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APPLICATION OF METHODS OF MARKETING ANALYSIS FOR THE INCREASE OF THE ACTIVITY OF THE WOOD PROCESSING COMPANY ON THE LATVIAN MARKET

ZASTOSOWANIE METOD ANALIZY MARKETINGOWEJ DO ZWIĘKSZENIA EFEKTYWNOŚCI DZIAŁALNOŚCI PRZEDSIĘBIORSTWA PRZETWÓRSTWA DREWNA NA RYNKU ŁOTEWSKIM

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Summary: The article analyses the activity of the wood processing company on the Latvian market and shows the role of marketing research to improve the efficiency of the enterprise. It also examines issues, relating to forestry industry of Latvia, its development as the most important sector of the national economy and the situation with the export of timber. Marketing research of the consumer segment of woodworking firm is conducted, which is a member of five leaders of the wood processing industry in Latvia. With the help of modern methods of marketing analysis a group of the most profitable firms for customers and consumer's preferences are identified. To this end a multivariate model of consumer opinions of Fishbein is used. Actions to improve the company's product offering is made on the basis of the conducted analysis, which allowed the company to increase sales volumes and gain stronger competitive position on the market of wood processing of Latvia.

Keywords: Latvia, forestry, wood processing, marketing research, competitive analysis, Fishbein model.

Streszczenie: Artykuł analizuje działalność firmy stolarskiej na rynku łotewskim i pokazuje rolę badań marketingowych w poprawie efektywności przedsiębiorstwa. Poruszono w nim również kwestie związane z przemysłem leśnym na Łotwie i jego rozwojem jako najważniejszego sektora gospodarki narodowej oraz sytuację w eksporcie drewna.

Przeprowadzono badanie marketingowe segmentu konsumenckiego firmy, która znajduje się w pierwszej piątce liderów w łotewskim przemyśle drzewnym. W tym celu zastosowano wielowymiarowy model opinii konsumentów Fishbein. Działania mające na celu ulepszenie oferty produktów firmy są podejmowane na podstawie analizy, która pozwoliła firmie zwiększyć sprzedaż i uzyskać silniejszą pozycję konkurencyjną na łotewskim rynku przetwórstwa drewna.

Słowa kluczowe: Łotwa, leśnictwo, przetwórstwa drewna, badania marketingowe, analiza konkurencji, model Fishbein.

1. Introduction

Latvia is located in a zone of mixed forests and it is one of the richest countries in terms of forest resources in Europe. Forests cover more than 50% of the country's territory. An important advantage of Latvian forests is that their general condition is better than the average in the world, and that the area of forests that is being restored is constantly increasing. For the last 70 years, the area of forests has nearly doubled and the volume of wood has reached 575 million m³. The quantity of forests, their quality and geographic location of the country as a whole allows Latvia to be included in the list of countries where forestry occupies an important place [LIAA 2016].

Coniferous forests possess the greatest forestry value. Pine and spruce make up about 54% of timber available in forests. In the deciduous forests, birch predominates, which from the economic value point of view has the same value as coniferous species.

47% of all Latvian forests are state-owned and managed by the state-owned joint stock company "Latvia's State Forests." There are more than 2500 different enterprises in Latvia in the forest sector and a total of about 59 000 employees [Baltic Export 2016].

The driving force of the forestry sector is wood processing and the production of sawn softwood species is particularly well-developed. The production of birch plywood and its commodities plays a significant role, Latvia is one of the largest producers in Eastern Europe in this area [Latforin 2016]. There are 8 sawmills in Latvia (some of them with local capital), which annual capacity exceeds 100 000 m³ of end products. There are more than ten producers of sawn products, whose annual production ranges from 10 000 to 75 000 m³.

The aim of the research: to analyse marketing factors affecting the development of the company, which is based on the results of the analysis of the wood processing market in Latvia, and to develop offers for improving its development opportunities, assessing prospects in the current economic environment.

Research tasks:

1. To conduct marketing research of the company's customer segment in the Latvian market.

2. Using modern methods of marketing analysis, to identify the group of the most profitable customers for the company.

3. Based on marketing research, to develop and implement proposals to increase efficiency of company's activities on the market.

The object of the research – LLC “Billerudkorsnas Latvia”, which is one of the top five largest Latvian companies on the woodworking market.

Subject of the research – prospects for activating company's competitive development on the Latvian market using methods of marketing analysis.

Research methodology based on the application of methods of marketing analysis [Малхотра 2007], creative combination of systematic and situational approaches, methods of statistical data analysis and informative Internet resources.

2. Results and discussion

With the increase in forest area, wood resources and demand for wood materials, deforestation and timber exports are also increasing. Forest sector is one of the most important export industries in Latvia. Wood industry is on government's priority industry list [Ministry of Economy 2016]. Approximately 75% of forest sector goods are exported. Traditionally, the main export products are timber and round timber. Export volumes of paper and cardboard, wooden container and wooden building components are gradually increasing. In the first eight months of 2016 the total value of exports of forest industry in Latvia amounted to 1,367 billion euro – it is 1.4% more than in the same period of 2015, the value of imports increased by 7.2% – to 483,437 million euro, according to the data for the beginning of the year provided by the Ministry of Agriculture of Latvia. The value of exported wood and its products is 1,169 billion euro – 1.8% more than in the previous year (1,148 billion euro). As it was reported, in 2015 the total value of exports of forest industry products in Latvia reached 2,01 billion euro, the total imports value was 678,773 million euro. Primary export markets for the wood industry sector are Sweden, the UK and Germany. Latvia exported to the UK 19.1% of its products amounting to 260,446 million euro, to Sweden – 10.9%, amounting to 149,199 million euro, to Germany – 10.8%, amounting to 136,037 million euro. The most forest industry products during eight months period were imported from Lithuania – 17.4%, amounting to 84,018 million euro, Russia – 13.5%, amounting to 65,064 million euro and Estonia – 12.8%, amounting to 62,113 million euro [Baltic Course 2016].

There are forecasts that the revenues from the forestry sector can be doubled within five years, exceeding 2 billion euro, if production of wood products using in-depth processing will be stimulated at the state level. So far, the largest investments in the forest industry have been made by the Swedish, Finnish, Danish, British and Cypriot investors.

3. Analysis of the woodworking market in Latvia

The main market players are JSC Latvijas Finieris with a turnover of 194,373 million euro, LLC Bolderaja Ltd (which became part of the *Kronospan* international concern as its branch *Kronospan Rīga*) with a turnover of 154,71 million euro, LLC Inchukalns timber processing and wood products trading company “Pata” with a turnover of 149,268 million euro, LLC “Billerudkorsnas Latvia” (formerly LLC “Latsin”) with a turnover of 61,981 million euro, JSC “Stora EnsoLatvija” with a turnover of 61,353 million euro. TOP 10 of 2015 also features LCC “Metsa Forest Latvia” with a turnover of 56,83 million euro, JSC “PataSaldus”, with a turnover of 51,22 million euro, LLC “R Grupa” with a turnover of 16,36 million euro, LLC “Krauzers” with a turnover of 14,59 million euro, LLC “Jubergs” with a turnover of 11,25 million euro, JSC “Strenču mežrūpniecības saimniecība” with a turnover of 10,43 million euro and LLC “Grantiņi 1” with a turnover of 10,11 million euro. Such an abundance of enterprises demonstrates high level of competition in the industry, especially after Latvia became a member of the EU [Baltic Export 2016].

Conducted research of woodworking market condition in Latvia has shown that the level of competition in the given industry is considerable, the branch continues to develop and competition structure of the market is changing.

In this situation, competitors strengthen their positions by developing new technologies and products that cannot only meet customer needs, but also their growing demands.

Research and identification of customer preferences in the target segment gives a company a basis to form competitive advantages, which, in turn, serves as a basis for further development of company’s activities [Вельмезева 2015].

This statement formed the basis for the marketing research of the consumer segment of LLC “Billerudkorsnas Latvia”, which main activity is processing sawn timber and checking its durability for further use in production.

The analysis of the woodworking market in Latvia, as well as the analysis of the results of “Billerudkorsnas Latvia” company activities for the last period showed that the company is one of the industry’s top five strongest players, has a strong position on the market, but the growth rates of net turnover and profits stopped increasing, which can be regarded as the slowing down of company’s activities, leading to negative consequences in the future.

4. Marketing research of the consumer segment

As a way out of this situation, a decision has been made to move from the sales-driven approach of conducting business activity to marketing approach, focusing on the needs of target segment and, depending on the urgency of this need, to offer products, which are preferable for the target segment.

Thus, marketing research in this case assumes:

- 1) identifying all consumers interested in company's goods;
- 2) ranking consumers in terms of their profitability;
- 3) determining consumer preferences of the most significant consumer group [Галицкий 2012].

To determine "who", after all, the main customer is, databases of Latvian companies, assistance from the BNS news agency, and information on the woodworking industry were used as a whole.

As a result, it was possible to identify the following groups of woodworking product consumers:

- furniture enterprises,
- construction organizations,
- maintenance organizations (including reconstruction),
- organizations that purchase wood for fireplaces,
- individual buyers.

In total, there are about 400 companies in Latvia that consume this product. Among them – a large number of small enterprises, as well as several large ones that are ready to purchase sawn wood on a regular basis.

The next stage was to identify the group of the most profitable customers for the company and also to form other customer groups.

The following was accomplished by constructing customer profitability matrix. As a result, a group of 12 highly profitable customers was identified, mainly consisting of large enterprises. The second group includes less profitable customers and features maintenance organizations. Their number exceeds 100. The third group consists of the representatives of low-profit enterprises. These are enterprises that purchase wood for fireplaces and also individual buyers.

A division into groups was necessary to make it easier to navigate when determining client preferences in the future, as for each group a company has to find a special approach and pursue a certain marketing policy.

In further research, only the first client group is considered, since its opinion is the most significant for the company at the moment. When interviewing potential large customers of "Billerudkorsnas Latvia" company, among whom there is also a Finnish furniture company located in Latvia, it turned out that all of them were also buying sawn wood from three other competitor companies.

The source of information was the buyer questionnaire, which was developed on the basis of a score system, buyers were asked to evaluate the goods of competitors and provide an answer about aspects that guide them when they make a certain choice.

Survey included the characteristics of the accompanying services (product delivery, transportation), as well as characteristics of processing logs in accordance with the following parameters:

- 1) whether the parameters of logs correspond to today's standards;
- 2) whether the quality of the material corresponds to today's standards;

- 3) how often one can find flawed logs;
- 4) whether this log is suitable for use in various fields;
- 5) the degree of processing of one wooden log;
- 6) the level of customer service (delivery, transportation);
- 7) whether the order is completed on time;
- 8) whether it is still worth buying logs of this quality if the price increases.

All obtained results are summarized in the general table of the multifactor model of consumer opinions, according to Fishbein [Белявский 2001]:

$$A_o = \sum b_i \cdot C_i,$$

where A_o – customer’s attitude to the object of research, expressed in points;
 b_i – strength of the opinion that the object possesses i -th characteristic;
 C_i – evaluation of the i -th characteristic by means of points;
 n – the number of indicators that provided the evaluations.

Fishbein model shows consumer attitude to the product (company). The value of b_i shows how much consumers are convinced that this product (company) has the characteristic i . Opinions are measured on a 7-point scale with values ranging from “very likely” to “unlikely.” The value of C_i , as a rule, is also determined on a 7-point scale with values from “very good” to “very bad” (+3 to –3). It is necessary to assess the opinions of consumers for each indicator and for each brand. If there are 4 brands and 8 indicators, it is necessary to measure opinions 32 times. Next, we need to calculate the average values of C_i and b_i . To assess the attitude for each brand, each value of the opinion has to be multiplied by the corresponding estimate and the results have to be added. For example, for an item A, characteristic 1 has a value of +2, which when multiplied by the score (+2) gives the value of this characteristic (+4). Similar actions are performed for all other indicators and, as a result, the value of brand A is determined. In order not to build opinion tables of each individual respondent, the average score is taken both by of the C_i value and of the b_i value (Table 1).

5. Analysis of results of research

Calculations show that company “Pata” currently has the most favourable position on the market, since it has the highest rating. Customers prefer their products. The company “Billerudkorsnas Latvia” has the worst rating, but “Kronospan Riga”, which has the third place, is only slightly ahead.

Thus, when objectively assessing prospects for further development, it should be noted that company can compete for its customer segment and occupy a large market share, outrunning the company, which currently holds the third place.

For this, it is necessary to find the parameter, which will predetermine the competition to ensure customer’s satisfaction. It was decided to work on improving the quality of the goods.

Table 1. Calculation of the multifactorial model of consumer opinions on Fishbein

Indicators	Ratingci	Opinions on brands, bi				Calculation for brands, bi*ci			
		Pata	Kronospan Riga	Latvijas Finieris	Billerudkorsnas Latvia	Pata	Kronospan Riga	Latvijas Finieris	Billerudkorsnas Latvia
1.	2	2	1	1	-1	4	2	2	-2
2.	2	3	2	1	2	6	4	2	4
3.	3	2	1	2	1	6	3	6	3
4.	3	3	1	3	2	9	3	9	6
5.	3	2	-1	1	-2	6	-3	3	-6
6.	-1	-3	1	-1	-2	3	-1	1	2
7.	2	2	1	1	1	4	2	2	2
8.	1	1	2	-1	1	1	2	-1	1
Total	-	-	-	-	-	39	12	24	10

Source: compiled by the authors according to the market research.

In order to find out which product parameter customers are most interested in today, the second survey of highly profitable customers was conducted, expecting that they had greater knowledge of the required quality of the product, since they worked on the international level. After conducting a survey of the selected consumer segment, it was identified that at the moment dried sawn wood (logs and planks) was in great demand on the international market. That is, in order to ensure that the wood is of the appropriate quality, and in order to ensure its better use in further production, it is necessary not only to skillfully process the raw material (wood) and then to check it for durability, but also to dry it. This has to be done since wood, even if already processed, by its nature emits moisture, which leads to the deformation of logs and planks and, accordingly, makes them unfit for construction. This technology has long been used in European countries.

Due to the previously carried out research to identify customer segment, the company was able to conduct a very important survey for its further work, which resulted in knowing how to improve the product offer and, if not overtake its competitors, at least strengthen its market position [Афиногенова 2012].

Further, actions were taken to improve company's product offer, based on the assumptions of the target customer segment. It was decided to purchase and install drying equipment. At the moment, it is already known how sales volumes increased after marketing research and installation of drying equipment.

Table 2. Sales volumes in 2015

Sales volumes before installation of the drying equipment, thousand euro						Sales volumes after installation of drying equipment, thousand euro					
January	February	March	April	May	June	July	August	September	October	November	December
330	380	370	470	450	400	440	460	500	515	560	600

Source: compiled by the authors according to the data of LLC "Billerudkorsnas Latvia".

Drying equipment was included in the process of manufacturing company's main products at the very beginning of the second half of the year and within six months the volume of sales gradually increased. In this case, we are talking about obtaining additional turnover, which can be calculated by the formula:

$$T_d = (T_s \cdot P \cdot D)/100\%,$$

where T_d – additional sales turnover under the influence of measures taken to change the quality of goods;

T_s – average monthly turnover for the previous period;

P – average monthly turnover growth in %;

D – number of months, during which the research was conducted [Caurkubule, Višņevska 2006];

T_s – average turnover in the period preceding the introduction of a new principle for the production of goods based on the installation of a drying equipment amounted to:

$$(330 + 380 + 370 + 470 + 450 + 400)/6 = 400 \text{ thousand euros}$$

P – increase of the average monthly turnover in percents for the first six months of operation of the drying equipment amounted to:

$$(10\% + 15\% + 25\% + 28\% + 40\% + 50\%)/6 = 28\%,$$

D – time period, when research was conducted, from July to December, was six months, with the additional turnover amounting to:

$$T_d = (400 \cdot 28 \cdot 6)/100 = 672 \text{ thousand euro.}$$

This figure indicates the growth trend of one of the most important indicators of company's activities – the volume of sales. However, it is necessary to compare this result with the costs of marketing research, purchase and installation of drying equipment, as well as the indicator of the net profit margin (N_p) adopted by the company. According to the available internal documentation, this figure stands at 22%.

Thus, the economic effect is:

$$E = (T_d \cdot N_p)/100\% = (672 \cdot 22)/100 = 147.84 \text{ euro.}$$

Costs of marketing research and purchase of drying equipment amounted to 10 and 220 thousand euro respectively (total amount of 230 thousand euro).

The indicator of economic efficiency of the management decision on the improvement of the product group can be expressed by the indicator of profitability of costs:

$$147/230 = 0.6.$$

6. Conclusions

Forest sector is one of the most important export industries in Latvia. Wood industry is on government's of Latvia priority industry list. Conducted research of woodworking market condition in Latvia has shown that the level of competition in the given industry is considerable, yet it continues to develop and competition structure of the market is changing. The analysis of the results of "Billerudkorsnas Latvia" company activities for the last period showed that the company was one of the industry's top five strongest players, had a strong position on the market, but the growth rates of net turnover and profits stopped increasing, which can be regarded as slowing down of company's activities.

Due to the carried out research to identify customer segment, the company was able to conduct a very important work, which resulted in knowing how to improve the product offer and, if not overtake its competitors, at least strengthen its market position.

Further, actions were taken to improve company's product offer, based on the assumptions of the target customer segment. It was decided to purchase and install drying equipment. At the moment, it is already known how sales volumes increased after marketing research and installation of drying equipment.

The use of marketing analysis methods allowed the company to act accordingly in order to improve its product offer, based on the assumptions of the target customer segment, which in a relatively lively short time period allowed to increase sales and significantly strengthen company's competitive position on the woodworking market in Latvia.

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