An Empirical Study on the Influencing Factors of the Corporate Performance of Listed Companies in the Transportation Industry – Evidence from China

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Abstract: According to the development trend of the transportation industry and rapid economic growth, China has carried out strategic layout and planning routes for the transportation industry. The National Development and Reform Commission have also issued a number of documents that promote the construction of a modern transportation system, and promote transportation projects such as railways, waterways, airports, and urban transportation. Besides, it continuously invests large amounts of money in companies in the transportation industry. The mission of companies in the transportation industry is of great importance. It can be seen that China's transportation industry is at a stage of rapid development, and it has received strong support from the government. Nevertheless, it still has a long way to go. To improve the transportation infrastructure of the nation, companies in the transportation industry must strive to improve their corporate performance. This paper empirically investigates the impact of factors such as financial factors, internal operations, and corporate growth on the corporate performance of listed companies in the transportation industry, with the aim of helping listed companies in the transportation industry to develop a sound corporate strategy and conduct standardized and effective management to improve corporate performance. This paper selects data of 42 listed companies in the transportation industry from 2012 to 2016, and utilizes the fixed effect model that controls heteroskedasticity to analyze influencing factors of the corporate performance of listed companies in the transportation industry. Empirical results show that core ratio, return on personnel, long-term debt ratio, and quality of staff positively influences the corporate performance of listed companies in the transportation industry. Factors such as operation cost ratio, managerial cost ratio, size, and delay ratio have a negative impact on the corporate performance of listed companies in the transportation industry. Policy implications are proposed accordingly.

Keywods: Corporate Performance, Transportation Industry, Panel Data.

INTRODUCTION

The economic benefits and social influence that the transportation industry can bring to a nation cannot be neglected. The transportation industry actively promotes the development of the industrial chain, enriches people's life, and contributes to national defense. It is generally believe that the economic development and the overall development speed of a region are based on developed and efficient transportation.

According to the development trend of the transportation industry and the rapid economic growth, China has carried out strategic layout and planning routes for the transportation industry, and the tasks of companies in the transportation industry are of great importance. The National Development and Reform Commission has also issued a number of documents that promote the construction of a modern transportation system, and promote transportation projects such as railways, waterways, airports, and urban transportation. It has continuously invested large amounts of money in the transportation industry. It can be seen that China's transportation industry is at a stage of rapid development. Besides, it has received strong support from the government. Nevertheless, it still has a long way to go. To improve the transportation infrastructure of the nation, listed companies in the transportation industry must strive to improve their corporate performance. Therefore, it is imperative to investigate the influencing factors of the corporate performance of listed companies in the transportation industry.

Influencing factors of the corporate performance of listed companies in the transportation industry mainly consists of financial factors, internal operations, and corporate growth. Empirical evidence can help listed companies in the transportation industry identify the main influencing factors of their corporate performance, and thus adjust the

operation mode or management style of the company effectively. Besides, it also helps understand the problems that occur during companies' operation, and find appropriate solutions and make optimization measures accordingly. The estimation results of the impact of financial factors can help companies optimize loan ratio and improve corporate performance. A good understanding of the impact of innovation can help companies better distinguish the current demand in the market so that they can got for technological innovation and accelerate research and development. Understanding the impact of human resource factors can help companies form a highly qualified team with a reasonable number of people.

This paper empirically analyzes the impact of influencing factors such as financial factors, internal operations, and corporate growth on the corporate performance of listed companies in China's transportation industry, with the aim of help listed companies to develop a reasonable corporate strategy and conduct standardized and effective management to improve their corporate performance. In this paper, the total return on assets is taken as the explained variable, and the effect of operational factors on corporate performance is analyzed through the fixed effect model that controls heteroskedasticity. This paper selects data of 42 listed companies in the transportation industry from 2012 to 2016. Some influencing factors are specific to the operational characteristics of the transportation industry. Empirical results show that core ratio, return on personnel, long-term debt ratio, and quality of staff all have a positive impact on the corporate performance of listed companies. Factors such as operating cost ratio, management cost ratio, size, and delay ratio have a negative impact on the corporate performance of listed companies in the transportation industry. This paper mainly selects operational level factors such as number of sales personnel, concentration of ownership, and number of employees with bachelor's level or above as explanatory variables. This paper proposes corresponding policy implications from three aspects, *i.e.*, operational factors, management mode, and human resources.

RELATED LITERATURE

Previous literature measures corporate performance from different angles. Lebas [1] proposed that corporate performance can be judged in terms of the correctness of corporate decisions and whether it can achieve the expected goal. Walker [2] conducted a detailed analysis of how to measure corporate performance from different levels. As a result, the traditional and intuitive way of measuring corporate performance is divided into three main categories: Return on Assets (ROA), Return on Equity (ROE), and Earnings Per Share (EPS). For the measurement of the corporate performance of listed companies in the transportation industry, a variety of measurement methods have been proposed. Guo [3] applied different theories to analyze the diversified operations of listed companies in the transportation industry from various angles, and summarized the influencing factors of the corporate performance of listed companies in the transportation industry. He also discussed how to improve corporate performance and made pertinent suggestion. From the perspective of stakeholders, Cao [4] mainly analyzed the impact of fulfilling social responsibilities on the corporate performance of listed companies in the transportation industry and provided suggestions on how to further enhance corporate performance by enhancing social responsibility. Mao [5] mainly utilized the cluster analysis method. Firstly, the study confirms the influencing factors that affect the corporate performance of listed companies in the transportation industry, and then it establishes the impact factors. By calculating and ranking the corporate performance of listed companies in the transportation industry, influencing factors are effectively evaluated. The comprehensive capabilities of the listed companies, including profitability, growth ability, and risk resistance, are all found to lead to the operating standards of listed companies in the industry.

For the external environmental factors affecting corporate performance, Li [6] drew on the stakeholder theory and analyzed operational factors of China's listed companies in the transportation industry in 2009. The study argued that companies should enhance their sense of social responsibility and enhance their ability to sustain growth, so as to better promote their corporate performance. Zheng [7] used the annual report data of listed companies in the transportation industry and studied the impact of China's government business rectification and VAT on corporate performance. The final conclusion is obtained by identifying the influencing factors and establishing a multvariate regression analysis. Wu [8] used different regression models of panel data and concluded that government's reform policies affect the corporate performance of listed companies in the transportation industry. Both theoretical research and empirical research show that national policies, industry environment, and regional economic development have a significant influence on the corporate performance of listed companies in the transportation industry.

On the factors of capital scale that affect corporate performance, Xu and Qi [9] used multi-factor analysis method and extracted a number of influencing factors based on previous research. The study established a multi-objective model to evaluate and classsify the corporate performance of 29 listed companies in the transportation industry. Li [10] found that the basic structure of China's listed companies in the transportation industry is negatively correlated with their corporate performance, and proposed suggestions on how to improve the corporate performance of China's listed companies in the transportation industry. Huang and Dai [11] used the factor analysis method to evaluate the corporate performance of listed companies in the transportation industry, and explored different development strengths of these companies through different aspects. On the management level factors affecting corporate performance, Yao, Lu, and

Wang [12] used the stochastic frontier analysis model and verified that internal incentives can effectively improve the management efficiency of companies, reduce management costs, and further improve corporate performance. They also found that the degree of influence of internal incentives varies among different industries. In addition, the expectations of companies for future development are also important factors affecting the efficiency of companies. Wang *et al.,* [13] analyzed listed companies in Shanghai Stock Exchange and Shenzhen Stock Exchange, and summarized relevant factors that affect the corporate performance of listed companies. They also analyze the problems existing in those companies from the aspect of internal operation, information exchange, and risk control. Countermeasures are proposed accordingly.

Previous literature has done a very detailed study on the definition and measurement of corporate performance of listed companies in the transportation industry. Corporate performance is primarily measured by ROA, ROE, or EPS. For listed companies in the transportation industry, the efficiency of capital utilization largely determines the pros and cons of corporate performance. Therefore, it is more reasonable to use ROA as the corporate performance evaluation standard. However, in terms of influencing factors of corporate performance, most previous literature only focuses on financial factors such as asset-liability ratio, liquidity ratio, quick ratio *etc.*, and very few previous research focuses on the transportation industry. Empirical results obtained in previous literature cannot be generalized to listed companies in the transportation industry, as the industry has its own unique characteristics.

In terms of research methods, the factor analysis method has been used in a great deal of previous literature. Multivariate regression has also been frequently used. However, the existence of unit roots is often neglected, and the possibility of spurious regression is not always considered. The DEA model has also been frequently used in previous literature. Although the model adopts the methodology of dimension reduction in data processing, it is mainly based on subjective judgment when selecting variables, so the selected variables are inevitably partial reflection of potential influence. Therefore, it is difficult to carry out effective operation management and policy recommendations for listed companies in the transportation industry using these two methods. As for the impact of product structure on corporate performance, most previous research conducts theoretical analysis or descriptive analysis. Empirical studies are scanty. Therefore, this paper attempts to fill in the void by empirically testing the impact of financial indicators and non-financial indicators on the corporate performance of listed companies in the transportation industry.

The Data

The data are gathered from Wind database and the annual reports of listed companies in the transportation industry. This paper excludes companies whose owners' equity is negative due to mismanagement between 2012 and 2016. Due to restructuring, mergers and acquisitions, and other events, owners' equity has experienced violent fluctuations in the sample, due to incomplete information disclosure. After removing companies with imputed data, 36 listed companies are included in the sample. The sample companies were in good condition in 2012 to 2016 in terms of ROE. This paper selects variables such as capital scale, human resources, market share, management mode, and other factors that potentially affect corporate performance. Descriptive statistics of the data are shown in Table-1.

Table-1: Descriptive Statistics

Variable	Number of Observation	Mean	Standard Deviation	Minimum	Maximum
ROE	210	7.313843	6.080829	-11.286	43.0501
Return on Personnel	210	223.1586	334.1547	-423.4494	2170.841
Core Ratio	210	86.83491	13.53412	42.2149	99.9673
Operation Cost Ratio	210	90.51061	11.93772	43.6289	114.9394
Managerial Cost Ratio	210	9.678441	20.59437	7.324	56.3887
Long-Term Debt Ratio	210	28.95665	18.14542	1.6808	77.2563
Operation-Growth Rate (Year to Year)	210	16.12553	34.15299	-81.0595	187.775
Liability-Growth (Year to Year)	210	36.61458	131.5783	-80.9073	792.73
Research and Develoment (thousands of yuan)	210	13782.39	45248.42	0	60570
Staff	210	1295	2797.098	11	7022
Market Share	210	64.5583	14.50533	47.62	91.48
Government Subsidy (thousands of yuan)	210	50126.69	127051	404	931873.8
Total Assets (ten thousand yuan)	210	1378693	2133	26500.17	12e-07
Size	210	2.651757	5.817131	0.000098	33.2901
Delay Ratio	210	0.2128224	0.2071423	0.0017	0.7083

As can be seen from Table 1, ROE of sample companies is good, and only very few companies are in a long-term loss state. The overall development is balanced, as most of the companies are in a profitable state. The net investment yield is more concentrated. The development status of the industry is reasonable. Most of the sample companies are controlled by large shareholders. This finding reflects the fact that about 80% of the companies in the transportation industry are state-owned companies. The overall management cost of the sample companies accounts for a large proportion, revealing a typical feature of the industry. The management mode is relatively backward and in need of transformation. The transition from the traditional management mode to the modern management mode should be put on the agenda. The proportion of employees who have bachelor's degree or above is relatively large, but the situation in different companies varies significantly. The difference in education level is very large. The overall return on personnel (ROP) is at a relatively high level of growth, which reflects the extremely unbalanced ROP in the industry. The long-term debt is polarized. The transportation industry in China is growing in the long run. Nevertheless, the development of different listed companies in the industry is unbalanced. The industry's investment in innovation and research and development is medium, and the gap among different companies is large. China's transportation industry is in an oligopolistic competition, and the market behavior of a few companies may have a huge impact on the entire transportation industry. Market share and average total asset show that the market power and market influence of different transportation companies vary greatly.

Table-2: Variable Description

	Variable	Meaning
Explained Variable	ROA	Ratio of the sum of total profit and interest income to total assets
Explanatory Variables	ROP	Ratio of net profit to total compensation and benefits of employees. It measures the return on investment in human resource and reflects the effectiveness of human capital investment
	Core Ratio	Ratio of the main business income to the sum of all income. It reflects the level of business concentration and the operation of the main business.
	Operation Cost Ratio	Ratio of operating costs to total operating income
	Managerial Cost Ratio	Ratio of managerial costs to total operating income. It reflects the management efficiency of a company
	Long-Term Debt Ratio	Ratio of long-term debt to total assets. It can be used to assess the overall situation of corporate debt
	Operation-Growth Rate	Ratio of the total operating income of a year to the total operating income of the previous year. It reflects a company's income development during a year.
	Liability-Growth	Ratio of the total debt of a year to the total debt of the previous year. It measures a company's current debt situation
	Research and Development	Annual investment in research and development. new products, new systems and new corporate management mode. It further enhances a company's comprehensive competitiveness
	Staff	Number of staff with bachelor's degree or above. Highly educated employees help to enhance the intellectual capital of a company. This factor can gradually demonstrate its role in the future development of a company, helping the company to develop faster and better.
	Market Share	Percentage of the total number of shares holds by the top ten shareholders. Companies with relatively concentrated market share are more efficient in collective decision-making, and the efficiency of decision-making further promotes corporate performance
	Government Subsidy	Government subsidy can help gauge the role of the government in the transportation industry under current political conditions.
	Size	A company's total assets in the balance sheet. Larger companies have more resources, so they can greatly expand the scale of operation, thereby reducing the cost of investment and bringing benefits
	Delay ratio	Ratio of the number of delayed orders to the number of total orders. It reflects the impact of customer's satisfaction

Empirical Analysis

The regression equation, ideally, would be of the following form.

$$ROA = \beta_0 + \beta_1 ROP + \beta_2 Core + \beta_3 Operation + \beta_4 Managerial$$
$$+\beta_5 Debt + \beta_6 Growth + \beta_7 Liability + \beta_8 Research + \beta_9 Staff$$
$$+\beta_{10} Market + \beta_{11} Subsidy + +\beta_{12} Size + \mu$$

Where β_0 is the intercept, β_i (i=1, 2, …, 11, 12) is the coefficient, and μ is the error term.

All variables and their meanings are summarized in Table 2.

Augmented Dickey-Fuller (ADF) test finds that each variable is stationary. Therefore, this paper does not perform cointegration test for non-stationary variables. Breusch-Pagan Lagrange Multiplier test finds that random effect model is superior to Ordinary Least Square (OLS) method. F test finds that the fixed effect model outperforms the OLS model. Hausman test finds that the fixed effect model is better than the random effect model. So this paper chooses the fixed effect model for the regression. Pesaran test and Friedman test both find that there is no cross-sectional dependency. Davidson-MacKinnon test finds that there is no endogeneity problem. Wald test detects the presence of significant heteroskedasticity, Therefore, this paper utilizes the fixed effect model that controls heteroskedasticity.

The regression results and robustness check are shown in Table-3.

Table-3: Regression Results and Robustness Check

Explained Variable: ROA					
Explanatory Variables	Reg. 1	Reg. 2	Reg. 3	Reg. 4	Reg. 5
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
	(t-value)	(t-value)	(t- value)	(t-value)	(t-value)
ROP	0.005393***	0.0098***	0.005393	0.0098***	0.005393***
	(-0.89)	(-0.97)	(-1.90)	(-1.32)	(-0.37)
Core Ratio	0.01047**	0.001081**	0.01047**	0.001081**	0.01047**
	(-3.04)	(-4.19)	(0.68)	(-7.34)	(-5.11)
Operation Cost Ratio	-0.1603***	-0.197***	-0.1603**	-0.197***	-0.1603***
	(-2.18)	(-1.14)	(-3.99)	(-14.62)	(-2.67)
Managerial Cost Ratio	-0.0068	0.08179**	-0.0068851	0.08179**	-0.0068
	(-4.47)	(-3.68)	(-0.76)	(-6.96)	(-6.07)
L-T Debt Ratio	0.0123	0.0236**	0.01237	-0.0118**	0.0123
	(-1.41)	(-0.78)	(-1.83)	(-4.27)	(-0.95)
OP-Growth Rate	-0.000116	0.00414	-0.000116	0.00414	-0.000116
	(-0.67)	(-1.7)	(-5.67)	(-0.64)	(-2.36)
Liability-Growth	0.0133***	0.0123***	0.0133***	0.0123***	0.0133***
	(-3.68)	(-2.53)	(-2.88)	(-9.14)	(-3.18)
Research	0.000011	-0.448**	-0.000011	-0.448***	-0.000011
	(-4.54)	(-3.25)	(-4.44)	(-9.67)	(-5.34)
Staff	0.00007***	0.00115***	0.000706***	0.00115***	0.00007***
	(-2.99)	(-3.55)	(-6.12)	(-5.41)	(-3.37)
Market Share	0.06691	0.0496**	0.0669	0.0496***	0.06691
	(-3.15)	(-0.23)	(-1.01)	(-4.79)	(-0.1)
Government Subsidy	1.73e-07**	2.39**	1.73e-07**	2.39**	1.73e-07**
	(-3.9)	(-3.65)	(-5.23)	(-10.99)	(-4.13)
Delay Ratio	-1.0317	-3.135**	-1.03175	-3.135**	-1.0317
	(-1.26)	(-3.39)	(-22)	(-2.74)	(-4.62)
Size	-6.05e-07***	-8.55e-07**	-6.05e-07*	-8.55e-07**	-6.05e-07***
	(-3.56)	(-3.21)	(-2.34)	(-2.71)	(-3.21)
_CONS	14.90662***	18.55207**	14.90662	18.55207**	14.90662***
	(4.68)	(3.55)	(3.25)	(5.45)	(5.27)
R^2	0.4286	0.5988	0.4286	0.5988	0.4286

Note: ***, **, and * denotes significance at 1%, 5%, and 10% significance level, respectively.

ROP is significant at the 1% significance level. If ROP increases by 1%, ROA is estimated to increase by about 0.005%. The return on human capital investment increases, and the net profit of a company increases, resulting in an increase in ROA. Therefore, there is a positive relationship between the return on human capital investment and ROA.

Core ratio is significant at the 5% significance level. When Core ratio increases by 1%, ROA is estimated to increase by about 0.01%. If the proportion of main business increases, a company's business will become more concentrated. Listed companies in the transportation industry should focus on developing their main business and improve their business. Higher proportion of main business leads to increase in ROA. It shows that the relationship between the proportion of main business and ROA is significant, and positive.

The operation cost ratio is significant at the 1% significance level. When the operation cost ratio increases by 1%, ROA is estimated to decrease by about 0.16%. If the proportion of operating costs increases, then the operating costs will increase, leading to decline in the operating efficiency, and thus ROA will decrease. Therefore, the proportion of operation cost has a negative impact on ROA.

The managerial cost ratio is significant at the 5% significance level. When the managerial cost ratio changes by 1%, ROA is estimated to change by about -0.0068%. If the management cost ratio increases, the management costs will increases, leading to decline in the management efficiency, and thus ROA will decrease. It shows that the proportion of management costs has a negative impact on ROA.

The long-term debt ratio is significant at the 1% significance level. When the long-term debt ratio increases by 1%, ROA is estimated to increase by about 0.012%. The proportion of long-term liabilities increases, the amount of corporate loan will rise, and the capital investment in production will increases accordingly, leading to an increase in ROA. Therefore, the proportion of long-term liabilities of companies has a positive impact on corporate performance.

Operation growth rate is insignificant. Besides, the sign of the coefficients in different regression models are not consistent, implying that although China's transportation industry is at a rapid development stage, there is no correlation between operation growth rate and corporate performance.

The variable Liability-growth is significant at the 1% significance level. When Liability-growth changes by 1%, ROA is estimated to change by about 0.0123%, and the debt growth rate is estimated to rise. The larger the amount of funds available to a company, the more it can focus on improving its management mechanism and the quality of its employees, resulting in an increase in ROA.

Research is not significant. Increasing the investment in R&D is generally regarded to improve corporate performance. However, this is not observed in the regression result. The reason may be due to the high degree of uncertainty in R&D activities. The investment in developing new products or systems by listed companies in the transportation industry only reflects the importance of innovation for the industry, but it does not directly enhance corporate performance.

Staff is significant at the 1% significance level. When staff changes by 1%, ROA is estimated to change by about 0.001%. Highly educated employees can help improve the intellectual capital of a company, implying that the number of employees who have bachelor's degree or above can promote corporate performance.

The variable market share is not significant. Listed companies in the transportation industry are mainly state-owned companies with concentrated equity. The decision-making efficiency is generally higher, but the empirical results show that there is no actual impact on the improvement of corporate performance. The dominance of a company in the market has a negative impact on the company's senior management, supervision and incentives, which further impedes improvement in corporate performance.

Government subsidy is significant at the 5% significance level. When the government subsidy increases by 1%, ROA is estimated to increase by nearly 2.39%. On the one hand, the government's policies and financial support are increasing, and the corporate performance of listed companies in the transportation industry is improving steadily. The impact of government's subsidy is significant. On the other hand, the government is more supportive of the transportation industry. Under the lax political and economic environment, the transportation industry still has a large room for development. Empirical results show that there is a strong positive correlation between government subsidy and ROA.

Size is significantly negative at the 1% significance level. Larger companies have more difficulty in implementing efficient management mode, and the management cost is relatively higher. Therefore, size of the company does not necessarily leads to high return on total assets.

Delay ratio is significant at the 5% significance level. When the delay ratio changes by 1%, ROA is estimated to change by about -1.03%. If the delay of orders cannot be managed in time, it will have a negative impact on the company's corporate performance, resulting in a decline in ROA.

CONCLUSION AND POLICY IMPLICATIONS

This paper collects data of listed companies in the transportation industry from 2012 to 2016. By utilizing the fixed effect model that controls heteroskedasticity, this paper analyzes the relation between operational factors, capital structure, equity structure and other factors and the corporate performance of listed companies in the transportation industry. Based on the empirical results, the following conclusions can be drawn.

It is found that ROP, core ratio, long-term debt ratio, liability-growth, staff, and government subsidy improve the corporate performance of listed companies in the transportation industry. Operating cost ratio, management cost ratio, size, and delay ratio are negatively correlated with the corporate performance of listed companies in the transportation industry. The impact of operation-growth rate, research, and equity concentration are not significant. Market size and company assets are not the decisive factors of the corporate performance of listed companies in the transportation industry. Main business is the key factor determining the corporate performance of listed companies in the transportation industry. Staff quality has a greater role in promoting corporate performance. The equity structure can affect corporate performance at the basic level. The corporate performance of listed companies in the transportation industry has improved over the sample period, and government subsidiy has played a significant role.

There are a number of unreasonable aspects in the main business, management mode, and human resource of listed companies in the transportation industry. In order to help listed companies in the transportation industry to improve their corporate performance, this paper proposes the following policy implications. First of all, listed companies in the transportation industry should actively develop their main business and maintain their competitive main business. Besides, they should make good use of their advantages and continuously expand their market share in order to maximize economies of scale. The decentralized business model weakens the competitive advantage of main business and has a negative impact on corporate performance. Therefore, listed companies in the transportation industry should actively establish and expand the advantages of their main business, and constantly enhance their competitiveness in the industry. Besides, the executive management team of listed companies in the transportation industry should learn from the management experience of their counterparts in developed countries and introduce advanced management methods to their own companies The executive management team should also implement risk control issues, do long-term strategic planning in the golden age of development of the transportation industry, establish their company's business focus, and strive to achieve a new management approach combined with clear corporate strategic objectives. Moroever, despite the integration and configuration of internal and external resources, listed companies in the transportation industry should strengthen their main business on a large scale, realize the renewal and optimization of their management mode, strengthen their training of staff, and recruit talented employees and commission companies with professional experience to train technicians. At the same time, listed companies in the transportation industry should also make full use of the comprehensive talent training and service system established by the government and select employees with strong professional background. In addition, listed companies in the transportation industry can also cooperate with relevant universities and research institutes to recruit targeted talents, and cultivate professional talents who meet the needs of their corporate development. In state-owned companies, appropriate reduction in the shares hold by state-owned companies has a positive effect on corporate performance. In this way, listed companies in the transportation industry can establish a sound management system, improve the supervisory system, and the independent director system, so as to better motivate and supervise staff, and each of its functions can better improve the company's corporate performance. Listed companies in the transportation industry should also strengthen and update transportation facilities, cite advanced information technology platforms, improve understanding of transportation timeliness, and endeavor to improve the estimation level. In addition, they must establish a variety of ways to communicate with customers, understand the needs of customers, and accept feedback from customers, and make appropriate adjustments to existing problems.

REFERENCES
1. Lebas, M. J. (1995). Performance measurement and performance management. *International journal of production economics*, *41*(1-3), 23-35.
2. Walker, R. (1985). *Applied qualitative research*. Gower Pub Co.
3. Guo, H. (2007). Research on the Correlation between Diversified Management and the Corporate Performance of Listed Companies in the Transportation Industry (in Chinese) [D]. Jilin University.
4. Cao, H. (2014). Research on the Influence of Social Responsibility on Corporate Performance of Listed Companies in the Transportation Industry - from the Perspective of Stakeholders (in Chinese) [D]. Jiangxi Normal University.
5. Mao, Y. (2017). Research on Performance Evaluation of Listed Companies in Transportation Industry (in Chinese) [D]. Beijing Jiaotong University.
6. Li, W. (2012). Research on the Relationship between Corporate Social Responsibility and Financial Performance-

Based on Data Analysis of Listed Companies in Transportation Industry(in Chinese) [J]. Financial problem research, (04):89-94.

7. Zheng, S., Jayasumana, S., Romera-Paredes, B., Vineet, V., Su, Z., Du, D., ... & Torr, P. H. (2015). Conditional random fields as recurrent neural networks. In *Proceedings of the IEEE international conference on computer vision* (pp. 1529-1537).

8. Wu, D. (2017). Research on the Impact of Camp Reform on the Financial Performance of China's Transportation Industry (in Chinese) [D]. China University of Geosciences.

9. Xu, C., & Sui, Z. (2001). Research on Financial Evaluation Model of Listed Companies in the Transportation Industry (in Chinese) [J]. Chinese Soft Science, (08):113-115.

10. Rekhter, Y., Li, T., & Hares, S. (2005). *A border gateway protocol 4 (BGP-4)* (No. RFC 4271).

11. Huang, S., & Dai, F. (2010). Research on Financial Evaluation of China's Transportation and Listed Companies (in Chinese) [J]. Business economy, (03):68-69.

12. Yao, W., Lu, T., & Wang, X. (2009). Internal Incentives and Enterprise Efficiency: A Comparative Analysis Based on Data from Listed Companies in the Information Industry and the Transportation and Storage Industry (in Chinese) [J]. Journal of Xiangtan University (Philosophy and Social Sciences Edition), 33(05):61-66.

13. Wang, P., Zhang, P., Tang, X., & Yuan, J. (2013). Empirical Research on Internal Control Evaluation and Optimization of Listed Companies – Illustrated by the Example of the Transportation and Storage Industry (in Chinese) [J]. Chinese Agricultural Accounting, (07):53-58.