Study on The Brand Force Evaluation of Coal-mining Enterprises

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Abstract: The value and status of brand have become more and more prominent, which not only formed the core competitiveness to businesses, but also established the enterprises’ status in the market competition and the world economy. By analyzing the connotation and components of the brand force of coal-mining enterprises, this paper will show the evaluation model of the brand force of coal-mining enterprises that is based on the fuzzy comprehensive evaluation, to help coal-mining enterprises to judge the brand force, and prompt the brand shape of coal-mining enterprises.

Key words: Brand, Brand force, Core-competitiveness, Fuzzy comprehensive evaluation method, Evaluation model

1 Introduction

For many years, there have seldom brands of China on the international market, and the coal brand even fewer. This has much to do with the coal enterprises which are lagging behind in the marketing concept, weak in brand awareness, and unconscious of brand’ importance in the long-term development of enterprises. In current era, the competitiveness of the brand can not be ignored, because brand has already surpassed the role only as the name and logo for the product and has become the main resources for the enterprises to create value-added products. The brand has already become the key to gain customer’s loyalty and to achieve long-term survival and development. Under the huge pressure of the mining developed countries’ superiority in economy, science, technology and equipment, coal-mining enterprises should scrutinize their tactics of brand again.

At present, domestic and international research mainly lays particular emphasis on the qualitative analysis, to discuss how important the brand of coal-mining enterprises is, how to strengthen the brand awareness of coal-mining enterprises and how to provide an underlying platform for the brand of coal-mining enterprises from the level of system and culture; In quantitative analysis, they mainly focus on evaluating the external value of the brand of coal enterprise. Although the study has produced a series of fruits, it also makes it not so easy to improve the brand force of coal-mining enterprises and tends to ignore their internal value, which lead to systemless of brand value and is unfavorable to the scientific administration of the coal brand. This paper will begin with analyzing the components of the brand force of coal-mining enterprises, and proceed from the internal force and external force of the brand to construct a model for the evaluation of the brand force of coal-mining enterprises, which can estimate the brand force of coal-mining enterprises more comprehensively.

2 The analysis of the brand force components of coal-mining enterprises

People's traditional understanding of the coal is the elementary use of getting warm and being used for generating electricity etc, and they have not noticed the uses of making burnt carbon after the drying distillation, decomposing refining and comprehensively utilizing the coal by the chemical decomposition method to produce chemical and industrial raw materials and some other extensive industrial use. In the chemical and industrial enterprises of coal, the choice of raw is essential, for the coal of different quality has different uses and produces different additional value, which makes due attention to be payed to brands of coal-mining enterprises.

2.1 The meaning of the brand force of coal-mining enterprises

The brand force of coal-mining enterprises means the brand of coal-mining enterprises have unique capability that can be distanced from other rivals, which also means the brand of coal-mining enterprises have unique competitive capability to defeat opponents and make coal-mining enterprises become stronger and stronger. Such capability shown as inherent quality of the brand, technical
performance and better service in marketing competition. The Brand force of coal-mining enterprises is to capture the imagination of the consumers that can impel them to purchase the product through showing the brand product has good functions (such as use, quality, etc.) and product image (such as design, color, packaging, advertising, etc.). Thus the brand enterprises can have unique ability distinct from or leading other rivals, which can satisfies consumers better and more quickly using its products and services than its rivals, and then offer the excess profit for coal-mining enterprises.

2.2 The feature of the brand force of coal-mining enterprises
2.2.1 The brand force of coal-mining enterprises has relativity to the ability
The brand force of coal-mining enterprises shows its comparative ability in the course of brand competition, such as coal product quality, price, market share and so on.
2.2.2 The aim of the brand force of coal-mining enterprises is for increasing profits
The ultimate aim of coal-mining enterprises is to get more customers and take a bigger share of the market in order to achieving the high-efficient circulation of the reproduction. Therefore, the fundamental purpose is the acquisition of the profit
2.2.3 The competitive ability of the brand force of coal-mining enterprises is dynamic
The brand force of coal-mining enterprises will be changed with the change of the structure and competition of the market, thus its power is not so absolute and lasting.
2.2.4 The forming of the brand force of coal-mining enterprises needs certain process
The nurture, construction and competitive dynamics of the brand force of coal-mining enterprises need certain forming process.
2.2.5 The brand force of coal-mining enterprises has the nature of integrated resources
The brand force of coal-mining enterprises exists as the result of resource distribution, and as the result of integration of the operation system of the brand force of coal-mining enterprises and brand management system, while lacking any kind of essential resource or a link system being poor will destroy the nurture and construction of the brand force of coal-mining enterprises.

2.3 The components of the brand force of coal-mining enterprises
While carrying on research to the brand force of coal-mining enterprises, we should begin with it based on the trade environment, enterprises’ own competitive advantages, the characteristic of the products, consumers’ recognition and other factors of the enterprises. Considering of different impacts of different factors on the brand force of coal-mining enterprises, this paper will regard the force affected by the products and coal-mining enterprises as the internal force, which coal-mining enterprises can take control of; while regard the force affected by the external environment-such as the market, consumers, sectored policies and so on-as external forces, which coal-mining enterprises can not control. Internal forces and external forces can be further decomposed into a number of components; the impacted forms were as follows:

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<th>Table 1 The Components Table of The Brand Force of Coal-mining Enterprises</th>
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As stated above, the brand force of coal enterprises is a comprehensive concept, a aggregate, the comprehensive reflection in people's mind of key elements of the coal brand, and people’s reasonable judgments on the brand. Therefore, in the process of evaluation, I have chosen the main components
above to analyze.

3 The evaluation model of the brand force of coal enterprises

We can see that the coal enterprises brand consists of a number of factors, most of which are the qualitative factors, with strong uncertainty and ambiguity. So, it is comparatively suitable for coal-mining enterprises to adopt the fuzzy comprehensive evaluation method to evaluate the coal-mining brand force.

3.1 Identify the Set of evaluation factors

Regarding the internal force of the brand and the external force of the brand as the first level of the set of evaluation factors.

\[ U = \{ \text{the internal force of the brand, the external force of the brand} \} = \{ U_1, U_2 \} \]

Every factor of the set of evaluation factors in the first level is decided by some factors. Therefore, the second level of evaluation for cable set:

\[ U_1 = \{ \text{the scope of coal-mining enterprises, the technology of exploitation and processing, the coal reserves, The quality of the coal, The rate of mining disasters, the culture of coal-mining enterprises} \} = \{ u_{11}, u_{12}, u_{13}, u_{14}, u_{15}, u_{16} \} \]

\[ U_2 = \{ \text{trade policy, the degree of trade prosperous, marketing, popularity, reputation, loyalty} \} = \{ u_{21}, u_{22}, u_{23}, u_{24}, u_{25}, u_{26} \} \]

3.2 Confirm the weight of every evaluation factors

There are various ways to weight the evaluation factors’ contribution to coal-mining brand or the last level of evaluation, here is the commonly used analysis of hierarchy process.

Assume that the weight of the set of factor \( U \) in the first level is:

\[ A = \{ A_1, A_2 \} \]

Then the weight of the set of factor \( U_i \) (i=1, 2) in the second level is:

\[ A_1 = (a_{11}, a_{12}, a_{13}, a_{14}, a_{15}, a_{16}) \]
\[ A_2 = (a_{21}, a_{22}, a_{23}, a_{24}, a_{25}, a_{26}) \]

Each set of weights meets the normalization principle.

3.3 To confirm the set of evaluation

For the sake of clarity and accuracy, we should adopt the law of five grades to set up the comment of every evaluation factor:

\[ V = \{ \text{very good, good, general, poor, very poor} \} \]

3.4 To set up Fuzzy comprehensive evaluation model

To evaluate the evaluation factors of the set of the second level by the confirmed set of evaluation, the fuzzy sets in the evaluation factors of the first level subordinate to the second level are available:

\[ B_k = (b_{k11}, b_{k12}, b_{k13}, b_{k14}, b_{k15}, b_{k16}) \]

Among them: \( k \)-the numeration of the first level of evaluation factors

\[ i \]-the numeration of the second level of evaluation factors under the first level of evaluation factors \( k \).

Thus, the fuzzy relation matrix of the second level of evaluation factors is available:
Considering the affections of all factors, the fuzzy sets in first level of evaluation factors subordinate to the brand are available by the formula $R_k = A_k \times B_k = (A_{k1}, A_{k2}, A_{k3}, A_{k4}, A_{k5})$.

This can result in the fuzzy relationship matrix of the first level of evaluation factors

$$R = (R_1, R_2)^T = \begin{pmatrix} r_{11} & r_{12} & r_{13} & r_{14} & r_{15} \\ r_{21} & r_{22} & r_{23} & r_{24} & r_{25} \end{pmatrix}$$

With the formula $E = A \times R$, we can get the fuzzy evaluation results of coal-mining brand force $E = (E_1, E_2, E_3, E_4, E_5)$, which is the overall evaluation of coal-mining brand force.

### 3.5 To calculate the totality evaluation value of coal-mining brand force

In the purpose of convenient comparison, the fuzzy evaluation result of each factor of coal-mining enterprises brand and the fuzzy Comprehensive Evaluation result of that brand are transferred into the law of 10 grades, in which the corresponding grades of reviews are surpassed to be the following: very good = 10 grades, good = 8 grades, general = 6 grades, poor = 4 grades, very poor = 2 grades. Thus, based on the factor of fuzzy evaluation results and the quantification of the reviews, the evaluation grades of different factors can be gained. The brand of coal enterprises of the overall evaluation score:

$$\text{VAL} = 10E_1 + 8E_2 + 6E_3 + 4E_4 + 2E_5$$

### 3.6 The function of evaluation model

The research and evaluation of the brand force of coal-mining enterprises take a very important role in the development of coal-mining enterprises:

1. The evaluation process of the Brand force of coal-mining enterprises can reflect the impact of each factor, which is the basis for coal-mining enterprises to improve the brand in the future. The scores of the brand force help coal-mining enterprises to understand every aspects of situation in their coal production and management, find out deficiencies in production and marketing, and improve their production and management, to meet the demand of the market better, attract more consumers and other members of the public understanding and support, gain better economic efficiency.

2. It provides a more direct comparative channel for coal-mining enterprises to study the position of their products in the market. By the scores of the brand force, coal-mining enterprises can realize their location in the competitive counterparts; identify the main competitors and the opportunities and obstacles in the market. Besides, it can help making correct decisions, benefiting the creation of a brand and improving the work of marketing.
4 Conclusions

On the one hand, a brand is a kind of intangible assets, which fundamentally decides that it’s difficult to evaluate the brand force of coal-mining enterprises. no matter what kind of specific assessment method is adopted, the evaluation of the brand force of coal-mining enterprises can only be a relatively reasonable but never absolutely accurate; on the other hand, there are many factors which affect the brand force, so it is reasonable to evaluate the brand force from different angles. The fuzzy comprehensive evaluation method of the brand force of coal-mining enterprises that this paper presented is scientific, reasonable and effective in theory, practical and workable in application, with effective and accurate quantitative evaluation of brands, so it can be considered a better and more comprehensive brand evaluation method.

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Reference


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