Research Article

Equity Incentive Model, Source of Subject Matter and Enterprise Performance: Modification Effect Based on Equity Incentive Intensity

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For modern enterprises, equity incentive is an important means to solve the principal-agent problem, the choice of incentive mode and the source of the incentive is an inevitable issue in the implementation of an equity incentive scheme. Based on the sample data of A-share listed companies from 2010 to 2020, this paper constructs a panel two-way fixed effect model, combining regression analysis and three interactions with differential equations (PDE), which empirically explores the relationship between two incentive models of stock option and restricted stock, the source of subject matter and enterprise performance. The study shows that the restricted stock incentive model significantly improved the performance of enterprises, and the intensity of incentives played a significant inverted *U*-shaped moderating role between the enterprise's performance and the different incentive models. After adding the subject matter incentive source, it is further found that repurchase, as the source of subject matter, has a positive moderating effect on restricted stock and a negative moderating effect on stock option. The intensity of equity incentives moderates the relationship between stock option incentive models and enterprise performance when enterprises use repurchases as the source. The results of the above-given research provide some reference for enterprises to give appropriate incentive intensities, objective selection of the subject matter source under different equity incentive models based on their characteristics, and facilitation of more efficient use of equity incentive tools.

1. Introduction

The equity incentive mechanism started to be implemented in China in 2006. It gradually became a regular arrangement for listed enterprises to solve the principal-agent problem, which is essential to accelerate the convergence of owners and operators of enterprises to a community of interests [1]. Since the promulgation of the Measures for the Administration of Share Incentives of Listed Companies (hereinafter referred to as the Measures), there has been an explosion in academic research on equity incentives, with the number of articles published in core journals rising from 273 to 2715 according to statistics. Incremental improvements in the market economy tend to supplement the essential contractual components of enterprises' equity incentives, and researchers' research on equity incentives

has been extended. Some researchers believed that setting the core contractual elements was an integral part of whether the equity incentive scheme can effectively resolve the moral hazard and adverse selection problems arising from the principal agent, and in the setting of contract elements, the choice of incentive model and incentive object is critical [2]. Presently, domestic enterprises mainly focus on two models of equity incentive, namely, stock option incentive and restricted stock incentive, and the source of subject matter incentive is mostly through repurchasing stock and issuing shares. So how does the heterogeneous nature of these two incentive models and the source of the subject matter affect the promotion of interest convergence between shareholders and managers and affect the performance of the enterprise? This is a question that warrants further study.

At this stage, scholarly research on the relationship between equity incentive models and enterprise performance can be grouped into two main categories. Some academics argued that the restricted stock incentive model is directly related to the rewards received by executives, urging them to think carefully when making risky investments and influencing them to make decisions. It is thus argued that restricted shares will be superior to stock option and that listed companies should be guided and encouraged in their policies to choose the restricted stock incentive model [3]. Taking entity enterprises as an example, Haiyan [4] explored the relationship between equity incentives and innovation performance in innovative firms from the perspective of equity incentives. It was found that for senior management, implementing a performance-based equity incentive model was more motivating than implementing a share price-based incentive model. This characteristic gives it a stronger incentive effect since the restricted stock is generally punitive in nature. For example, executives cannot unlock and sell their stock freely if they do not meet the agreed performance or fail a test. Wenzhe [5] introduced a framework of game theory analysis and conducted empirical testing using data from 2006 to 2017 on equity incentive plans for A-share listed companies. The results showed that firms with high executive power also tend to choose restricted shares, the reason being that executives could make greater private gains through restricted shares granted at a discount. Based on the perspective of two incentive models, stock options and restricted stock, Songwen [6] used an extension test to show that restricted stock equity incentives had an inverted U-shaped relationship with corporate innovation investment. Through an investigation of the influence of incentive targets on the choice of equity incentive methods in listed companies, Shufang [7] conducted a three-step binary logistic regression on the sample and found that when the proportion of leaders among incentive targets was greater, firms did not select stock options that were more suitable for executives, but the more likely they were to select restricted stocks with higher profitability and equal rights and duties, and this was more apparent in firms with more managerial power. When the equity incentive plan meets the incentive characteristics, restricted stocks can play a better incentive effect and promote enterprise performance. Other academics had argued that the stock option model enhances corporate risk-taking more than the restricted stock model. The incentive effect of stock option was superior to restricted stock. And, enterprise performance significantly improved with the intensity of equity incentives in companies that implement stock option. Lihui [8] selected typical listed companies using stock option and restricted stock incentive models in China for comparative analysis and conducted an empirical test with a sample of companies that first implemented equity incentive plans in the A-share market from 2013 to 2016. It found that equity incentives did not have a significant positive contribution to the operating performance of listed companies in China, comparing with the restricted equity incentive model of stock, stock option have a better incentive effect. Xuelui [9] used a DID model to analyse a matched sample and the results showed that the stock option model can better enhance corporate risk-taking

than the restricted stock model and directed offerings promoted corporate risk-taking more significantly than repurchase style stock sources.

Obviously, the findings of domestic and international scholars are highly biased due to the differences between the samples, variables, and methods selected at the time of the study. The stock option model has long been the mainstream choice of foreign companies for equity incentives. There is a general consensus in the literature that stock option is more effective as incentives and better at mitigating agency problems than restricted stock. Bryan et al. [10], Lambert and Larcker [11], Chourou et al. [12], and Kadan and Swinkels [13] had argued extensively that in the context of time-based incentive conditions, incentive recipients of options would have a stronger incentive to risk investing for high returns, while restricted shares were granted to incentive recipients for free and were less motivating. Dechow and Sloan [14] and Core and Guay [15] argued that stock options had the advantage of better embellishment of profit statements and that poorer performing companies would prefer stock options. The choice of incentive model, however, remains an unanswered question as far as our practice is concerned in China. Stock repurchases are also an important tool for firms to stabilize their stock price and information transmission, and they have an enormous impact on enterprise performance. The existing literature rarely associates repurchase with equity incentives, and the literature on equity incentives that use repurchase as the source of incentives is even rarer.

The innovation of this paper is to refine the impact of the equity incentive model, incentive intensity, and interaction term on enterprise performance in the context of principal-agent theory and executive rights theory by adding the source of the subject matter equity incentive as an influencing factor based on the existing literature. This provides a basis for listed companies to choose the appropriate incentive intensity and subject matter when implementing equity incentives.

In this study, we took data from listed firms in China's A-share market from 2010 to 2020 as our samples. A two-way panel fixed effects regression was conducted using the pattern of equity incentives implemented by the sample companies as the explanatory variables, and on this basis, the interaction terms of incentive intensity, source of incentive targets, and both were introduced to analyse the impact of the pattern of equity incentives, incentive intensity, and source of incentive targets on firm performance. The GMM, replacement variables, and simple slope method were also used to conduct robustness tests. Finally, the empirical results were summarised and the shortcomings and future directions of this study were pointed out to provide theoretical reference for different types of listed companies in choosing their equity incentive models.

2. Theoretical Analysis and Research Hypothesis

Stock option and restricted stock, the two most common incentive models of equity incentive scheme in China's listed firms, must be exercised by the incentive recipients when they reach their assessment targets. This means that

whichever incentive model to choose, in order to obtain lucrative incentive return, they must strive to make investment success, improve enterprise performance, and on this basis to achieve the assessment objectives. However, there are also clear differences between the two incentive models. Firstly, there are differences between how they are granted. Under the stock option model, the incentive recipient is not required to pay any money on the grant date. If the appraisal target is not met, the registered stock options are simply cancelled without any loss. In principle, if the valuation target is met, the listed company will directly pay the incentive recipient cash equivalent to the value of the stock options to complete the award. Lambert and Larcker [11] shows that in the restricted stock model the incentive recipient must pay a lump sum of money on the date of the grant in order to purchase all of the shares granted in real terms, and typically the incentive recipient must raise finance and bear interest costs. If the appraisal target is not met, the listed company repurchases the corresponding shares at a price no greater than the grant price plus interest on bank deposits for the same period of time, which of course does not cover the financing costs borne by the recipient of the incentive. The incentive recipient will benefit from selling the unlocked shares if the valuation target is met. But where the recipient of the incentive is a director or supervisor of the firm, the sale of shares will face some regulatory restrictions. Therefore, the incentive recipients of restricted stock face more constraints and it takes longer to realise the benefits [5]. Secondly, these two models have their obvious characteristics in essence. From the perspective of rights and duties derived from both, there is a symmetrical relationship between the rights and obligations of restricted stock. Under the premise of satisfying the conditions for granting, the incentive object can obtain stock, and the rise or fall of the stock price is directly related to the interests of the incentive object. Executives, as the incentive recipients, whose decision-making directly affects the enterprise, can invest in high-risk projects. If the investment success of high-risk projects leads to higher stock prices, they will achieve tremendous gains. On the contrary, once the project falls into a huge loss or even leads to the abnormal sales/revenue of corporate funds, the stock price will fall, resulting in executives being unable to obtain high returns or facing severe losses. That is, the constrained model of stock incentives will restrain executives, allowing executives to pursue enterprise value maximization when making decisions to promote enterprise performance (see Figure 1). The rights and obligations of a stock option are not symmetrical. The option holder has the right to choose to exercise but does not have to do so. Finally, from the perspective of incentives and constraints on incentive objects, there are also significant differences between stock option and restricted stock. Under the restricted stock incentive model, the risk of the company releasing shares is effectively controlled by the setting of the lock-up condition. And, for incentive recipients, the setting of the lock-up period also discourages executive short-sightedness to a certain extent [8]. Furthermore, firms may impose harsh release conditions to financially sanction the incentive. However, incentive recipients under the stock option model can escape such penalties by forfeiting the exercise of their options.
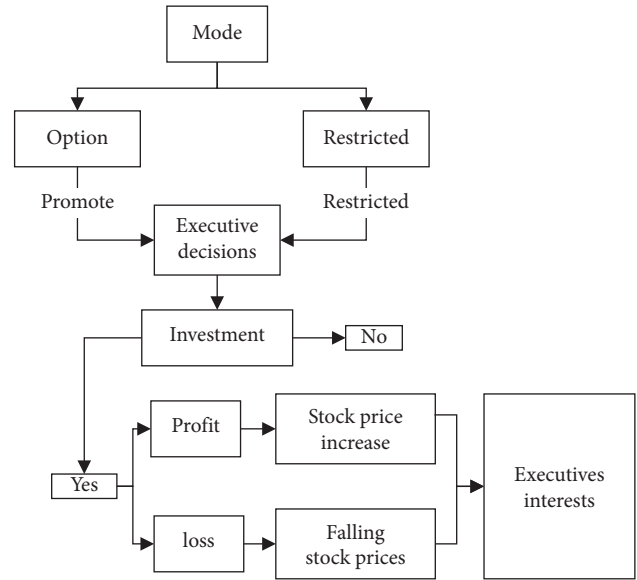

FIGURE 1: Mechanistic analysis of the equity incentive model.

In addition to the incentive model, the equity incentive plan includes exercise price, incentive intensity, award quantity, incentive recipients, expiry date, and grant conditions. The robust design of these elements can contribute to improving enterprise performance. Several studies have concluded that the intensity of equity incentives significantly impacts enterprise performance when considering models of equity incentives. With the increase of incentive intensity, management will be more concerned about the company's long-term development, which is more conducive to enterprise performance [16]. Guo [17] concluded that equity incentives had a significant effect on enterprise performance through propensity score matching analysis, indicating that the higher the intensity of equity incentives, the more significant the performance improvement. In an empirical study, Jianfeng [18] found a significant and positive relationship between the intensity of managerial equity incentives and enterprise performance. As the intensity of managerial equity incentives increased, management became more focused on the long-term development of the firm and was more motivated to increase investment in R&D, which in turn improved enterprise performance. For example, Shengjun [19] used the difference between the return on total assets three years after equity incentives were implemented and the return on total assets three years prior to implementation as a measure of the performance of the firm. It showed that equity incentive intensity was positively related to firm performance up to the 18% level. A few other earlier studies have shown that because of the low intensity of equity incentive implementation in Chinese companies, the effect on firm performance improvement is not significant enough [20]. This paper argues that when listed companies implement equity incentive scheme, giving appropriate incentives to incentive objects is conducive to promote enterprise performance. However, if the incentive intensity is too strong, it will lead to a larger share held by management, making its control and influence in the company uncontrolled. Exceeding the critical point of incentive intensity will continue to weaken the

effect of equity incentives. Excessive incentives will waste corporate resources and ultimately are unfavorable for improving enterprise performance. Based on the above-given analysis, this paper proposes hypotheses H1 and H2.

> H1: the restricted stock incentive model has a better impact on enterprise performance than the stock option when implementing an equity incentive scheme
>
> H2: incentive intensity has an inverted U-shaped moderating effect between equity incentive patterns and enterprise performance

In terms of the source of subject matter, issuing shares and stock repurchase are the two most prominent methods. A gap exists in the literature regarding the selection of two different sources of subject matter for listed firms when implementing equity incentives. The number of stocks repurchased by a listed company has no effect on the control of the beneficial owner's control, but at the same time, the earnings EPS increases to a certain level of profit, thereby enhancing the value of the company. Equity repurchases can also reduce paid-in capital, increase asset-liability ratio and save tax by increasing debt, which in turn promotes better use of "financial leverage" and has a positive impact on enterprise performance [21]. Skinner [22] examined time series data on US-listed companies and found that profit factors were becoming increasingly assertive in explaining stock repurchase behaviour, with enterprises with lower EPS having a greater incentive to undertake stock repurchases. When there is a large discrepancy between the current debt ratio and the optimal position of a publicly listed enterprise, there is a strong willingness to carry out stock repurchases, primarily through the form of debt to repurchase stocks [23]. The executive perspective suggests that when changes in capital structure affect executive control, executives prefer to repurchase, for it is only in this way that the threat of dilution can be lessened. Besides, listed companies may also use share repurchases as a signal of value transmission if they believe that external investors do not have a realistic understanding of the company's current situation and result in their value being undervalued. An announcement of a stock repurchase will lead investors who have received negative news to have a new positive perception of the enterprise's surplus, increasing their trust in the company, thus promoting investors to invest more in the company's stock price to generate excess returns, which has a positive effect on enterprise performance [24]. The root cause of the principal-agent problem is a potential conflict of interest between the owner and the manager of the business. Lin and Liu [16] believed that shareholders do not want to add high agency costs, whereas managers may choose to invest in projects with suboptimal returns or even harmful returns based on their goals of interest. In this case, if the company carried out a stock repurchase, it can reduce the idle cash flow, increase shareholder wealth, and reduce the risk of managers' arbitrary control of liquid capital. Similarly, Jagannathan et al. [25] showed that listed companies could use large amounts of idle free cash flow through share repurchases as a way to reduce agency costs for listed companies and to prevent operators from using funds at their discretion. Based on the above-given studies, it appears that the use of

repurchases as a source of incentive for listed firms is more beneficial to firm performance. Therefore, this paper advances hypotheses H3 and H4.

> H3a: the stock option incentive model is beneficial in promoting enterprise performance when repurchases are used as the source of the subject matter
>
> H3b: the restricted stock incentive model is beneficial in promoting enterprise performance when repurchases are used as the source of the subject matter
>
> H4a: when repurchasing is used as the source of the subject matter, there is a positive moderating effect of incentive intensity between the stock option incentive model and the enterprise's performance
>
> H4b: when repurchasing is used as the source of the subject matter, there is a negative moderating effect of incentive intensity between the stock option incentive model and the enterprise's performance
>
> H4c: when repurchasing is used as the source of the subject matter, there is a positive moderating effect of incentive intensity between the restricted stock incentive model and the enterprise's performance
>
> H4d: when repurchasing is used as the source of the subject matter, there is a negative moderating effect of incentive intensity between the restricted stock incentive model and the enterprise's performance

3. Materials and Methods

3.1. Sample Selection and Data Sources.
The sample used in this paper consists of data from 2010 to 2020 for enterprises listed on the Chinese A stock market. Also, the data in the sample were filtered as follows to ensure the accuracy and validity of the data: (1) exclude listed companies in the financial and insurance industries. (2) Exclude enterprises that have terminated their listing. (3) Exclude listed companies that use a combination of both incentive models. (4) Exclude enterprises that have suspended or ended the implementation of equity incentives. In addition, all nondummy variables are Winsorize scaled at the 1% and 99% levels in this article to avoid the potential confounding of this study by extreme values. For the purposes of this paper, the data sources are primarily CSMAR and WIND databases, with the missing data coming from Python big data crawlers, and the final 1876 observations obtained through data filtering by Excel; the empirical analysis was carried out by Stata.

3.2. Variable Definitions

3.2.1. Explained Variables

(1) Enterprise Performance (ROA). The indicators used in the studies to measure enterprise performance primarily include accounting and market indicators. Accounting indicators mainly include return on equity (*ROE*) and return on total assets (*ROA*). Market indicators mainly include earnings per share (*EPS*), Tobin Q (*TQ*), price-earnings ratio (*P/E*), market book

ratio (*M/B*). Market indicators are often used by foreign academics to measure enterprise performance in their studies, but given the gulf between the development of China's capital market and that of foreign countries, and low capital market efficiency, market indicators may not correspond to actual market conditions, the rationality of the use of market indicators to measure enterprise performance is open to dispute [26]. On the other hand, market indicators are usually linked to stock prices, and because of the frequency of stock price movements and weak market validity in our market, the use of market indicators is usually not an accurate measure of enterprise performance. At this stage, when scholars in China study this issue, the indicators selected by most studies are still dominated by return on equity (*ROE*) and return on total assets (*ROA*). Through a synthesis of previous studies and the requirements of the Administrative Measures on Equity Incentives for Listed Companies, in this paper, we choose the return on average annual total assets (*ROA*) to measure enterprise performance and use the return on average annual equity (*ROE*) as the regressor in the robustness test.

3.2.2. Explanatory Variables

(1) Equity Incentive Models. Listed companies implementing both stock option and restricted stock incentive models were selected. Dummy variables were set: the implementation of the stock option incentive took the value of 1 and the restricted stock incentive took the value of 0.

(2) Incentive Intensity. It is defined as the percentage of total equity capital to be incentivized by the equity incentive scheme for publicly traded enterprises that implement the equity incentive scheme; as the value approaches 1, the intensity of the equity incentive increases.

(3) The Source of the Incentive Matter. It refers to the object of the equity incentive in the equity incentive scheme in what manner; the value is 1 by stock repurchase and 0 by issuing shares.

3.2.3. Control Variables.

Enterprise performance is also confounded by other factors, such as its size, operating capacity, debt capacity, growth capacity, and governance. For the purposes of this paper, enterprise size (*Size*), total asset sales/revenue (*Operate*), debt capacity (*Lev*), equity concentration (*Shrhfd1*), the growth rate of total assets (*Growth*), and the presence of two jobs in one (*Both*). Corporate donations (*donation*) are chosen as control variables. Definitions and explanations of each variable can be seen in Table 1.

3.3. Construction of the Model.

In light of the above theories and hypotheses, in order to verify the relationship between the equity incentive model and enterprise performance and consider the moderating effect of equity incentive intensity and the source of incentive subject matter. The Explained variable is the continuous variable *ROA*; *ROE* is used for robustness testing. The equity incentive model and the source of incentive matter are bipartite dummy variables, respectively. Five regression models were constructed as follows:

$$\begin{aligned}
\text{ROA}_{i,t} &= \alpha_0 + \alpha_1 \text{Mode}_{i,t} + \varepsilon_{i,t}, \\
ROA_{i,t} &= \alpha_{10} + \alpha_{11} \text{Mode}_{i,t} + \alpha_{12} \text{Controls}_{i,t} + \varepsilon_{i,t}, \\
ROA_{i,t} &= \alpha_{20} + \alpha_{21} \text{Mode}_{i,t} + \alpha_{22} \text{Strength}_{i,t} + \alpha_{23} \text{Mode}_{i,t} \times \text{Strength}_{i,t} \\
&\quad + \alpha_{24} \text{Mode}_{i,t} \times \text{Strength}_{i,t}^2 + \alpha_{25} \text{Controls}_{i,t} + \varepsilon_{i,t}.
\end{aligned} \tag{1}$$

Models (1) and (2) are used to explore the impact of the two incentive models on enterprise performance. The restricted stock incentive model, which is expected to be significant and lower than zero. It means more conducive to improved enterprise performance. Model (3) considers the

role of equity incentive intensity between the two models. If α_{24} is significant and disagrees with the sign of the α_{23} coefficient, it indicates that there is an inverted *U*-shaped moderation of incentive intensity between the stock equity incentive model and enterprise performance.

$$\begin{aligned}
ROA_{i,t} &= \alpha_{30} + \alpha_{31} \text{Mode}_{i,t} + \alpha_{32} \text{Source}_{i,t} \\
&\quad + \alpha_{33} \text{Mode}_{i,t} \times \text{Source}_{i,t} + \alpha_{34} \text{Controls}_{i,t} + \varepsilon_{i,t}, \\
ROA_{i,t} &= \alpha_{40} + \alpha_{41} \text{Mode}_{i,t} + \alpha_{42} \text{Strength}_{i,t} + \alpha_{43} \text{Source}_{i,t} \\
&\quad + \alpha_{44} \text{Mode}_{i,t} \times \text{Strength}_{i,t} + \alpha_{45} \text{Mode}_{i,t} \times \text{Source}_{i,t} + \alpha_{46} \text{Source}_{i,t} \times \text{Strength}_{i,t} \\
&\quad + \alpha_{47} \text{Mode}_{i,t} \times \text{Source}_{i,t} \times \text{Strength}_{i,t} + \alpha_{48} \text{Controls}_{i,t} + \varepsilon_{i,t}.
\end{aligned} \tag{2}$$

In order to validate H$_3$ and H$_4$, the relationship between the incentive model and enterprise performance and the moderating role of incentive intensity between the two when

the source of the incentive comes from repurchases. Set models (4) and (5), where $\text{Mode}_{i,t} \times \text{Source}_{i,t}$ is the interaction term between the equity incentive model and the

TABLE 1: Definition and description of variables.

Variable category	Variable sign	Variable definition
Explained variables	ROA	Net profit/average balance of total assets
	ROE	Net profit/average balance of shareholders' equity
Explanatory variables	Mode	Dummy variables: stock option = 1; restricted stock = 0
	Strength	Strength total number of incentives/total equity
	Source	Dummy variables: stock repurchase = 1; issuing shares = 0
Control variables	Size	Ln (total assets)
	Operation	Net operating income for the period/2
	Lev	Liabilities at the end of the period/total assets at the end of the period
	Growth	(Assets at end of current period – assets at end of previous year)/(assets at end of previous year)
	Both	Chairman and managing director = 1, otherwise 0
	Shrhfd1	Shareholding of the largest shareholder
	Donation	Total annual social giving by listed companies

source of the subject matter, if α_{33} is significant, there is a moderating effect of the source of the equity incentive subject matter between the equity incentive model and the enterprise performance. When $\alpha_{33} > 0$, there is an isotropic moderating effect, the $\alpha_{33} < 0$, there is an inverse moderating effect. $Mode_{i,t} \times Source_{i,t} \times Strength_{i,t}$ is the interaction term between incentive intensity and the source of the subject matter under the equity incentive model. If α_{47} is significant, it indicates that there is a significant moderating effect of incentive intensity on the relationship between incentive intensity and enterprise performance when the source of the incentive comes from repurchase. It is positively moderated when $\alpha_{47} > 0$, otherwise it is vice versa.

4. Empirical Results and Analysis

4.1. Descriptive Statistical Analysis. Table 2 shows the results of the descriptive analysis of each variable, and the sample will be analysed in five dimensions: mean (*Mean*), standard deviation (*Sd*), minimum (*Min*), median (*Median*), and maximum (*Max*). Among them, return on total assets (*ROA*), equity incentive intensity (*Strength*), enterprise size (*Size*), total asset sales/revenue (*Operation*), total asset growth rate (*Growth*), debt capacity (*Lev*), equity concentration (*Shrhfd1*), and corporate donations (*donation*) are continuous variables; equity incentive model (*Mode*), source of equity incentive underlying (*Source*) and control of two positions (*Both*) are dummy variables.

Specifically, it appears that among the A-share listed companies implementing equity incentives: the mean value of *ROA* is 6.95% with a standard deviation of 0.054. The *ROA* of 1820 out of 1876 samples was positive, which leads to the conclusion that most listed enterprises implementing equity incentives have better effects on profits and the distribution of enterprise performance (see Figure 2).

On the choice of incentive model (*Mode*): the mean value of listed companies is 0.2521, and the median value is also biased toward 0, providing evidence that executives of listed companies in China prefer the restricted stock incentive model at this stage.

For the source of the subject matter (*Source*): as stipulated in the Rules for the Implementation of Share Repurchase by Listed Companies on Shenzhen Stock

Exchange and the Rules for the Implementation of Share Repurchase by Listed Companies on Shanghai Stock Exchange, if the listed companies have been listed for less than one year to implement the equity incentive, or if the stock repurchase method is used that causes the company will reach less than 25% of the total number of shares of the companies, thus not satisfying the listing conditions, only issuing shares can be used as the source of the subject matter of the equity incentive. Moreover, all of the announced equity incentive schemes of the GEM companies use issuing shares as the source of subject matter, as most of the GEM companies have been listed for less than one year and thus cannot use repurchase as the source of the subject matter for the implementation of equity incentives. In terms of the data, the mean value tends to be zero for the source of the subject matter (*Source*), which is consistent with the fact that most listed companies choose targeted issuance as the primary source of the subject matter equity incentives.

Among the listed companies implementing the equity incentive scheme, the mean value of equity incentive strength (*Strength*) is 2.32%, the minimum value is 0.1515%, and the maximum value is 8.75%. In 422 of these samples, the equity incentive intensity was less than or equal to 1%, and 127 had a greater than 5% equity incentive intensity with an equity incentive intensity distribution (see Figure 3). The overall picture from the data shows that the intensity of equity incentives in China is low at this stage and that there is a wide gap in the intensity of incentives between different companies. In foreign countries, the incentive intensity is typically between 10% and 15%, whereas in China it is typically less than 10%, making our equity incentive intensity somewhat conservative in comparison.

4.2. Analysis of Correlation. When the Pearson correlation coefficient test was performed, the absolute values of the correlation coefficients were all less than 0.4, and the test passed (See Table 3). In addition, the VIF test is used further to illustrate the problem of multicollinearity in the model. The maximum value of VIF for all variables is 3.01, which indicates no serious multicollinearity problems.

TABLE 2: Descriptive statistics of variables.

| VarName	Obs	Mean	SD	Min	Median	Max
ROA	1876	0.0695	0.054	−0.1261	0.0644	0.2411
Mode	1876	0.2521	0.434	0.0000	0.0000	1.0000
Source	1876	0.0613	0.240	0.0000	0.0000	1.0000
Strength	1874	2.3200	1.642	0.1515	1.9800	8.7500
Size	1876	20.8618	1.604	17.7273	20.7076	25.5418
Lev	1876	0.3781	0.185	0.0530	0.3712	0.8325
Operation	1876	0.7007	0.431	0.1341	0.5980	2.7824
Growth	1876	0.3022	0.446	−0.2151	0.1857	2.9971
Both	1876	0.3971	0.489	0.0000	0.0000	1.0000
Shrhfd1	1876	32.6268	13.988	7.4900	30.6950	69.9400
Donation	1876	$1.15e+04$	$4.93e+05$	0.0000	0.0000	$2.14e+07$
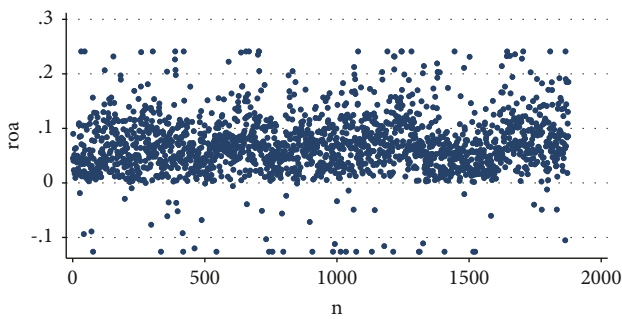
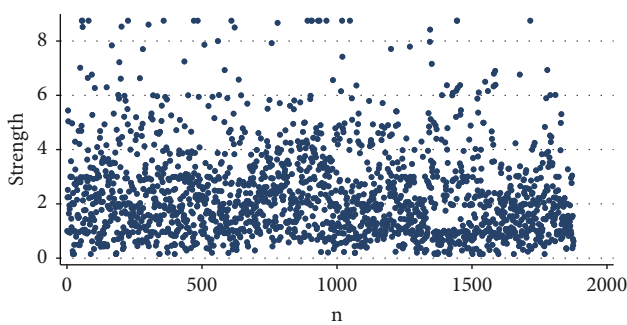
FIGURE 2: Enterprise performance distribution map.

FIGURE 3: Equity incentive intensity distribution chart.

4.3. Regression Analysis.

Table 4 shows the test results of the relationship between stock option incentives and enterprise performance. Column (1) adds only the explanatory variable *Mode* and performs an OLS regression using panel two-way fixed effects. The results show that the incentive model (*Mode*) has a significant effect on enterprise performance (*ROA*), stock option hurt enterprise performance, and the restricted stock has a significant positive effect on enterprise performance, and hypothesis H_1 is initially tested. Column (2) adds further control variables and the estimated coefficient of Mode passes the test at the 5% significance level. In model (2), the adjusted R^2 is 0.3264, which is a substantial increase from the value of R^2 in model (1). It is indicative of a further increase in the explanatory power of the equation. Hypothesis H_1 was further tested. It indicates that restricted stock is the more preferred option in listed firms' incentive covenants under incentive-based performance conditions. Because publicly traded firms are more willing to make risky

investments under the stock option model. If the investment fails and the firm's stock price falls, managers will avoid damage to their own interests by forgoing the exercise of their options. Conversely, if the project is successful and generates significant returns, the stock price will rise rapidly and managers will naturally be able to exercise their options for more substantial returns. When managers make decisions to invest in high-risk projects, the enterprise needs to take on substantial risks, which increases the probability of gains and losses [27]. The probability of loss is much greater than the probability of profit in a competitive market. If managers only consider their own interests and increase risky investments, this will influence enterprise performance (*ROA*). In the restricted stock incentive model, managers are required to meet performance evaluation criteria before they can sell their shares. During this period, if their investment decisions fail, the share price falls, and the managers will also suffer losses [28], so there is a stronger constraint on a risky investment in the equity incentive model. Some studies have shown that the value of the restricted stock is negatively correlated with firm risk, and this model will aggravate the risk aversion level of executives, the risk-aversion effect of restricted stock incentives is considerably stronger than the stock option model [29]. The above-given research results are consistent with the conclusions of Haiyan [4], Wenzhe [5], and Shufang [7].

4.4. Tests for Moderating Effects.

Column 1 of Table 5 shows the moderating effect of the strength of the equity incentive (Strength) on the incentive model (Mode) and enterprise performance (*ROA*). The primary term of Mode × Strength has a positive coefficient, but the secondary term of Mode × $Strength^2$ has a significantly negative coefficient. It indicates an inverted *U*-shaped relationship between the intensity of equity incentives and enterprise performance relative to the equity incentive model. Xiaowu [30] showed that listed firms implement equity incentives among their managers, the intensity of which is less than a critical threshold level, and equity incentives are beneficial in promoting long-term improvements in enterprise performance. However, as the intensity of the equity incentive increases, the proportion of shares owned by management increases, which in turn enables them to increase their control and influence within the firm, and above the threshold the performance enhancing effect of the equity incentive is continuously lost. Excessive

TABLE 3: Results of correlation analysis for each variable.

	ROA	Mode	Source	Strength	Size	Lev	Operation	Growth	Both	shrhfd1	Donation
Roa	1										
Mode	−0.106***	1									
Source	−0.022	−0.137***	1								
Strength	−0.164***	0.224***	−0.169***	1							
Size	−0.226***	0.147***	0.116***	−0.045*	1						
Lev	−0.391***	0.118***	0.065***	0.099***	0.801***	1					
Operation	0.169***	0.016	0.008	−0.011	0.163***	0.203***	1				
Growth	0.283***	−0.059**	−0.098***	−0.036	−0.035	−0.032	0.021	1			
Both	0.089***	0.038	−0.055**	0.056**	−0.151***	−0.135***	−0.034	0.056**	1		
Shrhfd1	0.069***	0.055**	−0.028	−0.089***	0.097***	0.071***	0.124***	−0.029	0.026	1	
Donation	−0.021	−0.013	0.091***	−0.031	0.065***	0.029	−0.015	−0.023	0.029	−0.039*	1

Note. ***, **, * indicate significant at the 1%, 5%, 10% levels.

TABLE 4: Regression results of equity incentive model and enterprise performance (ROA).

	ROA01	ROA02
Mode	−0.0089* (−1.9571)	−0.0089** (−2.1791)
Size		0.0138*** (2.6139)
Lev		−0.1754*** (−6.2335)
Operation		0.0798*** (6.4976)
Growth		0.0206*** (5.2275)
Both		0.0097** (2.0212)
Shrhfd1		0.0001 (0.2455)
Donation		0.0000*** (2.6670)
_cons	0.0991*** (11.9763)	−0.1957* (−1.9248)
TE	Yes	Yes
FE	Yes	Yes
N	1876	1876
R^2	0.0733	0.3329
Adj. R^2	0.0679	0.3264

Note. ***, **, * indicate significant at the 1%, 5%, 10% levels.

equity incentives can also waste corporate resources and are ultimately detrimental to the improvement and enhancement of listed enterprises' performance. It is clear from this that it is not the case that the greater the incentive intensity, the better the incentive effect. H_2 tests the hypothesis.

The results in column 2 of Table 5 show that there is no significant association between the source of the subject matter and enterprise performance. But the coefficient in column 3 is −0.0349, which passes the test at the 1% significance level. It indicates that the incentive underlying the repurchase method has a negative moderating effect on the relationship between stock option and enterprise performance, and a positive moderating effect on restricted stock. Kahle [31] found, in a large number of case studies of share repurchases, that companies with significant stock-based equity incentives prefer to use share repurchases rather than cash dividends as a corporate payment policy. The stock required for equity incentive and employee stock ownership plans can be obtained through the issuing of shares and stock repurchases. This method of the stock repurchase is more flexible than the issuing shares that will dilute the firm's equity. Hypothesis H_{3b} was tested. At the same time, this paper adds the primary and secondary terms of equity incentive strength to the source of the subject matter incentive. The secondary term coefficient is not significant. The regression results suggest that there is an

isotropic rather than an inverted U-shaped moderating effect of equity incentive intensity between the source of the subject matter incentive and enterprise performance. The results are shown in columns 4 and 5 in Table 5. This would also mean that the higher the intensity of the repurchase, it is more beneficial to enterprise performance, consistent with the results of the literature described above.

Column 6 of Table 5 regresses the interaction terms of the three parts (Mode × Source × Strength). But the regression results show significant multicollinearity in the model. For *Mode* and *Source* are dummy variables which take the value of either 0 or 1, the result of the cross-multiplication term will be zero if one takes 0. If one of the policies takes a large sample with a value of 0, the effect of the other two values will be overwritten due to the limitations of the sample data, and the process is shown as follows:

$$
\begin{bmatrix}
\text{Mode}_1 & A_1 & \text{Source}_1 \\
\text{Mode}_2 & A_2 & \text{Source}_2 \\
\text{Mode}_3 & A_3 & \text{Source}_3 \\
\text{Mode}_4 & A_4 & \text{Source}_4 \\
\text{Mode}_5 & A_5 & \text{Source}_5 \\
\text{Mode}_6 & A_6 & \text{Source}_6 \\
\text{Mode}_7 & A_7 & \text{Source}_7 \\
\cdots & \cdots & \cdots \\
\text{Mode}_n & A_n & \text{Source}_n
\end{bmatrix}
=
\begin{bmatrix}
1 & A_1 & 0 \\
1 & A_2 & 1 \\
0 & A_3 & 1 \\
0 & A_4 & 0 \\
1 & A_5 & 1 \\
0 & A_6 & 0 \\
1 & A_7 & 0 \\
\cdots & \cdots & \cdots \\
1 & A_n & 0
\end{bmatrix}
\begin{bmatrix}
0 \\
A_2 \\
0 \\
0 \\
= A_5 \\
0 \\
0 \\
\cdots \\
0
\end{bmatrix}
\longrightarrow
\begin{bmatrix}
Y_1 \\
Y_2 \\
Y_3 \\
Y_4 \\
Y_5 \\
Y_6 \\
Y_7 \\
\cdots \\
Y_n
\end{bmatrix}.
\tag{3}
$$

The original dummy variables in this paper are fixed as follows: Mode = 1 for the stock option incentive model, Mode = 0 for the restricted stock incentive model, Source = 1 for incentive source matter selection of stock repurchase, and Source = 0 for issuing shares. The root cause of multicollinearity in the data presented above is the small sample size, but the problem of small sample size cannot be resolved due to the late start of the development of China's equity incentive scheme and the unavailability of additional data.

$$
Y = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 M + \alpha_4 X_1 X_2 + \alpha_5 X_1 M \\
+ \alpha_6 X_2 M + \alpha_7 X_1 X_2 M + \alpha_8 \sum \text{Controls} + \mu.
\tag{4}
$$

After the deformation of the equation:

TABLE 5: Coefficients of the moderating effect of explanatory variables on equity incentives and enterprise performance (ROA).

	ROA03	ROA04	ROA05	ROA06	ROA07	ROA08
Mode	−0.0146 (−1.4659)		−0.0086** (−2.0830)			0.3755***(4.1029)
Size	0.0152*** (3.0170)	0.0133** (2.5155)	0.0136** (2.5632)	0.0137*** (2.6490)	0.0138*** (2.6698)	0.0145*** (2.8033)
Lev	−0.1823*** (−6.8552)	−0.1731*** (−6.0873)	−0.1749*** (−6.1942)	−0.1812*** (−6.6685)	−0.1813*** (−6.6674)	−0.1855*** (−6.8830)
Operation	0.0831*** (7.1345)	0.0791*** (6.2473)	0.0799*** (6.4983)	0.0807*** (6.5758)	0.0809*** (6.5918)	0.0819*** (6.8862)
Growth	0.0196*** (5.1393)	0.0210*** (5.3644)	0.0207*** (5.2524)	0.0203*** (5.2391)	0.0203*** (5.2397)	0.0195*** (5.0140)
Both	0.0098** (2.0833)	0.0100** (2.0870)	0.0097** (2.0564)	0.0105** (2.2341)	0.0104** (2.2107)	0.0105** (2.2862)
Shrhfd1	0.0001 (0.3409)	0.0001 (0.1414)	0.0001 (0.2660)	0.0002 (0.4805)	0.0002 (0.4388)	0.0001 (0.4430)
Donation	0.00000** (2.9545)	0.0000** (2.5430)	0.0000** (2.3066)	0.0000*** (3.3765)	0.0000*** (4.1277)	0.0000* (1.6798)
Strength	0.0011 (0.7769)			−0.0012 (−1.0074)	−0.0012 (−1.0242)	0.2043*** (3.7587)
Modestrength	0.0074 (1.4245)					
Modestrength2	−0.0013**(−2.2698)					−0.1884*** (−3.6228)
Source		0.0028 (0.3853)	0.0006 (0.0778)	−0.0144 (−1.4459)	−0.0230** (−2.4498)	0.3993*** (4.2010)
Modesource			−0.0349*** (−3.4921)			−0.3760*** (−4.1040)
Sourcestrength				0.0017 (0.1382)	0.0161*** (2.9902)	−0.2070*** (−3.7890)
Sourcestrength2				0.0041 (1.1453)		
Exchmodesourcestrength						0.1916*** (3.6588)
_cons	−0.2271** (−2.3558)	−0.1903* (−1.8634)	−0.1927*(−1.8868)	−0.1974** (−1.9901)	−0.1983** (−2.0037)	−0.6094*** (−4.2975)
TE	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes
N	1874	1876	1876	1874	1874	1874
R^2	0.3478	0.3263	0.3336	0.3356	0.3348	0.3459
Adj. R^2	0.3404	0.3197	0.3264	0.3280	0.3277	0.3374

Note. ***, **, * indicate significant at the 1%, 5%, 10% levels.

$$Y = \alpha_0 + (\alpha_1 + \alpha_5 M)X_1 + (\alpha_2 + \alpha_6 M)X_2 + \alpha_3 M + (\alpha_4 + \alpha_7 M)X_1 X_2 \sum \text{Controls} + \mu. \tag{5}$$

Taking the partial derivative of the above-deformed equation with respect to $X_1 X_2$ yields:

$$\frac{\partial Y}{\partial X_1 X_2} = \alpha_4 + \alpha_7 M. \tag{6}$$

If the values of Mode and Source are swapped, Mode = 1 is the restricted stock incentive model, and Mode = 0 is the stock option incentive model. Source = 1 is when the incentive source is chosen issuing shares, and Source = 0 corresponds to when the incentive source matter is chosen as stock repurchase.

$$Y = \beta_0 + \beta_1(1 - X_1) + \beta_2(1 - X_2) + \beta_3 M + \beta_4(1 - X_1)(1 - X_2) + \beta_5(1 - X_1)M + \beta_6(1 - X_2)M + \beta_7(1 - X_1)(1 - X_2)M + \beta_8 \sum \text{Controls} + \mu. \tag{7}$$

After the deformation of the equation:

$$Y = \beta_0 + (\beta_1 + \beta_5 M)(1 - X_1) + (\beta_2 + \beta_6 M)(1 - X_2) + \beta_3 M + (\beta_4 + \beta_7 M)(1 - X_1)(1 - X_2) + \beta_8 \sum \text{Controls} + \mu. \tag{8}$$

Taking the partial derivative of the above-deformed equation with respect to $X_1 X_2$ yields:

$$\frac{\partial Y}{\partial X_1 X_2} = \beta_4 + \beta_7 M. \tag{9}$$

The joint equation (6) and (9) yields:

$$\frac{\partial Y}{\partial X_1 X_2} = \alpha_4 + \alpha_7 M \longleftrightarrow \frac{\partial Y}{\partial X_1 X_2} = \beta_4 + \beta_7 M. \tag{10}$$

Then,

$$\alpha_7 = \beta_7. \tag{11}$$

In light of this, one can see that the regression results are equal when the values of the two dummy variables are traded simultaneously. The table shows the results after swapping the values of the dummy variables. Our analysis shows that at the 1% significance level when the enterprise selects the equity incentive model and uses repurchase as the underlying source; that is, incentive intensity has a suppressing effect on the relationship between the incentive model of stock option and enterprise performance. As the intensity of stock repurchases increases, the suppressive effect on the negative relationship between the stock option incentive model and enterprise performance increases, at which point R^2 rises from 0.3277 to 0.3374, and the fit is better. H_{4b} was verified.

4.5. Robustness Tests. In this paper, the national economic growth index (ln gdp), the fixed asset investment growth index (ln invest), the per capita disposable income growth index (ln output), and the per capita consumption index (ln cost) are used as instrumental variables in addressing the indigeneity issue. At the same time, considering that changes in any economic factor are inherently inertial, the results of the previous period usually have an impact on the results of the later period and there is a lagging effect on the enterprise performance of each listed company. For this reason, this paper uses the generalized method of moments (GMM) estimation to estimate a dynamic panel data model that is robust to potential endogenous issues (see Table 6). The regression results pass the stability test at the 1% level, and the sign of the coefficients is consistent with the above, P-values for Hansen's test were 0.493 and 0.715, respectively. The GMM endogeneity test passes.

To ensure the accuracy and consistency of the above findings, the explained variable *ROA* was replaced with *ROE* in the model to test the above results. Table 7 was mainly used to test the relationship between the equity incentive model and enterprise performance, and the regression coefficient was −0.0147, significant and negative, which is consistent with the above findings.

In this paper, two methods are used to test the moderating effect of incentive strength: the simple slope method

TABLE 6: GMM endogeneity test regressions.

Var	ROA01	ROA02
Mode	−0.0106*** (0.0037)	
Strength		−0.0002 (0.0026)
Source		−0.0455* (0.0245)
Sourcestrength		0.0301*** (0.0106)
Size	0.0095* (0.0057)	0.0100** (0.0044)
Lev	−0.1928*** (0.0594)	−0.1881*** (0.0471)
Operation	0.0444** (0.0207)	0.0400* (0.0205)
Growth	0.0257*** (0.0044)	0.0238*** (0.0048)
Both	0.0113 (0.0103)	0.0133* (0.0070)
Shrhfd1	−0.0001 (0.0004)	0.0001 (0.0003)
Donation	−0.0000 (0.0000)	−0.0000 (0.0000)
N	1876	1874
AR(1)p	0.096	0.124
AR(2)p	0.767	0.519
Hansenp	0.493	0.715

Note. ***, **, * indicate significant at the 1%, 5%, 10% levels.

TABLE 7: Robustness test results for incentive source and enterprise performance (ROE).

	ROE01	ROE02
Mode	−0.0147* (−1.6992)	−0.0157* (−1.9181)
Size		0.0478*** (2.8791)
Lev		−0.3525*** (−3.2471)
Operation		0.1773*** (4.3791)
Growth		0.0419*** (2.9558)
Both		0.0148 (1.5513)
Shrhfd1		0.0007 (0.8299)
Donation		0.0000* (1.9331)
_cons	0.1515*** (12.1462)	−0.8683** (−2.5732)
TE	Yes	Yes
FE	Yes	Yes
N	1876	1876
R^2	0.0377	0.2975
Adj. R^2	0.0320	0.2907

Note. ***, **, * indicate significant at the 1%, 5%, 10% levels.

with selected points [32] and replacing the explained variables. The moderating effects of the three interaction terms are

$$Y = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 M + \alpha_4 X_1 X_2 + \alpha_5 X_1 M + \alpha_6 X_2 M + \alpha_7 X_1 X_2 M + \mu. \tag{12}$$

After variation, it is obtained that

$$Y = \alpha_0 + \alpha_1 X_1 + (\alpha_2 + \alpha_4 X_1) X_2 + \alpha_3 M + M(\alpha_5 X_1 + (\alpha_6 + \alpha_7 X_1) X_2) + \mu. \tag{13}$$

The coefficient of M $(\alpha_5 X_1 + (\alpha_6 + \alpha_7 X_1) X_2)$ reflects how the relationship between X_1 and Y is moderated by the variable M. The slope subscale types in (4) in Figure 4, all others are main scale types. It is intuitive from the graph that stock repurchase is positively related to corporate

performance as the intensity of equity incentives increases. This is contrary to the regression results for H_{3b}, indicating that incentive intensity has a dampening effect between the stock option incentive model and enterprise performance when repurchases are used as the source of subject matter.
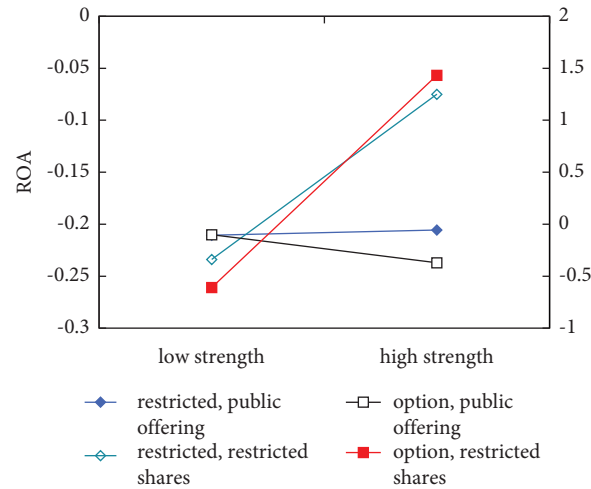
Figure 4: Schematic representation of the moderating effect of the interaction term.

Table 8: Robustness tests of the moderating effect of independent variables on equity incentives and enterprise performance (ROE).

	ROE03	ROE04	ROE05	ROE06	ROE07	ROE08
Mode	−0.0288(−1.6325)		−0.0159*(−1.8674)			0.5963***(3.2971)
Size	0.0515*** (3.1121)	0.0470***(2.8341)	0.0476*** (2.8637)	0.0477*** (2.8841)	0.0479*** (2.8994)	0.0494*** (2.9830)
Lev	−0.3691*** (−3.4314)	−0.3486*** (−3.2048)	−0.3521*** (−3.2370)	−0.3628*** (−3.3459)	−0.3629*** (−3.3486)	−0.3710*** (−3.4155)
Operation	0.1847*** (4.6576)	0.1758*** (4.3173)	0.1773*** (4.3887)	0.1783*** (4.4175)	0.1788*** (4.4361)	0.1810*** (4.5422)
Growth	0.0396*** (2.8286)	0.0428*** (2.9879)	0.0421*** (2.9546)	0.0415*** (2.9250)	0.0415*** (2.9304)	0.0397*** (2.7964)
Both	0.0152 (1.5910)	0.0152 (1.5683)	0.0146 (1.5441)	0.0161* (1.6935)	0.0159* (1.6724)	0.0163* (1.7641)
Shrhfd1	0.0008 (0.9350)	0.0007 (0.7624)	0.0008 (0.8518)	0.0009 (1.0285)	0.0009 (0.9895)	0.0008 (0.9470)
Donation	0.0000** (2.4127)	0.0000** (2.0077)	0.0000* (1.8444)	0.0000** (2.2354)	0.0000*** (3.1200)	0.0000 (1.5041)
Strength	0.0033 (1.0780)			−0.0020 (−0.9066)	−0.0020 (−0.9252)	0.3308*** (3.1104)
Modestrength	0.0174 (1.6330)					−0.3032*** (−2.9792)
Modestrength2	−0.0032**(−2.5540)					
Source		−0.0005 (−0.0353)	−0.0050 (−0.3454)	−0.0272 (−1.1314)	−0.0455** (−2.2983)	0.6479*** (3.4115)
Modesource			−0.0493***(−2.6008)			−0.6044*** (−3.3270)
Sourcestrength				−0.0024 (−0.0978)	0.0281*** (2.6312)	−0.3369*** (−3.1455)
Sourcestrength2				0.0087 (1.2677)		
Modesourcestrength						0.3116*** (3.0241)
_cons	−0.9470*** (−2.8244)	−0.8591** (−2.5433)	−0.8648** (−2.5602)	−0.8720*** (−2.5923)	−0.8739*** (−2.6021)	−1.5426*** (−3.6412)
TE	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes
N	1874	1876	1876	1874	1874	1874
R^2	0.3169	0.2927	0.2980	0.2992	0.2985	0.3091
Adj. R^2	0.3092	0.2858	0.2904	0.2912	0.2909	0.3002

Note. ***, **, * indicate significant at the 1%, 5%, 10% levels.

Substitution of *ROA* for *ROE* as the explained variable resulted in a regression coefficient of 0.3002, significant and positive in line with the results above (See Table 8).

5. Conclusions and Recommendations

The above-given study empirically analyzes the relationship among the equity incentive model, incentive intensity, and source of subject matter and enterprise performance and concludes the following: (1) restricted stock incentive model has a positive impact on enterprise performance. (2) Incentive intensity positively moderates between the restricted stock incentive model and enterprise performance is negatively moderates between the stock option incentive model and enterprise performance. (3) The restricted options from the repurchase have contributed to improved enterprise performance. (4) There is a significant positive moderating effect between incentive intensity and enterprise performance when repurchased restricted stock is the source of the incentive.

This study is based on the perspective of shareholders of listed companies and does not fully consider factors such as exercise costs, personal income tax, dividend distribution, and opportunistic behavior that are directly related to equity incentive returns. At the same time, China's capital market started late. Although the market efficiency has been greatly improved, it has not yet reached semistrong effectiveness, and it inevitably affects the effectiveness of equity incentives. Considering that China's equity incentive scheme needs to be further developed in the market, this paper does not further explore the relationship of incentive model, subject source, and enterprise performance in combination with the unique characteristics of the Chinese market, which is also the content that needs to be improved in the follow-up of this study.

The impact of equity incentive schemes on the performance of listed enterprises, as an important means of resolving principal-agent relations, has been the subject of a contentious debate. Compared to most of the developed foreign capital markets, the development of China's capital market is relatively late, and the exploration of the practical application of the equity incentive model should be combined with the analysis specific to the real situation. Combined with the above research findings, listed enterprises in China should pay attention when implementing the equity incentive scheme: firstly, the choice of equity incentive model and the different sources of incentive targets will make a difference to the performance of the enterprise, and listed enterprises should choose different incentive models in conjunction with the sources of the targets. Although the stock option incentive model can have a significant negative effect on enterprise performance, for listed companies that are under more capital pressure and choose public issues as the source of the subject matter, the choice of the stock option incentive model is more conducive to enterprise performance. Secondly, when implementing equity incentives, the heterogeneity of the moderating effect of equity incentive intensity between the two incentive models and enterprise performance should be carefully considered.

If listed companies choose restricted stock as the equity incentive model, they can appropriately increase the equity incentive intensity to achieve the effect of increasing enterprise performance. Of course, in addition to drawing the above conclusions in practical application, it is also important to give due consideration to the applicability of the equity incentive scheme. Optimal enterprise performance can only be achieved with a superior external environment and a good internal structure. From the conclusions drawn in this paper, the restricted stock incentive model appears to be more advantageous for listed companies. However, for the incentives, the risk of receiving high returns is much higher under the restricted stock incentive model than under the stock option. Therefore, listed companies should consider the incentive targets' personal characteristics, risk appetite, and external environment in selecting incentive models. Only in this way can the agency problem in corporate governance be solved and corporate value maximized as soon as possible.

Data Availability

All the data used to support the findings of this study are included within the article.

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

Acknowledgments

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