

Research on Comprehensive Evaluation of Enterprise Marketing Ability Based on Data Mining

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Keywords: Data mining, Marketing, Comprehensive evaluation

Abstract: Big data mining technology is to analyze data, predict the future, and discern cause and effect. Its ultimate goal is to realize accurate decision-making through data driving. With the vigorous development of knowledge economy and network economy, the scale of production, operation and sales of enterprises has expanded dramatically, accompanied by a sharp increase in the amount of data in related fields. Data mining is a process of extracting and displaying new knowledge. Using data mining in marketing is an inevitable requirement for marketing development at this stage. It helps enterprises to improve marketing efficiency and reduce marketing costs. The strength of marketing ability determines the quality of business results and is the key to the survival and development of enterprises. Therefore, it is necessary to accurately analyze and master the marketing ability of enterprises. This paper analyzes the role of data mining in marketing, introduces the process of data mining to collect information and the inspiration to China's commercial sales, and puts forward a comprehensive evaluation system of enterprise marketing ability.

1. Introduction

Enterprise's marketing ability is the ability to adapt to market changes, actively guide consumption and strive for the realization of competitive advantages. It is the comprehensive embodiment of enterprise's decision-making, adaptability, competitiveness and sales ability. The ultimate development of an enterprise depends mainly on the sales of its products. Only when the products sell well in the market can the enterprise make profits from the products and thus develop [1]. The content of the consumer planned behavior theory plays an important guiding role in marketing activities. There are some problems in the marketing of enterprises, which make the current sales situation unsatisfactory and the consumer's consumption motivation can not be promoted [2]. People urgently need a new generation of computing technology and tools to exploit the hidden treasure in the database, so that it can become commercially valuable information to guide the technological and operational decisions of enterprises and make them invincible in the competition. Through the objective understanding of consumer behavior and consumer behavior orientation in enterprise marketing activities, this is of great help to enterprises in formulating marketing plans and improving marketing efficiency [3]. With the vigorous development of the knowledge economy and network economy, the scale of production, operation and sales of enterprises has expanded dramatically, accompanied by the rapid expansion of the amount of data in related fields, and the mode of production and sales has gradually shifted from the original traditional method to basic orders. Production and customer-based marketing [4].

Facing the ever-expanding business data, the management of the company urgently hopes to organize and analyze the massive business data to find out the useful business decision information for the development of the enterprise and strengthen the correct judgment ability in marketing and other aspects, so as to improve the company's Position in market competition [5]. Market marketing must firmly work on three aspects: consumer attitudes, subjective evaluation of products by consumers around the consumer, and consumer's independent control over consumer behavior [6]. The strength of the marketing ability determines the quality of the company's operating results and is the key to its survival and development. Therefore, it is necessary to accurately analyze and master the marketing ability of the company. Commercial enterprise marketing is a series of market

operation activities and processes by which a commercial enterprise creates and stimulates consumer demand and comprehensively uses various marketing methods to sell it to consumers [7]. This paper analyzes the role of data mining in marketing and proposes an evaluation index system for marketing capabilities of enterprises.

2. Application of Data Mining in Marketing

Data mining is a new business information processing technology. Its main feature is to extract, transform, analyze and model a large number of business data in the business database to extract key data to assist business decision-making. The application of consumer planned behavior theory in marketing activities needs to further clarify the connotation of consumer planned behavior theory and realize scientific explanation of consumer behavior theory. Commercial consumption information comes from various channels in the market. In addition to collecting relevant business information, enterprises can also purchase such information from other companies or institutions for their own use. Through the analysis of a large number of customer consumption data, we can know the customer's consumption tendency and distribution of consumer groups [8]. In the competition, modern enterprises have mastered certain marketing strategies, subdivided customers, and selected targeted advertising and promotion activities for customers who are more likely to buy. In the developed countries and regions of market economy, many companies begin to process business information in depth through data mining on the basis of the original information system, in order to build their competitive advantage and expand their turnover. Marketing personnel must analyze and study the purchase psychology of consumers when carrying out marketing work, and explore the psychological pain points of consumers from the perspective of words, so that the purchase behavior of consumers will have a certain impact.

In the process of marketing planning and implementation, enterprises should compare the capabilities of competitors, then find their own advantages, strengthen this aspect, and improve consumer confidence. The marketing environment and marketing activities are dynamic, so the index system should be dynamic. The first problem that enterprises should consider when they carry out marketing activities is how to allocate the budget reasonably. Data mining technology can model the response degree in the process of marketing activities and provide strategies for arranging marketing activities reasonably and directionally. In the current economic market, every enterprise pays attention to integrated marketing. After consumers have a desire to buy a product of an enterprise, the enterprise can not only receive economic benefits, but also improve the quality of sales services. Compared with the traditional large-scale marketing methods which do not distinguish the characteristics of consumer objects, data mining can save the marketing cost, improve the marketing effect and bring more profits for enterprises.

3. Evaluation Method of Enterprise Marketing Ability

Any enterprise is in a competitive market environment, and the data sources must include external data and internal data. In the current stage, in the process of marketing, enterprises only pay attention to the actual quality of products and continuously improve the quality, often ignoring the value orientation and consumption ability of consumers and other factors. One of the important tasks of marketing activities is to stimulate consumers' desires and stimulate their needs. The index in this aspect is to reflect the influence of marketing activities of commercial enterprises on consumers' quality and social fashion. In the research and practice of innovation management in recent years, the parallel cooperation of internal resource capability and external network will also greatly promote the success of enterprise innovation activities. Through the analysis of consumer planned behavior theory, consumer planned behavior theory is influenced by several factors. Therefore, in the role of marketing activities, it is necessary to combine the influencing factors of consumer planned behavior theory. In the actual marketing process, enterprises need to fully compare their economic competitors and find their own development advantages in order to fully stimulate consumer confidence.

Using advanced data mining and data warehouse technology, build a platform for business analysis, mining and use. The same level indexes are compared, and according to the relative importance of the indexes, the scale score is given. After processing, a weight judgment matrix is constructed. According to the sample data, the statistical data results of the comparison of the primary index and each secondary index are summarized in Table 1.

Table 1 Results of Financial Risk Comparison Data

	Return on assets	Operating cash flow	Marginal cost rate
Return on assets	1	0.57	0.42
Operating cash flow	0.38	1	0.71
Marginal cost rate	0.46	0.71	1

The basic evaluation method of company value can be obtained by discounting the company's free cash flow with the weighted average cost of capital rate. The general appraisal form is as follows:

$$E_{RME} = \sqrt{\frac{1}{P} \sum_{p=1}^P (E_p)^2} \quad (1)$$

The discounted cash flow valuation method holds that the value of any enterprise is equal to the sum of the present value of all its expected future cash flows. Expressed as:

$$P = P(Y = 1) = F(\beta_i X_i) \quad (2)$$

Free cash flow is generally after-tax cash flow, so the cost of capital should also be the after-tax weighted average cost of capital. When calculating the weighted cost of capital, the market value must be used to reflect the weight:

$$Cost(P_i) = \sum_{e \in P_i} C(e) \quad (3)$$

The influence of market learning ability on accounting effect and brand assets is not significant. Although there is a certain degree of positive influence on the other three indicators, the degree of influence is less than that of customer management ability. But it is already very close, so its influence on brand assets cannot be ignored. The influence of marketing capability on customer value and product innovation is not significant. The positive influence on the other three indicators is significant. Similarly, the factor load of corresponding indicators is also smaller than that of customer-related capability. The structural parameter estimation and significance test of the influence of marketing sub-item capability on marketing performance sub-item indicators are shown in Table 2.

Table 2 Significance Test of the Impact of Marketing Sub-Capacity on Marketing Performance

	Customer value	Competition results	Brand assets	Product innovation
Marketing ability	0.67	0.68	0.76	0.79
Customer management capability	0.57	0.42	0.57	0.52
Market learning ability	0.49	0.51	0.59	0.61

According to relevant data and theoretical investigations, consumer behavior is controllable. Only by further improving the ability to control consumer behavior can the marketing effect of enterprises be better improved. Enterprises can provide systematic marketing services for certain product information and consumer objects to ensure that consumers can enjoy the marketing services of products in the first place when they need a certain product. If a consumer hesitates before purchasing a product, then the opinions of others will play a decisive role in the consumer's purchasing behavior [9]. When consumer groups are interested in a certain product produced within

the enterprise, the enterprise not only simply obtains economic benefits, but also further upgrades its service quality. The existence of the concept that products in the economic market acquire economic value after consumption requires enterprises to carry out marketing and development according to this law, instead of paying too much attention to the characteristics of the products themselves [10]. In the whole process, the person in charge of each post must fulfill his/her duty to complete his/her work. Only in this way can the business objectives set by the whole enterprise be completed, thus better promoting the purchase of products by consumers.

4. Conclusion

Data mining is a rapidly developing field, with new technologies and systems constantly appearing. The performance of data mining tools has been significantly improved. Great changes have taken place in both the degree of automation and the scope of application. It is of special significance to promote the application of data mining in enterprises and marketing. Any enterprise is in a competitive market environment, and the data sources must include external data and internal data. In the whole process, the person in charge of each post must fulfill his/her duty to complete his/her work. Only in this way can the business objectives set by the whole enterprise be completed, thus better promoting the purchase of products by consumers. First of all, the application of consumer planned behavior theory in marketing activities needs to further clarify the connotation of consumer planned behavior theory and realize a scientific explanation of consumer behavior theory. Compared with the traditional large-scale marketing methods that do not distinguish the characteristics of consumers, data mining saves marketing costs, improves marketing effects and brings more profits to enterprises. In the actual marketing process, enterprises need to fully compare their economic competitors and find their own development advantages in order to fully stimulate consumer confidence.

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