted by third parties, users rights for freedom of expression and privacy will be infringed (Turlea et al., 2011). However, the issue of punishing copyrights infringement and counterfeiting is not a novelty, neither for EU legislation, nor for the Romanian one.

Research regarding ACTA – purpose, objectives, methodology

In Romania, the people most affected by this decision and involved in local protests were young people, as reported from media (mediafax.ro). Research has shown that most of Romanian Internet users are young educated people (360insights, 2011). Therefore, in order to have a better understanding of Romanian's attitude towards ACTA, a research was designed to this purpose, among this group of users.

Objectives of the research aimed the following:

to determine the interest expressed by the young people of Romania towards this subject widely debated by the public opinion in the last period, expressed through their awareness about ACTA;

- to determine the extent of knowledge and understanding of this multilateral trade treaty;
- to determine the areas/activities respondents associate ACTA with;
- to identify the degree in which those interviewed agree or do not agree with the provisions of ACTA;
- to analyze the reasons that determine the young people of Romania to adopt an attitude "pro" or "against" ACTA.
- to identify whether there is an association between:
  - gender and the level of ACTA's correct understanding,
  - gender and attitude "pro" or "against" ACTA,
  - attitude and level of correctness in understanding ACTA.

This research, questionnaire based, took into account that the aimed objectives may be reached through information about attitudes, assessments and motivations of those investigated. Thus, the studied community is the community of Bucharest Academy of Economic Studies young educated, the unit of sampling being represented by the students enrolled in the academic year 2011 - 2012 within the master programs of the Academy of Economic Studies in Bucharest.

The research was conducted within the mentioned higher education institution, between February – March 2012, so during the academic year 2011 – 2012.

The sample consisted of 183 persons. The sampling was a probabilistic one and the method was simple random sampling.

Taking into account that the study groups within one master program are already randomly divided according to the alphabetic order of the surname, the random selection of some study groups was performed. Each Master's degree candidate from each group thus selected answered the questionnaire along the mentioned period of time.

Given the manner of determining the sample size and the sampling method, this research is significant for Bucharest Academy of Economic Studies community.

Due to the fact that students enrolled in masters programs have various bachelor backgrounds, ranging from Economics to Polytechnics, Earth Sciences or Agricultural Sciences, the research results might also be considered relevant for young Romanians (age between 23 and 36 years), with bachelor degree, within the limits of the sampling error.

The survey type was semi - structured, classic personally (face to face) with assistance to the filling in, with no time limit required for filling in.

Results and interpretation

The survey was performed just after demonstrations all over the world had taken place against ACTA.

From a total of 183 respondents, 59% stated that they know what ACTA is about, while 41% said that they don't know what ACTA represents.

Our analysis focused thus further on answers given by respondents of belonging to the group which answered affirmatively when asked if they have any knowledge about ACTA and its significance.

Our interview asked for more detailed information, in order to identify the extent of their knowledge about what ACTA really represents, the main associations respondents make when discussing about ACTA, respondents attitude towards ACTA, main advantages and disadvantages perceived in connection with ACTA's existence.

Below, in Table 1, are centralized the frequencies of the key words respondents used for describing their understanding about ACTA.

As resulted from the analysis, the most frequent key words associated to ACTA were *linked to copyright*, *piracy of music, films, video*. Almost all respondents who stated that they had heard about ACTA explained the treaty as an agreement against free distribution of information in text, audio, video, image format on internet (see Figure 1 also).

Table 1. The frequencies of ACTA associated key words

Keywords	Frequency
Music	22
Piracy	44
Film	19
Luxury products	4
Privacy	25
Copyright	70
Social Networks	8
Freedom of expression	19
Freedom of information	25
Control, censure	21
Obscenity	5

Source: own research

It is just a small part of respondents (3.82%) who explained ACTA as a convention that applies also to palpable goods – luxury products, namely art, clothes, perfumes, not only to forgery of virtual ones.

Among those who affirmed that they know what ACTA represents – 108 respondents, only 7 people gave a complete and correct explanation of it. However, a much larger number of respondents had however wrong perception and knowledge regarding the purpose and significance of ACTA: 25 out of 108 respondents explained it as something that by far had no connection to it. Most of the interviewed population stating they know about ACTA had however a partially correct image of what it represents 76 respondents. This lead us to the conclusion that from the whole population of questioned people (183 respondents), only a very small part – 3.82% really have a clear and complete image of ACTA.

From the first data analysis, 41.53% of respondents have a partially correct image of ACTA; 54.65% of respondents claimed that they didn't know about ACTA **or** said they knew about ACTA, but their answers proved to lead to a total wrong description of ACTA's provisions. In what concerns the respondents' attitude towards ACTA, the distribution of answers comes as it follows (see Table 2).

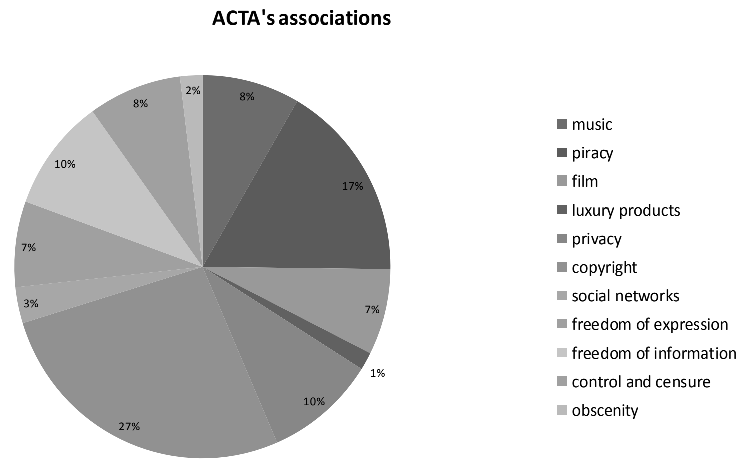

Figure 1. Key words for ACTA's associations (% respondents)

Source: own research

In terms of percentages, referring to respondents that stated they knew about ACTA it is clear that a larger part is against, than pro- ACTA, though a third of respondents had both a "pro" and, in the same time, an "against" attitude towards ACTA. All the respondents who shared this attitude, based their opinion on the ethical issues of ACTA when giving the "pro" ACTA explanation, and on the restrictions to free information and communication when manifesting the "against" ACTA position.

Table 2. Respondents attitude towards ACTA

Respondents' attitude	For ACTA	Against ACTA	For and against ACTA	No opinion about ACTA
Number of respondents	18	36	37	17
% of respondents	16.67%	33.33%	34.25%	15,74%

Source: own research

An interesting remark is that, those who were the best informed about ACTA (gave the correct and complete explanation of it) were also those who had arguments for or/and against ACTA. Those who had a totally incorrect perception of ACTA, were quite evenly distributed in the attitude categories (see Table 3).

Table 3. The distribution of respondent's attitude in association with their true understanding of ACTA's meaning

ACTA's perception	Respondents attitude			
	For ACTA	Against ACTA	For and against ACTA	No opinion
Correct	2	1	4	0
Partially correct	10	28	29	9
Incorrect	6	7	4	8

Source: original

The test of association between gender and respondents attitude indicated that there is no significant difference, the Pearson Chi-Square for 3 degrees of freedom being 2,545 and the p-Value 0,467. However, in performing the test, due to the fact that the number of those who had no opinion regarding ACTA is quite small, in calculating the steps for this test, there were 2 cells with expected counts less than 5, but greater than 4.

In a similar way was analyzed the possible dependence of ACTA's level of correctness of perception and respondents attitude. The Chi Square test resulted in a p-level of 0.42, less than 0.05. Taking into account that the calculus of Pearson for 6 degrees of freedom involved using six expected counts less than five, the two categories of correct answers and partially correct answers were merged into one category.

The Pearson Chi-Square test of independence among ACTA's perception(correct+ partially correct)/incorrect and respondents attitude resulted to be 9,956, which for 3 degrees of freedom indicate a P-Value of 0,019, much less than the cut-off 0.05. Taking into account these results, an association among respondents level of correctness in understanding the provisions of ACTA and their attitude towards this treaty seems to occur. However, the data have to be pondered carefully due to the fact that the merge of correct and partial correct answers into one category only reduced the number of expected cell counts less than five from six to two.

In terms of percentages, taken into account the size of the interviewed sample, women and men reported they know about ACTA in quite a similar proportion: 58.27% of female and 61.36 % of male respondents (see Table 4).

However, the Chi Square test between gender and respondents 'statements about their knowing about ACTA seems to indicate that there is no association among these two variables. For one degree of freedom , the Pearson Chi-Square is 0.132 and the p-value is 0.716; therefore, for $\alpha = 0.05$, within the current sample, the dependence of these two variables cannot be proved. Further on, we analyzed the level of ACTA's rightness of perception in association with gender. The data showed that the percentage of male and female respondents differs somehow in what regards their fully correct or fully incorrect answers regarding ACTA (see Table 5).

Table 4. The percentage of respondents according to gender and their acknowledgement about ACTA.

Respondents state they know about ACTA	Gender		**Total**
	Men	Women	
Yes	27	81	**108**
No	17	58	**75**
Total	**44**	**139**	**183**

Source: own research

Table 5. Distribution of answers according to gender and correctness.

The level of answers correctness	Gender			
	Men (frequency)	Men (%)	Women (frequency)	Women (%)
Correct answers	1	3.70%	6	7.40%
Partially correct answers	18	66.67%	58	71.61%
Incorrect	8	29.63%	17	20.99%
Total	**27**	**100%**	**81**	**100%**

Source: original

Analyzing the relationship among the incorrect/ correct and partially correct answers and respondents' gender, our aim was to check if one gender was more likely to be informed and interested about ACTA than the other.

However, the Chi Square test has shown that, for the sample used here, there is no provable association among gender and the level of correctness in explaining ACTA provisions, as the p-value of 0.357 resulted from the test is higher than the cut-off $\alpha = 0.05$.

In what concerns the distribution of keywords in association to the level of correctness of ACTA's understanding, it can be noticed that most of them gravitate around copyright and piracy, especially in online environment (see Figure 2).

As a matter of fact, the partially correct answers were considered as it because they referred to ACTA only as an agreement against piracy of music, film, photos, videos, texts in online environment. The fully correct answers were considered those that had the whole perspective of protecting both, the tangible products and those from the online environment, along with the measures proposed by ACTA. Incorrect answers mostly understood ACTA as an “Internet police”, having as purpose a strict control of online environment, allowing the censure of obscenities and of other elements.

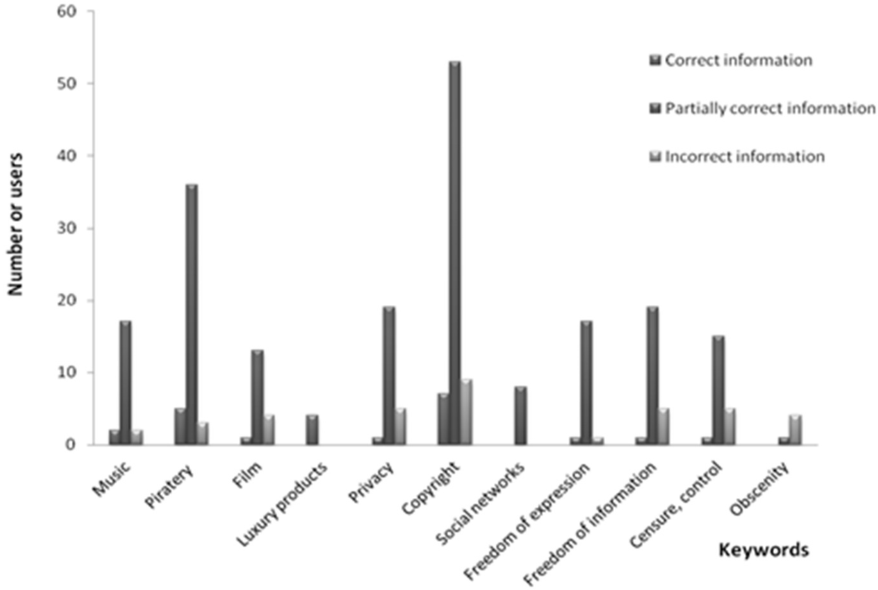

Figure 2. Keywords choices in association with users’ degree of knowledge about ACTA

Source: own research

Conclusions

The research was deployed in Bucharest Academy of Economic Studies among a representative sample of master program students both from the point of view of gender and age distribution.

The research process showed that:

- The majority of the respondents were informed, from various sources, about the existence of ACTA;
- The majority of respondents knew only partially the provisions and purpose of ACTA. The partially correct answers refer to this agreement only as a system of regulations regarding the control and distribution in various forms of information through information technology, especially on Internet, on websites and social networks;
- A greater number of respondents expressed an attitude against the measures proposed within ACTA, than those who are “pro” this treaty’s adoption;

- The main reason invoked to justify the attitude against the adoption of measures proposed by ACTA is related to the fact that they affect the privacy and freedom of expression and information, in the opinion of those interviewed.
- The tests of association showed that for the current sample gender variable has no influence upon the degree of young educated people's interest in ACTA; nor upon their attitude or level of correctness in understanding ACTA's provisions.
- The tests of association indicated that there might be a connection among the level of correctness in understanding ACTA's provisions (correct and partially correct versus incorrect understanding) and respondents attitude ("pro", "against", "pro and against", "no opinion"). However, the results must be pondered carefully when trying to extend them to a higher population that due to the particularities of the sample chosen for analysis.
- The fully correct answers offered the whole perspective of protecting both the tangible products and the intangible ones distributed mainly within online environment, along with the measures proposed by ACTA.
- The incorrect answers referred to ACTA as an "Internet police", having as main mission an austere control of digital environment and going to censure the obscenities and information, according to some powerful groups of interests directives.

Acknowledgement

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STUDY REGARDING THE SATISFACTION OF STUDENTS IN THE BUCHAREST ACADEMY OF ECONOMIC STUDIES, TOWARDS THE CHANGES REGISTERED IN THE ROMANIAN ECONOMIC HIGHER LEARNING

Bogdan Gabriel Nistoreanu[1], **Puiu Nistoreanu**[2]

The Bucharest Academy of Economic Studies
[1]*UNESCO Department for Business Administration,*
[2]*Department of Tourism and Geography,*
puiu.nistoreanu@com.ase.ro

Out of the desire to find out the perception of the students of The Bucharest Academy of Economic Studies (The first and only economic university of Romania, centenary institution – founded in the year 1913, milestone and example for all the Romanian economic colleges) regarding the changes that the Romanian economic higher learning went through – due to the transformations imposed by the Bologna process, we have realised the present research. The novelty character in theory and practice regarding the management of change in higher learning institutions in Romania, and also the possibility of using the results of the research in order to improve the educational management activities that take place in educational organizations present on the Romanian market, were due, in large part to the loyalty of the customers – the student collective, and to the capacity of accepting the change of the members of the academic community.

Designing the research

Designing the research included establishing the purpose, objectives and hypothesis of the research, and also its methodology, selecting its sources of information and choosing means of collecting and arranging them. The clear separation of each of these aspects presents a large importance to the research, following a logical, structured, coherent and systematised undergoing. Following the phases and stages of the research, according to the methodology, was essential for the quality of the research and implicitly for its results and applicability.

Scope

The scope of the research was investigating the opinion of the students of The Bucharest Academy of Economic Studies regarding the changes observed in the Romanian higher learning. These changes need an adequate management, which would allow the institution and its members to finalize the implementation of changes and modifications imposed by the Bologna process.

Objectives

The research has proposed collecting the necessary data as best as possible in order to present the problem discussed. At the same time, we must mention the fact that among the objectives of the study we can find the main aspects debated at the present level of the specialty literature. The objectives of the research are presented in a logical hierarchy, starting from general coordinates towards specific factors.

Hypotheses

In this stage of the research we have realised a forecast of the value of the information we expect to get from each objective, and in the analysis phase they were tested, fact which led to accepting or rejecting them. The objectives expressed as a correlation between two variables are represented through the usage of statistic hypothesis H_0 – null hypothesis, or H_1 – alternative hypothesis.

Metodology

The research takes into consideration the students perspective, according to the purpose of the research. The *statistic collective* researched was made up of students of the bachelor cycle, which studied at the Bucharest Academy of Economic Studies, in the university year of 2011 - 2012. Both the *observation unit* and the *survey unit* are represented by the individual. Our main purpose was the clarification and the better understanding of the coordinates of the problems taken into account, which in turn make up a *exploratory research*.

The method of information collection was the direct research as a questionnaire, using the structured interview technique. The information collection instrument was the *questionnaire*. It was applied during March 2012 – April 2012, in The Bucharest Academy of Economic Studies, at the end of seminar activities, answers to the questions were written by the respondents on the presented questionnaires.

The sampling method was random; the research was a pilot inquiry. 525 students took part in the research. The sampling scheme was simple and random. *The sample structure* was determined through keeping the most representative criteria in according with the collective specific, respectively – study year and gender. The sample included 31,43% - first year students, 34,86% - second year students, and 33,71% - third year students, having a relatively balanced repartition according to the real situation in The Bucharest Academy of Economic Studies. The absolute frequencies corresponding are: 165 first year students, 183 second year students and 177 third year students.

The information collection was done in a percentage of 78,29% among women and 21,71% among men, situation being representative in terms of gender for the student collective in The Bucharest Academy of Economic Studies, reflecting adequately the distribution on gender from a statistic point of view. Using absolute frequencies, out of the 525 people interviewed, 114 were men and 411 women.

Data collected from the filled in questionnaires was *processed* using office editing (checking, correction of data and exclusion of questionnaires with a high number of null answers for different questions) and *coded* (in the case of using scaling methods of the semantic differential type, and also when using mixed questions, who asked from the interviewed for a different answer than those included in the questionnaire questions).

The analysis and interpretation of the research's results

The results of the research are presented in a close connection with its scope: investigating the opinion of the students of The Bucharest Academy of Economic Studies regarding the changes observed in the Romanian higher learning, defined in the preliminary phase, followed by mentions on whether the initially established hypothesis was accepted or not.

The analysis and interpretation of the results of the research made among students

A first objective – of the research regarding the students in the Bucharest Academy of Economic Studies opinion, towards the implementation of changes in the Romanian higher learning – according to the Bologna process, was identifying the measure in which the implementation of these changes was considered necessary.

The answers given by the students underline the fact that the majority believe that the implementation of the changes proposed in the Bologna declaration was necessary to a large extent - 40,38%, and, in a medium extent - 29,71%. These results confirm the previously stated hypothesis. Just 8,57% and 7,05% appreciate that this contribution happens in a small extent, and to a very small extent.

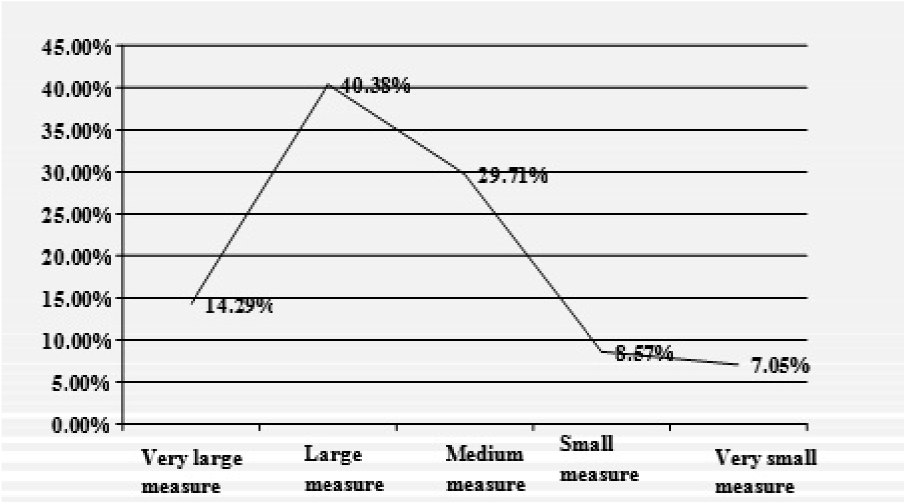

Figure 1. The necessity of restructuring the higher learning system according to the objectives of the Bologna process

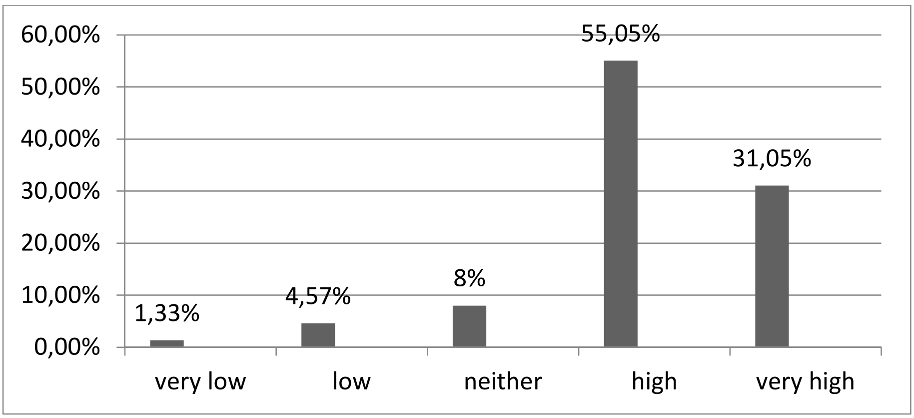

Figure 2. The importance of diploma and qualifications acknowledgment at a European level

Significant shares of the answers showed that the acknowledgment of students diplomas and qualifications at an European level is important - 55,05%, and, very important - 31,05%. These results confirm the hypothesis established previously, which stated that almost two thirds of the students consider that the importance of the acknowledgment of diplomas and qualifications at an European level is high or very high. The other answer possibilities have registered very low shares of respondents.

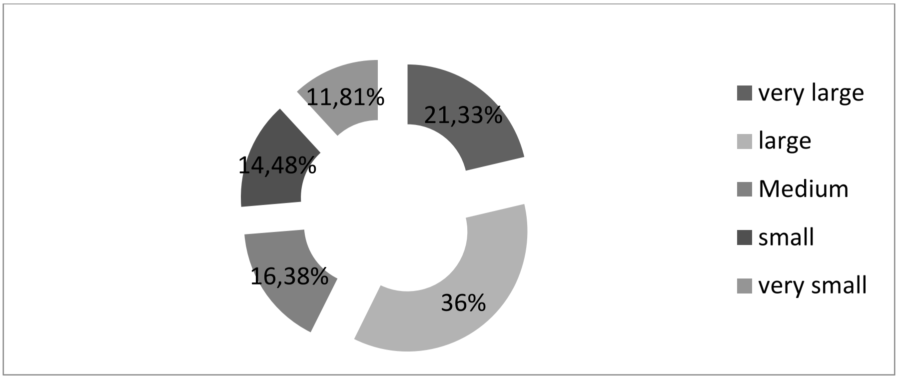

Figure 3. The degree of utility associated to the development of a credit system, transferable between the EU member countries

It can be observed that more than half of the students have appreciated that the degree of utility associated with the development of a credit system, transferable between the EU member countries is large - 36%, or very large - 21,33%. These results confirm the previously established hypothesis. Relatively small percentages of respondents appreciate the degree of utility as being small - 14,48%, or very small - 11,81%.

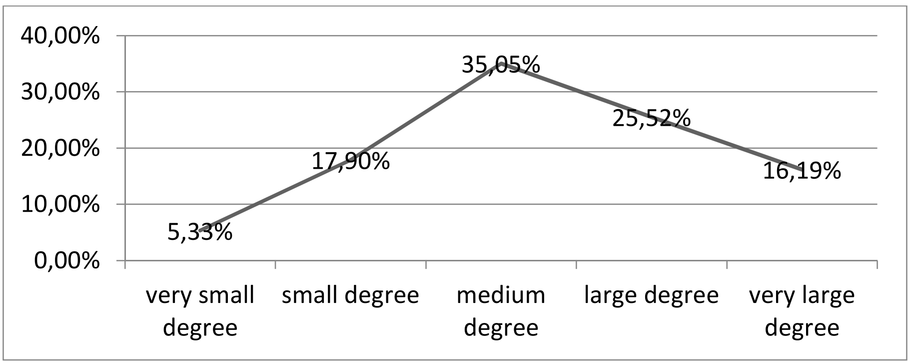

Figure 4. The contribution of student mobility between EU member states to the increase of their professional training level

The results obtained show that over a third of the students - 35,05% consider that ensuring the mobility between the EU member countries contributes to the increase in the level of professional training only in a medium degree. Only a quarter of answers have appreciated this contribution as being in a large degree - 25,52%, and in a very large degree - just 16,19%. This result refutes the previously established hypothesis, which stated that the largest part of students consider that ensuring the students mobility between the EU member countries contributes to the increase in their level of professional training.

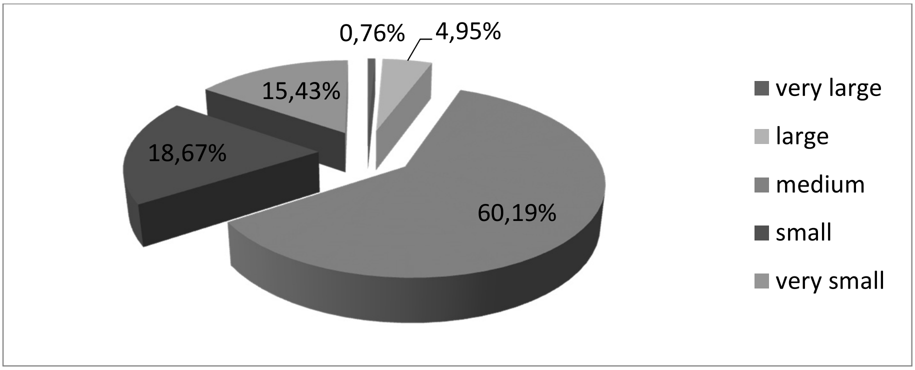

Figure 5. Duration of specialty studies taken by the students (first cycle)

Almost a third of respondents have appreciated that the duration of specialty studies is small - 18,67%, or very small - 15,43%. We can observe the low percentages of the answer large - 4,95%, or very large - 0,76% duration of the speciality studies for the first cycle. The majority of the answers - 46,48%, thought that the disciplines studied in the first cycle in the university curricula have a medium utility. Almost a third of respondents consider that the level of utility for this aspect is low - 21,33%, and very low - 15,05%.A significant percent of respondents - 44,57%, has appreciated the measure in which the economic knowledge learnt in Romanian higher learning helps continuing the studies in the European space as large, and almost a third - 30,86%, that this is true in a medium measure.

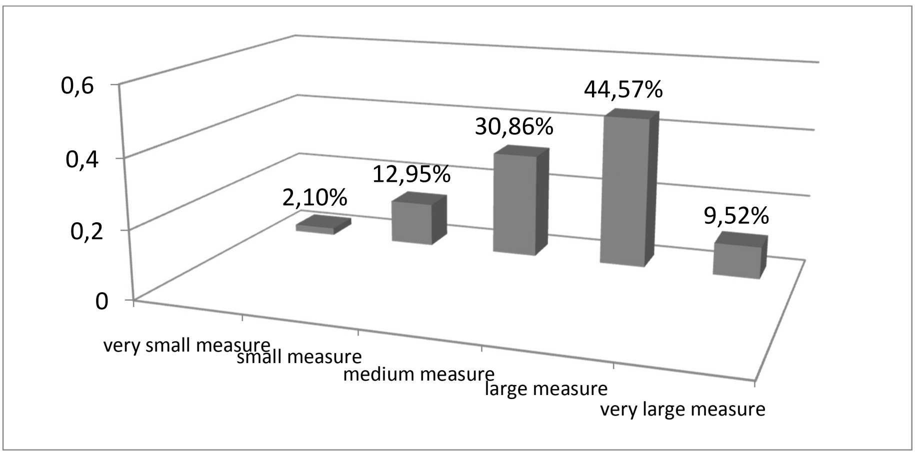

Figure 6. The measure in which economic knowledge learnt in Romanian higher learning helps continuing studies in the European space

According to the results obtained, the professional training of the teaching staff that presented the courses for the disciplines studied until the present is appreciated by the majority of the students to be at a high level - 51,58%. Also, the professional training of the teaching staff that presented the seminars for the disciplines studied is appreciated by the majority of the students to be at a high level 41,12%.

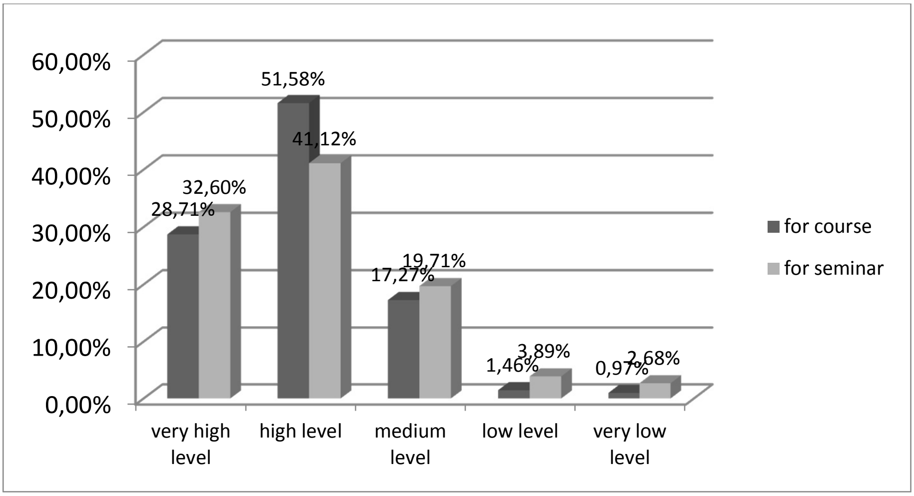

Figure 7. The professional training of the teaching staff that presented the courses and seminars for the disciplines studied until present

These results confirm the hypothesis established previously. We can observe that significant percentages representing almost a third of the respondents, believe that the professional training level of the teaching staff is very good, 28,71% - for the course and 32,60% - for the seminar. We can also observe the very low percentages of the respondents who believe the professional training level of the teaching staff to be inadequate or totally inadequate for both the course and seminar.

The analysis of the obtained results show the following hierarchy from the students' satisfaction level stand point, referring to the aspects of the teaching system applied in higher learning: taught disciplines content, usefulness of knowledge gained, teacher presentation style, didactic methods used during courses and seminars.

A generally high level of satisfaction for the content of taught disciplines, usefulness of knowledge gained, teacher presentation style, and generally medium for the didactic methods used during courses and seminars can be observed. These results refute partially the hypothesis according to which the hierarchy developed by the students is the following: usefulness of knowledge gained, taught disciplines content, teacher presentation style, didactic methods used during courses and seminars.

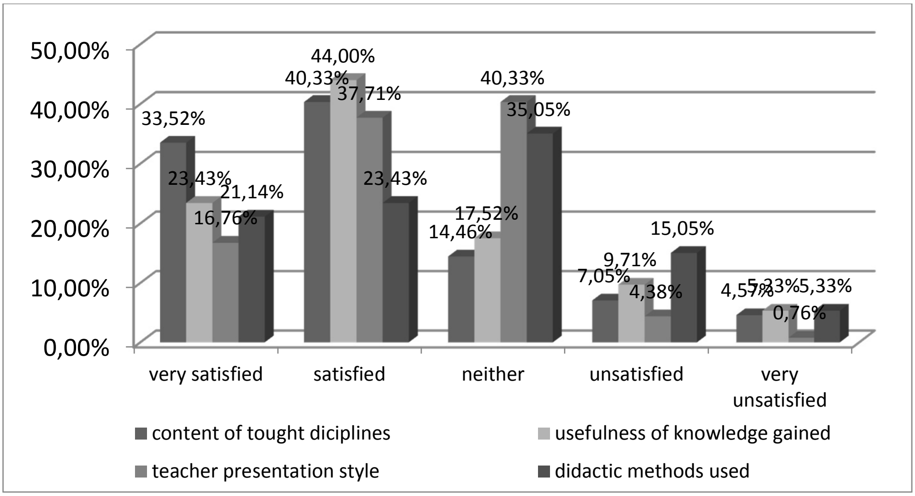

Figure 8. The level of satisfaction towards aspects of the teaching system in higher learning

We can observe that the majority of the students believe that the student evaluation system is objective in most cases - 40,38%, and almost a quarter of those believe that the system is entirely objective - 24,95%. These results confirm the hypothesis established previously. We can remember that the percentages for the negative answers were low regarding the objectivity of the evaluation system: no, just in isolated cases - 8,95%, and no, never - 6,10%.

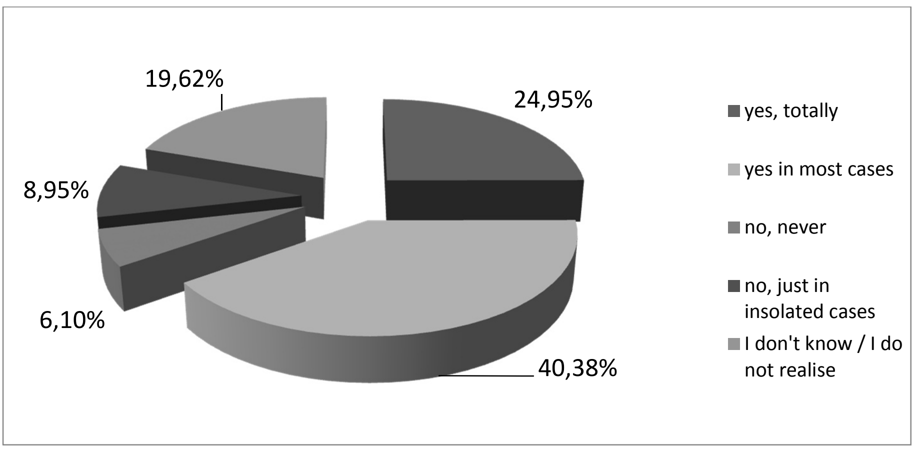

Figure 9. The objectivity of the student evaluation system

Almost half of the respondents - 48,38%, have appreciated that the degree of involvement of the state in stimulating students performance is low, and almost a third - 31,05% have stated a medium degree of involvement. An important percentage of respondents - 16,95% believe that this degree of involvement is very low. The results contradict the previously formulated hypothesis according to which the degree of involvement of the state in stimulating students performance is usually appreciated at a medium level. We can observe the very low percentages of respondents who stated a high level of involvement - 2,67%, or very high - 0,95%.

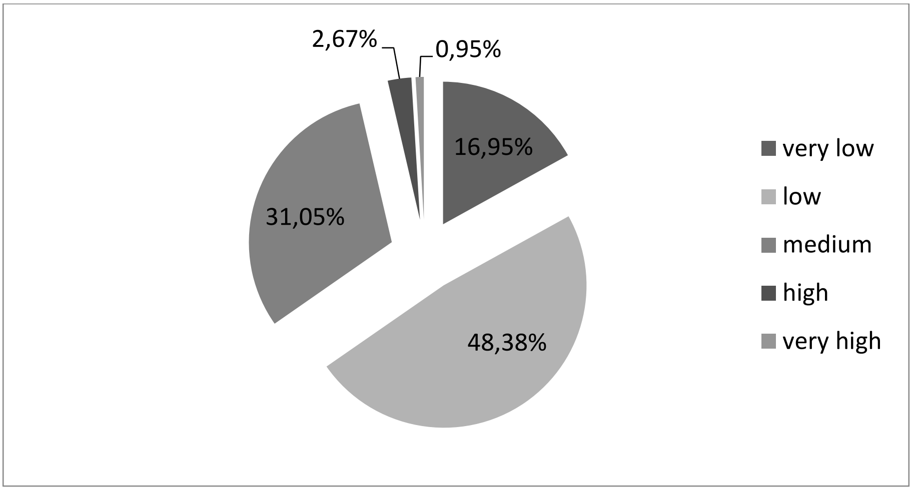

Figure 10. The degree of involvement of the state in stimulating students performances

The majority of the students - 60,19% intend to follow a masters degree programme in AES Bucharest after ending their bachelor cycle, and around a quarter of those - 26,86% do not intend this thing. The results confirm the initial hypothesis, which stated that almost three quarters of the students intend to follow a master’s programme in AES Bucharest after finishing their bachelor studies. A smaller percentage - 12,95%, are not decided in this approach.

We can notice that the majority of the students that wish to follow a masters degree programme do not intend to follow a PhD programme in AES Bucharest - 60,76%, and a percentage of 21,52% intend to do this. These results confirm partially the hypothesis established previously according to which almost a quarter of the students which desire to follow a master programme in AES Bucharest intends to follow a PhD programme in AES Bucharest. A smaller percentage - 17,72%, are not decided regarding this aspect.

Conclusions of the research

In the information analysis and interpretation phase, we took into account the detailed description of the research results for every objective, regarding the opinion of the students of the Bucharest Academy of Economic Studies towards the implementation of changes in the Romanian higher learning according to the Bologna process. The opinion of students of the Bucharest Academy of Economic Studies – regarding the implementation of changes in higher learning according to the Bologna process, is generally positive, believing that *the restructuring of the higher learning system according to the Bologna process objectives was necessary* mostly, as the significant majority of the given answers shows. Regarding the *students diploma and qualifications acknowledgment at a European level*, the students believe it to be an aspect of great importance. Also, *the degree of usefulness associated to the development of a credit system, transferable between the EU member countries* is appreciated clearly as high or very high. *The measure in which ensuring the mobility of students between EU member countries contributes to the increase of their professional training level* is generally appreciated at a medium level.

Regarding the duration and structure of speciality studies according to the changes introduced by switching to the Bologna system, the students generally appreciate *the duration of specialty studies corresponding to the first cycle of studies* at a medium level, according to a significant percentage of registered answers. On the other side, the analysis of *the utility associated to disciplines studied in the first cycle of university learning* shows in general an agreement of opinions, students believed that the usefulness of disciplines studied in the first cycle of economic university teaching, and also the usefulness for students future career, from the perspective of developing abilities and competences demanded on the workforce market are at a medium level.

On the other side, *the measure in which economic knowledge learnt in Romanian higher learning helps continuing studies in the European space* is appreciated by students at a high level, showing the acknowledgment of the opportunities brought in this aspect by the implementation of the Bologna process.

The aggregate perception of students regarding *the quality of course and seminar activities done in college* is definitely favourable, as the registered answers show, and, closely related, *the students satisfaction level related to the activities done in course and seminar classes* is high. A reduced percentage of respondents has shown a reduced or very reduced satisfaction level, showing as main *reason of discontent* the short amount of time dedicated to several disciplines in the curricula. Other reasons of discontent were the large volume of information that must be taught and in lesser measure, the usage of inadequate teaching methods, low degree of interactivity between students and teachers and problems on the evaluation system level.

We can observe that the level of satisfaction of the students towards the activities taking place in courses and seminars is generally high, and the main aspect that can be improved in order to increase the satisfaction level would target the structure of the teaching curricula, in what regards an increase in the interval of time allocated to these disciplines.

Aspects linked to *the professional training of the teaching staff who presented the courses and seminars for the disciplines studied until present* bring their contribution to obtaining the students high level of satisfaction in regard to activities done, as the registered results show, most students believe the professional knowledge of the teaching staff to be high. Even more, the reduced percentage of respondents who believe the professional knowledge of the teaching staff, both from the seminar and course, to be inadequate or totally inadequate is of note.

Referring to other *aspects of the teaching system in higher learning*, the students level of satisfaction is generally high in regards to the content of the taught disciplines, usefulness of gained knowledge and teachers presentation style, and usually medium towards the didactic methods used during courses and seminars. Also, the largest part of students considers that *the student evaluation system* is objective in most cases, conclusion confirmed also by the low percentages obtained by the negative appreciations towards the objectivity of the evaluating system.

In what regards *the degree of involvement of the state in stimulating students performance*, the respondents perception is generally negative, and the very low percentages of the answers who appreciated a high or very high level of involvement are to be noticed. These results should present an alarm signal, imposing the ulterior investigation of effective means to put into practice in order to identify the measure in which this perception is relevant. Carrying on, measures should be taken towards a greater involvement of the state in stimulating students performance, and, in correlation, the improvement of their perception in this aspect aiming for an increase in the satisfaction level.

The significant majority of the students *intend to follow a master program in the Bucharest Academy of Economic Studies after finishing college (first cycle)*, which suggests, generally, the acknowledgment of the necessity to continue speciality studies according to the restructuring of the system following the Bologna process. On the other side, *the majority of the students who wish to follow a master program do not intend to follow a PhD programme also in the Bucharest Academy of Economic Studies*, which shows the level of specialization considered sufficient by the students.

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MATERIALS USED IN FUNCTIONAL OUTERWEAR – CHARACTERISTICS AND CUSTOMER PREFERENCES

Renata Salerno-Kochan, Justyna Skawińska

Commodity Science Faculty, Cracow University of Economics, salernor@uek.cracow.pl

Introduction

Providing users with physiological comfort in harsh often variable weather conditions – in heavy rain and strong wind, in addition during a high physical activity is a quite large challenge for the manufacturers of outwear designed for active people. The materials used in such clothing should fulfil a series of requirements that seem to be mutually exclusive such as water resistance and water vapour permeability, also called breathability, wind resistance and air permeability, should be lightwear and durable as well as have appropriate aesthetic values. The reconciliation of such many different properties in a single material or product is no easy task.

The beginnings of functional outerwear materials can be traced back to the end of the 19th century. At that time Thomas Burberry invented a twill-weaved fabric made of cotton worsted yarn, of uniform colour and called gabardine. It provides good wind and water resistance qualities and was worn at that time by polar explorers and Himalayan mountaineers during expeditions (Wajda 2011). Probably the first quite primitive breathing material was invented about 1940 for military purposes under the brand name Ventile®. Due to a tough, tightly woven fabric made out of long cotton fibres that swell under moist conditions, thus preventing water penetration inside (Holmes 2000, *Ventile® Fabrics…* access: 06.06.2013). The advance in design of materials to provide better protection against weather conditions should be assigned to DuPont, where researchers invented nylon in 1935 used for manufacturing one of the first synthetic fibres. Three years later when this product was commercialized, materials of better strength properties were developed (Wajda 2011). The 1960s is the period when other synthetic polymers used today in functional outerwear, including polytetrafluoroethylene, commonly called Teflon, polyester, polypropylene and polyurethane became known. Due to invention of synthetic fibres it was possible to commence the production of flat textile products of improved water and wind resistance qualities.

Nowadays the market offers consumers a wide variety of functional outerwear. The consumers interested in purchasing such products may select from various products that differ not only in design and fashion, but at the first place in the quality of materials used and finishing. The aim of this paper is to present material and technological solutions used in sports outerwear, properties that have to distinguish them and results of research on consumer's purchasing behaviours and preferences related to requirements set for these products.

Sports outerwear technologies

There are many manufacturing techniques and technologies that provide outerwear materials with water resistance, but also water vapour permeability and wind resistance. The mentioned properties are of utmost importance as they provide the user with physiological comfort when wearing clothing. The compilation of water resistance and water vapour permeability deciding on sweat removal from the near skin layer is, as mentioned above, a quite large challenge to manufacturers, as water penetration depends on pores size. The materials should be designed in such a way so that they do not pass raindrops, while being able to carry away moisture. According to various information related to clothing materials of special properties contained in publications and available in sports brand manufacturer catalogues (Maklewska 2010, Wajda 2011), there are a many methods enabling an outerwear to be obtained of all the properties mentioned above. The membrane manufacturing technology, its functional mechanism and chemical composition should be taken into account.

The commercial offer includes products made out of various materials fulfilling the requirements for waterproof and water permeable clothing. The oldest materials to be referred to as "waterproof and breathing" are tightly woven fabrics, initially made out of cotton yarns, but now of microfiber. They are impermeable to water, but to a specified hydrostatic pressure only. The principle of operation of such materials is that the outer textile surface swells after moistening and hinders water penetration through the material. The water vapour permeability is ensured by fissures and pores between fibres that are sufficiently large to allow water vapour molecules to be transferred outside the material (*Textiles in sport* 2005). Another method for obtaining the properties mentioned above is the use of laminates based on membranes or microporous coatings combined with woven or knitted fabrics. Such materials function on the similar principle as filament yarn fabrics mentioned above, but have much better performance parameters. There are water-repellent and its function is based on pore sizes in a membrane. They are larger than water vapour molecules and smaller than even the smallest water drop occurred in the nature, thus providing water resistance and sweat removal from the skin surface. The diameters of pores occurring in individual membranes vary from 0.05 μm to 10 μm. The number of pores per cm^2 of the membrane, depending on its type, is about 1.5 – 2.0 billions. Microporous membranes are built out of such polymers as polyurethane, polyamide, polyester or polytetrafluoroethylene as well as special acrylic resins. Their combination with the carrier fabric may be achieved in several variants, beginning from the simplest one without lining up to two- and three-layer coatings with lining (*Textiles in sport* 2005, Wajda 2011). Microporous films are normally not resistant to such impurities as dirt, salt, detergents or cleaning agents. Their influence may affect water resistance and water vapour permeability. To protect a membrane an additional layer of hydrophilic polyurethane is applied. The next type of materials that meet requirements for functional outerwear are laminates combined with hydrophilic membranes or coatings with chemically modified polyester or polyurethane. Their tight structure contains no pores or channels. The membrane function is based on polar characteristics of water molecules and properties of polymer used. Its proper functioning depends on its hydrophilic and hydrophobic properties. Due its hydrophobicity it is able to repel water molecules gathered on the product surface, while enabling water vapour and gas transfer due to its hydrophilic properties. The important properties of hydrophilic membranes include its high resistance to damage, durability, wind resistance and resistance to various contaminations (Bendkowska & Wrzosek 2001, Holmes 2000, Maklewska 2010, Mukhopadhyay & Midha 2008). Another example of waterproof and water vapour permeable materials are hybrids combined both hydrophilic and microporous properties. The products with such membrane are coated with copolymers ensuring hydrophobic and hydrophilic properties. The first protective hydrophobic layer guarantees water resistance and adherence of the coating to the fabric, while the second one, hydrophilic membrane allows water vapour transport (Fig. 1). These two-component membranes have a number of advantages and disadvantages as well as faults related to the use of outerwear.

When considering its application, the finished product can be constructed as a two-layer laminate in which a membrane is bonded to a carrier fabric, while the lining is a separate part or joined with a membrane, and the outer layer is a separate part or forms a laminate composed of three parts bonded together (Mukhopadhyay and Midha 2008).

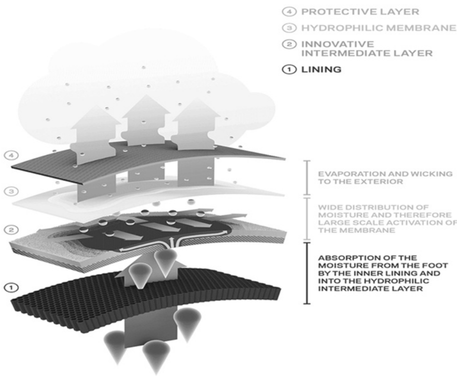

Figure 1. An example of a laminate structure

Source: http://www.sympatex.com/en/membrane/225/ properties, access: 15 March 2014.

Available on the polish market membrane materials used in functional outerwear

The microporous membrane under the trade name Gore-Tex® constructed by W.L. Gore & Associates was a very high achievement in the development of functional outerwear. Launching this product on the garment market is dated back to 1976. This membrane, despite of its presence on the market for almost 40 years, is still predominating on the outerwear market. It is made from polytetrafluoroethylene and is characterized by all the parameters ensuring wearer's physiological comfort when used in harsh field and weather conditions, i.e. high water resistance, breathability and wind tightness. It was possible to reach such parameters due to an appropriate two-layer membrane structure in which 1.4 billion pores per 1 cm^2. This allows moisture (sweat) to be easily removed from the near skin layer, while maintaining high water resistance, thus causing that these membranes are the most appreciated products among membranes used for functional outdoor garments. An additional advantage of this membrane is its lightweight, good mechanical properties and tensile strength and resistance to dirt and contaminants due to the use of an oil repellent substance. Another advantage of Gore-Tex® membrane is the use of Gore-Seam® tape for waterproof protection of seams and joints and waterproof zippers (Lankes 2011, Maklewska 2010, Wajda 2011, *Stencil Product Info* 2007). Due to its advantageous biophysical parameters, light weight and good mechanical strength, Gore-Tex® is used in such materials as: Gore-Tex® Paclite® Shell, Gore-Tex® Performance Shell, Gore-Tex® Pro, Gore-Tex® Soft Shell used for manufacturing jackets, trousers, gloves, caps and shoes. The most significant brands based on Gore-Tex® membrane include: The North Face, Mammut, Marmot, Salomon, Burton, Salewa and many others (http://www.gore-tex.pl/produkty/odziez/, access: 19 December 2013).

Another example of membranes used in functional outerwear is Sympatex, a hydrophilic transparent membrane developed by ENKA and currently manufactured by SympaTex® Technologies GmbH. This membrane is 5 - 25 µm thick. The manufacturer declares 100% water and wind resistance, optimal breathability and extension up to 300% (http://www.sympatex.com/en/membrane/ 225/properties, access: 15.03.2014). In addition it has a high mechanical strength and chemical resistance. The membrane can be used in outdoor garments in various ways. The first of them is laminating with a carrier fabric between the lining and outer material as an intermediate material. The next way is laminating the member with the lining or the outer material. The membrane is also widely used in any winter and extreme sports, hiking and tourism in a general understanding. The manufacturers ensure also the full greenness of the membrane that is 100% recyclable (www.sympatex.com, access: 19 December 2013).

Another example recognised on the garment market is Hydrotex, a water vapour permeable and waterproof membrane manufactured by the Polish company Alpinus. The principle of operation is the presence of ducts of appropriate size enabling removal of moisture in the form of water vapour at amounts of 4,000 g/m^2/24h, while maintaining wind and water up to 60 m water column. In addition this is a lightweight membrane of high mechanical strength. Hydrotex is manufactured by coating with foamed polyurethane creating a microporous structure (Maklewska 2010).

An interesting example of material used for manufacturing outside sports clothing are smart polymer membranes that show an ability to response to such environmental stimuli as moisture or temperature. With raising temperature the membrane responses with increasing intermolecular space, thus improving water vapour permeability. When temperature begins to drop, intermolecular space shrinks again and the moisture permeability decreases. Examples of such construction may be the membrane called DiAPLEX manufactured by Mitsubishi and Schoeller–c_change ™ (Śmiałkowska-Opałka 2009).

There are many other products of similar properties present on the outdoor garment market manufactured by using various materials and technologies. Many clothing brands posses their own exclusive membranes. For example, brand Marmot posses their own membrane MemBrain® or Jack Wolfskin – Texapore (*Jack Wolfskin brand catalogue* 2013, *Marmot brand catalogue* 2013).

Research objectives and description

The goal of this preliminary questionnaire survey was to learn customer's purchase preferences in sports outerwear and their knowledge of characteristic properties of such clothing.

The survey was carried out in 2013. The diagnostic survey was performed by using the questionnaire addressed to the staff (merchants, salesmen) of sports and outdoor garment stores. The questionnaires were delivered personally in part to the store personnel (retail trade networks) located in Krakow and environs, while the remaining questionnaires were distributed among the participants of training meetings organised for employees of the Intersport store network located in Poland courtesy of the trainer.

134 people participated in the survey. Among them there were 102 persons employed at the Intersport network stores in the following Polish cities: Białystok, Bielsko-Biała, Bydgoszcz, Bytom, Częstochowa, Gdańsk, Gdynia, Gorzów Wielkopolski, Kielce, Katowice, Kraków, Łódź, Opole, Płock, Poznań, Radom, Rzeszów, Szczecin, Warszawa, Wrocław and Zakopane. The remaining 32 people were employed in sports clothing stores in Krakow, including those offering one brand, a number of brands and outdoor clothing.

The questionnaire contained a number of closed and semi-open questions as well as those where the respondents were asked to specify the importance of given factors in a 5 point scale. The answers of the respondents provide information on the aim of outerwear purchasing and the importance of factor deciding on purchasing decision, consumer's knowledge and expectations related to performance parameters and its significance as well as product determining factors such as the degree to which potential purchasers are interested when visiting the store and other details deciding on the purchase of a product by a consumer.

Results and discussion

The first question deals with a motive for purchasing functional outerwear and intended use of such clothing. Among possible answers there were: climbing, and other extreme sports, such winters sports as skiing or snowboarding and other sports, tourism and casual clothes. The answers to these questions are presented in Figure 2.

Based on the answers gained from salesmen in the specialized sports garment stores one can conclude that consumers purchase function outerwear mainly for using it when practising winter sports (total number of answers "most often" and "often" was 80%). Another important use of this clothing is tourism and everyday wearing (casual clothing). Such answers to this question indicate that the consumers consider outerwear as a versatile product.

The next question verifying the consumer's preferences in functional outdoor clothing was aimed at the determination of factors deciding on product purchasing decisions. An analysis of the obtained results that according to the retail network employees the consumers pay most attention to product price: 40 % of respondents marked this factor as the “most important”, while almost 50% - as “important”. Only 1% of respondents indicated the price as a factor of “minor importance”. The factors highly appreciated by customers include also specific product properties and product functionality. According to respondents most of factors deciding on product purchase are assigned the rank “important”. Apart from the price, specific properties and multi-functionality they include: the brand, finishing quality and salesman’s opinion. However, a significant group of respondents indicated the salesman’s opinion and fashion as a “typical” factor. The answers to this question are detailed in Table 1.

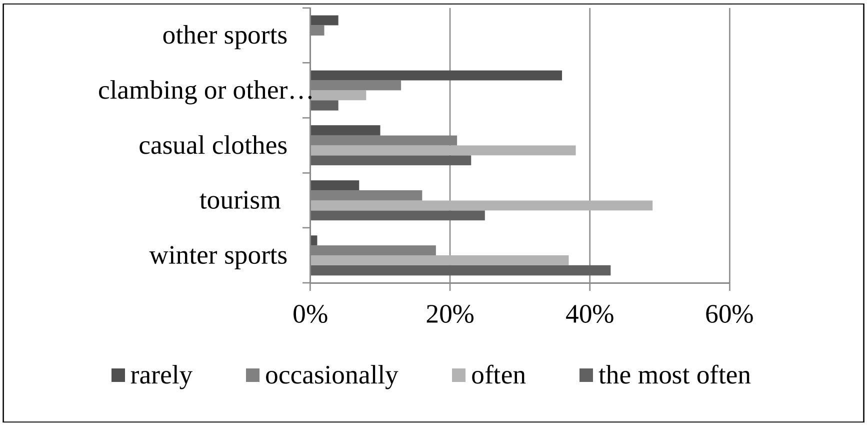

Figure 2. The aim of purchasing functional outerwear

Source: own research.

In the question on the basic knowledge of outerwear properties by customers decided to purchase it, the salesmen participating in the survey answered as follows:

– 2% of respondents declared that they well know both product types and properties;
– 61% of respondents answered that the store customers are rather well informed about the properties of outerwear of special purpose products;
– 36% of answers indicated “rather no”;
– 1% of respondents indicated that respondents have no knowledge on subject matters nor awareness of the existence of such product in the offer.

The next questionnaire question dealt with the way how the customers assess the importance of parameters characterizing the basic functional properties of functional outerwear, i.e. water resistance, water vapour permeability called breathability and wind resistance. The answers to this question are presented in Figure 3.

Based on these results one can conclude that the consumers pay most attention to waterproofing, then to breathability, and finally to wind tightness. As follows from the answers to the next questions the customers are most interested in products of water resistance of 6,000 up to 10,000 mm of water column and breathability within the range between 5,000 and 10,000 g/m^2/24h. This is undoubtedly connected with its price that is much higher and the customers are generally not interested in it.

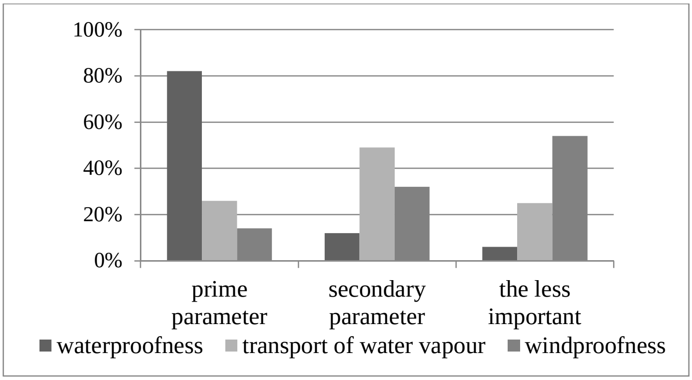

Figure 3. The importance of the parameters affecting physiological comfort of functional outer garment

Source: own research.

The last questionnaire question addressed to respondents was targeted at answer to the question whether the customers are interested in novelties offered on the outdoor clothing market regarding its properties, finishing or, for example, design solutions. Based on the obtained data (7% of answer "yes" and 52% - "rather yes") one can conclude that the customers demonstrate quite large interest in purchasing innovative products.

Summary

Despite of high prices there is a quite large number of people interested in purchasing outdoor clothing. In many stores up to 10 – 50 customers planning such purchase appear every day, but the number of customers depends on store location and availability of offered product range. The more renowned is a store for a wide variety of products, the more people appear in it.

According to employees of specialized sports and outdoor clothing stores, the vast majority of customers has sufficient knowledge about products they want to purchase. The salesmen think that in most cases the customers know product properties and its required parameters. This is probably connected with high prices of such products, thus inducing customers to learn more about such products and its properties, thus also make carefully considered purchasing decision.

When considering the factors deciding on customer's purchasing decisions in selecting a desired product one may conclude that the most important ones include the price, specific product properties and multi-functionality. Also such factors as the quality of product finishing, brand, fashion or colour play an important role.

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THE EFFECT OF SNS ATTITUDE TO INTERACTION THE MODERATING EFFECT OF TIE STRENGTH

Meng-Meng Song, Won-Kyum Kim

Department of Business Administration, PaiChai University
smmlgl@msn.com

Introduction

Recently, SNS and online communities via interaction and mutual collaboration have caught increasing interests of the researchers. One special feature born by the SNS is that they can reduce space and time limitations. At the same time, they can circulate information with parallel structure and 2-way confidential information. In this regard, SNUS, in one hand, reduce weaknesses carried by either offline or online method and implement these relations effectively, in the other hand. For this reason, awareness of SNS' role has been increased.

It has been studied that attitude by the users of mediate means of communication influences frequency of using that means of communication (9). This helps to establish the social networks, implementing the interaction. SNS users' attitude may produce influences on interaction via that SNS.

The better the tie becomes, the closer the relationship between 2 sides increase, relationship becomes more and more reliable (10). The more the degree of mutual concern increases, the more message recipient concentrate on improvement of understanding and effectiveness of the message (8). As a result, it has been expected that high mutual tie strength produces more useful information than low tie strength (10)

Due to the difference in social and cultural foundation between Korean and China, factors that influence mutual trust and interaction, respectively will be shown in a different way. Therefore, it is necessary to analyze and compare the degree of effects toward interaction and SNS users' attitude by means of tie strength.

In case we acknowledge the research objective according to the three most important values, it can be seen as follows. Firstly, analyze the effects of SNS users' attitude on the interaction. Secondly, examine the effect degree of

SNS users' attitude toward the interaction. Thirdly, verify the tie strength to find out whether the moderating effect exists as a unique value in the relations between interaction and SNS users' attitude in Korea and China.

Literature review and theories

Attitude on SNS and the Relationship of Interaction.

It has shown that SNS users' attitude on mediate means of communication, to some extent, affects frequency of usage (9). Accordingly, SNS have been established to enable users' interaction. It has been a fact that users' attitude and participation in interaction activities carried out via SNS, more or less, have influence on the real relationship between users themselves.

When looking at the result of increase and activation of SNS usage, it is necessary to focus on SNS users' attitude as the main factor that affects interaction via SNS. It is the convenience and close distance of using SNS in the mobile environment and appropriate attitude via SNS that increases interaction, thus, bringing in influence on the interpersonal relationship after usage. Regarding to communication experience, depending on each responder, interaction can be understood in different ways. Thus, interaction is not necessarily to be considered as an objective factor, instead, a subjective factor. Therefore, it can be seen that users' attitude produce some effects to interaction.

Hypothesis 1: Attitude toward SNS produces a significant (+) effect to interaction.

Tie strength

Tie strength is defined as a multi-dimensional concept representing the intensity bilateral interpersonal relationship in the social network circumstance. Also, it includes definitions of rigorousness, intimation, support and association (7). SNS arises from social relationship, and depending on the degree of intimation in the relationship between information sender and recipient, participation into SNS varies amongst users.

According to a recent domestic research, the result has shown that the pioneer who gathers members' opinions – linker bears some definite influence on sharing of information (2). Furthermore, reports have shown that people possessing higher tie strength tend to exchange information at a greater frequency than those under lower tie strength (6). When collecting notes on mentioned discussions, it is imaginable that attitudes on SNS among people of higher relevant relationships are producing greater impact to interactions in relationships of less relevance. As such, a Hypothesis can be:

Hypothesis 2: Impact level of attitude on SNS to interactions remains bigger in settings of higher relevant relationships than in lower ones.

3. A comparison of SNS culture between South Korea and China.

According to some researches by scholar Chae Myung Soo on cultural values effects in online orally transmitted settings among South Korean and Chinese people as the subject, it is proven that there exists a mutual value of national identities and individual culture (4)

The South Korean so-called “community/group culture” is considered to value consistency among its members for mutual interests, which means each individual somehow sacrifice their personal benefits. Conversely, reports have indicated an obvious opposite trend is preferred among the Chinese where parities among individuals are more appreciated; thus, joys and future-purposes are paid more attention to (3). These cultural differences are predicted to bring intimacy to the establishment and expansion of social networks.

Previously stated in a research by Koh Sang Min, in China, SNS users express their most recent psychological state besides its communication purposes. In addition, there is an increasing attention paid to contact functioning and maintaining among members of connected offline relationship on SNS (1). Compared to that among the South Korean people, it is likely to see that Chinese SNS users also take advantage of it as a tool to demonstrate their personal values in accordance to amplifying their connections to other people. As such, another Hypothesis on cultural differences between China and South Korea can be made forward:

Hypothesis 3: Influence from attitudes on SNS to interactions upon relevance level varied from South Korea to China.

Methodology

Research model:

In schematizing the study basing on the three Hypotheses aforesaid, a research model has been generated in Figure 1.

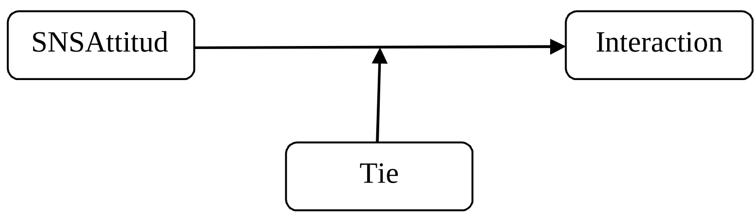

Figure 1. Research model

Sampling and data collection

The survey has been conducted among 260 people aging from 20 to 30 using SNS in China and South Korea in August 2013. A collection of 192 answer sheets in South Korea and 172 in China has been completed after excluding ineligible versions

Findings:

Sample features

Features upon population statistics of the sample surveyed in South Korea and China have been presented in Figure 1.

Table1. Demographic Characteristic of the Sample.

The sample	Measurement Items	Korean		Chinese	
		frequently	%	frequently	%
gender	Male	106	55.20	71	41.30
	female	86	44.80	101	58.70
age	Less than 20s	20	10.42	31	18.02
	20s~30s	163	84.50	140	84.40
	More than 40s	9	4.70	1	0.58
Purpose of the User	Personal Relations	41	21.35	37	21.52
	Self Expression	14	7.29	10	5.81
	Communication	54	28.13	22	12.79
	Interest	56	29.17	39	22.67
	Information Sharing	57	29.69	79	45.93
	Others	2	1.04	28	16.28

Hypothesis investigation

Regarding Hypothesis 1: A regression analysis conducted has shown that attitudes to SNS have significantly (+) impacted on interactions (Table 2).

Table2. Simple regression analysis on SNS Attitude and Interaction

Source of Variation	R^2	F	Beta	SE	T	Sig.
SNS attitude	.350	194.691	.591	.042	13.953	.000

Regarding Hypothesis 2: A regression analysis has been conducted and it has been identified that community/groups of strong tie strength (t=2.507) noticeably affect interactions, and community/groups of weak tie strength (t=1.521) produce little effects on interactions (Table 3).

Table3. The Analysis of the role of Tie strength (Moderating effect)

Source of Variation		R^2	F	Beta	T	Sig.
SNS attitude	High	.430	48.538	.256	2.507	.013**
	low	.220	15.320	.213	1.521	.130

*** P<0.001, ** P<0.05, * P<0.1

To examine whether there exists differences in attitudes on SNS between Chinese and South Korean people, T-testing has been conducted. Results are as presented in Table 4.

Table4. The Compare between Korean and Chinese of SNS attitude (T-verification)

Source of Variation		N	Means(SD)	T	P
SNS attitude	Korea	192	3.4045(0.722)	2.686**	.008
	China	172	3.6027(0.680)		

*** P<0.001, ** P<0.05, * P<0.1

After the differences between the two countries have been proven, a regression analysis has been conducted to investigate the accuracy of Hypothesis 3. As shown in the result, Chinese people's attitudes on SNS only produce effects on groups of strong tie strength; thus, a difference upon tie strength varies between the two countries. Attitude of SNS users in China influences on group interaction; therefore, there exists difference between the two countries according to Tie strength (Table 5).

Table5. The Multiple Regression Analysis on SNS Attitude to Interaction between Korean and Chinese (mediated by Tie Strength)

Source of Variation			R^2	F	Beta	T	Sig.
SNS attitude	Korea	High	.416	15.702	.317	1.157	.252
		low	.214	10.711	.165	1.256	.212
	China	High	.452	33.811	.189	2.119	.036**
		low	.210	3.638	.268	.773	.444

Dependent variable = Interaction
*** P<0.001, ** P<0.05, * P<0.1

Conclusion:

A summary of the findings:

The findings of the research are as follow: On selecting Hypothesis 1: Attitudes towards SNS are likely to affect interactions among users. As such, it can be concluded that those possessing positive impression on using SNS are producing more than interactions to other individuals such as communication, sharing and emotion exchange. The wide spreading of smart phones and the choices to SNS applications have led people to rely bigger on SNS as a communicative channel owing to their connections and interactions to other individuals.

Secondly, it has been verified that impact level of attitudes towards SNS to interactions varies upon tie strength. To this point, it can be concluded that a consistency has been followed in all mentioned researches (10)

On Hypothesis 3: differences between users in South Korea and China are showcased through moderating variables of tie strength. Interactions are not impacted upon moderating effects by attitudes towards SNS among South Korean users. In contrast, Chinese SNS users are suffering from the situation. It can also be concluded that groups of weak moderating effects are not likely to suffer from attitudes towards SNS to their interactions; contrasting to groups of strong moderating effect. Concerning Chinese SNS users, higher tie strength of the relationship tends to strengthen the connection and maintain the interactions more positively. The situation reverses to the South Korean: they tend to appreciate the conveyance of information and ideas that they are interested in on a personal basis. According to Hwang Seong Min (5), unlike South Korea, standards on level of Internet security distrust in China are stricter; therefore, Chinese SNS users rely on SNS only for intimate connection of high tie strength. Online information exchange, communication and affection expressing among users of low tie strength are limited.

Recommendations and limitations:

The study proposes an important recommendation for business managers relying on SNS network system as Facebook, which indicates the remarkable influence of positive attitude among SNS users to interactions provides them with understanding of network characterized SNS users. For instance, regarding SNS users possessing positive attitude, instead of expanding the number of members, it is more valuable to focus on enhancing the number of interacting activities in SNS.

Moreover, the study has investigated the significance of tie strength upon moderating effects among interactions and attitudes towards using SNS. To reinforce interactions among SNS users, it is crucial to reinforce emotional connection or intimacy among users. This has led to the needs of an emotional marketing strategy to enhance positive attitudes among users.

The study, however, remains limited; thus, opens to future research. On measuring interactions among SNS users, there should be a strategic approach developed to action viewpoints among users in a more specific and practical manner. Instead of conducting researches on interactions of attitudes towards SNS, it is more necessary to study on how changing users' relationships are after their uses of SNS.

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THE EFFECTS OF EMPLOYEES' SATISFACTION GROWTH ON TOURISTS

Olimpia State, Maria Ioncică, Delia Popescu, Irina Mişoc

Faculty of Commerce,Academy of Economic Studies of Bucharest,
state.olimpia@com.ase.ro

Introduction

The service-providing companies focus their attention on the quality of services, in order to increase their market share and profit-margin. In order to achieve a certain level of quality, an important part is held by the increase of employees' satisfaction. The first step in achieving a certain level of satisfaction is to be familiar with the motivation's sources.

The purpose of this article is to define the concept of employees' satisfaction, to identify the factors that influence satisfaction, to study the relationship between motivation and satisfaction, to point out the main methods used to reach the quality in services in general, and the quality in tourism services in particular.

The last part of this article is dedicated to a case study, whose main objective is to estimate the general level of employees' satisfaction in a company that offers tourism services and to come up with ideeas to increase the level of satisfaction and the number of tourists.

The specialized literature shows a large amount of interest towards the concept of quality in services, which was debated in many articles, written by: (Ioncică, 2006), (Păunescu, 2009), (Plumb, Zamfir, 2009), (Dinu, 2009), (Minciu, 2004), (State, Istudor, 2009), (Teodorescu, Stăncioiu, Mitu, 2009), (Cristea, 2009). Also, the following specialists pay attention to concepts such as employee's motivation and satisfaction: Schreiber (1952), De Witt(1972), Weintraub(1973), (Lazea, 2012), (Drăgan,2008).

Employees' satisfaction and the determining factors that influence it

It is easily observed that a big part of our lives is dedicated to our jobs or our careers, thus the work satisfaction concept plays a fundamental role in our lives, individually and collectively.

Employment Satisfaction is a positive feeling that the employee is experiences vis-a-vis his/her work. Employee's attitude vis-a-vis his job directly influences his work performance, and implicitly, the organization's outcomes. If the employee exhibits high level of job satisfaction, this will determine good work outcomes, adding value to the organization's economic status.

Employment Satisfaction or Satisfaction in Employment, expressed in simple terms, represents how pleased the employees are of their work. Employment Satisfaction is usually measured with the aid of questionnaires/surveys. With these questionnaires/surveys the following data are collected; the level of compensation/pay, the work volume, the employee's perception of management, the work flexibility, team work, the communication resources, the responsibility level, etc. (Heathfield, 2012**)**

These aspects play an important role for companies that plan to keep their employees happy, and reduce the employment turnover rate.

Employment Satisfaction and ***Employees Engagement*** appear to be two similar concepts, yet there are differences between the two.

Employment Satisfaction represent the level at which the employees are content and happy with their jobs and their workplace (What is Employee Satisfaction?)

Employees Engagement represent the level at which the employees are passionate about their work, are committed to the organization's mission, and put additional effort in their jobs (or in layman terms, "they go the extra mile").

The engaged-employees are different than the average employees, by being motivated to work more than the minimum necessary to hold on their jobs. By comparison, satisfied-employees are happy and content about the status quo. Therefore, their work effort is minimal, as long as they preserve their jobs.

From the perspective of ***Employment Satisfaction*** concept, a current problem plaguing the service industry is the ***unusual high rate of employment turnover***.

There are employees that never feel satisfied in their jobs/careers, even though they change their employment (different organizations), their career pats, or their profession, invariably claiming job/career dissatisfaction. There are employees that are preoccupied over being ill suited for their professional field, leading to a poor professional efficiency/performance (Lazea, 2012).

Thus, employment satisfaction is directly correlated to the professional performance, since a happy employee is a performing/efficient employee. Consequently, there is a correlation between employment dissatisfaction and absenteeism, as dissatisfied employees claim, unusually often, physical and/or psychological tiredness, and tend to miss work quite frequently (Lazea, 2012).

The shortcoming associated with the concept "Employment Satisfaction" is that is not focused on characteristics significant to the most talented employees, instead it is geared on preserving an optimal level of "content and happiness" of every employee, Thus, the organization's employees are "content and happy", with minimum work and effort to preserve their employment. These employees will never leave the organization, yet they will never bring a substantial contribution to the wealth and health of the organization.

An organization could make a wrong decision, by channeling its resources, and focusing on increasing the employment satisfaction of its employees who do not generate economic value, loosing this way its most talented employees.

A study done by ***TNS for the Conference Board***, in 2009, on a sample of 5000 US employees, concluded that 45% from those interviewed stated that they are happy in their work place, as compared with 61% in a similar study done in 1987 (the firs year that this study was done). (Heathfield, 2012)

As a general trend, it is observed a substantial decline in the ratio of employees happy in their workplace, with those most dissatisfied of young age, below 25 years old (37%), and those most happy in their workplace of midleage, between 25 and 34 years old (47%).

It is predicted an accelerated trend of decreasing number of employees happy in their workplace, as the economic crisis continues.

Due to jobs scarcity, many working-age people will settle for employment beneath their qualifications and lower wages. Thus, they will never be content and happy about their workplace, and will feel professionally dissatisfied. Under these circumstances, the sentiment of dissatisfaction will take hold rather quickly, and these employees would perform poorly, with negative effects on the organization's financial status.

Employment Satisfaction is achieved based on a multitude of dimensions/factors. Throughout time, series of research were focused on the dimensions/factors generating the employment satisfaction/dissatisfaction, as well as the contributing level of each dimension/factor to the employment satisfaction, the type and level of employment satisfaction/dissatisfaction (Micle, 2009).

The studies conducted by some researchers, i.e., Schreiber (1952), De Witt(1972), Weintraub(1973, p. 296), have identified as the primary sources of professional satisfaction the following dimensions/factors: ***the type of work, the direct supervisory time, the attitude of organization's leadership,***

the relationship between colleagues at work, salary and promotion opportunities.

A study conducted by the ***Society for Management and Human Resources***, in 2009, has considered 24 factors directly linked to the Employment Satisfaction of the workforce.

The experts in Human Resources have concluded, after the study was completed, that most important factors that influence the workforce's Employment Satisfaction are:

- job security
- employee-supervisor interaction
- benefits
- top management communication with their employees
- opportunities for applying one's knowledge and skills
- rewarding performance of employees by the management
- specific job training
- safety in the workplace
- salary and bonuses
- corporate culture.

Motivation-Employment Satisfaction Relationship

Employees' motivation represents an important factor in determining individual professional performance.

Three types of motivation are identified: ***internal motivation*** determined by work well done, collegial atmosphere, direct collaboration with the immediate supervisor; ***positive external motivation*** determined by financial gain, prestige and respect from coworkers, solving social problems; ***negative external motivation*** referring to avoiding critiques and sanctions, the prevention of unemployment.

The internal motivation stimulates professionalism and the awareness of social responsibility, it stimulates positive social relationships, it is an important source of employment satisfaction, as compared to the external motivation (positive and/or negative) where the work quality performance is unknown, due to individualism orientation that causes mistrust and a passive attitude toward work. This fact leads to negative phenomena. Consequently, it is recommended a large internal motivation and a small external motivation.

In the context of productive work, motivation can be classified as the degree of employee's availability to be involved in productive/creative work in the workplace, and to exhibit a sustained effort to attain set professional objectives at the personal level or at the organization level. Therefore, the professional motivation could be considered as representing an outcome of the interdependent relationship between employee and the organization, rather than a result of all individual motivations (Drăgan, Burghelea, 2008).

An important role in the process of motivating an individual, to achieve higher work efficiency, is the set of objectives that the individual sets for him/her self, thus influencing his/her work performance and behavior. Therefore, those who set difficult to achieve objectives for themselves, would experience higher work efficiency, as compared to those who set easy to achieve objectives, and consequently exhibit low work efficiency.

The status of satisfaction/dissatisfaction is an indicator of motivation, its efficient/inefficient implementation; an individual is pleased/satisfied when he/she has achieved his/her goal, and dissatisfied when he/she didn't achieve his/her goal (Drăgan, Burghelea, 2008).

The motivation and the satisfaction act as cause-effect with dual action. Usually, the motivation acts as the cause for satisfaction. In some cases, intense satisfaction would become a motivational source. Both, satisfaction and motivation are linked to the work performance that they are influencing in a positive or negative way.

Lack of motivation and satisfaction leads to dramatic decrease in work performance. The employees could be stabile (low job turnover) but not dedicated and faithful, if the organization doesn't find efficient means to motivate its employees. The discontent generated by the lack of employment satisfaction can be generalized to a large group, and this discontent could originate from the lack of interest the managers have for their employees and for their needs.

These situations prompt the Human resources Department to find solutions for the development of new programs to enrich and diversify the workplace.

The evaluation of motivation and/or satisfaction in the workplace is done with the aid of questionnaires/surveys S.I.D.O., namely Standardized Instruments for Diagnosis of Organizations, and by applying the Absolute Data Evaluation Flowchart (the interpretation of A.D.E.F.): the answers from a questionnaire/survey are weighted from 1 to 5. An evaluation scale is constructed, divided in several sections, each pertaining to a particular situation, and each section is allocated a qualitative rating, such as: under 3 – severe situation, between 3 and 4 – normal situation, above 4 – very good situation. This way, it is easy to identify the contributing factors to dissatisfaction, helping to enunciate the possible corrective solutions, as well as determine the contributing factors that generate a high level of satisfaction.

From previous research, it was concluded that the most important indicators considered in the process of evaluating work satisfaction are:

- The working group/team
- The immediate supervisor
- The profession
- The organization
- Opportunities for promotion
- Salary/compensation
- The details of the job
- Existing facilities

Quality in the Area/Field of Service

In the field of service, quality usually involves a comparison between the services done and the service expected by the customer. Therefore, in order to appreciate the quality of a service, the customer compares what he/she expects from the particular service based on his/her experience during the service. Whenever the expectations are met, either objectively or subjectively, the service is perceived as of high quality (Ioncică, 2006).

Of primary concern, for the management of the service industry, is conformity with the quality standards, because the customers' quality expectations are increasingly high and the most important approach for an organization to distinguish itself from similar organizations, is the high quality level of the services offered.

This is done through knowledge (using diverse information technology systems), exchanged of ideas and information, from within the organization and from external partners, and through continuous improvement of employees' qualification.

Regarding the continuous improvement of employees' qualification, those organizations choosing to invest in the professional and personal development of their employees, are rewarded with better economic performances on a long term. In turn their employees will feel appreciated and valuable to the organization; therefore the job satisfaction will increase, and the employees will make an effort to achieve maximum work efficiency in the field of service. Concomitantly, those employees who would feel better trained and better informed will exhibit an attitude of self-esteem and optimism will be kind and attentive to their customers. In short, they will offer a pleasant experience to their customers, motivating them to make use of the organization's services in the future.

In the customer's service evaluation, an important role is held by the set of perceptions (a study or a report well and clean written makes a good impression, being an added appreciation of the content, and vice versa), as well as the circumstances under which the services were rendered (for example, under "normal" circumstances, hotel customers appreciate characteristics such as: price, comfort, cleanliness, etc; if tourists/hikers find themselves in difficulty in an isolated region, it is most important to find shelter) (Ioncică, 2006).

The interest taken on the services quality topic, is reflected in the high number of studies conducted on this subject.

Most important aspects analyzed are: the design of a conceptual model that emphasizes the correlation between the critical components of the managerial system in the field of services (Păunescu, 2009), the identification of logical connections existing between the changes occurring in the society, in services and in the quality management of services and the modality in which knowledge based economy influences the quality management in service organizations (Plumb, Zamfir, 2009), proposing solutions for solving the problem of poor quality services in Romania through the implementation of a quality management service at the organization level (Dinu, 2009).

Regarding the tourism industry, "…the services in the tourism industry are inseparable from the person rendering the service, services that are concluded once the person stops providing the service. From this characteristic, a series of particularities are generated for the tourism organization and related services implementation. Thus, tourism commerce implies a direct link between producer/manufacturer, service provider and consumer-tourist… However, being directly linked to the presence and/or participation of the service provider/tourism-employee, the service quality is determined by the professional level attained by the service provider/tourism-employee, his/her professionalism and his honesty in the workplace. Therefore, a constant improvement of qualification and of professional ethics for the personnel in the tourism industry represents a fundamental requirement for outstanding services characterized by high quality" (Minciu, 2004).

The most important aspects of the specialists ' concerns on studying quality in the tourism services are: determining the correlation concept-methodology between the "concept of quality management in the service-industry", and the primary instrument of marketing used to evaluate consumer satisfaction in the tourism industry (Teodorescu, Stăncioiu, Mitu, 2009), the analysis on the quality perceived by the tourists of a hotel from Bucharest-Romania, using the model SERVQUAL (State, Istudor, 2009), the influence of tourist on the hospitality-services and tourism-products (through the quality control function) (Vasile, 2009), the resurrection of the Romanian tourism industry by creating a legislative-institutional framework and a technical instrument that would promote a diverse line of tourism services; hotels and food-courts/restaurants (Cristea, 2009).

Employees' motivation determines the quality of services, because motivated employees are embolden to be dedicated to their jobs, and to achieve good work results.

In this context, our study is focused on emphasizing the correlation between employment satisfaction and the tourism-service quality, through a case study done for a service-provider company in the tourism industry.

CASE STUDY – Determining the general satisfaction level for the employees of a service-provider company in the tourism industry

In this step, it will be determined the level of job satisfaction for the employees working on a project related to the tourism industry for company X. Company X is an intermediate between the provider of tourism-services and consumers. The service provider is a tourism club, rated at luxury level that offers its members tourism packages at promotional prices, with lodging at 4 or 5-star hotels (and promotions up to 70%). The customers have the opportunity to choose tourist attraction places and packages well suited for the most demanding tourists. Meanwhile, the vacation packages can be personalized based on each customer's preference.

For this project, 30 people are employed, as 60% full-time and 40% part-time (4 or 6 working hours daily), mainly females (95%). Already a representative group of 17 people was chosen (16 females and a male), of ages ranging between 20 and 32 years old, all college graduates.

Methodology: Data collection is done via a questionnaire (with 31 questions) focused on employment satisfaction, through the 8 criteria for evaluating the level of job satisfaction (the working group/team, the immediate supervisor, the profession, the organization, opportunities for promotion, salary/compensation, the details of the job, existing facilities). Data analysis was done employing SEDA tools. A scale with five points (from one to five) was used for evaluating the 8 criteria of employees' satisfaction. 1 point represent the fact that the respondent is very dissatisfied, 2 points – the respondent is dissatisfied, 3 points – partially satisfied, 4 point – satisfied, 5 points – very satisfied.

In order to keep all data in confidentiality, the respondents were requested not to provide their names on the forms. After, the information was collected, it was centralised and median employees' satisfaction level has been calculated for each analyzed criteria, in order to apreciate the general level of employees' satisfaction.

Results and discussions

The result of the study, presented in Table 1 and Figure 1, demonstrates that the employees who work for the X project are partly satisfied, or not satisfied with the profession; they consider, as they perceive that the profession is below their education level and their work experience and it doesn't offer them the possibility to specialize in a certain field. Additionally, the employees are disappointed of the salary level, and consider themselves not paid according to their performance, while most employees consider that there are few opportunities for promotion, with no fairness in the process.

There are too few social facilities, the company only offers meal tickets and the deduction for transportation for the employees who finish work at late hours in the night.

The employees are quite satisfied of their supervisors and the atmosphere in the working group.

Table 1. The eight criteria used in measuring employees'satisfaction

Current No	Criteria	Value
1.	Working group/team	3,46
2.	The immediate supervisor	3,41
3.	The profession	2,56
4.	The organization	3,17
5.	Opportunities for promotion	2,82
6.	Salary/compensation	2,77
7.	The details of the job	3,05
8.	Existing facilities	2,76

Source: table made by the author

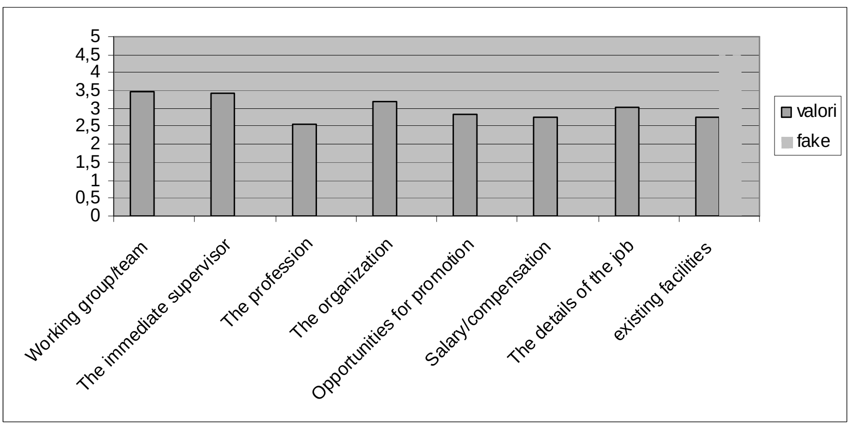

Figure 1. The level of satisfaction's criteria

Source: table made by the author

Concerning the general level of satisfaction in X company, it can be noticed that in general, the employees are partly satisfied; in some aspects they are satisfied, other aspects should be improved.

All the same, because of low salaries and compensations and of the few chances of promotions and development, the staff fluctuation is high (proximate 10% of employees abdicate every six months). This have a negative impact on economic results and on the quality of services offered. The employees who are familiar with the procedures leave the organization, and it will take time until the new employees become familiar with the procedures, the clients, the suppliers, the colleagues and bosses. At the begining, the new employees make mistakes, and this aspect has direct impact on clients, as this will lead to a decrease in the client's satisfaction, and in the worst case scenario, the clients will look for another tourism services provider. Meanwhile, the costs generated by the staff fluctaution are high, and are absorbed by the organization/tourim service provider.

In order to solve these problems, it is necessary to apply methods for raising the level of employees' satisfaction.

The organisation X should pay attention to employees' loyalty, should treat its employees as business partners, and should consult them when the decisions about the efficiency of their work are taken. In this way, the employees will feel the usefulness of their work and they will be more polite with the clients.

The company should offer satisfying salaries to its employees, so that they would be motivated to remain with the company. Starting with november 2012, to reduce the costs related to the staff, the company has decided not to increase anymore the salary based on the time spent in the company, and to remain at the same level. Before november 2012, the salary has been increasing with a certain percentage every six months until two years seniority in the organization. In this way, the employees had no intention to leave the company. Now, even if some of them have good performances, after one year the salary is still the same, despite the growing inflation. As a result, many of them prefer to work for other companies which offer better salaries, and considering the low number of social facilities. Therefore, an increase in salary from time to time, for best-performing employees (according to the reviews from clients), will motivate all the employees to work better.

The clients' feedback could be perceived as a recognition and appreciation for their work. On the website will be introduced a section in which the clients should express their opinions regarding the services rendered by the organization. This way, the employees could improve the way they work with minimal delays.

Regarding the promotions; the organisation prefers to bring supervisors from other projects, who are perceived as "outsiders" by the employees, questioning the new supervisors’ competence and intentions. A better solution would be to promote the emplyoees who have the best results on the project, since they are familiar with the procedures, the suppliers, the clients and the other employees. The competition between colleagues is encouraged and every employee will make an extra effort to get a promotion that will bring her/him a salary rise and a social recognition from the colleagues.

The management is being aware of the lack in social facilities and take into consideration the improvement of this aspect. Bearing in mind that 95% of the employees are young women up to 35 years, and now 25% of them are pregnant, in the future, a nursery will be built in the company and the expenses will be 50% supported by it. It is estimated that the female employees will spend more time at work and will see their children more often.

Conclusions

The X company' employees are partially satisfied, due to low salaries and inadequate compensation system, due to the lack of social facilities (canteens, nurseries for children, deductions for transportation) and lack of opportunities for promotion.

By raising the salaries depending on the performance, all the employees will be motivated to work better and to have much more satisfied clients.

By raising the perspectives of promoting and the social facilities, it will increase the employees' satisfaction.

All of these will lead to an improvement of the tourism services offered to the client, alongside an increase in the employees' aknowledgement level and the improvement of the tourist-service worker's behaviour. Consequently, the tourism services companies should focus their attention on their employees and they should invest more resources in them.

The employees are the ones who bring clients and who are responsible for their customer retention. Accordingly, it is essential for every service company to keep a high level of employees' satisfaction.

In order to increase the general level of employees' satisfaction, as we have noticed it is important that the companies should pay attention to the 8 satisfaction indicators: the working group/team, the immediate supervisor, the profession, the organization, opportunities for promotion, salary/compensation, the details of the job, the existing facilities.

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DEMYSTIFYING THE ORGANIC PRODUCT: FROM POSITIVE IMAGE TO DECEPTIVE REALITY

Lelia Voinea, Dorin Vicenţiu Popescu, Mihai Teodor Negrea

Consumer Sciences and Quality Management Department,
Faculty of Commerce,
The Bucharest University of Economic Studies, Business,
lelia.voinea@gmail.com

Introduction

For several decades now, organic farming represents an area of great interest, given the benefits it promotes: a healthy agro-ecosystem, biodiversity, the soil's biological activity, preservation of environment, in general, and of rural landscapes in particular. In addition, organic products, which are obtained under very strictly regulated conditions regarding the prohibition of genetically modified organisms, chemical pesticides and fertilizers or antibiotics, contribute to the development of a harmonious lifestyle based on a nutritionally balanced diet.

In this context, there is an increase in the importance given to organic farming in the European Union – which, through its support, has set a priority in the Common Agricultural Policy, as reflected by increasing subsidies for this type of economic activity - and in Romania, where we see that the area under cultivation and the trade in organic products is constantly expanding, given the export and competitive advantages that they offer businesses.

The start hypothesis of the research considers the existence, on the Romanian market, of organic products from different groups of food products - bakery, confectionery, pastries, dairy products etc., all industrially produced - with nutritional content that is inappropriate for a balanced diet, as in their chemical composition there are substances with a negative impact on consumer health (salt, added sugar, saturated fats) in the case of an unbalanced food diet.

The SAIN-LIM method is used in our research for establishing the nutritional profile of organic products with potential health risk to consumers, randomly selected from the internal network of hypermarkets. The SAIN-LIM method is based on two indicators: SAIN and LIM. The SAIN indicator summarizes the favourable aspects of the food product and highlights the average coverage percentage of the recommended daily allowance for the essential nutrients with beneficial health impact, the so-called positive nutrients (proteins, fibres, vitamins, minerals, polyunsaturated fatty acids). The LIM indicator summarizes the unfavourable aspects of the food product and is based on compounds that have to be included the human diet in limited quantities (saturated fat, added sugars, sodium and salt).

The expected results aim to accurately prove the fact that in a number of food products, obtained and marketed under the organic terminology in Romania, there are chemical components that, although not predominant in terms of their participation in defining the nutritional profile of the products concerned, can however constitute potential risk factors for the consumers' health.

We propose that these results should be harnessed for further broader clarifications regarding the support of consumer education activities carried out by specialized governmental structures and NGOs, including joining them in promoting legislative initiatives regarding the presence of graphic warning labels on organic products that would enable informed consumers to choose such products, taking into account both the health benefits and potential health risks that some of them can induce.

Considerations on the quality and sanogenetic value of organic food products

To refer to food produced without using synthetic chemicals (fertilizers, soil, feed ingredients and additives for food preparation) is most often used the phrase "green product" and also "organic product" or "biological product". Therefore, differences between the terms "eco", "bio", "organic", "ecological" are just terminological. On a global scale, the preference for one of the synonymously terms imposed its prevalence in the economical practice and in common vocabulary. Thus, in Germany, Spain, Denmark and Romania is preferred the term "ecological", in France, Italy, Portugal and the Netherlands is the most commonly used term "biological", while in Britain and the U.S. the term "organic".

Organic foods are products exclusively natural, which fully comply with biological processes, being certified by an approved institute to carry the label "organic", indicating that they were obtained according to recognized standards for organic farming (Dima et al., 2006).

As defined by FAO (Food and Agriculture Organization), cited by Viorel et al. (2004), organic farming is "a holistic production management system that promotes agro-ecosystem health, biodiversity, biological cycles and soil biological activity.

In another sense (www.onpterbv.ro), organic farming is a natural system for plant cultivation, animal husbandry and food production. Therefore, it includes all stages of production, processing and distribution: primary production of an organic product, storage, processing, transport, sale or supply to the final consumer as well as labelling, advertising, import, export and subcontracting.

The objectives of organic agriculture are (www.madr.ro):

- ensuring food products with a balanced nutritional profile, thus healthy for the body and safe for consumption;
- development of consumer confidence and protecting their legitimate interests;
- job creation and operation of fair competition in the food market;
- preservation of the environment in general, and of rural landscapes in particular.

To achieve these goals a set of measures is required, such as: implementing a sustainable management system for agriculture, manufacturing products of superior nutritional quality and producing a wide variety of processed food products and other agricultural products in accordance with the requirements of consumers for goods made by using processes that do not harm the environment, human health, respectively, plant health and animal welfare (EC Regulation 834/2007 on organic production and labelling of organic products).

The importance of organic agriculture is also reflected by the fact that it has become one of the priority objectives of the EU Common Agricultural Policy, a reality demonstrated by increasing subsidies, both from European funds and the national.

We note, however, that the subsidy for agricultural area will be restricted by strict environmental performance standards contained in the so-called "greening measures" (30% of direct payments will be subject to compliance with environmental friendly agricultural practices: crop diversification, maintaining permanent grasslands and conservation of 5-7% ecological focus areas). In addition, at least 30% of the money allocated to rural development programs will have to be allocated to agro-environment measures supporting organic agriculture, namely supporting investment projects related to the development of environmental innovation (www.capital.ro).

In Romania, in recent years, organic farming has experienced a sustained growth rate as reflected in the number of operators working in the system, which exceeded 26.000, and the expansion of areas covered by organic crops, encompassing approximately 450,000 hectares. Most of the production, over 90%, is exported to countries like Germany, Italy, Spain, UK and the Nordic countries. Among the products with the largest share of exports are honey, oil products, fruits, rapeseed and sunflower oil etc. Although Romanian demand of organic products is not very high, recorded sales have exceeded 80 million Euro lately, especially through the network of hypermarkets (www.bio-Romania.org).

Using as criteria the origin and state of technological processing, organic foods can be grouped as follows:

- primary unprocessed plant products of plant origin;
- unprocessed animal products;
- processed products for human consumption, prepared from one or more ingredients of plant origin and / or animal origin.

In the USA, standards have been introduced for the production and manipulation of biological agricultural products, which are applicable to the entire logistic chain, from the farmer to the consumer. These standards are also applicable for the intermediary operations. According to these standards, four categories of biological products are determined (Diaconescu, 2004; Dima et al., 2006):

- 100% biological, representing the products that do not contain but biologically produced ingredients;
- biological, representing the products that contain 95% biologically produced ingredients (referred to the product's weight);
- products prepared from biological ingredients, representing the products that contain more than 70% biological ingredients, but maximum three biologically produced components can be specified on the main wrapping label;
- transformed products that contain less than 70% biologically produced ingredients, and the "biologic" term cannot be written on the main wrapping label, but in the ingredients' list on the wrapping the components that are biologically produced can be specified.

The transition from a conventional agriculture to an organic one, the two being in deep antithesis with one another, is subject to completing a conversion period (which can last from a few weeks in birds producing eggs, to a few years for perennial crops and plantations), and requires strict compliance with the rules and principles laid down in national and EU laws. At the same time, throughout the food chain approved inspection and certification bodies exercise their competences. Only after completing these steps, manufacturers can obtain a certificate of organic product and the right to use the organic logo.

In order to guarantee the organic origin of a food product several symbols were used at both Community and national level.

The first EU organic symbol (Figure 1) was launched in the late 1990s, its use being voluntary.

In order to give consumers confidence in the origin and quality of foods and beverages, as well as to guarantee compliance with Regulation (EC) no. 834/2007 on organic production and labeling of organic products, from 1 July 2010, the European Union uses the "Euro-leaf" symbol (Figure 2), which certifies organic products.

Figure 1. Voluntary EU organic logo

Source: http://ec.europa.eu/agriculture/organic/eu-policy/logo_ro

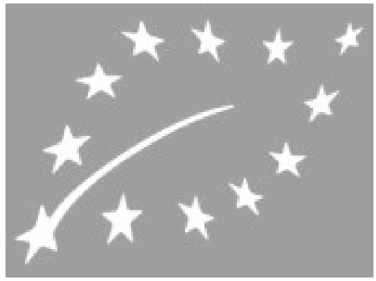

Figure 2. New mandatorz EU organic logo

Source: http://ec.europa.eu/agriculture/organic/eu-policy/logo_ro

In accordance with Regulation (EU) no. 271/2010 on organic production logo of the European Union, the new symbol is mandatory for all pre-packaged organic food products in the European Union. It can also be used voluntarily for organic products manufactured within the EU, but are not prepackaged, or for all organic products imported from third countries (http://ec.europa.eu/agriculture/organic/eu-policy/logo_ro).

The Community logo for organic production may be associated with national logos. In Romania, for example, the specific national logo for organic products is "**ae**" (Figure 3), which, if used with the Community logo, has the purpose of identifying products manufactured in accordance with organic production methods and ensuring that they are certified organic by an inspection and certification body accredited by the Ministry of Agriculture. In addition to logos, the label applied to an organic product should include a compulsory reference to organic production, as well as the name and code of the inspection and certification body that performed the inspection and issued the organic product certificate (http://www.madr.ro/en/agriculture-ecologica.html).

Because organic food products must be obtained by strictly applying the principles of organic agriculture, these products have authentic and attractive taste, texture and features.

Thus, in the production stage at the farm is prohibited the using of genetically modified organisms, chemical pesticides (herbicides, fungicides, etc.), chemical fertilizers or antibiotics. High quality products are obtained only through multi-annual crop rotation, by providing plants and animals the needing time to reach maturity, and by using species and varieties of native plants and animals. To ensure a high level of quality during processing is strictly prohibited to use GMOs, and there are severe restrictions on the use of synthetic food additives and processing additional substances (http://ec.europa.eu).

Figure 3. The national "ae" logo for organic products

Source: http://www.madr.ro/ro/agricultura-ecologica.html

Experimental research has shown that organic foods have a high content of vitamins, minerals, essential fatty acids and antioxidants, contributing primarily to strengthening the immune system (Pamfilie and Voinea, 2009) (Table 1). For example, recent comparative studies conducted on organic/non-organic products, in the case of vegetables, fruits and cereals, revealed that in the case of organic farming, the nutritional content is higher by 27% in terms of vitamin C, 21% for iron, 30% for magnesium and 14% for phosphorus (http://www.prodietabio.ro/). In addition, organic meat, dairy and eggs contain more essential fatty acids while goat cheeses have more calcium. Also, organic foodstuff consumers are not exposed to the risk of food allergies, as for many conventional products. In addition, the absence of nitrates in organic foodstuff helps reduce the risk of cancer (Cottingham and Winkler, 2007).

Considering all these nutritional benefits of organic products compared to conventional products, the positive image of these foods among consumers is explained as well as the expanding organic trend in recent years, as evidenced by the numerous studies conducted worldwide (Finch, 2005; Cottingham and Winkler, 2007; Bellows, 2008; Zepeda and Deal, 2009). This positive image is reinforced by the belief of many consumers, especially the female audience, that organic food contributes not only health maintaining, but also silhouette maintaining.

Table 1. Special nutritional characteristics of organic food products

Organically produced food products	Special nutritional characteristics
Eggs	Eggs from poultry that have not been fed with genetically modified fodder or with synthesis vitamins has a stronger shell and a higher content of vitamins.
Milk	Milk from animals bred in organic farms (where the natural grass represents 84% of cows' feed) has a conjugated linoleic acid concentration, which helps prevent the appearance of cancer, 60% higher than in the normal milk. In addition, the omega-3 fat acids and the vitamin E concentrations (also, substances with an important role in reducing the cancer and heart diseases appearance risks) are higher.
Meat	Meat from grass-fed animals has a higher content of essential fatty acids Omega-3 type and has a lower risk of contamination with Escherichia Coli.
Oil	The ecologic oil from cold presses corm germs is assimilated by the organism in a 99% proportion, being twice richer in vitamins A, D and E than any other refined oil type, including the olive oil.
Fruits	Organic fruits reduce the risk associated with pesticides, and if consumed in high season their sensory characteristics are better compared to those which ripen during transport.

Source: L.Voinea, Aliment ecologic versus aliment convenţional – consideraţii privind calitatea şi inocuitatea, Revista Calitatea-Acces la succes, anul 11, nr. 12/2010, pp. 54-58

Evaluating the nutritional profile using the SAIN–LIM method

Although numerous experimental studies have highlighted the nutritional and higher sanogenetic potential of organic foods, consumers should note that some processed organic products (especially those in the category of snacks, confectionery and industrial pastries), like their conventional equivalents can generate nutritional imbalances if consumed frequently and in large quantities. These imbalances are the result of high amounts of added sugars, salt and saturated fats, contained by some processed organic foods.

To demonstrate the risk of nutritional imbalance to which some consumers that overestimate the nutritional and sanogenetic virtues of organic food may be exposed to, we selected several organic food products on the Romanian market and we evaluated their nutritional profile, using the SAIN-LIM method.

The SAIN –LIM method was developed by a team from the INRA/INSERM Joint Research Unit on Human Nutrition in Marseille and released in 2009 by the French Food Standard Agency, is based on two indicators (SAIN and LIM).

The SAIN indicator summarizes the favourable aspects of foodstuff and estimate the average percentage of the recommended daily intake for essential nutrients with benefit on health, so called positive nutrients (proteins, fibres, vitamins, minerals, unsaturated fatty acids) and it is calculated using the formula (Darmon et al., 2009; Achir et al., 2011):

$$\mathrm{SAIN} = \frac{\frac{\sum_{i=1}^{n} \frac{\mathrm{Nut}_i}{\mathrm{RV}_i}}{n} \times 100}{E} \times 100$$

where: Nut_i is the quantity of positive nutrient in 100 g of foodstuff, RV_i is the daily recommended value for nutrient i, n is the number of positive nutrients and E is the energy content of 100 g of foodstuff (in kcal/100 g).

The acceptability threshold: SAIN>5

The LIM indicator summarizes the adverse aspects of food and is based on nutrients that must be limited (saturated fatty acids, added sugars, sodium or salt) and it is calculated using the formula (Achir et al. 2011):

$$\mathrm{LIM} = \frac{\sum_{j=1}^{3} \frac{\mathrm{Nut}_j}{\mathrm{MRV}_j}}{3} \times 100$$

where: Nut_j is the content of negative nutrient in 100 g of foodstuff, and MRV_j is the daily maximal recommended value for nutrient j.

The acceptability threshold: LIM<7,5.

In order to establish the nutritional profile of a foodstuff, the values of SAIN and LIM indicators will be compared with the acceptability thresholds.

According to the values of SAIN and LIM, the foodstuffs can be classified in four classes (Darmon, 2007):

- Class 1 (SAIN>5 and LIM <7,5) – includes foodstuffs recommended for health;
- Class 2 (SAIN<5 and LIM <7,5) – includes neutral foodstuffs, which should be consumed in combination with foodstuffs from the Class 1;
- Class 3 (SAIN>5 and LIM >7,5) – includes foodstuffs which should be eaten only occasionally;
- Class 4 (SAIN<5 and LIM >7,5) – includes foodstuffs which should be eaten sparingly, or better to be avoided in consumption.

In order to evaluate the nutritional profile of each selected bio product, the two indicators (SAIN and LIM) were calculated, by using the nutritional information from the labels

Although Romania is currently not required to apply the provisions of Regulation (EU) no. 1169/2011 on nutritional information, we note that there are many products on the Romanian market imported from EU countries whose labels contain nutritional information reported as required by said regulation (mandatory information: *energy value and the amounts of fat, saturated fatty acids, carbohydrates, sugars, proteins and salt*; these mandatory information may be supplemented by quantitative indication of the following components: monounsaturated fatty acids, polyunsaturated fatty acids, polyols, starch, dietary fibre, vitamins and minerals present in the product in significant quantities). In addition, some Romanian food manufacturers have voluntarily aligned to the requirements of the new Regulation (EU) 1169/2011 on the provision of food information to consumers.

To assess the nutritional profile using the SAIN-LIM method, organic foods were selected in order to provide nutritional information in accordance with Regulation 1169/2011 (Table 2).

Table 2. The nutritional labels of the analysed products

Label's information (for 100g)	**Cookies Bio with dark chocolate** (Nutrition et Sante, France)	**Biscuits Bio with 3 cereals** (Probios, Italy)	**Gaufre Bio with honey** (Bio All Green, Germany)	**Wafer Bio with cocoa cream** (Crich, Italy)	**Musli Bio with dry fruits** (Bio Nature, France)	**Halva Bio with sesame and honey** (Allos, Germany)	**Chocolate Bio with milk** (Carrefour, France)	**Tortilla Chips Bio** (Delhaize, Belgium)
Energy (kcal)	490	428	492	514	430	579	562	492
Proteins (g)	7.6	7	11.8	7.4	7	16.8	9.7	6.7
Carbohydrates (g), of which Sugars (g)	62.1 28.6	73 16	72 23 *	58.7 19.7	64.5 27	37.5 25.1 *	48.7 46.5	60.3 1.5
Fat (g), of which Saturated fat (g)	22.5 10.2	12 1.8	20.1 9.8	27.1 19.1	14.5 5.9	41 7.9	36 22.1	24 10.8
Fibers (g)	4.2	2.8	1.6	2.8	6.9	4.8	2.5	4
Salt (g)					0.1			0.8
Sodium (g)	0.17	0.3	0.2	0.1		0.1	0.09	0.3

* In the case of honey Gaufre Bio (Bio All Green, Germany) and Bio sesame and honey halva (Allos, Germany) for the LIM indicator calculation the sugars declared on the nutrition label were not considered because they do not reflect the added sugar, as they are simple sugars derived from honey (sugar is not included in the list of ingredients of these two products).

To calculate the SAIN indicators for each product, the followings daily recommended values for the positive nutrients were considered: Proteins – 65 g, Fibres – 30 g, Vitamin B1 – 1,2 mg, Vitamin B2 – 1,6 mg, Vitamin B3 – 15 mg , Vitamin B6 – 1,7 mg, Vitamin B9 – 0,135 mg, Fe – 12,5 mg, Mg – 390 mg. In order to calculate the LIM indicators for each product, the followings daily maximal recommended value for undesirable nutrients were considered: Sugars – 50 g, Saturated fatty acids – 22 g, Sodium/Salt – 3,153 g/8g (Darmon et al., 2007).

The values of the two indicators (SAIN and LIM), calculated for the two products are shown in Table 3.

Table 3. The nutritional profile of the analysed products

Products	SAIN	LIM	Nutritional profile and recommendations
Cookies Bio with dark chocolate (Nutrition et Sante, France)	**2.83** (<5)	**36.16** (>7.5)	***Very unbalanced nutritional profile***, the product should be consumed with great moderation
Biscuits Bio with 3 cereals (Probios, Italy)	**2.25** (<5)	**17.36** (>7.5)	***Very unbalanced nutritional profile***, the product should be consumed with great moderation
Gaufre Bio with honey (Bio All Green, Germany)	**2.47** (<5)	**16.78** (>7.5)	***Very unbalanced nutritional profile***, the product should be consumed with great moderation
Wafer Bio with cocoa cream (Crich, Italy)	**1.97** (<5)	43.12 (>7.5)	***Very unbalanced nutritional profile***, the product should be consumed with great moderation
Musli Bio with dry fruits (Bio Nature, France)	**3.56** (<5)	**27.4** (>7.5)	***Very unbalanced nutritional profile***, the product should be consumed with great moderation
Halva Bio with sesame and honey (Allos, Germany)	**3.54** (<5)	**12.72** (>7.5)	***Very unbalanced nutritional profile***, the product should be consumed with great moderation
Chocolate Bio with milk (Carrefour, France)	**2.13** (<5)	**65.27** (>7.5)	***Very unbalanced nutritional profile***, the product should be consumed with great moderation
Tortilla Chips Bio (Delhaize, Belgium)	**2.67** (<5)	**23.79** (>7.5)	***Very unbalanced nutritional profile***, the product should be consumed with great moderation

The values of SAIN and LIM indicators show that all the analysed bio products have a very unbalanced nutritional profile, which determines their classification into the category of food to avoid.

In addition, from the analysis of the information declared in the ingredients list on product labels, we note that the selected organic products also contain unhealthy ingredients, as follows: glucose syrup/high fructose from corn, starch, flavours, growth enhancers (potassium tartrate, sodium hydrogen carbonate, and ammonium carbonate), synthetic vitamins and minerals.

Conclusions

Eating organic products defines, among other habits and activities, the modern consumer's concern for a healthy lifestyle. Nowadays many food products look the same, many of them have almost the same name and we must quickly decide what product to buy. Our decision criteria are not only related to price, but also to the content of the product, not to mention its impact on our health. All of these are possible because of the main "mutations" suffered by the new consumer, who is individualistic, involved, independent and knowledgeable (Negrea and Voinea, 2013).

In this context, the "organic" trend began to gain ground on the Romanian market, among the evidence being:

- the increasing number of Romanian organic products, whether in already known brands, either as absolute novelty;
- the creation of dedicated spaces in supermarkets and hypermarkets;
- the emergence of more and more specialized stores;
- the emergence and continued diversification of restaurants with "eco-bio-organic" menus.

Despite the positive developments, we must warn consumers of any potential risks to which they become subject when they consume organic products:

- both on the markets in other countries and in Romania, there were reports of situations in which various organic foods had a high content of substances that shouldn't have been included in their composition; this negative contribution is the result of processing those products. An example to this is the recent study of Romanian researchers from the Faculty of Physics of the "Babes-Bolyai" University of Cluj-Napoca, which revealed the presence of pesticides in fruit batches labelled "organic";
- the presence of any form of "organic" labelling does not exclude the possibility that these products are nutritionally unbalanced, the latter aspect being the subject of this research.

In practice, the results of our study show that processed organic food products, although obtained from ingredients from organic farming, may expose consumers to the risk of nutritional imbalances, sometimes serious, because of the high content of negative impact compounds (salt, added sugar and saturated fats). If sugar, salt and saturated fats, although organic certified, are added by manufacturers in exceedingly large quantities, with the primary goal of obtaining products that entice many senses and create consumer dependency, the risk of nutritional imbalance is as high as for conventional foods.

The results of the research conducted in this paper highlight the need for strengthening the nutritional education of Romanian consumers. Taking into account the issues raised in this paper, we consider it is necessary to educate consumers on the proper interpretation of nutritional information on food labels, which could lead to a rapid assessment of the food's nutritional characteristics in various buying instances and in the development of healthy food choices.

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*** Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91.

*** Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers.

http://www.onpterbv.ro

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LEGAL ASPECTS OF FOOD SAFETY IN POLISH LEGAL ORDER IN EXAMPLE OF MILK AND DAIRY PRODUCTS

Monika Żuchowska-Grzywacz

Kazimierz Pulaski University of Technology and Humanities in Radom
mon.zuchowska@wp.pl

Introduction

Food law in Poland is seen as a branch of sanitary law or as a branch of agricultural law slowly starting to be independent. Current food law is very complex but dominated by methods specific to administrative law. This branch of law contains main elements of control and prevention which are there to sustain products security level. The main deed in Polish legal order is a bill from 25th of August 2006 about food and nutrition safety. There is no legal definition of food law but the main aspect of this bill is food safety and food quality. These elements are to fully secure consumers' interest. In this point one has to concentrate on issues concerning regional products (Korzycka-Iwanow M., Wojciechowski P., 2011).

The genesis of food law regulations in the context of regional milk and dairy products

Despite the fact that regional products arouse interest of Polish and foreign consumers for a long time, actions to regulate their legal status were undertaken not so long ago. The impulse to create legal solutions in this matter was a necessity to adapt Polish law to EU requirements.

The implementation to Polish law regulations resulting from the necessity of harmonizing them with EU's regulations especially decree of Council of Ministers nr 2081/92 was undertaken by Patent Office. Certain regulations were also found in the bill of Industrial Property Law. Next step to was made by the Ministry of Agriculture. Analytical work was done in the matter of legal regulations concerning geographical marking and certificates of specific character (GTS). The evaluation showed that proposed legal solutions fully implement requirements of The Council nr 2081/92 with the exception of rules on control of properly used protected brand names and designating control units. In conclusion was affirmed that there is no need of having a new bill on protection of names and marks distinguishing agricultural and food products with their geographical origin and specific character.

In Polish legal order the issue of geographical marking and certificates of specific character was regulated in the bill Industrial Property Law and in the bill on Commercial Quality of Food and Agricultural Products. This kind of system was to secure the legal status of regional products. In the same time rose social interest on ways of making and selling local and region al products. Besides growing interest among consumers the problem of counterfeiting regional products occurred. There was a need to precise legal regulations in the matter of their protection. Significant meaning in the process of making and harmonizing regulations concerning regional products was given to local initiatives such as “Our culinary heritage”. The goal of this initiative was identification and promotion of local, traditional specialities.

In these days crawling domestic system of Geographical Marking Protection was used only in southern Poland. In Patent Office on 29th of August 2003 first geographical markings were registered in the name of regulations in Industrial Property Law. They were regional dairy products and preserves. On behalf of Regional Sheep and Goat Breeders Society in Nowy Targ, Podhale Society in Ludzmierz, Nowy Targ County, Tatry County in Zakopane and Żywiec County was issued a right to register 5 geographical markings: Redykołka, Bryndza, Oscypek, Bunc and Żentyca. Registration was a result of cooperation between local governments and subjects interested in making these products. Entities which registered five before mentioned products as geographical marks did not draw direct benefits from registering them. It should be noted that a significant change occurred with the enforcement of the law on veterinary requirements for products of animal origin. Registered products were recognised as traditional products. According to the contemporary wording of article 2 paragraph 15 of the mentioned Act the traditional products of animal origin were "products referred to in national legislation and EU legislation on the protection of geographical indications and designations of origin for agricultural products and foodstuffs and agri-food products of specific character". In accordance with this wording derogations in the field of, among others, hygienic regulations or those regarding the distribution could be applied solely to that group of products (Winawer Z., Wujec H., 2010). These regional products were the first and the only products that have obtained registration before Poland’s accession to the EU. It should be emphasized that the registration giving them national protection ceased to apply on May 1, 2004, because of inconsistencies with EU law. Registered trade names of cheese acquired a period of temporary six-month protection. At the same time subjects reporting these products were required to re-submit an application for the protection of the European Commission. After this period only two applications for oscypek and bryndza cheese from Highlands were eventually submitted.

In the chronology of the development of legislation and institutional framework the establishment of the Office of Geographical Indications and Promotion as a separate organizational unit of the Ministry of Agriculture and Rural Development in December 2003 was an important event. Its purpose was to coordinate activities related to the implementation of the EU's system of geographical indications and certificates of specific character for agricultural products and agri-food products.

The most important task became the development and implementation of a new Act on the registration of regional and traditional products to the Polish legal order. The office also became an institution responsible for the conducting of registration at the national level within temporary protection and coordination procedures (M. Gąsiorowski, 2005). Responsibilities of the Office were gradually extended to the protection of geographical indications and designations of origin for agricultural products and foodstuffs, as well as to the promotion of agri-food products, including trade fairs, domestic and international exhibitions, running the showroom of agri-food products, competitions, thematic exhibitions, participation in trade fair committees and issues related to the patronage of the Minister („Polska Dobra Żywność").

An important factor from the point of view of the development of a legal status of the regional product in Poland was the establishment of the Chamber of Regional and Local Product. Its primary task has become attention to regional and traditional food, as well as to arts and crafts. Thanks to the support from the project "Agro-Smak", on February 18, 2004 a founding congress, attended by 160 founding members, was held in the Ministry of Agriculture and Rural Development. A chamber was appointed and its statute was signed and eventually the Chamber of Regional and Local Product was registered by the Court of Registration on July 31, 2004. Polish Chamber of Regional and Local Product was established as an organization associating producers. Its role from the beginning has been the establishment together with the government's and local governments' administration of coherent system for traditional, local and regional products, on the exemplar of EU countries. As a part of the second chapter analogous organizations operating in other European countries are presented. Quality and protection of traditional and regional products systems created by them were developed mainly by producers and retailers or representing them organizations. The Chamber has also decided to adapt this model. Among the most important tasks facing the organization is the necessity of rising the awareness of food producers, processors, control institutions, local governments, and consumers on the role of traditional and regional products and their role in the market. To date, the Chamber helps to identify products produced in accordance with the centuries-old tradition passed down from generation to generation. It also holds an important role in organizing producers in the collective action groups, as well as popularizes knowledge of regional products among potential producers, consumers or control institutions.

The Chamber of Regional and Local Product makes producers aware of the possibility to manufacture such products based on traditional agriculture, family farms and a large amount of labour in rural areas. It also aims at analyzing legal, economic and fiscal barriers accompanying such production (http://www. produktyregionalne. pl/onas. php?body=article&name=co-to-jest-pipril&lang=pl). Activities undertaken by the Chamber resulted in the activation of producer groups. The outcome of those activities was filing of the first application to register the name of “Miód wrzosowy z Borów Dolnośląskich”("Heather honey from the Lower Silesian Forest”) as a protected geographical indication (PGI) at the Patent Office on August 27, 2004.

It was the first example of using the possibility to protect the designation of origin of the Polish product on the basis of the Council’s regulation no 2081/92. A few months later applications for two other products from the group of products registered under the Industrial Property Law were filed at the Patent Office requesting the protection of the names oscypek and bryndza podhalańska. (M. Gąsiorowski, 2005)

As it was stated above, initially the indigenous regional products under the national legislation could be entered in the Register on the basis of the provisions of the Industrial Property Law. On the other hand, agricultural products and foodstuffs, classified as traditional ones, could be entered in the Specific Character Certification Register in accordance with the provisions of the Act on the quality of agri-food products, and since June 2, 2004 in accordance with the provisions of the Regulation of the Minister of Agriculture and Rural Development of May 12, 2004 on the terms of applying for the registration of certificates for agricultural and food products of specific character. In the first period of application of this law some significant legal problems were revealed. To apply for the registration of the product name as a PDO or PGI, the product should be introduced to the market. However, if the name of an agricultural product or a foodstuff is not registered, the manufacturer does not have the possibility of using the derogation provided for producers of regional products. Therefore, a vicious circle preventing the registration and protection of these products was created.

Due to practical problems the necessity of the creation of a consistent, unified act, under regulations of which a clear division of competence would be made. Work on a legal act which would be fully harmonized with the EU regulations and provide effective protection of regional products began.

On 17 February 2005, the Act of 17 December 2004 on the registration and protection of names and indications of agricultural products and foodstuffs as well as traditional products took effect. It introduced a new division of powers in relation to matters related to the registration of regional and traditional products within the EU system. According to the contemporary wording of the provisions the Ministry of Agriculture and Rural Development was responsible for issues connected both with the registration of geographical indications, protected designations of origin and guaranteed traditional specialty. On the basis of the before mentioned act the List of Traditional Products was created.

National regulations relating to food safety and the special status of the regional milk and dairy products

Two important ordinances, one of the Minister of Agriculture of July 27, 2007 and the other of the Minister of Health of February 18, 2009, MARD Regulation of 15 December 2006 on detailed conditions for the recognition of marginal, local and restricted (Journal of Laws of 2010. 113. 753), MARD Regulation of 27 July 2007 on the broad derogations from the hygienic requirements in establishments producing traditional foods of animal origin (Journal of Laws, 2007. 146. 1024), provide the producers of regional and traditional products with the possibility of a legal manufacturing of them with the use of traditional methods, tools and in the natural environment. Plants producing traditional food of animal origin may obtain derogations from certain hygiene requirements for the manufacturing method of animal or non-animal products in case where such derogations are necessary to preserve the traditional character of those products. To be considered as traditional, food products must:

- be put on the national List of Traditional Products or
- be reported to the European Commission as a Protected Designation of Origin or a Protected Geographical Indication or
- be a Guaranteed Traditional Specialty.

Approved derogations concern the nature of the premises and the type of materials of which the instruments and the equipment used for the preparation and packaging of these products can be made. Under these provisions it is possible to produce oscypek and bryndza cheese with unpasteurized milk in bacówka (a type of a hut in the Highland).

Before presenting the specific regulations related to the above-mentioned Act, it is justified to provide general standards applicable within the framework of Polish legislation regarding dairy products.

According to the Polish law the head of the plant or an authorized person is obliged to implement and apply the principles of the HACCP system. Therefore, the HACCP system applies to all food manufacturers except for the producers at the stage of primary production who, in order to ensure proper quality of care and hygiene rules, are required to implement and apply the principles of Good Manufacturing Practices (GMP) and Good Hygiene Practices (GHP).

The regulations require that raw milk is put in a clean, properly equipped place immediately after milking, so as not to be contaminated. The premises for the storage of milk should:

- have smooth, easy to clean, wash and disinfect walls and floors,
- be fitted with the devices for cooling milk,
- be protected against rodents and insects,
- be inaccessible for animals and separated from the animals' enclosure,
- have an organized and clean area around the premises for milk.

Tanks and containers for milk cannot be damaged. They should be made of stainless steel with a smooth surface, easy to clean, wash and disinfect. Vehicles used for the transport of milk cannot be damaged or used for transporting animals, products or items that could contaminate the milk. Cisterns, tanks, milk churns and other containers used for transporting milk should be designed so that the milk flows down from them entirely, easy to clean, wash and disinfect, hermetically sealed during transportation and clearly labeled(http://www. ppr. pl/dzial-standardy-mleka-surowego-2441. php).

However, the guidebooks of good manufacturing practices and good hygiene practices, which contain procedures associated with production of a product, should take into account the specificity of the production process of a given product, particularly, the needs and capabilities of those entrepreneurs who:

- due to the size of the plant and the type of foods manufactured or placed on the market operate on local markets,
- produce food or use raw materials for food production in accordance with traditional methods established by the long-term practice or tradition characteristic of the given food,
- operate in specific regions considering the geographic location or accessibility of supply.

Taking into account the specificity of the food produced when preparing the principles of good manufacturing practices and hygiene, the uniqueness of the product is considered when creating the HACCP system, which is based on the principles of GMP and GHP. Understanding this relationship allows to construct the principles of HACCP so as it is possible to produce food using traditional methods and traditional raw materials. (Project „Produkt regionalny",2008)

In practice the interpretations mentioned above were unnecessary because of the particular deregulation issued by the Minister of Agriculture and Rural Development under the regulation of 5 July 2002 on detailed veterinary conditions required for the acquisition, processing, storage and transport of milk and milk products amended by the regulation of the Minister of Agriculture and Rural Development of 7 July 2010 on veterinary requirements for the production of dairy products with traditional characteristics. (Dz. U. 2010, Nr 315 poz. 910.)

Manufacturers of traditional products can apply for authorization to derogate from existing and legally regulated production requirements (veterinary, health or sanitary). However, it must be remembered that the derogations:

- must result from the use of unchanged, traditional production methods by manufacturers,
- cannot negatively affect the health quality of a product,
- may be granted only if they result from the traditional methods of production, and are not related to e.g. lack of financial resources to adapt the plant to production requirements. (M. Dymacz, 2012.)

Manufacturers may be allowed to derogate from the requirements concerning the materials from which the instruments and equipment used for the production or packaging of traditional products are constructed as well as in relation to the ripening cellars or rooms for such products. In accordance with the provisions of the regulation, the ripening cellars for traditional products can consist of geological, natural walls and floors, ceilings and doors that are not smooth, may not be permeable, may be impermanent and do not have to be coated with a light-coloured coating or covered with stainless steel material. Moreover, the frequency and type of cleaning and disinfection in such areas should be adapted to the type of activity and take into account the specific flora present in the environment. (Korzycka-Iwanow M., 2010)

In the Act on veterinary requirements for products of animal origin appropriate delegation to the Minister responsible for agriculture was placed, which enables determining the veterinary requirements for the production and for animal products with traditional characteristics by means of issuing a regulation. It should be stressed that under this delegation, granting derogations greater than the derogations included in the Commission Decision no 97/284 is only possible for products sold within the direct selling.

Minister of Agriculture and Rural Development has used the possibility of issuing such a regulation only once so far. This regulation applies to the production of oscypek, bunc, redykółka, bryndza and żentyca which by operation of law can be produced among others of unpasteurized milk and with the use of wooden tools. (Project „Produkt regionalny", 2008)

Issue concerning regional products, which may be subject to derogations with respect to the provisions relating to the mass production of goods is the labelling of products. It should be noted that adequate labeling is the most important source of information about the product from the point of view of a consumer. The current Polish regulations on food labeling transpose the provisions of the European Parliament and the Council directive 200/13/WE of 20 March 2000, regarding the approximation of the laws of the member countries in the labeling, presentation and advertising of foodstuffs. These issues have been dealt with in the Act of 25 August 2006 on food safety and nutrition, and the Act of 21 December 2000 on the quality of agri-food. (Dz. U. z 2005 r. Nr 187, poz. 1577).

Article 46 paragraph 1 of food safety and nutrition Act determines what within the label cannot be used. Labeling must not mislead the consumer, in particular as to the characteristics of food, including its name, type, properties, composition, quantity, durability, origin or provenance, method of manufacturing or production. Taking regional products into consideration, the information is crucial. In addition, Art. 6 paragraph. 2 of quality of agri-food Act states that the descriptive labels should be in Polish, written clearly and in a manner understandable for consumers, placed in a visible place, and cannot be hidden, obscured or interrupted in any way by other written or pictorial imprints. They must be legible and not removable. These general provisions do not apply to regional products of milk and dairy products in Poland due to the specific derogations. These goods are not packed, so it is not possible to put the information relevant from the consumers' point of view on them. It could therefore be assumed that in such a situation the regulations on the labeling of food sold in bulk should apply. It means that at the site of selling food without packaging following information should be displayed: name of the food and commercial quality class or other distinguishing feature of commercial quality if they were determined in the regulations on the specific requirements of particular commercial quality of agri-food products or groups of products or if the obligation to declare them under separate regulations exists. (Taczanowski M., 2009) The scope of this information is therefore significantly reduced in comparison with the requirements for packed products. Additional information that should be provided to consumers is dependent on the type of a product. They are required only in the case where goods contain allergens and regarding some commodity groups, such as meats, fish products, bread, and eggs. Unfortunately, regional milk and dairy products are not properly labelled in this respect. The placement of information boards is occasional and takes place only for products certified within the EU systems. Other regional products are often not marked at all. It is difficult to accept that the storage of information in the hinterland, in the showcase, in a box under the counter, or in any other manner that prevents consumers from becoming acquainted with them before the purchase would be the best solution. (UOKIK, 2012). Widely encountered practice in this respect is the total lack of information, which is often used as an argument supporting "familiarity" and originality of the regional product. Therefore, the introduction of requirements for proper labelling is essential. The broadest and the most effective solution would be to introduce an obligation of packaging and placing the necessary information for the consumer on the packaging.

Conclusions

The impetus for the creation of appropriate solutions was the need to adjust Polish law to EU requirements. On the initiative of the Ministry of Agriculture analytical work was undertaken in the field of legal regulations on geographical indications. Initially, these issues were regulated in the Law of Industrial Property Act and the Act on trade quality of agri-food products. However, the growing problem of counterfeiting of regional products revealed the need to clarify legal regulations for their protection. An important event was the creation of the Chamber of Regional and Local Product in 2004 - producers' organization which aims to support the development and improvement of the system of protection and promotion of regional products.

The key issue for the Polish regional products was the enforcement of the Act of 17 December 2004 on the registration and protection of foodstuffs, agricultural and traditional products. There is a significant dependency of the safety of food in relation to the regional product. In particular, the special status and the possibility to derogate in the field of hygiene and sanitation should be highlighted.

Labelling of regional products is the most important source of information from the point of view of the consumer. In places where the food is sold without packaging - as it usually happens in case of regional products, determinants of trade quality and the name of the producer should at least be placed. Unfortunately, to date regional products from milk and dairy products are not properly labeled. The placement of information boards is occasional and takes place only for products certified within the EU systems. Other regional products are often not marked at all. Therefore, there is a necessity to introduce legal requirements for proper labeling of them.

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