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Optimizing ESG Management in Enterprises Using 'Internet +' and Big Data Technologies

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ABSTRACT

The in-depth development of "Internet +" has made the application of data information technology in ESG (Environmental, Social and Governance) management more extensive and has made the optimization of ESG management the focus of listed companies. The original statistical evaluation method cannot solve the problem of improving the level of ESG management, and the ability to improve the quality of the environment, society and the company is weak, increasing ESG management's difficulty. Therefore, this paper proposes a method based on big data technology to optimize ESG management. First, the "Internet +" technology is used to analyze environmental, social and company quality data, and ESG management classification is carried out according to the requirements of listed companies. Then, according to the classification results, the "Internet+" technology forms different ESG management sets and iteratively mines different sets to obtain the optimal optimization strategy. After MATLAB testing, the effect of ESG management can be improved based on Internet + technology. The effect improvement rate reaches 92.6%, the ESG management process is improved, the improvement is 25%, and the ESG management time is reduced to 15 seconds, which meets the ESG management needs of listed companies.

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INTRODUCTION

Although the emergence of ESG (Environmental, Social and Governance) management scoring institutions such as SynTao Green Finance and FTSE Russell has dramatically improved the level of ESG management, the scores of various institutions vary considerably,[1] significantly impacting corporate equity and performance. In 1992, UNEP financial institutions repeatedly proposed that corporate ESG management be considered in decision-making.[2] The promulgation of the 2018 Governance Code for Listed Companies also requires enterprises to strictly implement ESG-related disclosure. Then, the promulgation of documents such as the Research Report on the ESD Evaluation System of Chinese Listed Companies and the Guidelines for Environmental,[3] Social and Governance Reporting also prompted listed companies to implement ESG responsibility.[4] However, although the analysis of ESG management in the WIND database can promote the improvement of this management level, it cannot eliminate the problem of differences in ESG management in the same industry.[5] Therefore, finding an evaluation method for ESG management has become an urgent problem for listed companies. ESG management involves environmental,[6] social and other data, and a non-linear relationship exists between corporate governance data.[7] In the environment, responsibility, corporate governance and other links, it is easy to have problems such as poor assessment accuracy, inconsistent evaluation standards and different industry accuracy. "Internet +" technology has strong comprehensive analysis capabilities to realize the optimization and integration of ESG management of listed companies.[8] At the same time, the content of ESG management is explored to verify the feasibility

and rationality of ESG management and the effect after implementation. Some scholars apply intelligent algorithms to ESG management optimization and try to improve the level of ESG management.[9] The results show that the accuracy of intelligent algorithms in ESG management is poor, but there are problems such as data loss and reduced accuracy in environmental, social and corporate governance.[10] "Internet +" technology uses the Internet to integrate and extract ESG management data and calculate environmental,[11] social and corporate governance data, and its calculation results are more in line with the development needs of society. Therefore, this paper relies on "Internet +" technology to judge ESG management data[12] and mainly improves the following aspects: 1) adjust the corporate governance parameters and data calculation direction in ESG management. Some scholars have conducted research on ESG management and compared the management effects of different methods, and the results show that the corporate governance assessment of "Internet +" technology is more accurate and can achieve a large number of data analyses;[13] 2) Compared with other research methods, "Internet+" technology uses Internet integration to classify environmental, social and other data,[8] and divides ESG management according to classification weights to improve the speed of evaluation. However, external policies greatly influence this method and cannot achieve comprehensive analysis.[9] From the perspective of ESG management,[14] some scholars use "Internet +" technology to analyze ESG management data processing and compare the classification methods of the environment and society,[10] proving that "Internet +" technology can efficiently evaluate ESG management data. 3) Compared with the online monitoring method, SynTao Green Finance, FTSE Russell and other platform evaluations, "Internet +" technology can improve the complexity of ESG management and improve the accuracy and effectiveness of evaluation, but the method lacks corresponding practical proof.[15] The above analysis shows that although the previous methods can comprehensively judge ESG management data, the evaluation results are unsatisfactory and cannot be adapted to the evaluation and analysis needs of listed companies.[16] Therefore, the current optimization problem of ESG management is to solve the problems of the evaluation system, evaluation results and evaluation process. This paper uses "Internet+" technology to improve ESG management, then analyzes the results more accurately and proves the relevant aspects with practical cases. At the same time, it analyzes the key points, corporate governance points, and social responsibility points in ESG management and improves the process of ESG management, aiming to promote the improvement of ESG management level.

Table 1: Research Status of ESG Management Under "Internet+" Technology (Unit: Article)

Year	*Amount of data*	*Average value*	*Vari-ance*	*Increase the amount*
2015	58.90	24.79	9.01	0
2016	71.56	42.27	7.52	12.66
2017	53.85	32.64	8.94	-17.71
2018	221.70	168.22	1.33	167.85
2019	229.98	136.78	6.67	8.28
2020	117.95	102.71	7.13	-112.03
2021	32.49	11.16	9.34	-85.46

It can be seen from the content in Table 1 that domestic research on ESG management under "Internet +" technology has shown an increasing trend [17]. However, the process of increasing is more tortuous and gradually moving towards ESG management, as shown in Figure 1.

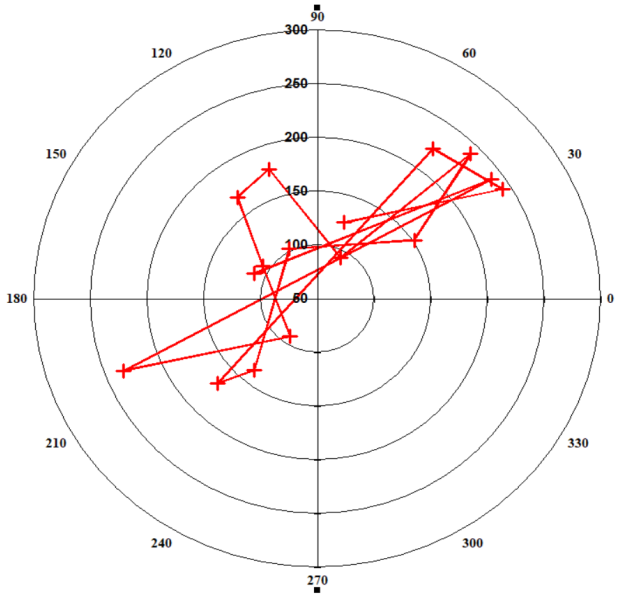

Fig. 1: Development Process of ESG Management Under "Internet+" Technology

RELATED CONCEPTS

"Internet +" Technology

The big data method is a comprehensive computing method; the implementation of ESG management data integration and optimization analysis can solve the complexity of ESG management data,[18] realize the comprehensive analysis of social and environmental data, and improve the accuracy of ESG management data calculation results. Compared with other methods, "Internet+" technology is more comprehensive in calculating ESG management data and can realize the integrated analysis of social, environmental and corporate governance data. At present, "Internet +" technology is widely used in computers, machinery,

aviation and other fields, but it is less used in ESG management optimization. In order to conduct ESG management analysis more objectively, the application conditions and application points of Internet+ technology are quantitatively described, and the results are as follows.

Complexity calculation of ESG management: environmental and social data is x_{ij}, corporate governance data is y_{ij}, the complexity function between data is k, the correlation coefficient is ζ_{ij} ζ_{ij}, and the complexity centre of data is, then the data complexity calculation is shown in Equation (1).

$$\varphi(k)=\begin{cases} x_{ij}\to y_{ij}, loaction \\ x_i\to y_j, \text{int}\, ernet \end{cases} \tag{1}$$

Classification of ESG Management

$\varphi(x\cdot k)$ Characteristics of ESG management: The ESG management data function is $\varphi(x\cdot k)$, and the specific judgment is shown in Equation (2):

$$\int_{x\in d_{ij}} k f(x)dx \approx P_j(x) \tag{2}$$

Classification conditions for ESG management: The constraint function of ESG management is $I(x)$ the same as the constraint function of corporate governance $P(x)$. The calculation of the classification conditions is shown in Equation (3).

$$I(x,p)=lin(\frac{n}{\sqrt{x^3}}) \tag{3}$$

Where p stands for the standard of ESG management.

Judgment Process of ESG Management

After the ESG management collection is constructed, it is necessary to make targeted judgments on corporate governance, environment and society. At present, the judgment of ESG management is divided into two categories, one is the conditions of corporate governance, and the other is the environmental and social responsibility letter. The "*IF*" mode is used to fuse the optimization strategy and output the constraint M, and the classification process is as follows:

$$\text{IF:}\quad M(x)\doteq C(\Delta x_i)\ ,\ \text{and}\quad x_i\in d_{ij}\ ,$$

$$\text{Then}\quad y_a \lhd y_b \rightleftarrows \lambda(\Delta x_i)$$

Among them $\lambda(x_i)$ are the implementation conditions of "Internet +" technology, d_{ij} ESG management data collection, $M(x)$ ESG management constraint function, and the calculation result of the ESG management process is shown in Equation (4).

$$O(x_i)=\frac{\lambda(x_i)}{d_{ij}}\cup M(x) \tag{4}$$

Verification of ESG Management Results

Initialization of Process Data

The initial data of ESG management is mainly social, environmental, corporate governance and other data, so the data should be standardized to obtain the basic attributes of ESG management data. In addition, the "Internet+" technology will mine ESG management, so it is necessary to map the ESG management data to the "Internet+" technology list to realize the preprocessing of ESG management data, and the result is shown in Figure 2.

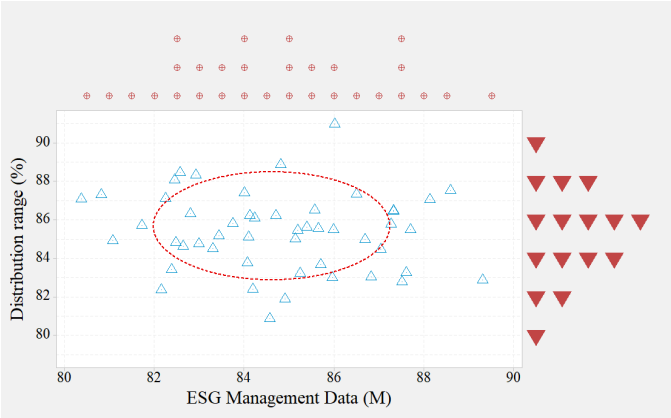

Fig. 2: Initial Data Distribution of ESG Management

It can be seen from Figure 2 that the distribution of ESG management data is reasonable and regularly arranged, but the gap between ESG management data is large, indicating that "Internet +" technology has the potential for ESG management. In addition, ESG management data presents a partial normal distribution, and standard data processing can be realized through coordinate system transformation.

Table 2. The Processing of ESG Management Data in Figure 2

Cronbach α=-0.1986 for ESG management metrics		Normalized α=-0.1549	
Remove the indicator and the remaining indicators	Remaining indicators		
remove	*Correlation coefficient r*	*Cronbach a*	

x1	0.0747		-0.7111		
x2	-0.0090		-0.3610		
x3	-0.2597		0.4351		
Divided into 2 groups according to the front and back:					
Split-half r=-0.25966		Spearman-Brown r=-0.70148			
The odd-even interval is divided into 2 groups:					
Split-half r=-0.00902		Spearman-Brown r=-0.01821			
Hoyt Reliability ANOVA table					
ESG management situation	D.F.	SS	MS	F	PROB
Single indicator room	30	126.8823	4.2294	0.8343	0.7013
Within a single indicator	62	307.6227	4.9617		
measurement	2	3.4711	1.7355	0.3424	0.7115
error	60	304.1516	5.0692		
total	92	434.5050	4.7229		
Hoyt unadjusted reliability test = -0.1731			SE (measure) = 3.8581		
Hoyt adjusted reliability test = -0.1986			SE (measure) = 3.8997		
Hoyt unadjusted project reliability = -0.0517			SE (measure) = 3.6530		
Hoyt adjusted project reliability = -0.0584			SE (measure) = 3.6647		

Verification of ESG Management Content

There are three main types of ESG management: environmental, social, and corporate governance. The mathematical description of the above three verifications is as follows.

The main indicators of environmental verification are environmental objectives, environmental sustainability, environmental disclosure, and environmental negative events. The environmental indicators are adjusted according to the listed enterprises, and their calculation is shown in Equation (5).

$$F_1(x) = \frac{x_i^2}{\overline{x}} \tag{5}$$

The main indicators of social verification are customers, communities, products, public welfare, and negative events, which are calculated by the transfer function, combined with the normal processing technology of "Internet +" technology, to complete social verification, and its calculation is shown in formula (6).

$$F_2(x) = x_i^2 \bigcup 2 \cdot \pi \cdot x_i \tag{6}$$

The main indicators of corporate governance are business ethics, corporate governance and negative events, which are fused and analyzed using the gradient optimization function, which is calculated as shown in Equation (7).

$$F_3(x) = -20\exp\{-0.2\sum_{i=1}^{n}\sqrt{\frac{1}{n}\sum_{i=1}^{n}x_i^2}\} - \exp\{\frac{1}{n}\sum_{i=1}^{n}\cos(2\pi x_i)\} + 20 + e \tag{7}$$

The requirements for the results of the above analysis are shown in Table 3.

Table 3:. Verification Process of ESG Management Data

Key values of each indicator after the 0th adjustment			
Group	**Society**	**Environment**	**Corporate governance**
1	84.0199	84.8999	81.0699
2	85.0458	85.2900	85.0289
3	88.1199	86.4499	87.3299
Key values of indicators after the first adjustment			
Group	Society	Environment	Corporate governance
1	83.7680	85.9040	81.6800
2	84.8711	84.8100	85.3378
3	87.2383	87.0667	86.1533
The key values of the indicators after the second adjustment			
Group	**Society**	**Environment**	**Corporate governance**
1	83.9471	86.3114	82.1557
2	84.2920	84.0915	85.8710
3	87.3018	86.8891	85.1754
Key values of indicators after the third adjustment			
Group	**Society**	**Environment**	**Corporate governance**
1	83.7037	86.2975	82.4737
2	84.2183	84.0122	86.1300
3	87.3525	86.5992	84.9425
Key values of the indicators after the fourth adjustment			
Group	**Society**	**Environment**	**Corporate governance**
1	83.7037	86.2975	82.4737
2	84.3100	84.3095	86.3125

3	87.7960	86.5220	84.3400
Key values of indicators after the fifth adjustment			
Group	**Society**	**Environment**	**Corporate governance**
1	83.3571	85.9914	82.4600
2	84.3100	84.3095	86.3125
3	87.6445	86.6964	84.1791
Key values of indicators after the sixth adjustment			
Group	**Society**	**Environment**	**Corporate governance**
1	83.3571	85.9914	82.4600
2	84.3100	84.3095	86.3125
3	87.6445	86.6964	84.1791
ESG management results were adjusted 6 times			
Sample number	**Initial category**	**Final category**	**Distance from condensation point**
1	2	2	3.0390
2	2	1	5.6340
ESG management results were adjusted 6 times			
Sample number	**Initial category**	**Final category**	**Distance from condensation point**
3	2	3	0.7780
4	2	3	4.4730
5	2	1	0.6550
6	2	2	2.1790
7	2	1	2.3450
8	2	2	11.3510
9	2	2	1.2980
10	2	1	6.9030
11	2	2	5.5710
12	2	2	4.2310
13	2	2	10.8210
14	2	3	5.0480
15	2	2	5.3070
16	2	3	7.9230
17	3	3	10.2150
18	2	2	0.2070
19	2	1	0.0260
20	2	2	0.0690
21	2	2	0.1510
22	2	3	0.0490
23	2	2	0.2280
24	2	3	0.0770
25	2	2	0.2160
26	1	1	0.0220
27	2	2	0.1170
28	2	2	0.1470
29	2	3	0.0370
30	2	3	0.1520
31	2	2	0.4370

It can be seen from the data in Table 3 that the data verification of formula (5)~(6) is ideal, and the difference between the initial value and the final assessment is small, which meets the requirements of ESG management.

Sub-Content Verification of ESG Management

There is a correlation between big data and the optimization strategy of ESG management, so it is necessary to use sub-strategies to analyze ESG management. The sub-strategies include social, environmental, corporate governance, etc., which are calculated as follows.

1) ESG management in the social aspect, calculated as shown in Equation (8).

$$y_{ij}(t+1)=\omega \bullet y_{ij}(t)+\max \sum_{i,j=1}^{n} g_{ij}{}^{k}[x(t)] \tag{8}$$

2) ESG management in the environmental aspect, calculated as shown in Equation (9).

$$y_{ij}(t)=2\omega \cdot y_{ij}(t)+x(t)\cdot f(P_j[x(t) \tag{9}$$

3) ESG management in corporate governance, calculated as shown in Equation (10).

$$y_{ij}(t+1)=n+3\cdot \delta \cdot \sum_{i,j,k=1}^{n} g_{ij}{}^{k}\{x(t)\cdot f(P_j[x(t)]\} \tag{10}$$

In terms of the optimization of ESG management by "Internet +" technology, on the one hand, the coverage of ESG management is expanded, and various calculations are carried out for social data and environmental data to realize horizontal computing of ESG management. On the other hand, it mines and analyzes corporate governance, society, environment and other data, builds a database of listed companies through "Internet +" technology, forms a data collection, and realizes the integration of "Internet +" and ESG management. for the accuracy of ESG management analysis, it is necessary to add management coefficients to the constraints. Among them, the constraint coefficient of "Internet+" β and the constraint coefficient of ESG management are α, and the specific calculation is shown in Equation (11).

$$\begin{cases} \alpha = \max Line_t^{\ d} \\ \beta = \min \sum_{t=1}^{T} \Delta w_i^{\ d} \end{cases} \quad (11)$$

Among them, e is the amplification factor of ESG management, T is the dynamic adjustment process of ESG management, and d is the number of iterations of ESG management.

Calculation Process of "Internet+" Technology in ESG Management

"Internet +" technology to use the Internet core to promote the improvement of ESG management level and realize the integration of Internet and enterprise management; the specific selection process is shown in Figure 3.

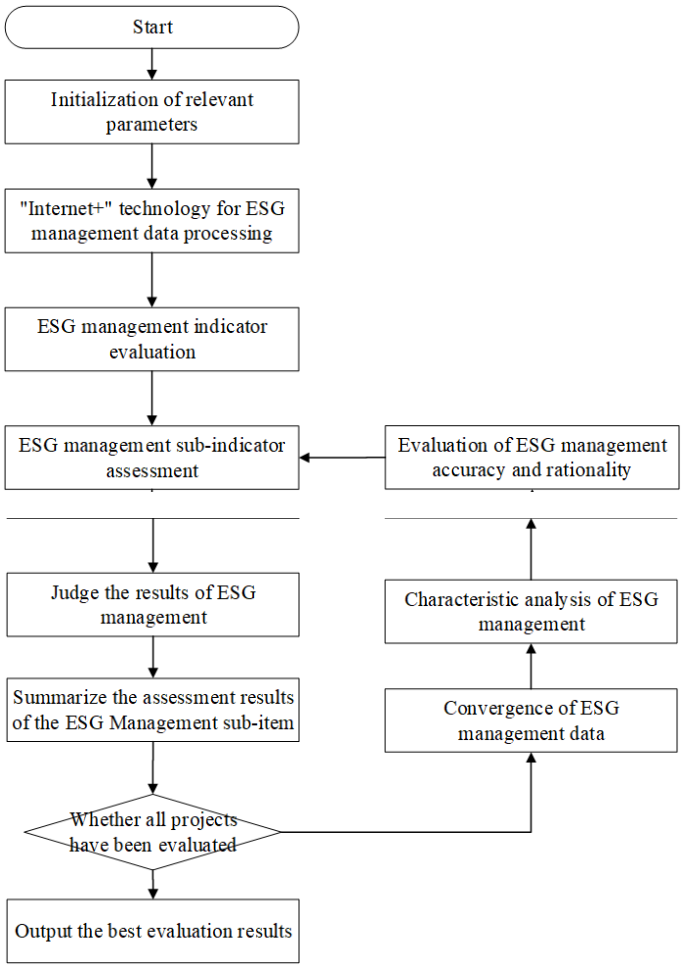

Fig. 3. The Optimization Process of ESG Management by "Internet+" Technology

Step 1: Determine the ESG management data set and the "Internet +" technology collection, analyze the ESG management issues according to the advantages of "Internet +" technology, and determine the set of ESG management. At the same time, the initialization data and constraints of ESG management are mapped, and an ESG management list is formed.

Step 2: ESG-managed data processing. According to the "Internet +" technology, choose standardized processing methods.

Step 3: Generate ESG management functions. The "Internet+" technology calculates environmental, social and corporate governance data and distributed servers and selects optimization strategies by setting initial weights and constraints. Data mining is carried out by formulas (1) ~ (7) and sub-strategy coefficients of different strategies.

Step 4: Optimal integration points for ESG management and selection of sub-fusion points. According to the amount of data and data structure of ESG management, the best fusion point is selected, and the entire ESG management is optimized.

Step 5: Constraints on optimal ESG management. Environmental, social, and corporate governance are obtained, and the marker coefficients of different ESG management data are adjusted.

Step 6: Comprehensive judgment of ESG management. After determining the ESG management set, select the optimal convergence point and explore the strategy to verify the degree of integration of environmental, social, and corporate governance and the degree of compliance with various constraints.

Step 7: Determine whether the ESG management data collection and "Internet+" technology are all analyzed. If all data sets are analyzed, repeat steps 2~6; otherwise, output the best optimization strategy and constraints.

Practical Cases of ESG Management Optimization

Data Situation of ESG Management

This paper takes the WIND and CSMAR databases as examples and evaluates 120 listed companies according to the domestic ESG management evaluation system, and the data collection period is December 2021~November 2023. Among them, environmental data accounted for 20%, technical data accounted for 45%, and corporate governance data accounted for 35%, as shown in Table 4.

Table 4. ESG Management

Variable	Data content	Amount of data	Error	P-value
Stock	Equity concentration	2306.93	7.58	4.246
	Earnings per share	1548.68	4.07	3.345
Company situation	Company size	831.99	3.77	9.775
	Assets and liabilities	2665.58	4.43	3.054
	The company grows	4038.76	1.23	1.611
	Cash flow per share	4025.53	6.37	8.802
Industry-standard	technology	1966.46	9.87	7.012
	energy	2594.66	0.14	2.273
	Information	3054.24	6.84	7.621
	machine	1638.78	6.29	2.115
	electricity	632.11	3.53	9.342

Reasonableness of ESG Management Assessment

The number of research objects in this paper is n=120, the maximum number of ESG management mining times is D=4, and the evaluation accuracy level is 1~5. In order to improve the accuracy of the results, the median value was taken, and the specific calculation results are shown in Table 5.

Table 5: Evaluation of Reasonableness of ESG Management

Evaluation parameters	Specific indicators	WIND database	CSMAR database	"Internet +" technology	P-value
Environment	Environmental continuity	87.13	87.39	84.00	6.138
	Environmental negativity	88.20	88.31	82.93	8.128
	Environmental Disclosure	83.19	85.71	81.72	1.086
Society	Commonweal	83.81	85.53	85.65	3. 884
	Products	84.08	84.75	82.99	4.938
	Client	83.74	82.86	89.30	8.712
Corporate governance	Corporate governance	85.17	84.96	86.68	8. 750
	Morality	82.00	86.20	84.70	8.774
	Negative	84.80	83.76	84.07	6.138

From the data in Table 1, it can be seen that the data rationality of "Internet+" technology is basically the same as that of WIND database and CSMAR database, and the P value is greater than 0.05, which further indicates that there is no significant difference between the three, and the analysis rationality of "Internet+" technology for ESG management is better. The reasonable calculation process of ESG management assessment is shown in Figure 4.

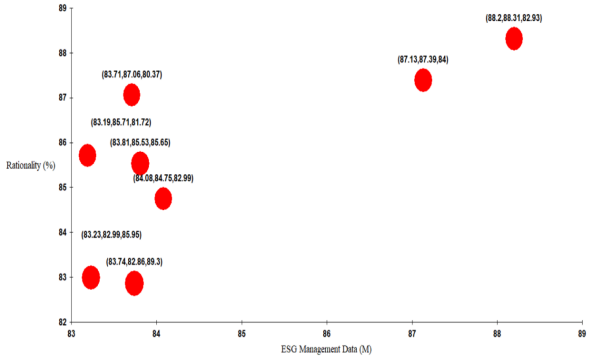

Fig. 4: Evaluation Rationality of ESG Management

As shown in Figure 4, the accuracy of payment assessment, transmission evaluation accuracy and receipt evaluation accuracy are all high, higher than IV and lower than V, which meets the assessment accuracy requirements of ESG management.

ESG Management Level Improvement Rate

ESG management is too complex, so the improvement rate of the ESG management level is one of the important contents of the assessment, and the specific improvement results are shown in Figure 5.

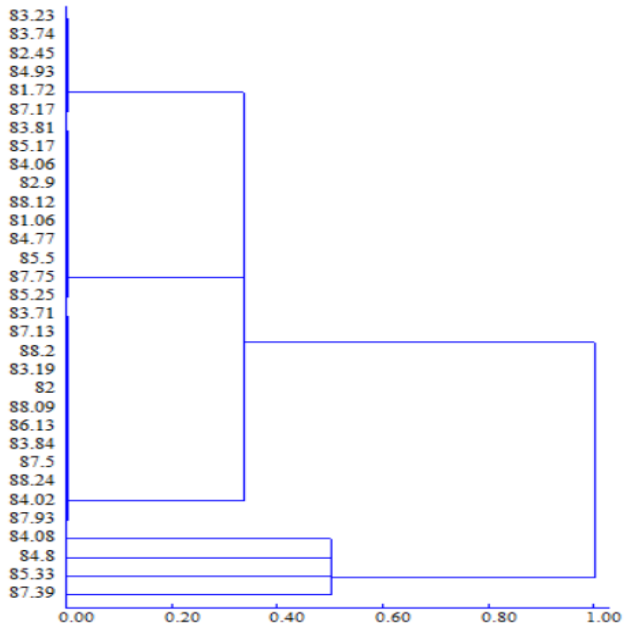

Fig. 5: ESG Management Level Improvement Rate (Abscissa Represents ESG Management Level, Ordinate Represents Improvement Rate, Unit: %)

It can be seen from Figure 5 that the improvement rate of ESG management level of "Internet +" technology is about 31%, which is significantly higher than that of the statistical evaluation method; in addition, between 4~6% improvement, Internet + technology has achieved rapid improvement, and the amount of ESG management data has been rapidly reduced, so as to ensure the stable improvement of ESG management. The main reason for the above problems is that the distributed server in Internet + technology can realize the extraction of abnormal data and identify and process social data.

Evaluation Time for ESG Management

The evaluation time of ESG management is another evaluation index of optimization strategy, and the shopping time, payment time, and verification time are calculated and compared with the statistical evaluation method, and the results are shown in Figure 6.

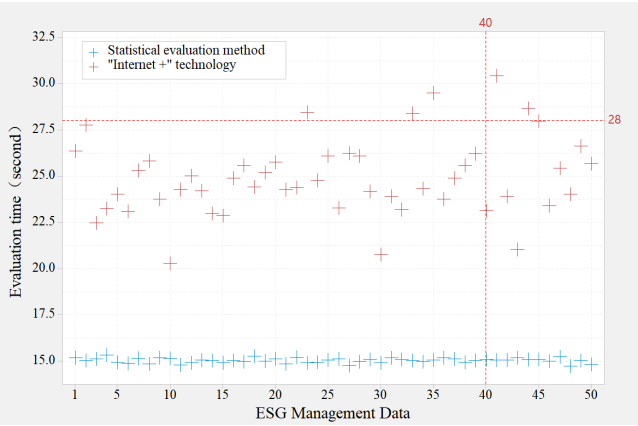

Fig. 6: Mapping of Cause Analysis Data

It can be seen from Figure 6 that compared with the statistical evaluation method, the evaluation time of ESG management by "Internet+" technology is shorter, and the calculation results of Internet+ technology are better than those of the statistical evaluation method in terms of standard deviation, average and deviation. The reason is that "Internet+" technology can realize the calculation of massive social data, and ESG management data has been standardized to increase the initial data volume of "Internet+" technology.

Accuracy of ESG Management Assessment

In order to verify the implementation effect of "Internet+" technology, the selection results of ESG management optimization strategies are analyzed, and the results are shown in Figure 7.

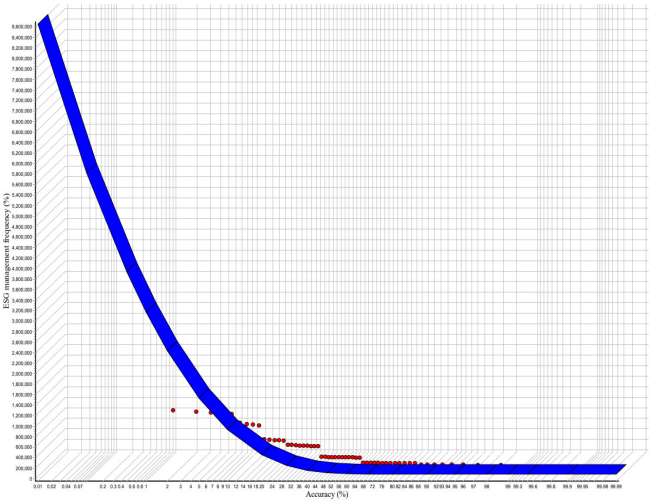

Fig. 7: Test accuracy of "Internet+" Technology

It can be seen from Figure 7 that the accuracy of ESG management assessment by "Internet +" technology is high, almost close to 99%, and the change range is relatively small, indicating that the calculation results of "Internet +" technology are relatively stable. Among them, the results of the selection of "Internet+" technology as an ESG management strategy are shown in Table 6.

Table 6. Optimal Assessment Results of ESG Management

Number of classifi-cations	Error	Optimal evaluation results
2	396.9215	1-23,24-33
3	364.0920	1-5,6-23,24-33
4	335.2067	1,2-5,6-23,24-33
5	311.6955	1,2-5,6-21,22-23,24-33
6	288.8505	1,2-5,6-19,20-21,22-23,24-33
7	264.8350	1,2-5,6-13,14-19,20-21,22-23,24-33
8	241.1704	1,2-5,6-13,14-17,18-19,20-21, 22-23,24-33
9	226.9873	1,2-5,6-13,14,15-17,18-19,20-21, 22-23,24-33
10	207.4972	1,2-5,6-13,14,15,16-17,18-19, 20-21,22-23,24-33
11	192.2083	1,2-5,6-13,14,15,16,17,18-19, 2z0-21,22-23,24-33
12	177.8801	1,2,3-4,5-7,8-13,14,15,16-17, 18-19,20-21,22-23,24-33
13	162.5912	1,2,3-4,5-7,8-13,14,15,16,17, 18-19,20-21,22-23,24-33
14	148.4188	1,2,3-4,5-7,8,9-13,14,15,16,17, 18-19,20-21,22-23,24-33
15	136.5319	1,2,3-4,5-7,8-13,14,15,16,17, 18-19,20-21,22-23,24-25,26,27-33

16	122.3595	1,2,3-4,5-7,8,9-13,14,15,16,17, 18-19,20-21,22-23,24-25,26,27-33
17	110.5911	1,2,3-4,5-7,8,9-13,14,15,16,17,18-19,20-21,22,23,24-25,26,27-33
18	99.3919	1,2,3-4,5-7,8,9-12,13,14,15,16,17,18-19,20-21,22,23,24-25,26,27-33
19	89.1676	1,2,3-4,5-7,8,9-12,13,14,15,16,17,18,19,20-21,22,23,24-25,26,27-33
20	79.7112	1,2,3-4,5-7,8,9-12,13,14,15,16,17,18,19,20-21,22,23,24-25,26,27,28-33
21	69.3177	1,2,3-4,5-7,8,9-13,14,15,16,17,18-19,20-21,22,23,24-25,26,27,28,29-30,31,32-33
22	58.1186	1,2,3-4,5-7,8,9-12,13,14,15,16,17,18-19,20-21,22,23,24-25,26,27,28,29-30,31,32-33
23	47.8943	1,2,3-4,5-7,8,9-12,13,14,15,16,17,18,19,20-21,22,23,24-25,26,27,28,29-30,31,32-33
24	37.7308	1,2,3-4,5-7,8,9-12,13,14,15,16,17,18,19,20-21,22,23,24-25,26,27,28,29,30,31,32-33
25	31.7516	1,2,3-4,5-7,8,9,10-12,13,14,15,16,17,18,19,20-21,22,23,24-25,26,27,28,29,30,31,32-33
26	25.8681	1,2,3-4,5-7,8,9,10,11-12,13,14,15,16,17,18,19,20-21,22,23,24-25,26,27,28,29,30,31,32-33
27	20.5910	1,2,3-4,5-7,8,9,10, 11-12,13,14,15,16,17,18,19,20,21, 22,23,24-25,26,27,28,29,30,31,32-33
28	15.4878	1,2,3-4,5,6-7,8,9,10,11-12,13,14,15,16,17,18,19,20,21,22, 23,24-25,26,27,28,29,30,31,32-33
29	11.3949	1,2,3-4,5,6-7,8,9,10,11,12,13,14,15, 16,17,18,19,20,21,22,23,24-25,26, 27,28,29,30,31,32-33
30	7.3206	1,2,3-4,5,6-7,8,9,10,11,12,13,14,15, 16,17,18,19,20,21,22, 23,24,25,26,27,28, 29,30,31,32-33
31	3.4422	1,2,3-4,5,6,7,8,9,10,11,12,13, 14,15,16,17,18,19,20,21,22, 23,24,25,26,27,28, 29,30,31,32-33

It can be seen from Table 6 that before and after the standardization of "Internet+" technology, the calculation accuracy is significantly improved, and after the standardized treatment, the calculation deviation is significantly reduced. After standardized processing, the number of ESG management optimization strategies gradually decreased, indirectly indicating the improvement of the accuracy of optimization strategy selection. In order to further verify the accuracy of the "Internet+" technology in ESG management, the accuracy of its sub-projects was analyzed, and the results are shown in Figure 8.

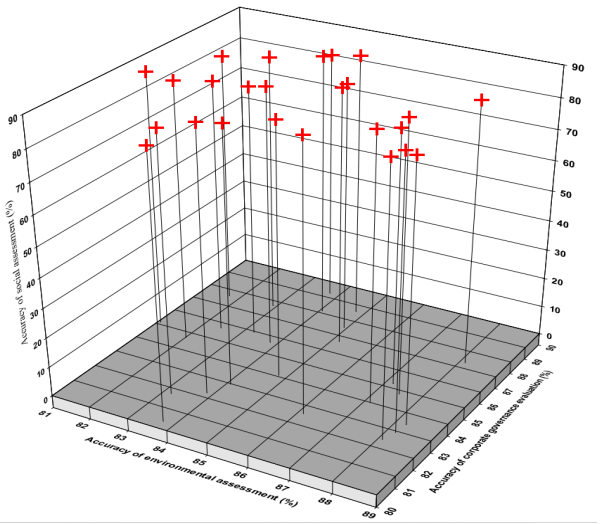

Fig. 8: The Evaluation Accuracy of ESG Management Sub-Projects by "Internet+" Technology

It can be seen from Figure 8 that in terms of the suitability of ESG management optimization strategy, the sub-items processed by "Internet +" technology are significantly better than the statistical evaluation method, and the evaluation accuracy of environment, corporate governance and society is greater than 80%, the reason is "Internet +" technology The ESG management sub-project is integrated to realize the reconstruction of ESG management data and improve the accuracy of evaluation results.

Conclusion

Aiming at ESG management, this paper proposes an optimization strategy based on "Internet+" technology. This method combines distributed computing, constraint conditions, and weight coefficients to analyze ESG management data and improve the accuracy of ESG management evaluation. The results show that "Internet+" technology can accurately evaluate ESG management and shorten the evaluation time. Compared with the statistical evaluation method, "Internet+" technology has a higher improvement

rate and evaluation accuracy for ESG management, which can meet the strategic selection requirements of ESG management. However, when conducting ESG management assessment, "Internet+" technology pays too much attention to social, environmental and corporate governance and ignores supporting indicators, which will reduce the effectiveness of ESG management assessment. Therefore, in future studies, relevant indicators will be added to improve the accuracy of ESG management assessment.

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