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Promotion of the Effectiveness of Corporate Financial Management to Social Benefits

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Abstract:

Purpose: *The aim of this article is to study the promotion of the effectiveness of corporate financial management to social benefits.*
Design/methodology/approach: *From the perspective of professional technology, the effectiveness of financial management is not considered by the analysis of the promotion effect of enterprises on social benefits, which will lead to the analysis results are inconsistent with the actual situation. New analytical methods are studied. The GA-SVM-based effectiveness evaluation model of enterprise financial management is used as the basis. Through GA-SVM and genetic algorithm, the model is constructed to evaluate the effectiveness of financial management.*
Findings: *According to the evaluation results, the established evaluation model is used to comprehensively score the indicators for promoting the social benefits of the enterprise. The experimental results show that the correct classification rate of the proposed model is above 90%, and the average correct classification rate is 95.0%, which indicates that the model has strong generalization ability. The average score of the company evaluated in 2013 is 4.52×10-6, which is consistent with the actual situation. Colleagues also verified the effectiveness of the method.*
Practical implications: *The paper has guiding significance for the overall development of benefits, and also provides the scientific method for evaluating the performance of corporate social responsibility.*
Originality/value: *The paper could continue the evaluation of the effectiveness of traditional enterprise financial management, conduct the more comprehensive, in-depth and scientific analysis of the production and operation, provide more practical financial management information to promote sustainable business.*

Keywords: *Corporate, financial management, effectiveness, social benefits, promotion, GA-SVM.*

JEL codes: *G03, G30.*

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1. Introduction

Under the new situation, the development of enterprises has higher requirements for the construction of internal control systems and the content of financial management. Enterprise financial management can effectively guarantee the effectiveness of the conduct of corporate economic activities and management. At the same time, the company's production and operating costs can be reduced, and corporate assets can be protected to avoid corporate financial and operational risks (Twomey *et al.,* 2015). The construction of financial management should be highly valued in order to play its role and significance.

With the continuous development of the market economy, the scale of enterprises has been continuously expanded, the influence of science and technology has gradually increased, the internal and external costs of enterprises have become increasingly obvious, and the negative external effects of enterprises have attracted more and more attention. In the 1950s, the function of promoting social benefits is widely studied in developed countries. The business community is also actively involved in this debate, and a large number of theories and facts show that companies should assume certain social responsibilities (Nangka *et al.,* 2015).

Howard R. Bowen's "Social Responsibility for Entrepreneurs" published in 1953 announces the beginning of the discussion on corporate social responsibility issues (Joseph, 2015). Since then, this issue has been the focus of the industry and a series of discussions have been carried out. But there are many differences in the views of scholars.

The comprehensive evaluation of enterprises should take into account both economic and social benefits. At present, China's evaluation of the economic benefits of enterprises has been relatively mature, but there is very little research on social responsibility. There is still no consensus on how to establish the evaluation index system and model for corporate social benefits, which affects the comprehensive, systematic and fair evaluation of enterprise benefits to a certain extent (Eun, 2018). The focus of this method research is to explore the evaluation index system and model of the social benefit promotion function suitable for China's national conditions. From this point of view, the research of this method has certain theoretical significance and has certain guiding significance for supervising the implementation of corporate social responsibility in China.

2. Materials and Methods

2.1 The GA-SVM-based Effectiveness Evaluation Model of Enterprise Financial Management

Support Vector Machines (GA-SVM): The analysis of the promotion of social benefits is based on the evaluation of the effectiveness of financial management.

Support vector machine is new technology in data mining, which is the new tool to solve machine learning problems by means of optimization method (Thillaivanam *et al.,* 2016). Its essence is learning algorithm based on the optimization theory using linear functions in high-dimensional feature space. The algorithm is based on the structural risk minimization criterion and achieves the maximum generalization ability by minimizing the risk upper bound of the generalized error (Reayat, 2015).

When the sample is linearly separable, the support vector machine is algorithm for solving the maximum interval solution in the sample space. When the sample is not linearly separable, the algorithm maps the sample set to high-dimensional space by the appropriate kernel function to achieve the linearly separable image of the sample set in high-dimensional space (Pendharka *et al.,* 2016).

Assume that the sample is linearly separable, it is

$$(x_i, y_i), i = 1, 2, ..., n, x \in R^d, y \in \{-1, +1\}$$

In d-dimensional space, the general form of the linear classification function is $g(x) = w \cdot x + b$, the specific classification equation is

$$w \cdot x + b = 0 \tag{1}$$

The normalization process is performed so that both types of samples satisfy $|g(x)| \geq 1$. That is to say, the sample closest to the classification surface $|g(x)| = 1$, its classification interval is equal to $2/\|w\|$. Therefore, the task with the largest classification interval of the support vector machine is transformed into minimize $\|w\|$ or $\|w\|^2$ (Dang *et al.*, 2017). To ensure that the classification is correct for all samples, it must be satisfied:

$$y_i[(w \cdot x) + b - 1] \geq 0, i = 1, 2, ..., n \tag{2}$$

In summary, the classification surface that satisfies the above conditions and minimizes $\|w\|^2$ is the optimal classification surface. The problem of solving the optimal classification plane by SVM can be transformed into the following constrained optimization problem, that is, under the constraint of equation (2), the minimum value of the following function is obtained (Baptista *et al.,* 2016):

$$\varphi(w) = \frac{1}{2}\|w\|^2 = \frac{1}{2}(w \cdot w) \tag{3}$$

This problem is further translated into the Language function:

$$L(w,b,a)=\frac{1}{2}(w\cdot w)-\sum_{i=1}^{n}a_i\{y_i[(w\cdot x)+b]-1\} \tag{4}$$

The optimal classification function is

$$f(x)=\text{sgn}\{(w^*\cdot x+b^*)\}=\text{sgn}\{\sum_{i=1}^{n}a_i^* y_i(x^*\cdot x)+b^*\} \tag{5}$$

sgn is a symbolic function. In the case where the sample is strictly linearly separable, it can be processed as described above.

In the case where the sample is not linearly separable, the relaxation variable needs to be introduced. The relaxation variable $\xi_i \geq 0$ is added to the equation (2) to satisfy the condition. Equation (2) can be replaced by the following equation:

$$y_i[(w\cdot x)+b-1]+\xi_i \geq 0, i=1,2,...,n \tag{6}$$

The corresponding objective function is also transformed into the minimum value of the following function:

$$\varphi(w,\xi)=\frac{1}{2}\|w\|^2=C\,|\sum_{i=1}^{n}\xi_i\,| \tag{7}$$

$C>0$ is constant, it is a parameter that controls the degree of punishment for a sample of right and wrong (Shin *et al.,* 2015).

The most prominent advantage of SVM is not to solve the linear separable problem, but to solve the nonlinear problem. The method is to map the input vector to high-dimensional eigenvector space. If the chosen mapping function is appropriate and the dimension of the feature space is sufficiently high, most nonlinear separable modes can be transformed into linear separable modes in the feature space. Therefore, the optimal hyperplane in the feature space can be constructed for pattern classification, which is related to the inner product kernel function (Claxto *et al.,* 2016). The radial basis kernel function is selected as shown in equation (8).

$$K(x,x_i)=\exp\{-\frac{|x-x_i|^2}{\sigma^2}\} \tag{8}$$

Each base function center of the support vector classifier machines corresponds to one support vector, and the support vector and the output weight are automatically determined by the algorithm (Cantuarias-Villessuzanne *et al.,* 2016).

Genetic algorithm: Another important problem of the support vector classifier machines is the selection of parameters. Different parameters directly affect the classification accuracy and generalization ability of the model. Therefore, the genetic algorithm is used to select the model parameters of the support vector machine, and then the optimization of the model is realized. The support vector machine for the radial basis kernel function needs to determine two parameters: one is the penalty coefficient C and the other is the variance σ (Lee *et al.*, 2015). The specific method is as follows:

(1) Encoding and initialization: Each pair C and σ can be considered as an individual in the population, encoded in binary. The initialized population contains 10 individuals, and the initialized binary code is converted into the real number code, which is normalized and converted into the initial solution (Nieminen *et al.*, 2015). These strings are evenly distributed in the space, and the corresponding C and σ values are evenly distributed in the parameter space.

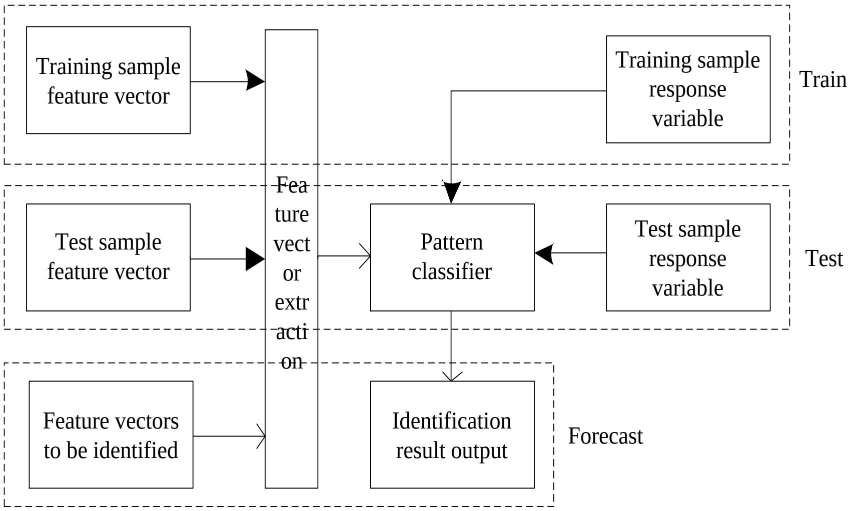
(2) Variation operation: There are many types of operator selection, such as roulette, sorting, random traversal sampling, and so on. According to the fitness of individuals in the parent population, the random traversal sampling method is used to select excellent individuals. Cross-operation is the main method of genetic algorithm to generate new individuals, which determines the global search ability of the algorithm (Rebonato, 2017). Here, the discrete recombination of new and old populations is adopted. The mutation operation is method of generating a new gene, which determines the local search ability of the algorithm. Here the mutation probability is 0.7. After selection, crossover and mutation, the population can be regained that retains the superior characteristics of the previous generation. The newly obtained population should be evaluated again for fitness, and then judged according to the termination conditions of the program to determine whether the goal of optimization is achieved, and then whether the genetic operation needs to be continued.

(3) Global optimal convergence: The condition of the end of the genetic process is that the fitness of the optimal individual reaches a given threshold, or the fitness and group fitness of the optimal individual no longer rise. One of the two conditions is considered to be the convergence of the iterative process of the algorithm, and the algorithm ends. Otherwise, replace the previous generation with a new generation of groups selected, crossed and mutated, and return to (2) continue to perform (Noh and Lim, 2015).

Model establishment: According to the above, the effectiveness evaluation of enterprise financial management is the same as the division of points in geometric space. Suppose there are n indicators in the feature space of the enterprise sample, the number of financially normal enterprises is m, and the number of enterprises in the financial crisis is k, they form the sets X and Y respectively. There may be the intersection between the two sets, and the purpose of constructing the model is how to separate the two sets with minimal error rate and highest efficiency (Raudla *et al.*, 2015).

The empirical method is used to establish the enterprise financial management effectiveness evaluation model, which includes two processes of model training and model testing. If the trained and tested model has good recognition capabilities, it can be applied to specific evaluations to further verify the validity of the model. The model structure is shown in Figure 1.

Figure 1. *Structure chart of effectiveness evaluation model for enterprise financial management*



Source: *Own study.*

The thick black arrows in the Figure indicate the data flow direction of the training and test samples, and the thin arrows indicate the direction of the data flow in the actual enterprise financial management effectiveness evaluation process (Hepworth, 2018). As can be seen from Figure 1, the first step in model building is to establish training samples and test samples, and then input training samples to train the classifier. After the training is over, enter the test sample to verify the results of the training. If the financial management effectiveness of the enterprise in the future is consistent with the discriminant result of the model classifier, the model is designed successfully.

2.2 Evaluation Model of Corporate Financial Management Effectiveness on the Promotion Function of Social Benefit

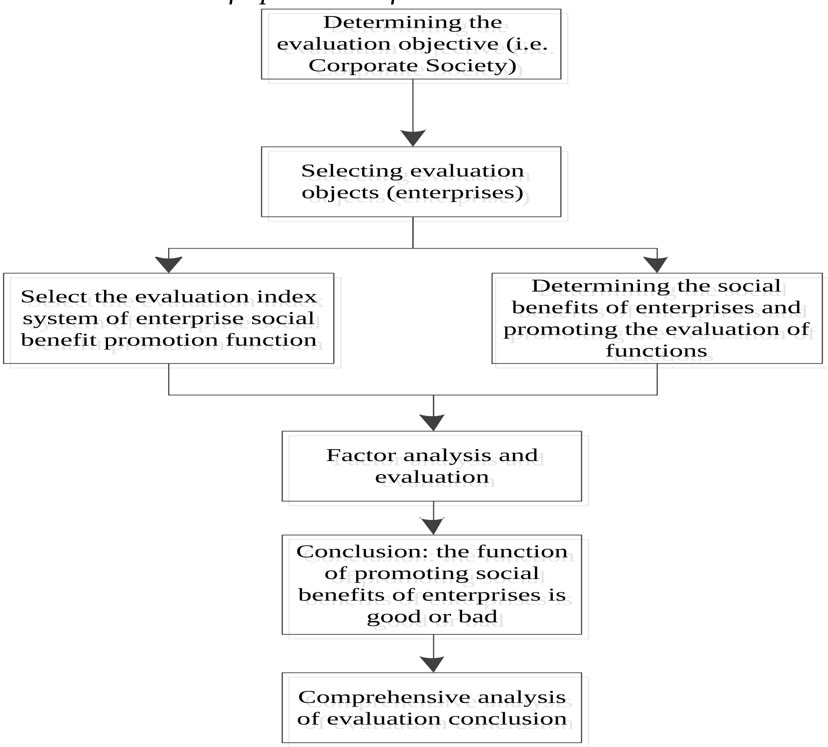
The effectiveness of corporate financial management has multifaceted contents for the promotion of social benefits, so its evaluation indicators are also indicator system. Fifteen indicators such as net taxes and fees, asset tax rates, employment numbers, per capita income of employees, and return on net assets are selected. In order to evaluate the promotion of corporate social benefits, the comprehensive score function is constructed to compress the selected indicators into a composite score (Yermack, 2017):

$$V_i = \sum a_{ij} F_{ij} \tag{9}$$

Where, V_i is the comprehensive score of the i-th corporate social benefit; a_{ij} is the weight of the j-th indicator of the i-th enterprise; F_{ij} is the score of the j-th indicator of the i-th enterprise.

As a more mature statistical method, factor analysis is used to determine the weight of the indicator. As early as 1904, factor analysis models are used to explain human behavior and abilities. Since the 1950s, it has gradually gained application in sociology, economics, medicine and marketing (Dembek *et al.*, 2016). The technical route for promoting functional evaluation is shown in Figure 2.

Figure 2. *The technical line of evaluating the effectiveness of corporate financial management on social benefit promotion function*



Source: *Own study.*

Factor analysis first requires the solution of the initial factor. The main purpose of this step is to determine the number of factors that can explain the relationship of the observed variables. In this paper, the principal component analysis method is used to solve the initial factor. It is a mathematical transformation method that converts the given set of related variables into another set of unrelated variables by linear transformation, and the new variables are arranged in descending order of variance (Letch, 2016).

In the mathematical transformation, the total variance of the variables is kept constant, so that the first variable has the largest variance, which is called the first principal component; the second variable has the second largest variance and is not related to the first variable, which is called the second principal component. By analogy, k variables have k principal components, and the last principal component has the smallest variance (Liu and Guo, 2017). The specific solution process is as follows:

Let X is the observed variable matrix and R is the correlation matrix of the observed variables. The real number λ and non-zero vector T makes the following formula hold:

$$RT = \lambda T \tag{10}$$

λ is called the eigenvalue of the matrix k, and T is called the eigenvector of the matrix corresponding to λ.

$$|R - \lambda I| = 0 \tag{11}$$

The k eigenvalues of R are obtained and arranged from large to small as follows:

$$\lambda_1 > \lambda_2 > \ldots \lambda_k > 0 \tag{12}$$

Because the eigenvalues of the correlation matrix are real numbers, and there are k linearly independent eigenvectors. Therefore, a set of orthogonal unit feature vectors $T_1, T_2, \ldots, T_k$ of R can be found. T_i is the unit eigenvector corresponding to λ_i, which satisfies $RT_i = \lambda T_i$, then $T = (T_1, T_2, \ldots, T_k)$ is an orthogonal matrix, which needs to satisfy the following equations:

$$TT^{'} = T^{'}T = I \tag{13}$$

Set $Q = diag(\lambda_1, \lambda_2, \lambda_k)$, then

$$RT = TQ \tag{14}$$

That is

$$R = TQT^{'} \tag{15}$$

Set $f = T^{'}X$, the covariance matrix of f is:

$$M = E[FF^{'}] = E[T^{'}XXT] = T^{'}E[XX^{'}]T = T^{'}RT = Q = diag(\lambda_1, \lambda_2, ..., \lambda_k) \tag{16}$$

P-th principal component $f_p = T^{'}{}_p X$ The principal component $f_1, f_2, ..., f_k$ obtained is irrelevant, and the variance of f_p is equal to λ_p . $\sum \lambda_p = k$, That is, the sum of the eigenvalues is equal to the number of variables (Yi *et al.*, 2016).

Principal component analysis only turns the relevant variables into irrelevant variables, but the number of variables does not decrease. To simplify the data, some relatively unimportant variables in the new variable matrix must be removed and the least information lost (Li, 2018). The eigenvalue criterion is generally adopted, that is, the principal component whose eigenvalue is greater than 1 is taken as the initial factor, and the principal component whose eigenvalue is less than 1 is discarded. However, sometimes in order not to lose too much information, the requirement of the feature value can be reduced. As long as the original data can be simplified, it is generally feasible to select more than 0.5.

In order to evaluate the sample by taking the obtained factor as variable, after finding the initial factor, the factor needs to be measured, and the value corresponding to each sample case is given, which are called factor values (Yan, 2017). The value of the p-th factor on the i-th case can be expressed as:

$$f_{pi} = \sum_{j=1}^{k} \omega_{pj} x_{ji} \tag{17}$$

Where, x_{ji} is the value of j-th variables in the i-th case; ω_{pj} is the factor value coefficient between the p-th factor and the j-th variable. The factor solution obtained by principal component analysis can directly obtain the factor value coefficient, that is, the feature vector $T^{'}_{pj}$. The factor value is obtained by multiplying the factor value coefficient by the normalized value of the corresponding variable. Convert formula (9) as follows:

$$V_i = \sum b_p f_{ip} \tag{18}$$

Where， b_p is the weight. From the above analysis, λ_p / k represents the variance contribution rate, and b_p is the variance contribution rate. f_{ip} is the p-th factor value of the i-th enterprise. Therefore, the comprehensive score of the evaluation index of the promotion function can be obtained from the factor value and the variance contribution rate, and the sample can be analyzed.

3. Results

3.1 Model Analysis

3.1.1 Selection of training samples and test samples

The establishment of the enterprise financial management effectiveness evaluation model consists of two parts: training and testing. Therefore, it is necessary to select appropriate training samples and test samples. The training sample selects 60 groups of listed companies (of which 50% were financially normal and financially crises). Three training samples are established, and each group selected 20 sets, 40 sets and 60 sets of data as training samples. The proportion of each group of samples containing +1 listed company is 50%, and the proportion of the class 1 sample is 50%. Finally, 40 listed companies are randomly selected from the 60 listed companies as internal test samples.

3.1.2 Model training and testing

Using the financial data information of listed companies selected in the previous article as training samples, the GA-SVM enterprise financial management effectiveness evaluation model is trained. After the training is completed, the model is tested with the in-sample and out-sample. As shown in Table 1, the values in the table indicate the correct classification rate.

Table 1. *GA-SVM listed company financial evaluation model test results*

Training sample size	20 groups	40 groups	60 groups
Correct classification rate in samples	92.5	95.0	97.5
Out sample correct classification rate	85.0	90.0	92.5
Correct classification rate in average samples	95.0		
Average out sample correct classification rate	89.2		

Source: *Own study.*

It can be seen from the test results in Table 1 that the correct classification rate in the samples of the three groups of samples is above 90%, and the average correct classification rate is 95.0%; the correct classification rate outside the sample is also above 85%, and the average correct classification rate is 89.2%. This shows that the generalization ability of this model is very strong. In addition, it can be found from the test results that as the number of training samples increases, the validity of the model increases correspondingly, which indicates that the validity of the model is greatly affected by the quality of the sample.

The above empirical results prove that the evaluation model of GA-SVM enterprise financial management effectiveness has strong pattern recognition ability, and can accurately judge the financial management effectiveness of the future period based on the financial management data information.

3.2 Empirical Research to Evaluation of Promote Functional

There are absolute numbers and relative numbers in the corporate social responsibility indicators selected in this paper. In order to make indicators with different meanings and dimensions comparable, relevant indicators need to be standardized. Transform $z = (x - \overline{x}) / \sigma$ into normalized variable ($\overline{x}$ is the mean of x and σ is the standard deviation of x). Normalized transformation does not change the correlation coefficient between variables. Standardized variables are used for empirical analysis using SPSS software.

3.2.1 Test of factor analysis

The Bartlett sphericity test helps determine if the observed data is suitable for factor analysis. Starting from the correlation coefficient matrix of the variable, its zero-hypothesis correlation coefficient matrix is the identity matrix. That is, the observed variables are irrelevant, and it is considered unsuitable for factor analysis. The experimental results show that the approximate chi-square values from 2013 to 2015 are 323.637, 311.459 and 379.76, respectively, and the degrees of freedom are all 105. The significant levels are all 0.000, which is less than the significant level of 0.05. That is, the data is suitable for factor analysis. The Bartlett sphericity test results are shown in Table 2.

Table 2. *2013-2015 years of Bartlett sphericity test results*

	Particular year	2013	2014	2015
Bartlett's Test of Sphericity	Approximate chi square value	323.637	311.459	379.76
	Degree of freedom f	105	105	105
	Significant level Sig.	0	0	0

Source: *Own study.*

3.2.2 Determination and naming of common factors

The Eigenvalues of the main factors and the variance contribution rate of each factor in 2013 and 2014 are only slightly different from those in 2015. Therefore, 2015 is taken as an example. According to the algorithm of this paper, the eigenvalues of the five main factors in 2015 are 4.010, 3.077, 2.542, 2.220 and 1.348. The cumulative value of the variance of the five eigenvalues as percentage of the total variance is 87.97%, that is, the variance explained by the five factors accounts for 87.97% of the total variance, which can more comprehensively reflect the information contained in the original indicator.

At the same time, in order to make the main factor to be easier to explain, the variance of the correlation coefficient matrix is maximally rotated. The obtained eigenvalue, variance contribution rate and factor load matrix are shown in Table 3 and Table 4.

Table 3. *The characteristic root and variance explanation of 2015 principal factors*

	Main factor	1	2	3	4	5
Before rotation	Characteristic value	4.179	3.67	2.271	11.679	8.84
	Contribution rate(%)	27.857	24.465	15.139	11.679	8.840
	Cumulative contribution rate(%)	27.857	52.322	67.460	79.140	87.979
After rotation	Characteristic value	4.010	3.077	2.542	2.220	1.348
	Contribution rate(%)	26.733	20.510	16.949	14.800	8.987
	Cumulative contribution rate(%)	26.733	47.243	64.192	78.992	87.979

Source: *Own study.*

Table 4. *Factor loading matrix after rotation in 2015*

Index	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Per capita income	0.853	-0.055	-0.211	-0.183	-0.07
Total labour productivity	0.767	0.064	0.101	0.075	0.263
Per capita public welfare fund	0.695	0.185	0.235	0.14	-0.029
Net tax paid	-0.01	0.921	0.027	-0.031	0.199
Assets tax rate	0.083	0.857	0.053	-0.105	0.1
Number of employees	-0.07	0.852	0.085	-0.117	-0.134
Earnings per share	-0.182	0.258	0.856	0.18	0.114
Cash dividends paid	0.054	0.117	0.855	-0.087	-0.042
Return on net assets	0.072	-0.123	0.695	0.07	-0.218
Flow rate	-0.071	-0.114	-0.006	0.979	-0.081
Speed ratio	0.019	-0.054	0.055	0.983	-0.045
Asset liability ratio	-0.019	-0.16	0.048	0.974	-0.054
Interest protection multiple	-0.147	0.097	-0.247	0.71	0.156
Donation	0.01	0.182	-0.029	-0.046	0.898
Donation income ratio	0.146	-0.11	0.022	-0.105	0.85

Source: *Own study.*

As can be seen from the above Table, the evaluation indexes X1, X2 and X3 have large load in the factor F1. Among them, X1 is the net amount of taxes and fees that are turned over, X2 is the asset tax rate indicator, and X3 is the employment number indicator. Therefore, F1 can be named as the business-to-government benefit factor. The contribution rate of the main factor F1 to the corporate social benefit variance is 26.733%, which is the main aspect of the corporate social benefit promotion function. Name F2 as the benefit factor of the company to employees, name F3 as the benefit factor of the company to shareholders, name F4 as the benefit factor of the creditor, and name F5 as the benefit factor of the enterprise for public welfare. These benefit factors can reflect the promotion of corporate financial management effectiveness to social benefits. The above analysis can be organized into Table 5.

Table 5. *Analysis of corporate social responsibility factors in 2015*

Factor name	Operational indicators	Factor loading	Characteristic value	Cumulative variance contribution rate
Benefits to the government	X_1=Net tax paid X_2=Assets tax rate X_3=Employment number	0.921 0.857 0.852	4.01	26.733
Benefits for employees	X_4=Per capita income X_5=Per capita public welfare fund X_6=Total labour productivity	0.853 0.767 0.695	3.077	47.243
Benefits to shareholders	X_7=Earnings per share X_8=Cash paid by distributing dividends or profits X_9=Return on net assets	0.856 0.855 0.695	2.542	64.192
Benefits to creditors	X_{10}=Flow rate X_{11}=Speed ratio X_{12}=Asset liability ratio X_{13}=Interest protection multiple	0.979 0.983 0.974 0.71	2.22	78.992
Benefits for public welfare undertakings	X_{14}=Donation and sponsorship expenditure X_{15}=Donation income ratio	0.898 0.85	1.348	87.979

Source: *Own study.*

3.2.3 Comprehensive score for promoting function

The SPSS software can automatically generate the scores of the main factors, and calculate the comprehensive scores of the corporate social indicators of each company according to formula (18) in the algorithm. The data comes from the variance contribution rate in Table 5. From equation (9), the comprehensive score and ranking of the evaluated company can be calculated, as shown in Table 6. This Table is based on the order of 2013, ranked in descending order of scores; in 14 and 15 years, according the order of 2013 companies, the corresponding scores and rankings are filled in.

Table 6. *Comprehensive score and ranking of social benefit promotion function of sample enterprises in 2013-2015 years*

Corporate name	2013 score ranking	2014 score ranking	2015 score ranking
G Jiao Tong Tang	0.903 1	0.849 1	0.051 10
The Changfeng automobile	0.687 2	0.429 6	0.775 3
Hualing	0.66 3	0.79 2	0.937 1

Hunan Torch A	0.478 4	0.68 12	0.035 11
Electric wide	0.35 6	0.383 7	0.217 18
ZOOMLION	0.294 7	0.541 5	0.363 5
G times	0.25 9	0.304 21	0.115 14
Silver China Electric Power	0.041 11	0.045 11	0.034 15
Average value	4.52×10^{-6}	2.3×10^{-7}	1.84×10^{-6}
Standard deviation	0.398	0.405	0.415

Source: *Own study.*

4. Discussion

4.1 Discussion on GA-SVM Based Evaluation Model

This paper takes the financial data of listed companies as the research object. Through empirical research, the GA-SVM evaluation model of financial management is constructed. The main conclusions are as follows: The financial data of the listed company is effective and has strong predictive ability. Through the mining of financial management data of listed companies, the future financial status can be predicted. The empirical test proves that the evaluation model based on GA-SVM can more accurately evaluate the effectiveness of financial management of the company and provide the reliable premise for the analysis of social benefit promotion function.

4.2 Discussion on the Comprehensive Score of the Promotion Function

The average composite scores of companies in 2013, 2014 and 2015 are 4.52×10-6, 2.3×10-7 and 1.84×10-6, respectively, with the highest average score in 2013 and the lowest in 2014; the standard deviations are 0.398, 0.405 and 0.415, respectively. The analysis results of the above data are consistent with the actual results, which show that the model is effective. If the average level is set as the measure of the promotion function of social benefits, then in 2013, half of the companies' corporate social benefits are better and the standard deviation is the smallest, which indicates that the company's comprehensive score has the smallest deviation.

However, the standard deviation is still large, which shows that the gap between companies is very obvious. It can be seen from Table 6 that the pharmaceutical manufacturing industry has the good social benefit, and the ranking of Jiuzhitang Pharmaceutical has been relatively high, while the ranking of the information technology industry has generally declined.

It can be seen that the promotion function of corporate financial management effectiveness to social benefits is influenced by the industry in which the company is located.

5. Conclusions

The analytical approach to the effectiveness of corporate financial management in promoting social benefits is proposed. According to the empirical results, it can be clearly known the overall status of each company's promotion function of social benefit and the position of the specific five aspects in the evaluated company. The benefits of the enterprise to the government, the benefits of the company to the employees, the benefits of the company to the shareholders, the benefits of the enterprise to the creditors, the benefits of the enterprise to the public welfare undertakings). Which aspects of the benefits are done well, and which aspects are not enough can be clearly understood, which has guiding significance for the overall development of benefits, and also provides the scientific method for evaluating the performance of corporate social responsibility.

Introducing the promotion effect of corporate social benefits into the existing evaluation system, it can continue the evaluation of the effectiveness of traditional enterprise financial management, conduct the more comprehensive, in-depth and scientific analysis of the production and operation, provide more practical financial management information to promote sustainable business.

First is to help enterprises to obtain more social profits while taking legal responsibility to avoid the risk of being terminated. Let them know that taking social responsibility is to create benefits for the company; Second is to help enterprises make scientific decisions; Third is to tie the interests of enterprises and social benefits so that the development of enterprises can promote the improvement of social benefits.

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