

Conducting marketing research of new products of the company

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Abstract. The main principle of marketing is the slogan "production of the product being sold, not sale of the product being produced". Therefore, planning and evaluating the effectiveness of marketing activities should be carried out as a result of marketing research in order to determine the degree of customer satisfaction with the quality of goods and services. Marketing research is a systematic and objective process of identification, collection, analysis and dissemination of information aimed at increasing efficiency in identifying and solving a marketing problem. The main goal is to create an information and analytical base for reducing the level of uncertainty and making marketing decisions [1]. The task of marketing research is to provide objective, reliable, justified, timely information and assessment of the information needs of the business entity, reflecting the real state of the business entity [5]. Such research includes marketing activities in the market, as well as market processes that have any links to it. The object of the study is the economic entity itself, the marketing environment of its sphere of activity, the market that represents competitive advantages, as well as marketing advantages in the areas of product, price, communication and sales activities [2].

1 Introduction

In the market conditions of management, the company is always in search of its own niche, The city of Almaty occupies a special place in the housing sector of Kazakhstan. Almaty is the largest city of the megalopolis and the financial center of the Republic, as a result of which this city has high indicators of development of the construction industry.

According to the statistics Department of the city of Almaty, in 2019, 832 thousand square meters of housing were introduced to the market and 1,304 economic entities operate on the market [6]. A total of 1304 construction companies are not companies that specialize in housing construction, of which only 25-27% represent housing construction projects on the market, i.e. 352 housing construction companies [7].

The competitiveness of construction companies depends on the new products they offer to the market. Improving competitiveness primarily depends on the level of customer satisfaction. Therefore, the results of marketing research conducted by consumers are the

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main factor that ensures competitiveness [3].

The purpose of marketing research conducted by the author is to study the satisfaction of consumers of new housing, and assess the competitiveness of companies as a result of research.

2 Methodology

Marketing research was conducted in the summer of 2019 to determine the level of satisfaction of consumers of new housing, in order to get answers to the following questions:

- questions on a social basis;
- questions about technical safety;
- price and convenience of credit conditions;
- a sense of satisfaction with the consumption of a new product;
- consumers' attitude to the level of novelty;
- advantage of competing companies from analog products;
- the quality of consumption of the product after its purchase.

For marketing research, we used the method of opinion polling to collect quantitative data. The survey was conducted openly and anonymously.

The first number of apartments in the residential complex "Altyn Bulak" of the group of companies "Basis-A" was 245, of which at the survey stage, 90% were found to be in 220 apartments. If each apartment is planned to conduct a survey for one resident, the number of General complete units is equal to 220. Thus, we can assume that the number of main total units for all companies is equal to the number of apartments in which residents managed to get settled.

The second residential complex of the company "Urum Kazakhstan" in the residential complex "Apple Town" has 458 apartments, i.e. the number of complete units is 400. In the third residential complex "Zheruyyk" of the construction company "Atrix-Stroy" LLP, there were 260 apartments, and the main complete number of units was 230. In the fourth residential complex "Tolebi Tau", represented by "OTAU-Kurylys LTD" LLP, 250 apartments, of which the total number of complete units is 236. In addition, at the request of the majority of respondents, the question about consumer wages in the questionnaire of these respondents was subtracted from the questionnaire. Respondents, especially individual entrepreneurs, openly stated that they did not want to answer this question.

First, the sample size for marketing research was determined. In practice, several methods of calculating the sample size are used: the voluntary method, the traditional method, the statistical method, the method of calculating using a monogram, the empirical method, and the expense method. In our case, the statistical method of sample analysis was used to determine the sample size. It is calculated using the following formula [4]:

$$n = \frac{t^2 \sigma^2 N}{t^2 \sigma^2 + \Delta^2 N} \quad (1)$$

where: t is the probability-dependent confidence factor (p);

σ^2 - variance of the studied sign;

Δ - the allowable selection error is less than 30% (or 0.3%);

N - number of units in the main collection.

When $P=0.990$ $t=3$. If $P=0.999$ $t=3.25$, and $P=0.954$ $t=2$. in most cases, in marketing research, the confidence factor is considered to be equal to two.

The first question in the questionnaire was selected for calculation, the indicators in Table 1.

Table 1. Indicators required for calculating the selection for the survey of specific consumers of the "Basis-A" group of companies.

What was the reason for choosing this company's products when buying innovative housing?		
Number of answer	Answer choice	Number of responses based on the results of the pilot survey for 30 people from the number of respondents
m=5	Popularity of the company (image)	X ₁ =9
	The company's responsibility to consumers (shareholders)	X ₂ =7
	Speed of commissioning of the company's residential facility	X ₃ =5
	The duration of the practice of functioning on the market	X ₄ =7
	Your answer	X ₅ =2
Note: compiled by the author based on the results obtained from the pilot survey of specific consumers of the group of companies «Basis-A»		

To determine the sample size (n), you must first find the variance of the studied characteristic σ^2 . It is calculated using the formula [4]:

$$\sigma^2 = \sqrt{\frac{(X - \bar{X})^2}{m}}$$

$$\bar{X} = \frac{9 + 7 + 5 + 7 + 2}{5} = \frac{30}{5} = 6 \quad (2)$$

$$\sigma^2 = \sqrt{\frac{(9 - 6)^2 + (7 - 6)^2 + (5 - 6)^2 + (7 - 6)^2 + (2 - 6)^2}{5}} \approx 5,6$$

Next, we calculate the outgoing values using the formula (1) :

With a probability of P = 0.954, the confidence coefficient dependent on it is t = 2, and the variance is $\sigma^2 = 3.6$.

The allowable sampling error is obtained: $\Delta = 0.3$, the number of units in the main configuration N = 220 people. From here, the sample size (n) looks like this:

$$n = \frac{2^2 \times 5,6 \times 220}{2^2 \times 5,6 + 0,3^2 \times 220} \approx 115$$

The sample size of the survey of the population of the group of companies "Basis-A" in the residential complex "Altyn Bulak" -115 respondents or 52.3%. This formula is used to calculate the sample size of the other three companies:

During the survey of the population of the Apple Town residential complex from the Urum Kazakhstan construction company, the values of X changed: X₁ = 7, x₂=7, X₃=8, X₄=4, X₅=4. As a result, the sample size is 95 people or 23.7%.

Residential complex "zheruyyk" from the construction company "Atrix-Stroy" LLP, the values of X were: X₁ = 6, x₂=7, X₃=9, X₄=4, X₅=4, the sample size was 95 people or 40.3%.

X values for the survey of the population of the Tolebi Tau residential complex proposed

by OTAU-Kurylys LTD: $X_1 = 4$, $x_2=8$, $X_3=7$, $X_4=4$, $X_5=7$, the sample size is 85 people or 30%.

Questions that were considered important for companies to conduct market research were included in the survey. The survey was conducted by one Respondent within 3-5 minutes. Due to the rare frequency of purchasing housing products, the number of questions is limited to six questions, taking into account the conditions that do not allow you to quickly remind consumers of product features.

In the course of marketing research, the goal of purchasing innovative residential buildings by consumers is an indicator of high importance for the company. Let's look at the answers (Table 2).

Table 2. Purpose of purchasing new housing.

Answer	The company							
	Bazis-A		Urum Kazakhstan		Atrix-Stroy		OTAU-Kurylys LTD	
	Person	%	Person	%	Person	%	Person	%
To increase social status	40	35	35	37	38	40	32	38
To transfer the inheritance to their children	21	18	14	15	12	13	14	16
To meet a value need	15	13	11	12	9	10	7	9
For renting out in order to get additional profit	31	27	29	30	25	26	24	28
Your answer	8	7	6	6	11	11	8	9
Total	115	100	95	100	95	100	85	100

Note: compiled by the author as a result of marketing research

From Table 2, it became known that for the entire company, on average, 37% of consumers purchase housing products in order to increase their social status, 28% of consumers carry out the procurement process in order to obtain additional profit, 15% - for gifts to children, and the remaining 10% - to meet the need for value.

In the questionnaire 3 question: "What is your frequency of housing replacement?" the answer in the Table 3.

Table 3. Frequency of housing replacement?

Answer	The company							
	Bazis-A		Urum Kazakhstan		Atrix-Stroy		OTAU-Kurylys LTD	
	Person	%	Person	%	Person	%	Person	%
The first time I buy	20	17	19	20	14	15	11	13
I change my home once every five years	12	11	14	15	12	13	8	10
I change my home once every ten years	55	48	43	45	45	47	41	48
I change my home once every fifteen years	22	19	12	13	19	20	18	21
Your answer	6	5	7	7	5	5	7	8
Total	115	100	95	100	95	100	85	100

Note: compiled by the author as a result of marketing research

From Table 3, the number of first home buyers for the entire company is about 15%, replacing once every five years is 12%, once every ten years is 47%, and the remaining 18% is once every fifteen years.

In the questionnaire: the results of the answer to the fourth question : " what indicators of an apartment are important for you when buying innovative housing" are calculated in 5 points, as a result, you can determine which indicators are preferred by consumers (Table 4).

Table 4. Assessment of the most important indicators for consumers when buying a new home.

Answer	The company				
	Basis-A	Urum Kazakhstan	Atrix-Stroy	OTAU-Kurylys LTD	Total, (max - 25 points)
Residential building location	3	5	4	2	14
Price of a residential building	4	3	4	4	15
Seismic resistance of products	5	5	5	5	25
The quality of the materials used in housing construction (brick, concrete, block))	4	5	5	3	17
Infrastructure development	3	5	4	3	15
Total, (max - 25 points)	19	23	22	17	

Note: compiled by the author as a result of marketing research

From Table 4, it became known that the actual consumers of all companies show a priority for seismic resistance of products - 25 points. The second important indicator is the quality of materials used for housing construction -17 points, the assessment of housing of high importance after that and its infrastructure -15 points, the area of housing placement - 14 points. When buying a new home from the calculations, you can get a high result for consumers of the city of Almaty conditions of seismic safety. In addition, we will compare the importance of responses for each company.

Group of companies "Basis-A" - 19 points;

Urum Kazakhstan company - 23 points;

Construction company "Atrix-Stroy" LLP - 22 points;

OTAU-Kurylys LTD company LLP - 17 points.

In comparison, there is a high demand for elite and business class housing-22.23 points. And for buyers of residential complexes of a comfortable class-17.19 points. At the same time, it became known that all the company's consumers did not rate any response with 1 point. To the fifth question: "how do innovative residential buildings differ from existing ones for you?" the answers of consumers are as follows (Table 5).

Table 5. Difference between new residential buildings and existing ones.

Answer	The company							
	Basis-A		Urum Kazakhstan		Atrix-Stroy		OTAU-Kurylys LTD	
	Person	%	Person	%	Person	%	Person	%
Wide modern architectural project	31	27	24	25	26	27	23	27
Large-scale infrastructure activities	32	28	26	27	22	23	19	22
Aesthetic character of the housing product	29	25	26	27	24	25	21	25
Engineering and design safety	18	16	17	18	18	19	15	18
Your answer	5	4	2	3	5	6	7	8
Total	115	100	95	100	95	100	85	100

Note: compiled by the author as a result of marketing research

Above from the table-5, 28% of consumers of the group of companies "Basis-A" show interest in the volume of infrastructure services of innovative housing, construction company "Urum Kazakhstan" emphasized the aesthetic nature of the infrastructure and housing products with two indicators 27% of consumers, LLP "Atrix-Stroy" and LLP company "Otau-Kurylys LTD" highly appreciated the indicator of difference between innovative housing with a wide modern architectural project.

In the questionnaire: index of respondents' responses to the sixth question: "what types of services were required for you when buying innovative housing" in the Table 6.

Table 6. The need for additional types of services for the acquisition of innovative housing.

Answer	The company							
	Bazis-A		Urum Kazakhstan		Atrix-Stroy		OTAU-Kurylys LTD	
	Person	%	Person	%	Person	%	Person	%
Advice of an architect-designer	17	15	23	24	18	19	20	23
For registration of documents for real estate	33	29	29	30	34	35	23	27
Registration of the loan agreement	35	30	30	31	27	28	27	32
Legal support for transactions	22	19	10	11	10	11	10	12
Your answer	8	7	3	4	6	7	5	6
Total	115	100	95	100	95	100	85	100

Note: compiled by the author as a result of marketing research

From Table 6, 30% - consumers of the group of companies "Basis-A", 31% - consumers of the construction company "Urum Kazakhstan" and 27% - consumers of "OTAU-Kurylys LTD" LLP need additional services from the company in the registration of a loan agreement, 35% - consumers of "Atrix-Stroy" LLP have a high need for registration of documents for real estate.

3 Conclusion

From the results of marketing research conducted by the author, we get the following conclusion:

In the questionnaire: the first question: "What was the reason for choosing the products of this company when buying innovative housing" -30% of consumers of the residential complex "Altyn Bulak" of the group of companies "Basis-A" noted the popularity of the company, after which 23% - the company's responsibility to shareholders, 17% - the speed of the time of commissioning of the company, 23% - the duration of the experience of functioning in the market, the remaining 7% - the consumer gave their answers.

To this question, the responses of consumers of the Apple Town residential complex from the "Urum Kazakhstan" construction company were presented as follows: 23% - the popularity of the consumer company, 23% - the company's responsibility to shareholders, 27% - the speed of commissioning of the company's residential facility, 14% - the duration of the experience of functioning in the market, 13% - consumer responses.

Consumers of the residential complex "Zheruyyk" from the construction company "Atrix-Stroy" LLP with an indicator of -30% highly appreciated the speed of the time of commissioning of the company's residential object, after which the company's responsibility

to shareholders - 24%, the company's popularity - 20 %, the duration of the experience of functioning on the market and their consumer responses are the same - 13 %.

Residents of the "Tole-bi Tau" residential complex, offered by "Otau-Kurylys" LTD LLP, are answered by 13% - the company's popularity, 28% - the company's responsibility to shareholders, 23% - the speed of commissioning of the company's residential facility, 13% - the length of experience in the market, 23% - the consumer.

On the second question: "the goal of purchasing innovative housing", it was known that most consumers buy to improve their social status.

"What is your frequency of housing replacement?" from the answers to the third question, it became known that most consumers, on average, 47% change their homes every ten years.

In the questionnaire: on the fourth question "What indicators are important for you when buying innovative housing" - the indicator of seismic resistance when buying a home is significant and is rated at the level of a 5-point rating on a par with consumers of all companies.

On the fifth question: "How does innovative residential buildings differ from existing housing for you?" the first two companies-the group of companies "Basis-A" and the construction company "Urum Kazakhstan" highly appreciated the large-scale infrastructure services, the other two companies -"Atrix-Stroy" LLP and "Otau-Kurylys LTD" LLP highly appreciated the wide project of modern architecture.

"What additional services were required for you by the company when purchasing innovative housing" of the last sixth question-three companies, the group of companies "Basis-A", the construction company "Urum Kazakhstan" and the company "OTAU-Kurylys LTD" LLP require additional assistance in processing contracts for obtaining a loan, one consumer company "Atrix-Stroy" LLP noted that they need help in processing documents for real estate. In July 2019, in August, marketing research was conducted by the authors, and the level of satisfaction of specific consumers with the consumption of new housing was revealed. Increasing the level of customer satisfaction with new housing, in turn, will increase the competitiveness of companies.

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