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ECONOMIC ASPECTS FOR EVALUATION OF LOGISTIC SYSTEMS

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Abstract: The economic aspects of evaluation of logistic systems are presented in the paper and factors for differentiated evaluation of the financial state, purchasing power, the population with its number and ethnicity and specific preferences, the mass consumption in the region, the trade in the country and abroad, variety, quality and the corresponding competitive price.

Key words: economic aspects, logistic systems

Technical and technological environment is of great importance for the development of technical advancement. It is envisaged acceleration of the creation, implementation and dissemination of scientific and technical innovations [1,2]. More innovative ideas are developed and time gap between the emergence of an idea and its successful implementation in practice is decreasing rapidly. Significantly shortens the time from introduction of the idea until it reaches maximum possible production rate.

Over the past two years there has been a slight increase in the relative spending on acquiring new machinery and equipment. The largest share of expenditure is for acquisition of tangible fixed assets in industrial activities. Of particular interest are logistics systems associated with the renovation of the technology [3]. Higher spendings on machines are mostly aimed to maintain existing production capacities rather than to

create new production. This is generally a threat because of the lack of investment in new technology.

Analyzing logistics system as part of financial analysis of company X based in N-town, we determine huge production capacity of the company. Operating at full production capacity, the company can meet 70% of the national consumer demand. This is due to the fact that technology in the enterprise is new and provides great manufacturing opportunities. As a result, there is an opportunity for N-town based Company X, operating at full production capacity, to produce significant amounts and to profit from the scale of production. Another opportunity for the company is the growing number of highly skilled professionals that are preferred for hiring. They improve and advance the technique and work on creating new and high quality products.

To analyze the logistics system company must be evaluated in the

branch environment and be given due weight to the meat as food. It is a rich source of biologically complete protein. The nutritional value of meat and meat products are mainly determined by their morphology and chemical composition, as well as their biological value and digestibility of the substances that compose it. Therefore, meat from different types of domestic animals has specific properties that make it a favorite of various categories of consumers. For example, bovine has a number of advantages as flavor, nutritional and dietary character. Its consumption is not subject to seasonal preferences.

Pork outperforms other types in terms of calorific value, the content of calcium, phosphorus, iron, vitamin B1 and B2. Meats of sheep and caprine have higher protein content than pork and almost as much as beef, but higher dry matter content and calorific value than beef. Company X operates a processing plant with a completed cycle of live animals processing: pigs, cattle, sheep and caprine to meat, sausages, canned food and waste management in pink slime and bone meal. Logistics system for economic analysis is defined by the scheme (Fig. 1).

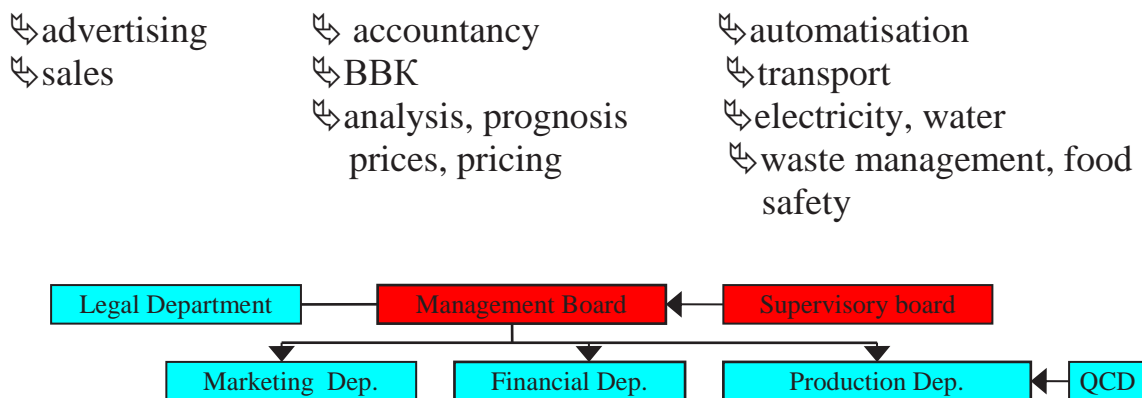


Fig. 1. Logistics system for economic analysis

Analysis and evaluation of consumer behavior is an important and fundamental goal of marketing - to identify and meet the needs of consumers. Key point in the analysis is the complexity of consumer behavior conditioned by many factors that partially counteract. Furthermore, consumers often act impulsively, intuitively or simply by habit without rational basis of their behavior.

In logistical terms users are divided into two main groups: mainstream and industrial. For **mainstream users** include individual users of products for mass consumption. In this analysis, potential mass consumers of Company X is the population of Region of City of N, and the neighboring towns of V and H (Table 1).

Table 1

Region of N			
Municipalities	total	men	women
X ₁	21844	10945	10899
X ₂	22004	10919	11085
X ₃	28468	14203	14265
X ₄	17931	8816	9115
X ₅	7021	3646	3375
X ₆	21683	10868	10815
X ₇	103532	50661	52871
X ₈	6951	3430	3521

Patterns of consumer behavior upon purchase of products of the Company X can be combined into two main groups:

- logistic patterns based on the postulates of positive psychology / cognitive /;

- logistic patterns based on the concept of stimulus-response.

Cognitive logistic patterns consider the process of user behavior as a sequence of three phases: cognitive, emotional and volitional. Consumers go through the three phases in a different sequence, depending on the nature of the product and on consumer decision. According to the sequence of the three phases is determined what marketing influences can be applied in each of the phases.

Stimulus-response models are based on the idea that the consumer is exposed to various marketing and other stimuli inducing consumer response and purchase decision. The

main factors influencing the behavior of consumers of the products of the company X is scaled by cultural, social and psychological behavior.

Cultural factors have the strongest impact on the consumer's behavior because they are the determining factor in the formation of personal desires and behaviors. Culture includes personal values and a wide range of behaviors, which are acceptable in a certain society. The concepts, values and behavior which compose culture are learned and passed on from generation to generation. Our culture determines what we eat and how to eat it and when and how to buy it. The culture has an impact on our choice and the usage of products and influences our satisfaction with them. According to human traits like age and ethnicity, culture is divided into subcultures (Table 2).

Table 2

Ethnic composition of the population in region - V	
Total	916070
Bulgarians	720218
Turks	133104
Gypsies	50253
Others	13391
Not-stated	101

In this case it must be taken into account that the majority of the Turk population is under religious influence and because of it doesn't buy pork products and any kind of sausage made from it. Another aspect of the cultural factors is the social class.

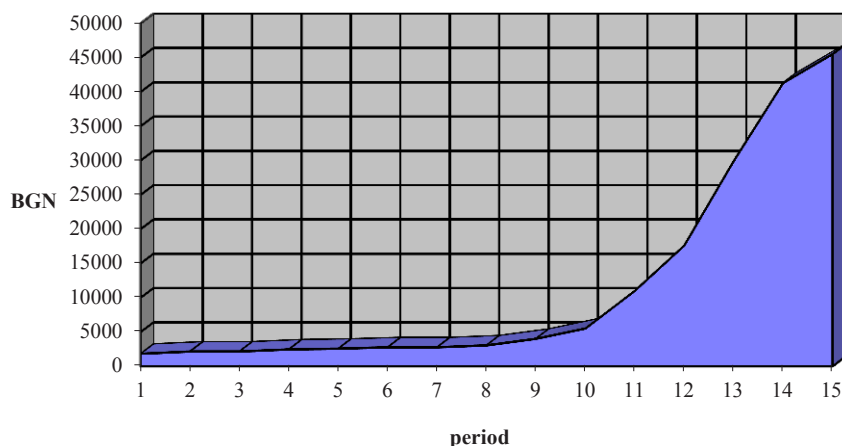
Social factors include reference groups – families, social roles and statuses. The family is the most influential primary reference group. There are two families in one's life – his parents' family and his own. That is so, because it's quite possible that the inherited habits from the first family may transfer to the other. For example – If there had been a certain type of sausage included in one 25 year old men's usual meal then most probably it would still be included in his meals after he has created a new family.

Social Roles and Statuses. As people occupy numerous positions in their careers, they have many roles. For example – A male can be a

husband and a father, but he can also be a worker, an employee or trainer. There are some sets of expectations for the behavior of every person. The roles of the individual influence not only the general behavior, but also the shopping behavior. The requirements of the different roles one has can be inconsistent and confusing. For example – let's assume a father wants to buy fillet "E". His wife wants it bought tomorrow. His kids want him to buy ham "D". His college recommends him pork "T", which is famous for its high quality. So the shopping behavior is partially influenced by the input and the opinion of others.

Personal Factors: include age, stage of life, career, economic environment, lifestyle, personality and self-perception. The economic environment has a strong impact on the customer's decision which product from the company X's assortment to buy. (Figure 2)

Distribution of wages



Graphic 2 - Distribution of Wages

Individuality and self-perception are important factors of the personality which include special psychological characteristics which lead to a fairly consequent and unchanging reaction towards surrounding environment. Self-perception is a part of the person's view of himself or his attitude towards marketing – whether the product or brand are positioned so that they meet the perception of the target market. Self-perception is made of two types:

- Ideal – or how the person sees himself in his own eyes;
- Through others – or how a person is seen by the others.

Psychological factors include motivation, perception, knowledge, beliefs and attitude. *Motives* are necessities big enough to cause action. The main theories of human motivation are the theories of Freud, Maslow and Hertzberg. According to Freud the psychological motives

forming the human behavior are mainly subconscious. According to Maslow the human needs are hierarchically arranged – Maslow's pyramid. According to Herzberg motivation is influenced by two types of factors – the first one causes feeling of satisfaction – and the second type causes feelings of dissatisfaction. Our goal here is to remove the influence of the second type of factors. Increasing the feeling of satisfaction leads to differentiation of the brand and product.

Perception as a psychological factor influences the human choice, organizes and interprets the available data in order to construct an idea of the world or the situation. There are three processes:

- Selective attention – it means that the people perceive only a part of the stimuli. The stimuli of the company X should ensure attracting and keeping of the consumer's attention;

- Selective distortion – it reflects the tendency of people to perceive the received data while not dismiss their predisposition;

- Selective memory – People permanently hold back the information which supports their views and beliefs.

Learning describes the change in attitude due to gaining experience. Learning is a result of the interaction of motives, stimulus, motivation and reinforcement effects.

Beliefs and predisposition are formed in the process of human activity. Beliefs are thoughts which support a certain statement. Beliefs construct the views of brands and products. Predisposition is a permanent evaluation, feeling and eventual action regarding a certain object or an idea. Predisposition puts the objects in a certain thought frame – positive or negative.

Industrial user is a term that includes user organizations forming the business market as well as different social structures. Their thought process preceding a purchase are different than that of the mainstream user. That is so because their purchasing decisions depend mostly on the economic benefits of the purchase.

Competitive analysis is one of the key points in analyzing the presence of a company on the market. Considering that importance, the logistic analysis has the purpose of making a most accurate assessment of the current and potential competitors. It is important to point the source of the data we have used. First is the

register of the Privatization agency for companies subject to mass privatization, annual accounting reports published in the media, the business plan of one of the competitors. We haven't had a direct contact with the companies themselves due to physical and material limitations of the research. We'll fix on three main competitors of the company X from the town N. The criteria according to which the competitors are chosen are the following:

- Company structure;
- Company size;
- The company's way of working;
- The location of the company;
- Membership in a particular system.

The scope of activity and the production structure of the competitors overlap because of the similarity of the companies. In general the all three companies stated in the competitor analysis have as main activity producing and processing meat into a variety of meat products and selling them on the market. The focus of the products is for the internal market due to the setting in the country. The production structure is also similar. In both of the stated competitor companies and in company X in town N had been noted a tendency of updating the equipment inherited from the state structures.

In conclusion it must be noted that the differential assessment of the economical aspects of evaluation of the logistic systems has great

importance on the company's profits. The mass demand in the region, sales in the country and abroad, the

assortment, quality and the competitive price all have a significant influence as well.

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