Application Analysis of Equity Incentive in China's Environmental Governance Enterprises——Taking Beijing AvIC Teda As an Example

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Abstract. With the continuous advancement of the "14th five year plan", environmental governance enterprises have developed more and more rapidly, a large number of high-tech state-owned enterprises have poured into them, and gradually established the leading position in the industry. For this type of enterprises, how to effectively attract and retain core technical talents is very important. At the same time, the central guidance on deepening the reform of state-owned enterprises also puts forward new requirements to accelerate the stimulation of internal vitality. Therefore, equity incentive, which is conducive to mobilizing the enthusiasm of core talents, began to be concerned by many enterprises. Based on the brief introduction of equity incentive theory and taking Avic Teda in Beijing as an example, according to this company's financial data from 2019 to 2021, this paper analyzes the impact of the equity incentive scheme on enterprise performance of solvency and profitability, and puts forward some suggestions on how to make good use of the equity incentive tool, in order to improve the role of equity incentive in the development of this type of company

Keywords: Equity Incentive, Environmental Governance Enterprises, listed state-owned enterprises.

1. Introduction

Equity incentive is a medium and long-term market-oriented incentive method to stimulate the vitality of enterprise development However, it can help enterprises reduce operating costs, reduce the outflow of corporate funds, and also improve business performance Residence is a core talent with high value and strong ability. It is precisely because equity incentives have so many positive effects that they have made Zhu.Many experts and scholars have maintained long-term attention and research on it.

For a long time, many companies in China have the problem of insufficient development momentum, especially state-owned listed companies.This is related to the phenomenon of insufficient incentives of Chinese companies. For enterprises, the problem of insufficient incentives, on the one hand, will lead to enterprises.It is difficult to reserve talents, and the follow-up development is weak, which will also lead to short-sighted behavior. And in recent years, with the improvement of the dual carbon goal.A large number of environmental protection enterprises have ushered in a new stage of development and opportunities, and the implementation of equity incentive plans in the industry.Cases are also relatively rare. Therefore, in such a situation, it is necessary to study the benefits of the implementation of equity plans by listed companies in environmental protection and how to design the scheme has important practical significance.

2. The status quo of China's environmental governance industry

2.1. An overview of the current situation of China's environmental governance industry

Since the reform and opening up, after 30 or 40 years of development, China's environmental protection industry has gradually improved. environmental protection.The main sectors of the industry include air pollution, water treatment and solid waste treatment, and the environmental

services industry is aimed at this category blocks for environmental services. With the two-mountain theory and the dual carbon goal, the vitality of China's environmental protection industry market has been further enhanced.Under the continuous influence of the tendentious policies of governments at all levels, China's environmental protection enterprises have been stimulated.The environment has also been gradually improved. In the past five years, the market of China's environmental protection enterprises has grown rapidly and shown a good trend.

For example, in 2019, the total market output value of the industry reached more than 1.12 trillion yuan, an increase of 23.2% compared with 2018.Although the impact of the epidemic in 2020 was greater, and the construction period of many projects was delayed, China's environmental protection industry as a whole remained stable BBK grew to about 1,293 billion yuan at the end of the year. As of the beginning of 2022, although the epidemic is still continuing, my country enterprises related to environmental governance are still actively exploring new development directions, trying to seek them in the context of the 14th Five-Year Plan new opportunities continue to develop. In the long run, the environmental protection and governance industry is still the direction of national key development.In the future, it will play a more important role in economic development and overall industrial layout.

2.2. The characteristics of China's environmental governance industry

2.2.1. The proportion of state-owned enterprises is increasing year by year

With China's attention to the environmental governance industry in recent years, a large number of state-owned capital has poured into it, and the pattern of environmental protection industry has gradually changed from the original nineties to the beginning of the twenty-first century, dominated by individual and private private enterprises, and gradually transformed into large and medium-sized central enterprises and state-owned enterprises. At the same time, some universities and research institutes are also involved in it. Due to the entry of state-owned capital, the industry team has taken on a new look, and qualitative changes have been made from human resources to scientific research level to market share, which has alleviated the original financing difficulties of small and micro enterprises. Today, large state-owned enterprises led by Centaline Environmental Protection and Everbright International are gradually showing a leading position in the industry.

2.2.2. The pace of technological change is accelerating

Since the environmental governance enterprises themselves rely on new technologies and new equipment to a large extent, the technical level of the environmental protection industry has been greatly improved with the increasing attention and investment of the state this year. Coupled with the continuous subdivision of environmental protection, more and more new technologies, new equipment and new patents are emerging in response to different types of needs such as air pollution and water environment treatment, such as desulfurization of thermal power plants and sewage treatment technology. So far, the existing domestic products and technology level have been able to meet the existing needs.

2.2.3. Small and medium-sized enterprises are the mainstay, and the industry as a whole is diversified

According to the data of the 2021 National Statistical Yearbook, China's environmental governance industry is currently involved in an increasing number of fields, and has gradually developed into a comprehensive industrial system integrating environmental services, environmental governance, environmental infrastructure construction, and various resource recycling equipment. At the same time, with the integration of domestic and foreign capital, all types of enterprises in the industry are blooming, and the number of small and micro enterprises is still relatively high, but the income contribution of listed and NEEQ enterprises is large, accounting for 94.7%.

2.3. The feasibility of implementing equity incentives for environmental governance enterprises

According to the development policy of China's "14th Five-Year Plan", the environmental protection industry is gradually developing in the direction of clean and efficient utilization, especially under the guidance of the current dual carbon goals, a large number of preferential tax policies have been launched from the central government to various provinces, cities and localities, which has cultivated the soil for the vigorous development of China's environmental governance enterprises, which also makes China's environmental governance enterprises have great room for trial and error in the reform of a series of equity incentive plans. At the same time, in a relatively good market environment, the effect of implementing the equity incentive plan is more significant, and it is easier to give positive feedback to managers and shareholders.

3. Literature References

Since this century, foreign scholars have carried out new changes in the application of equity incentive scheme in listed companies Extensive research, and then analyze the relationship between equity incentive and the development of the company and the optimization scheme.

Scholars such as Shahzad Umeair and Luo Fukai (2021) have taken a different approach to discuss the sensitivity of management equity incentive mechanisms to the quality of innovation, and finally concluded that companies should consider the sensitivity of equity incentive plans and strive to control them in advance, so as to occupy a leading position in technology and obtain the best enterprise value.

Mohamed A. Shabeeb Ali (2020) focused on studying the moderating effect of corporate governance mechanisms on the relationship between managerial equity incentives and earnings management, and tested it using a multiple regression model. Ultimately, it was found that managerial equity incentives are associated with higher absolute values and earnings management with increased returns.

Ma Yue (2020) focuses on the home appliance industry, taking the leading enterprise Midea as an example, by analyzing the effect of the implementation of the company's equity incentive plan from 2014 to 2018, discussing its impact on the profitability of the enterprise and other aspects, and putting forward suggestions such as improving the matching degree of the plan and improving the performance conditions for the exercise of the plan.

Mohammad Alhadab (2019) tested the impact of equity incentives on earnings management using a sample of 204 bank year observation data from 2006 to 2011. And ultimately, it is concluded that earnings management through discretionary loan loss provisions is correlated with equity incentives.

Therefore, this paper analyzes and studies the current situation of equity incentives of Chinese enterprises and specifically combines the equity incentive plan of AVIC TEDA Group, and conducts an in-depth discussion on the existing problems based on the specific industry of environmental protection, in order to enlighten the equity incentive plan of China's state-owned listed companies.

4. Beijing AvIC Teda implemented equity incentive analysis

4.1. Company Profile

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control them in advance, so as to occupy a leading position in technology and obtain the best enterprise value.

4.2. The specific content of implementing equity incentives

AVIC TEDA officially announced and implemented its equity incentive plan in March 2020. The company's equity incentive plan mainly adopts a restricted equity approach aimed at the senior management and core technical personnel of AVIC TEDA shareholders. The main content and related information of its plan are shown in the afternoon chart. Table 1 mainly lists the main content of the incentive plan.

Table 1. AVIC TEDA Equity Incentive Plan

Project	Content
Incentive Model	Restricted Stocks
Incentive targets	directors, supervisors, senior management personnel, and core backbone: 21 people
Time arrangement	Grant date: The grant date shall be determined by the board of directors of the company after being reviewed and approved by the shareholders' meeting, and shall not exceed 60 days after being reviewed and approved by the shareholders' meeting. Lockup period: 24 months from the grant date If the lock up period needs to be extended or adjusted due to the listing of AVIC TEDA or the listing of selected layers, the incentive recipients should cooperate. Service period: The incentive recipient shall continue to serve in the company for no less than 2 years from the date of award.
Stock source	Targeted issuance of RMB ordinary shares (A-shares) by the company to incentive recipients
Funding source	Partner's share of partnership property held by the partnership enterprise Explanation: The company is not allowed to lend funds or provide guarantees for incentive recipients
Grant scale	A total of 1.722 million partnership shares
Award price	The price of the proposed incentive shares is 4.50 yuan per partnership share
Unlocking condition	No major illegal activities have occurred within 12 months Achieve the company's net profit targets for 2020 and 2021 The individual performance evaluation results of the incentive targets for 2020 and 2021 are "qualified"
Repurchase arrangement	The executing partner has the right to repurchase based on the principle of the total amount of capital paid by the incentive object plus the interest of the benchmark interest rate for bank fixed deposits

4.3. The specific content of implementing equity incentives

4.3.1. Profitability analysis

Profitability is the evaluation of a company's financial condition under normal operating conditions. In the past two years, the overall profitability of environmental governance enterprises in China has been declining due to the impact of the epidemic. Therefore, based on the study of relevant indicators before and after the implementation of equity incentives by AVIC TEDA for a total of three years, this article selected two other companies in the same industry. Among them, Qidi Environment is a private environmental protection enterprise, while Meishang Ecology is a state-owned holding enterprise, both of which have a certain typical representative role. A comprehensive analysis of the profitability of AVIC TEDA since the implementation of equity incentives, using the return on equity as an indicator for comparison.

Table 2. Profitability related indicators from 2019 to 2021

	2019	2020	2021
Operating income	463,707,850.18	401,030,404.85	557,076,491.54
Gross profit margin	23.83%	29.80%	18.47%
Return on equity	10.62%	8.36%	3.60%
Return on total assets	6.13%	4.29%	2.16%

The trend of changes in the net assets and total asset return of AVIC TEDA is roughly the same, both showing a significant decline under the influence of the epidemic. However, it is worth noting that equity incentives will be implemented in 2020.

After the implementation of the incentive plan, the overall gross profit margin of the company still showed a significant increase after the outbreak of the epidemic, which indirectly reflects the positive impact of the implementation of the equity incentive plan. Although other related indicators continued to decline in 2021, the overall operating income increased significantly compared to the previous two years. According to the company's annual report, this is partly due to the company's new development of two construction projects on the basis of ensuring stable operation in 2021. At the same time, due to the company's characteristics and temporary impact of the epidemic, the increase in raw material prices, transportation material costs, and other indicators has been significantly reduced, resulting in a decrease in gross profit margin.

Table 3. Indicators of return on equity for enterprises from 2019 to 2021

	2019	2020	2021
AVIC TEDA	10.62%	8.36%	3.60%
Meishang Ecology	5.37%	-0.15%	-2.45%
Enlightenment Environment	2.31%	-12.69%	-43.17%

Environmental governance enterprises have been affected by the epidemic in recent years, and their overall trend of net asset return on investment is generally the same, with a significant decline in overall profitability. There were significant fluctuations in 2020. However, through comparison, it can be seen that after implementing the equity incentive plan at the beginning of 2020, the return on equity of AVIC Teda has only decreased by two percentage points compared to 2019. Compared with other enterprises, its decline rate is significantly slower, and the fluctuation of indicators is relatively small. Especially in 2021, although it still showed a downward trend, it maintained a ratio greater than 0. This data fully indicates that implementing equity incentives in this type of enterprise can enhance profitability, provide investors with information on returns, and play a positive role in the future development of the enterprise.

4.3.2. Solvency analysis

The solvency of an enterprise is divided into short-term solvency and long-term solvency. It is an important indicator for measuring the current financial and operational status of the enterprise, and also a key factor in determining the survival and development of the enterprise. This article first analyzes its debt paying ability through four indicators before and after the implementation of the equity incentive plan, and then combines the common characteristics of environmental governance enterprises to select two indicators: current ratio and asset liability ratio, and analyze and compare them from two aspects: long-term and short-term debt paying ability.

Table 4. Indicators related to corporate solvency from 2019 to 2021

	2019	2020	2021
Current ratio	2.24	3.01	3.16
Quick ratio	1.31	2.94	2.13
Asset liability ratio	47.29%	32.47%	45.48%
Interest coverage ratio	5.19	7.62	6.72

From the data of the past three years, it can be seen that as a company with a relatively high proportion of current assets, the current ratio of AVIC TEDA has shown a good trend, especially after the implementation of the equity incentive plan in March 2020, the current ratio has significantly increased compared to 2019. This indicates that the short-term solvency of the company has been improved during this period. Although it has declined in 2021, this is because the company's original construction projects and other payments have gradually increased, resulting in a significant increase in accounts receivable. Prepayments have decreased significantly due to the company's optimization of procurement internal control, which cannot prove that the company's short-term solvency is poor; At the same time, since the implementation of the equity incentive plan by AVIC TEDA in 2020, the enterprise's asset liability ratio index has shown a significant decline of 15 percentage points, indicating that this policy has played a positive role in the long-term solvency of the enterprise.

Table 5. 2019-2021 Enterprise Current Ratio Indicators

	2019	2020	2021
AVIC TEDA	2.24	3.01	2.16
Meishang Ecology	1.08	0.90	0.87
Enlightenment Environment	0.82	0.69	0.79

Despite the impact of the COVID-19 pandemic in 2021, the indicator for two other companies in the same industry fell below 1, but remained generally stable at around 2 to 3. At the same time, in the company's announcement of that year, it can be observed that the accounts receivable of AVIC Teda have increased, and the accounts payable have significantly increased, which have had an impact on the fluctuation of this indicator. This also indirectly indicates that the overall short-term debt repayment ability of the company is still relatively good after implementing equity incentives.

4.3.3. Operational capability analysis

Due to the characteristics of environmental governance enterprises such as AVIC TEDA, the production of environmental governance equipment is their main business. In the current assets, the proportion of inventory in this type of enterprise is relatively large, which directly affects the current ratio of the enterprise. Therefore, this article selects the inventory turnover rate of three companies as an indicator to analyze their operating capacity, and conducts a comprehensive analysis of other indicators of the enterprise's operating capacity.

Table 6. Inventory turnover rate indicators from 2019 to 2021

	2019	2020	2021
AVIC TEDA	1.82	14.94	36.93
Meishang Ecology	1.37	1.76	0.92
Enlightenment Environment	11.51	9.53	6.35

The inventory turnover rate of AVIC TEDA Enterprise has greatly improved in 2020, indicating that as the enterprise continuously improves and develops new products, even with an increase in product quantity and scale, the company's inventory turnover rate remains high. The liquidity of inventory is strong, and the realization speed is fast. The continuous growth of turnover speed brings about a lower level of capital occupation. Based on the horizontal comparison of 2021 data, other companies in the industry, such as Qidi Environment, have experienced a significant decline from the high inventory turnover rate of the previous two years, while AVIC Teda has reached a high level of 36.93. Excluding the impact of new order industries, we still maintain a high level of turnover rate. On the one hand, the implementation of the dual carbon target has provided new opportunities for enterprise development. On the other hand, it also indicates that after the implementation of the equity incentive plan, the inventory turnover rate of AVIC TEDA has been enhanced, and the overall operational capacity has been improved.

4.3.4. Growth Ability Analysis

Table 7. Indicators of year-on-year growth rate of net profit from 2019 to 2021

	2019	2020	2021
AVIC TEDA	-25.23%	0.30%	-42.86%
Meishang Ecology	-47.57%	-907.59%	-161.90%
Enlightenment Environment	-44.18%	-527.52%	-1923.53%

Table 8. Indicators of year-on-year growth rate of operating revenue from 2019 to 2021

	2019	2020	2021
AVIC TEDA	6.67%	-13.52%	38.91%
Meishang Ecology	-12.57%	-33.70%	-81.40%
Enlightenment Environment	-7.43%	-16.27%	-8.16%

On the one hand, affected by the COVID-19, the year-on-year growth rate of net profits of companies in the industry showed a sharp downward trend. For example, Tus Environment dropped from -44.18% in 19 years to an astonishing -527.52%, which was more serious on the basis of negative growth, indicating that the growth potential of enterprises continued to shrink. In contrast, the situation of AVIC Teda is relatively good. After the implementation of the equity incentive plan, even though it was affected by the epidemic in 2020, its net profit year-on-year growth rate continued to soar, changing from negative growth rate to positive growth rate. Although it showed a significant decline in 2021, considering other factors such as corporate characteristics, it is generally more stable than other companies. This indicates that the company has a strong foundation of strength and can quickly adjust to a good state in case of unexpected situations, which also indirectly reflects the positive impact of equity incentives.

4.3.5. Analysis of net assets per share

Table 9. 2019-2021 operating net asset per share indicator

	2019	2020	2021
AVIC TEDA	2.50	3.33	3.27
Meishang Ecology	5.06	3.47	3.39
Enlightenment Environment	9.47	8.33	5.53

Net asset value per share is an important indicator to measure a company's development potential. In the same industry, the higher the net asset value per share, the greater the asset value per share that shareholders have. In the past three years, both Meishang Ecology and Qidi Environment have experienced significant declines, while the net assets per share of AVIC Teda have shown a clear upward trend and stabilized in 2021. This indicates that the equity incentive plan has to some extent promoted the growth of the company's intrinsic value, and investors have more confidence in the company's future development and intrinsic value, and the investment risk they bear is also smaller.

From the above financial indicators and analysis, it can be seen that in recent years, the development of the industry has been sluggish due to the impact of the epidemic, and AVIC TEDA is also inevitably affected. However, since the implementation of the equity incentive plan by AVIC TEDA in 2020, the company has maintained a relatively stable profitability and growth ability, and its debt repayment ability has been significantly improved. The inventory liquidity is strong, and its operational ability is good. The implementation of this plan has also to some extent led to the overall development of the company becoming stable under the impact of the epidemic, reducing the degree of negative impact, promoting the company to enhance its ability to respond to emergencies, and continuously stimulating vitality under the background of national government support, so that the future development of the company enters a new normal.

5. Summary

5.1. The effectiveness of the equity incentive plan for AVIC TEDA

The most significant advantage of the equity incentive plan of AVIC Teda is its keen grasp of market trends. As early as 2015, before the company went public, it began to implement the equity incentive plan, which was particularly prominent in the environmental governance industry, especially among the large number of state-owned enterprises that flooded into the industry. The equity incentive plan was implemented early in the same industry, and a new equity incentive plan was released in 2020 after the company went public, making its plan timely and effective. At the same time, the incentive targets will be continuously expanded from the original directors and executives to core technical personnel, making them in line with the long-term development direction of the enterprise and achieving good incentive effects, which has reserved a large number of talents in advance for the development of the enterprise and provided core impetus for the development of the technology-based enterprise.

At the same time, the incentive plan accurately grasps the direction of the times, the content of the plan is relatively reasonable, strives to avoid risks, seeks common interests, and is more in line with the requirements of enterprise development. The environmental protection industry itself has a certain public welfare nature. The equity incentive plan implemented by AVIC TEDA has promoted the stable performance of the enterprise through the new environment brought about by the epidemic, which has led to the development of its various indicators, especially its debt paying ability, and stimulated the driving force and environment for internal technological innovation of the company, enhancing its core competitiveness in the industrial smoke control industry. In the context of the dual carbon target policy orientation, it is worth learning and learning from by other enterprises in the industry.

5.2. Shortcomings of AVIC Teda's equity incentive plan

The main problem with the incentive plan of AVIC Teda is that its regulatory system is relatively incomplete, including various aspects such as assessment standards, which results in a low degree of matching between its equity incentives and the performance of its management. Especially in recent years when the market economy has been relatively sluggish, the various efforts of the company's senior management may only be able to maintain the stable operation of the enterprise and reduce losses to a certain extent. In addition, the assessment standards and supervision system are too simple, making regulatory measures inadequate and prone to various problems, exacerbating the risk of equity incentives for the enterprise. And this is also a common problem brought about by the influx of state-owned enterprises into the environmental protection industry in recent years, where equity incentives are largely only a reward measure for market-oriented reforms. Regulatory and other supporting systems are prone to becoming mere formality, and their ability to correct errors in the later stages is poor when problems arise. In the early stages, an effective comprehensive system has not been established, and only when a large number of problems arise will it attract the attention of management.

At the same time, it can be seen from the incentive plan released by AVIC TEDA in the previous text that its equity incentive plan is relatively too simple. From a formal perspective, its unlocking conditions are relatively vague, and the setting of individual performance evaluation standards for the company is too subjective, with only "qualified" and "unqualified", and no corresponding specific values are set. This makes it easier for incentive targets to achieve unlocking goals. Moreover, the unlocking plan does not reflect the long-term and phased nature of the plan, and there are many gaps in the setting. The specific reward arrangements and subsequent implementation processes are also mentioned less in the company's listing announcement. At the same time, the above content has not been supplemented and improved within the two years of the implementation of the plan. There is also a lack of non-financial indicators in the incentive exercise conditions. Relying solely on subjective performance evaluation of the incentive object to assess the overall development of the

enterprise is too singular. On the basis of introducing more financial indicators, non-financial indicators can be used within the limited range as much as possible to more comprehensively demonstrate the development of the enterprise and the effectiveness of the plan.

Finally, it is necessary to acknowledge the attempts and progress made by AVIC TEDA to a certain extent. From the perspective of incentive targets, in addition to the company's controlling executives, it also includes a certain number of core employees and technical personnel. However, from the perspective of equity structure, on the one hand, the total number of incentivized individuals is still relatively small. In the 2021 company annual report, the number of equity incentive recipients has not only been expanded. For such high-tech enterprises, further expansion of the coverage of middle-level technical personnel is still needed; On the other hand, the proportion of state-owned shares still exceeds 50%, and the equity structure is relatively single, which still needs further optimization. It is necessary to appropriately increase the proportion of other investors, such as encouraging non-state-owned capital to participate, increasing the supervision of enterprises, and promoting incentive plans to play a greater role in promoting the further development of enterprises.

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