The analysis of enterprise economic benefit evaluation model based on network marketing

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Abstract. The comprehensive evaluation of enterprise economic benefits is the core content of enterprise diagnosis and has been the focus of domestic and foreign enterprise management circles. In thorough statistical evaluation, establishing a set of scientific and economic benefit index systems and evaluation methods is of great significance. This paper briefly introduces the design principles of the economic benefit evaluation index, analyzes the shortcomings and improvement measures of the current enterprise economic benefit evaluation system in China, and puts forward the indexes that should be added on the basis of the current index system. At the same time, the main methods for comprehensive evaluation of enterprise economic benefits are also proposed.

Keywords: Network marketing, Enterprise, Economic benefit evaluation.

1. Introduction

The benefit of enterprises that focus on the industry today refers to the proportion between the final results of production and the time and resources spent in output after a period of operation and production, which also refers to the relationship between the function and production of enterprises and the investment in production. At the same time as the growing economic development and progress, the particularity of China's enterprises focusing on industry to provide material wealth for the development of the national economy has become increasingly prominent. Therefore, whether these enterprises can develop smoothly and continuously will have a specific impact on the action and progress of society and the national economy. However, due to the requirements of today's society for enterprise development, the internal operation and production development of industrial enterprises with industry as the development focus can be analyzed through the final economic benefits of enterprises. At the same time, it is also the most critical reference standard for judging and measuring an enterprise. The corresponding different evaluation standards will affect the development of enterprises, and each evaluation system plays a vital role in the link of enterprise economic benefits [1].

This paper mainly measures the economic benefit of enterprises by analyzing the monetary benefit standard of enterprises under the background of network marketing, taking network marketing as an essential indicator, standardizing the original data, determining the factor variables, and using the factor analysis method to deal with the economic benefit indicators of enterprises to measure the financial benefit of enterprises, and finally obtains a better evaluation.

2. Connotation of enterprise comprehensive economic benefits

The economic benefit of an enterprise is the financial benefit and material utility obtained by the enterprise in the process of production and operation. Economic benefit, that is, people's economic

benefits, is reflected through capital, cost, tax, investment income, and other value forms. It is mainly reflected and evaluated through comprehensive statistical and financial indicators in terms of the value form. Material utility refers to the utility of society. It meets various needs of people's life and social production through the production of labor volume, variety, quality, and service[2]. It is mainly evaluated from the perspective of the form of use value. Enterprise economic benefit is a macro concept that reflects the quality of industrial economic operation. It reflects the overall efficiency of the whole process of industrial product input, output, sales, and value creation from the perspective of input-output comparison. Therefore, from the perspective of the industrial reproduction cycle, the industrial economic benefits should examine the whole process of industrial production and operation[3].

3. Basic principles of index setting in enterprise economic benefit evaluation index system

3.1. Comprehensiveness principle of enterprise economic benefit evaluation

The set evaluation indicators should objectively reflect the financial problems, operating conditions, and economic benefits of the enterprise and fairly show the enterprise's operation and management level and management ability. Therefore, financial and corresponding non-financial indicators should be considered when setting hands. In this way, we can avoid some mistakes in the process of benefits evaluation and make a comprehensive evaluation and summary of the enterprise's benefits from multiple aspects[4], see Fig. 1.

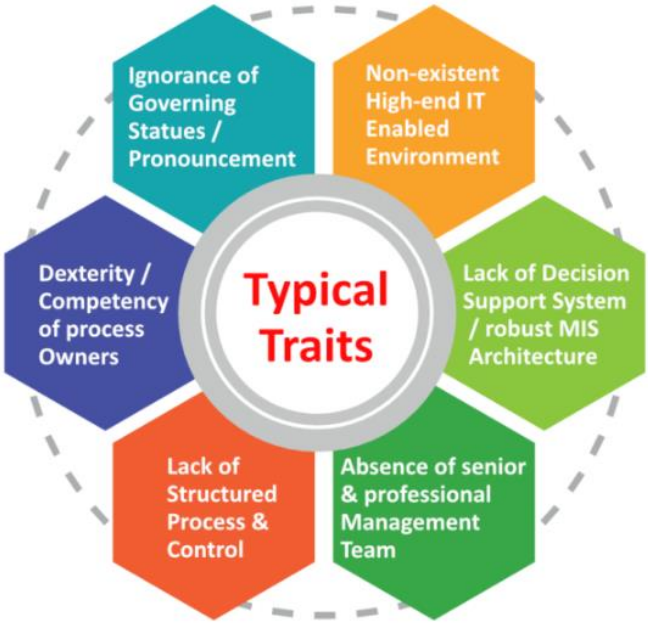


Figure 1. Evaluation index system of enterprise economic benefits

3.2. Comparability principle of enterprise economic benefit evaluation

The setting of each evaluation indicator is to evaluate, so it must be feasible. Comparability refers to the comparison between evaluation objects and standards or between evaluation objects, including horizontal and vertical comparability. The evaluation of indicators can be a comparison between an enterprise's current and past or a comparison between different enterprises in the same industry[5].

4. Problems in the evaluation of enterprise economic benefits

4.1. Do not understand the meaning of economic benefits

Only by correctly understanding the meaning of economic benefits can scientific and reasonable evaluation indicators be set for enterprises. Therefore, it is necessary to sort out and understand the specific measures when the economic benefits of enterprises deviate before evaluation. The deviations mainly include the following aspects: First, the number of enterprise profits is equal to the number of enterprise economic benefits. If we carefully distinguish the specific calculation formula of profit and financial benefit, we can see the apparent difference between them[6]. The second is to draw an equal sign between the total number of products produced by the enterprise and the comprehensive economic benefits of the enterprise. The high output of the enterprise will only provide more protection for high benefits, and the enterprise can not directly obtain the desired high benefits. If the enterprise's products have good market competitiveness, the enterprise has appropriate sales channels, and the economic benefits of the enterprise can grow. Otherwise, the practice of high enterprise output will only increase the inventory of the enterprise's products. The third is to draw an equal sign between the size of the enterprise's labor productivity and the economic efficiency of the enterprise. The improvement of the enterprise's labor operation performance will undoubtedly improve the economic efficiency of the enterprise[7]. At the same time, it will also consume much labor in the enterprise when providing value for economic efficiency.

4.2. Failure to balance the needs of all relevant levels of the enterprise

An enterprise is an organizational form that uses relevant contract agreements to connect different economic benefit evaluation objects. The financial beneficiaries of enterprises include enterprise investors, bonders, relevant government departments, and internal employees of enterprises. Only by meeting the economic needs of all economic benefits can we jointly operate and develop the enterprise, thus reflecting the synergy of the enterprise. However, too much emphasis on the economic benefits of the investor side of the enterprise will not better promote the sustainable development of the enterprise. The focus of attention of all monetary benefit providers is different. Corporate bonders pay more attention to whether the enterprise can repay the principal and interest on time, so they pay more attention to the specific indicators of the enterprise's debt-paying ability in the economic benefit link. The relevant government departments pay more attention to whether enterprises can collect taxes from enterprises in crucial positions in the financial market and provide them with related jobs.

5. Network marketing is a crucial way for modern enterprise operation and product publicity

5.1. Effective network marketing contributes to the healthy development of enterprise operation

Compared with traditional marketing, the labor cost of online marketing is lower. Therefore, enterprises only need to increase the proportion of technical talents, strengthen the role of network marketing, reduce the cost of labor leasing, and effectively reduce the operating costs of enterprises. In the traditional operation mode, enterprise marketing personnel have many travel expenses, while network marketing saves these expenses. In the process of commodity publicity and circulation, the manual publicity and management expenses are also saved accordingly. Using emerging network market survey tools such as online questionnaires can also reduce the cost of enterprises using traditional manual methods to conduct research and become an important means for enterprises to reduce operating costs. For modern enterprises, users of their main products need to make necessary statistics on their usage habits. While reducing the cost of manual research, this information can be more accurately used to determine the product orientation that customers like.

5.2. Appropriate network marketing can better promote enterprise products

At present, the development level of social informatization is constantly improving. The traditional way of selling enterprise products can no longer meet customers' needs, nor can it adapt to the development of society. Suppose a modern enterprise wants to improve its business level and gradually improve its position in the industry. In that case, it needs to systematically analyze some big online marketing data to obtain helpful information, effectively carry out online marketing activities, and promote the healthy development of enterprise business. Of course, with the help of online marketing and modern online publicity, the popularity of the enterprise's products among the broad target user groups will be constantly improved, laying the foundation for the expansion of the enterprise's production scale and product sales The indicators and indicator system reflecting the economic benefits of enterprises To comprehensively and scientifically evaluate the economic benefits of enterprises, the financial and theoretical circles have done a lot of research and discussion over the years, making the evaluation indicator system of the economic benefits of Chinese enterprises increasingly perfect. In 2018, the National Bureau of Statistics of the People's Republic of China formulated and promulgated a new set of enterprise economic benefits assessment index system, namely, the contribution rate of total assets, the value maintenance and appreciation rate of capital, the turnover rate of current assets, the profit rate of costs and expenses, the total labor productivity, the product sales rate, and the negative feedback rate of support, which were officially implemented in China in February 2020. This system has changed the past situation in which single indicators such as "output value" and "output" were used for assessment. Only seven indicators were used to assess the profitability, solvency, capital maintenance, and appreciation of factories and enterprises, and the settings were relatively scientific, basically in line with the provisions of the quality of economic benefits; The index of "capital value maintenance and appreciation rate" is introduced, which is of great significance for safeguarding the investment rights and interests of China's state-owned assets and ensuring the value maintenance and appreciation of state-owned assets; At the same time, the calculation method of each index of the system is precise, the data is easy to obtain, and the system is highly operable. However, the system still has the following defects:

(1) Unreasonable setting of cost profit rate indicator

(2) The setting of cost profit rate results from the influence of traditional financial management systems. Under the past financial management system, the state strictly limited and controlled the scope of cost expenditure of enterprises. It is understandable to take cost as a critical inspection indicator. However, with the strengthening of the dominant position of enterprises in the market, enterprises operate independently and assume sole responsibility for their profits and losses. The direct control of government management departments on enterprise costs will gradually decrease, and costs are usually business secrets of enterprises. Therefore, the cost-profit rate indicator should be removed.

(3) The asset-liability ratio is inconsistent with the connotation of economic benefits

The asset-liability ratio is a comparison between the total liabilities and the total assets of an enterprise. It shows how much of the total assets of an enterprise are obtained by borrowing from creditors. It does not reflect the enterprise's economic benefits but instead reflects its debt situation, solvency, and degree of debt protection. In addition, although the turnover rate of current assets is consistent with the connotation of economic benefits, it only explains part of the content. Therefore, these two indicators should be replaced by other more appropriate and comprehensive indicators.

(4) The calculation formula of capital maintenance and appreciation rate is unreasonable

It is calculated based on the relative ratio of closing owner's equity to opening owner's equity. because the enterprise may have changes in owner's equity caused by noncapital value maintenance, appreciation, and impairment in a certain period. For example, the enterprise may have received investments, issued shares, received donations, etc., in a certain period, which will cause an increase in owner's equity at the end of the period, but this obviously cannot be considered an increase in the original capital. Similarly, If the enterprise distributes profits to investors, it will inevitably lead to the reduction of owner's equity at the end of the period, which obviously cannot be considered as the

impairment of the original capital. Therefore, if we compare the total owner's equity at the end of the period with the entire owner's equity at the beginning of the period, it is not easy to objectively and accurately reflect the value maintenance and appreciation of capital. On the other hand, time value is not considered. Although it is simple, it lacks scientificity and rationality.

6. Enterprise economic benefit evaluation method

The evaluation of enterprise economic benefits belongs to the category of comprehensive assessment. A thorough evaluation is a statistical analysis method that uses the statistical index system, combines various qualitative materials, builds a complete evaluation model, obtains the total evaluation value through quantity comparison and calculation, and makes a straightforward evaluation and ranking of the evaluated objects, see Fig. 2.

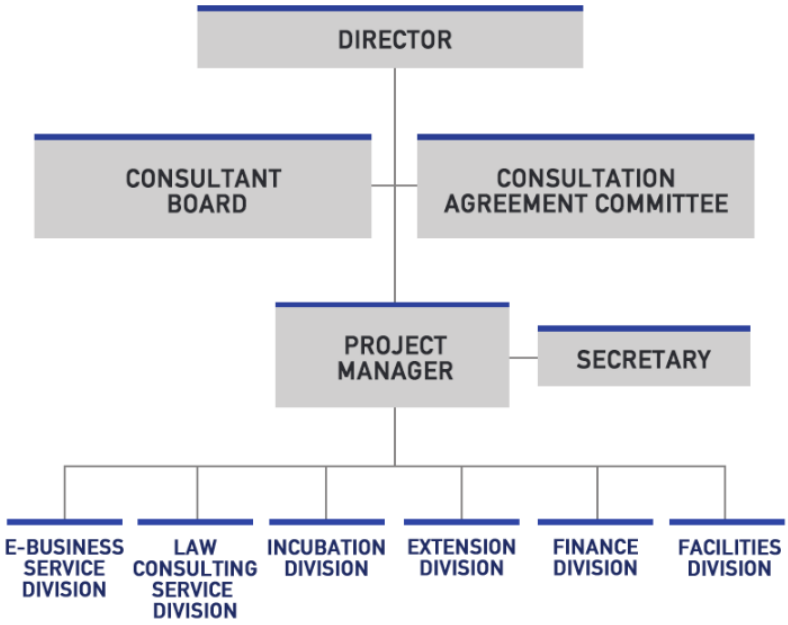


Figure 2. Network marketing is the operation and product promotion of modern enterprises

The statistical indicator system reflects the quantitative characteristics of the research object from several different aspects. Different statistical indicators have different numerical values and strengths and weaknesses among other economic activity entities, requiring a comprehensive evaluation of these indicators and a judgment of their overall strengths and weaknesses. The results of the thorough evaluation are shown as the conclusion of ranking and making judgments. There are many methods of comprehensive assessment. Due to space limitations, only the frequently used methods are described as follows.

6.1. Analytic Hierarchy Process

Analytic Hierarchy Process (AHP) is a systematic and hierarchical analytical method that combines qualitative and quantitative analysis. It decomposes a complex problem into constituent factors, forms a hierarchical structure according to the dominant relationship, and then determines the decision-making scheme's relative importance by using the pairwise comparison method. Analytic Hierarchy Process (AHP) is especially suitable for modeling unstructured problems. By using the analytic hierarchy process, the following steps can be generally followed:

(1) Analyze the relationship among the factors in the system, and establish the hierarchical structure of the system. To get the difference in economic benefits between different enterprises, this paper studies the six factors of enterprise profitability, development capacity, solvency, operating capacity, output efficiency, and production and marketing linkage.

(2) Compare the importance of each element of the same level concerning a criterion in the previous story in pairs, and construct a judgment matrix for comparison in pairs. The Delphi method

is used to determine the relative importance of each factor on the economic benefits of enterprises, and a judgment matrix is constructed.

(3) The judgment matrix is used to calculate the relative weight of the compared element to the criterion, and the consistency of the judgment matrix is checked. The work at this stage is to test the quality of each judgment matrix, determine its choice, and then calculate the weight vector of various indicators at the elementary level to the target level, which is the weight used in the comprehensive evaluation of the weighted convergence of the economic benefit index of each element.

6.2. Factor analysis method

The basic idea of factor analysis is to use fewer mutually independent factor variables to represent most of the information of the original variables. It explores the basic structure of data through the internal dependency of the correlation matrix or covariance matrix. It condenses multiple variables into a few factors to reproduce the correlation between the original variables and factors. These factors can reflect the primary information contained in many original variables and explain the interdependence with the original variables. The basic steps of factor analysis are as follows:

6.2.1. Standardize the original data

Calculate the correlation coefficient matrix between indicators (variables). Due to the different dimensions of various hands of enterprise economic benefits, all hands should be standardized before comprehensive integration of these indicators. The standardized calculation formula is:

$$X_i = \frac{x_I - \bar{x}}{\sigma^2} \tag{1}$$

The standardized value, X_i is the original data, X_I is the mean value, and $\underline{X}$ is the variance. The purpose of factor analysis δ^2 is to synthesize a small number of representative factor variables from the numerous original variables, which must have a potential prerequisite. That is, there should be a strong correlation between the actual variables. It is easy to understand that if there is no strong correlation between the original variables, it is impossible to synthesize a few standard factor variables that can reflect the typical characteristics of some variables.

Therefore, in factor analysis, correlation analysis of original variables is generally required. The simplest method is to calculate the correlation coefficient matrix between variables and conduct the statistical test. If most of the correlation coefficients in the correlation coefficient matrix are less than 0.3 and fail to pass the statistical test, these variables are not suitable for factor analysis.

6.2.2. Determination of factor variables

Constructing factor variables is one of the critical steps of factor analysis. There are many methods to determine factor variables in factor analysis, which can be generally divided into two categories according to different criteria: one is the principal component analysis method based on the predominant component analysis model, and the other is the standard factor analysis method based on the common factor sub-model, including the principal axis factor method, maximum likelihood method, least squares method, alpha method, etc. In this paper, the eigenvalues and eigenvectors obtained by principal component analysis are used to determine the number of main factors according to the principle that the factor cumulative variance contribution rate is greater than 80%.

6.2.3. Factor rotation

Make each variable have a relatively high load on as few factors as possible so that a factor variable can become a typical representative of several variables, and the actual meaning of the factor will be easier to explain.

The following illustrates the application of the factor analysis method in the comprehensive benefit evaluation of enterprise economic benefits with examples.

Based on the above seven improved economic benefit evaluation indicators, The enterprises are selected as the analysis basis, and the following assumptions are made:X_1=contribution rate of total assets (%),X_2=turnover rate of total assets (%),X_3=operating profit rate (%),X_4=capital maintenance and appreciation rate (%),X_5=labor productivity (yuan/person.year),X_6=return on net assets (%),X_7=product sales rate (%).

SPSS, one of the world's most popular statistical analysis software, is used for analysis.

The factor analysis process calls the factor analysis program in SPSS standardizes the original data of seven indicators, and obtain the correlation coefficient matrix R between indicators (see Table 1)

Table 1. Correlation coefficient matrix R

	X_1	X_2	X_3	X_4	X_5	X_6	X_7
X_1	1	0.351	0.411	0.369	0.435	0.441	0.242
X_2	0.351	1	0.313	0.134	0.647	0.152	0.338
X_3	0.411	0.313	1	0.138	-0.394	0.477	0.68
X_4	0.369	-0.048	0.079	1	0.485	0.206	0.445
X_5	0.435	0.647	0.078	0.130	1	0.293	-0.062
X_6	0.441	0.152	0.198	0.068	0.293	1	0.244
X_7	0.242	0.338	0.68	0.445	-0.062	0.244	1

It can be seen from the correlation coefficient matrix R that there is a specific correlation between all indicators except indicators. In particular, the correlation coefficient between the operating profit margin and product sales rate (Xi) is above 0.60, reflecting that an enterprise's operating profit is closely related to product sales. Eigenvalues and contribution rates of common factors (see Table 2)

Table 2. Characteristic Bits of Common Factors and Their Contribution Rates

Common factor	Y_1	Y_2	Y_3	Y_4	Y_5	Y_6	Y_7
Characteristic value	2.792	1.98	1.08	0.461	0.4	0.164	0.123
Contribution rate(%)	39.883	28.289	15.433	6.583	5.708	2.34	1.764
Cumulative contribution rate(%)	39.883	68.172	83.605	90.188	95.896	98.236	100

The contribution rate of a public factor represents the amount of information that the general factor reflects on the original indicator, and the cumulative contribution rate represents the amount of data that the corresponding general factors reflect on the initial indicator. It can be seen from Table 2 that the total contribution rate of the first three public factors reached 83.605%. That is, the first three public factors can reflect the information content of the original indicator of 83.605%. Therefore, the above seven indicators can be integrated into the main factors, (the common factors extracted based on the cumulative contribution rate of more than 80% are considered adequate), and thus the rotation matrix can be obtained (see Table 3)

Table 3. Rotation Matrix

	X_1	X_2	X_3	X_4	X_5	X_6	X_7
Y_1	0.215	0.171	0.871	0.407	0.153	0.443	0.838
Y_2	0.896	0.893	-0.242	-0.459	0.861	-0.632	0.233
Y_3	0.281	-0.146	0.164	0.703	0.141	0.462	0.0981

According to the principle of factor analysis, the three main factors are highly independent, and each factor has a high correlation with other included variables. Many variables included in one factor also have a high correlation. Based on this, the following analysis is made in Table 3: the relationship between operating profit margin (X_3) and product sales rate (X_7) in the main factors is far greater than the coefficients of other variables, and they are all positive values. That is, there is a highly positive nature between the two variables. These two variables reflect the sales and profits of the enterprise, so they are called sales factors in this paper. It is mainly a comprehensive reflection of the total asset contribution rate (X_1), real asset turnover rate (X_2), total labor productivity (X_5), and return on net assets (X_6). It marks the level of capital and human resources utilization of enterprises. This paper is

called the efficiency of people and materials. For the comprehensive reflection of the capital value maintenance and appreciation rate (X_4), this paper is called the cause of development.

To comprehensively evaluate the economic benefits of these enterprises, the factor scores of the three main factors are calculated. The factor score table is obtained, and the comprehensive score Y and total ranking are obtained by linear weighted average with respective contribution rate as the weight. The 26th enterprise has the highest broad level of economic benefits. However, the total score of the enterprise ranked first because of its vital promotion means and high factor score. However, its factor ranking is the lowest, indicating that the enterprise needs to strengthen its capital and human resources.

7. Conclusion

With the development of the economy and social economy, Internet marketing is rising and becoming more and more respected by enterprises and users. While Internet marketing brings convenience to enterprise operations and people's lives, many problems still need to be improved. In a word, based on Internet marketing, a scientific and reasonable enterprise economic benefit evaluation index system and comprehensive evaluation method should be established. The empirical analysis of 31 enterprises shows that this analysis is objective and factual, and the conclusions are basically in line with reality. Furthermore, the enterprise economic benefit management information system can be established so that the index calculation, query, analysis, and evaluation of enterprise financial benefit can be based on modern computer technology. From a macro perspective, we can conduct a quantitative research of China's enterprise reform and development, provide a reference and basis for enterprise reform and scientific decision-making of leaders at all levels, guide the entire enterprise to change the mode of economic growth, and improve the quality and efficiency of economic growth.

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