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RFM-ANALYSIS AS A MARKETING POLICY PLANNING TOOL

RFM-АНАЛИЗ КАК ИНСТРУМЕНТ ПЛАНИРОВАНИЯ МАРКЕТИНГОВОЙ ПОЛИТИКИ

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ABSTRACT

SPSS STATISTICS, MARKETING RESEARCH, FREQUENCY ANALYSIS, RFM ANALYSIS CUSTOMER SEGMENTATION

The article examines the possibilities of the SPSS STATISTICS package for conducting market research. Along with classical methods of statistical analysis, the possibilities of the Direct Marketing tool are explored.

АННОТАЦИЯ

SPSS STATISTICS, МАРКЕТИНГОВЫЕ ИССЛЕДОВАНИЯ, ЧАСТОТНЫЙ АНАЛИЗ, RFM-АНАЛИЗ, СЕГМЕНТАЦИЯ КЛИЕНТОВ

В статье рассматриваются возможности пакета SPSS STATISTICS для проведения маркетинговых исследований. Наряду с классическими методами статистического анализа исследованы возможности инструмента «прямой маркетинг».

Any marketing research is carried out, first of all, to study the competitiveness of goods and services, attract new and retain old customers. It significantly accelerates and optimizes this process using modern computer technologies and specialized packages for statistical data processing.

In carrying out this study, the results of a survey of fifty respondents were used as input data for the analysis in order to identify preferences in the selection of juices produced by the Republic of Belarus. A fragment of the table with the initial data placed in the SPSS STATISTICS environment is shown in Figure 1.

Computer program for statistical data processing SPSS STATISTICS is one of the market leaders in the field of commercial statistical products. A feature of the latest versions of this package is the availability of a special tool «Direct Marketing». Along with the classical methods of statistical analysis built into SPSS Statistics, this toolkit combines the methods of marketing research that allow to form a better understanding of existing and potential customers, and methods aimed at increasing the effectiveness of marketing companies.

	Имя	...	Тип	Ширина	Метка
1	вопрос1	0	Числовой	8	Как часто вы покупаете сок?
2	вопрос2	0	Числовой	8	Где чаще покупаете соки
3	вопрос3	0	Числовой	8	Какой объём упаковки Вам удобнее всего покупать и
4	вопрос4	0	Числовой	8	Соки с какими вкусами предпочитаете?
5	вопрос5	0	Числовой	8	В каких упаковках Вам нравится потреблять соки?
6	вопрос6	0	Числовой	8	Для кого покупаете соки?
7	вопрос7	0	Числовой	8	На что обращаете внимание при выборе и покупке со
8	вопрос8	0	Числовой	8	Какие марки сока Вы знаете?
9	вопрос9	0	Числовой	8	Соки каких марок Вы покупаете?
10	вопрос10	0	Числовой	8	По какой причине Вы покупаете сок?

Figure 1 – The data for frequency analysis

Methods aimed at better understanding customers include customer identification (RFM analysis), customer segmentation (clustering), and creating customer profiles that responded to offers.

In the course of research on certain questions of the questionnaire, statistically significant patterns were revealed, statistical distributions of response variants were determined, and proximity to the normal distribution law was estimated. Thus, during the frequency analysis, descriptive statistics of numerical variables with graphical interpretation of the frequency distribution results was obtained. For example, the question «How often do you buy juice?» was answered by the majority of the respondents (43.8 %) as 1-3 times a month, the rest of the votes were distributed equally among the answers: 18.8 % between answers: more often than once a week, once a week, less than once a month. Thus, the results obtained during the frequency analysis, revealed the preferences of customers in the frequency and place of purchase of juices, as well as in the desired amount of packaging.

For a more detailed understanding of the planning and marketing policy RFM-analysis was held, which is based on customer segmentation technique, based on their behavior. This type of analysis is based on three components: Recency (R) – the prescription, the amount of time from the previous purchase, Frequency (F) – frequency, the total number of purchases, Monetary (M) – money, the total amount of purchases. Therefore, when carrying out this type of analysis, it was necessary to include in the set of initial data the information on the number of transactions and the amounts of payments of each customer: the number or other unique customer ID, the last order for each customer, the total number of customer transactions, the total amount of money received from the client.

As a result of the RFM-analysis, a table of the number of observations in groups, diagrams and histograms of RFM was obtained (Figures 2, 3).

Количество наблюдений в группах по недавности, частоте и деньгам

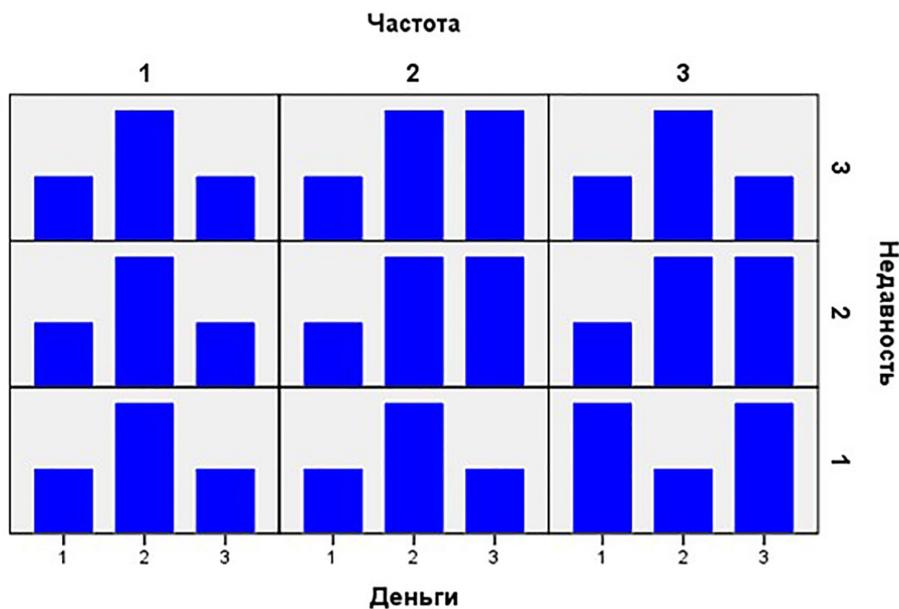


Figure 2 – RFM diagram

Гистограммы RFM

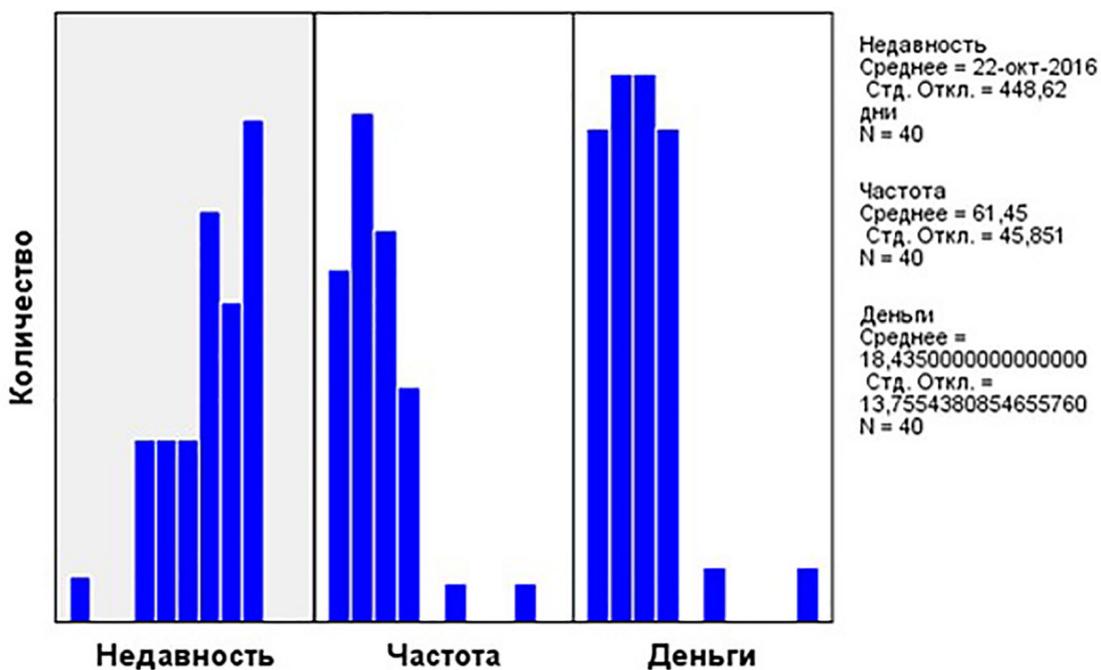


Figure 3 – RFM histogram

Thus, the diagram of the number of observations in groups (Figure 2) displays the distribution by groups for the chosen grouping method. Each column represents the number of clients to which each combined RFM score will be assigned. The goal of marketing policy should be a fairly even distribution with all or most columns with approximately the same height. But in reality there is always a certain variation in the results, which should be minimized by changing the initial parameters of the RFM analysis. The histogram (Fig. 3) shows the relative distribution of values for the three fields used to calculate estimates of recency, frequency, and money.

The analysis of the obtained results makes it possible to develop an action plan with the aim of changing the marketing policy of the trade enterprises, strengthening such areas as increasing the percentage of retained customers, increasing the response rate, increasing the conversion percentage, and increasing income.

Thus, the analyzed analysis methods in the SPSS Statistics environment can be used to better understand the behavior of clients, whether in retail, e-commerce, distribution or other commercial sectors. And RFM analysis is a relatively easy to understand modeling process and an excellent starting point for finding additional interesting ways of applying in-company technologies for in-depth data analysis and predictive analytics.

REFERENCE

1. Vardomatskaja, E. U. Informatics. At 2 pm, Part 2. Excel.: Textbook / E.U. Vardomatskaja, TN Okisheva. – Vitebsk, 2007. – 237 p.
2. Vardomatskaja, E. U. Informatization of Education on the basis of technology distance learning / E. U. Vardomatskaja, U. L. Sharstniou. // Proceedings of the Maternallam of the International scientific and practical Internet-conference, the adjustable-WIDE Modern technology used in full-time, part-time and additional education / compilation – Korolyov MO: Publishing House of the «Chancellor», FTA, 2014. – 426 p. – S. 406-412.
3. Sharstniou, U. L. Computer Information Technology: lectures / U. L. Sharstniou. - Vitebsk: UO Vilnius Gediminas Technical University, 2008. – 350 p.
4. Sharstniou, U. L. Computer Information Technology: practical laboratory-cum: Manual / U. L. Sharstniou, E. U. Vardomatskaja. Vitebsk: EE «VGTU», 2008. – 170 p.
5. Sharstniou, U. L. Computer Information Technology. Packages of applied programs for modeling and analysis of problems in economics: Manual / U. L. Sharstniou, E. U. Vardomatskaja. - Vitebsk: EE «VGTU», 2008. – 138 p.