

panies should fully understand the limitations of their capital strength, single structure, and lack of support from the securities market. When formulating and implementing equity incentive plans, it is necessary to strictly implement procedures, reasonably plan incentive objects, and carefully design equity incentive methods and share ratios. And when choosing an equity incentive method, it is necessary to make the difference in the life cycle as the starting point and adopt a differentiation strategy.

Xu Xuemei (2007)^[2] studied relevant legal systems. She believed that relevant Chinese legal systems still lag far behind developed countries. Enterprises do not have relevant legal systems as a basis, and they have greater arbitrariness in formulating mechanisms. Unable to implement a complete equity incentive mechanism is likely to cause a series of corporate problems. Since the company has no relevant legal system to support it, it has also encountered obstacles in formulating an equity incentive mechanism.

Zeng Hongmei (2019)^[3] believes that the equity incentive mechanism in China is too restrictive and the scope of incentives is too difficult to determine. Most of the listed companies in Chinese choose the company's senior management and core technical personnel as the incentive objects. This practice ignores the incentive needs of other ordinary employees and stockholders; however, from another perspective, if the scope of incentive objects is too large that ordinary employees are also motivated together, once the equity incentive mechanism fails, it will bring irreparable losses to the company.

2.1.2 The role of the Chinese equity incentive mechanism

Yu Yaping and Jiang Yingbing (2016)^[4] selected the equity incentive plan implemented by Zhejiang Dahua Technology Co., Ltd., or Dahua Technology for short, a private high-tech company in 2010, as the research object to investigate the changes in innovation ability before and after equity incentives. After analysis, it is found that Dahua Technology's equity incentive plan not only

harmonizes the interests of shareholders and managers; it also promotes the enthusiasm of R&D technicians, thereby increasing the output of R&D results and improving the ability to transform R&D results. Therefore, they came to a conclusion: First, the company's equity incentive plan design should distinguish between the nature of the company and the industry in which it is located, and the design of the exercise conditions must be challenging. Only the incentive equity incentive schemes with challenging exercise conditions can be marketed and then can genuinely improve the company's independent innovation capabilities. Second, the combination of equity incentive plans and employee stock ownership plans, it can mobilize the enthusiasm of executives and employees at the same time. This move will further improve the benefit-sharing mechanism for workers and owners and ease agency problems between executives and employees.

Zhao Xianggong and Yu Wei (2011)^[5] researched domestic companies that announced equity incentive plans for A-shares from 1st of January 2009 to 31st of August 2010. They found that stock options and restricted stocks are two types of equity incentives. It is a significant form, and the restricted stock approach is relatively beneficial to the management. Therefore, companies with robust internal control are more inclined to choose the restricted stock approach. However, the response of the securities market to the stock options approach is more positive than that of restricted stocks. It can be seen that the two methods of stock options and limited stocks are essentially substitutable.

Wu Pei, Hu Qingshi (2020)^[6] mainly discuss the development process of equity incentives implemented by Huawei after 2003. Research on the motivations of its implementation found that equity incentives can not only alleviate the adverse effects of financing constraints but also attract and retain talents, enable executives to abandon their speculative behaviors, restrain them and increase investment behaviors.

Liu Gang (1996)^[7] studied the three ways of

equity incentive mechanism and found that equity incentive mechanism can allow the agent to obtain a part of the company's equity. There will be stock appreciation in the future, and at the same time, bear certain risks with the company. As a result, the agent is more concerned about the long-term value of the company in the operation and avoids the agent from formulating a short-term profitable business plan for personal benefits such as quarterly bonuses and annual bonuses.

2.2 Foreign understanding and research on equity incentives

Tang (2012)^[8] established a multiperiod framework to evaluate the incentive effect of equity and found that when the waiting period is short, the incentive effect of using restricted stocks is better than the incentive effect of stock options, while the waiting period is longer. In the long-term situation, stock option incentives are more suitable.

LEE YJ (2008)^[9] mainly studied the impact of employee equity incentives on the company's credit evaluation and found that employee stock options conveyed two types of cash flow information: (1) The expected cash inflow from future exercises (including options brought by tax incentives); (2) The expected cash outflow caused by the share repurchase meeting the source of stocks for future exercise. The former has a positive impact on the company's credit rating, while the latter has a negative effect. The after-tax fair value of employee stock options can comprehensively reflect the impact of the above cash flow and is negatively related to the company's credit rating.

Banker et al. (2011)^[10] found that the key to the effect of equity incentives is that the increase in innovation input matches the long-term value. For high-tech enterprises, its value mainly comes from corporate innovation, so the effect of equity incentives will be greater. The expected value of equity incentives has a positive impact on the intensity of technological innovation.

Jenson and Meckling (1976)^[11] mentioned that companies would give employees certain incentives to reduce agency costs, and the equity incentive mechanism is the best model to choose.

The equity incentive mechanism can allow employees and the company to converge in their interests and create more profits. The equity incentive mechanism is made to avoid the drawbacks of the principal-agent theory.

Kahle, Shastri (2005)^[12] mainly studied the impact of employee equity incentives on corporate debt policies and found that companies with less debt are just those with the most employee stock options. The long-term debt ratio and the short-term debt ratio are negatively correlated with the tax deduction for option exercise; moreover, the change in the long-term debt ratio is negatively correlated with the difference in the number of employee options exercised. However, the research of Babenko et al. (2009)^[13] reached the opposite conclusion: stock options have tax incentives relative to fixed wages and increase the company's ability to borrow money. Therefore, the debt ratio is positively correlated with employee stock options. In companies with higher profitability, the debt ratio is significantly positively correlated with the value of employee options.

3. Equity incentives and corporate performance

3.1 Domestic understanding of the impact of equity incentives on corporate performance

3.1.1 Equity incentives have a negative or no significant relationship with corporate performance

Wu Wenhua and Yao Lihua (2014)^[14] compare the innovation performance of listed companies that implement equity incentives to core personnel and the innovation performance of non-implemented companies through hypothesis testing and regression analysis. The results show no significant correlation between the equity incentives of core employees and the innovation performance of enterprises. There are two reasons for the non-linear correlation between the two: first, the share of equity incentives for core technical personnel in listed companies in strategic emerging industries is too low, and the incentives are insufficient; second, the development of equity incentives in my country is not yet mature, and the implementation of equity incentives Insufficiency of the external capital

market, incomplete legal supervision, imperfect corporate governance structure, and other factors restrict the effectiveness of equity incentives.

Li Xiaoling, Wang Daming (2008)^[15] Based on the 2006 annual report data of listed companies on the Shanghai and Shenzhen stock exchanges, 100 listed companies were selected as samples, and management's shareholding ratio was used as a variable for the return on equity (ROE) and earnings per share (EPS) conducted an analysis. They concluded that there is an interval effect between equity incentives and company performance (EPS). That is, there is no significant correlation between equity incentives and corporate performance.

Yu Honglin (2006)^[16] found that the managerial shareholding level of listed companies in China is positively correlated with the company value, but the result is not significant; for state-owned listed companies, the executive shareholding level is significantly negatively correlated with the company value. The reason may be due to the imperfect board of directors mechanism, the highly concentrated shareholding structure, and the government's control of state-owned listed companies so that the equity incentive mechanism of state-owned listed company managers did not exert the expected incentive effect.

Dong Bin, Chen Jie (2015)^[17] used the Rosenbaum boundary estimation method to examine the robustness test of the average treatment effect of the treatment group and tried to use the propensity score matching model (PSM) to solve the endogenous problem of equity incentives. They found that the implementation of incentives has significantly improved company performance, but the execution of equity incentives by state-owned listed companies has no significant effect on corporate performance. The reason is that China's capital market is not effective enough, so the implementation of equity incentives by companies cannot achieve the expected results and improve company performance.

3.1.2 Equity incentives are significantly positively correlated with corporate performance

Liu Guoliang, Wang Jiasheng (2000)^[18] Use the cross-sectional data of listed companies to conduct empirical research to establish a numerical linear regression model, including employee shareholding ratio, management shareholding ratio, return on assets (ROA), and return on equity (ROE). They obtained a positive correlation between the employee shareholding ratio, management shareholding ratio, and company performance.

Chen Yun (2019)^[19] selected 116 listed A-share manufacturing companies from 2016 to 2018 as the research objects. Using the method of SDA-TA regression analysis, it is concluded that there is a positive correlation between executive shareholding and corporate performance, indicating that companies can implement equity incentives. By adjusting the relationship between R&D investment and corporate performance, equity incentives can achieve the convergence of interests of managers and shareholders to stimulate the enthusiasm of management, avoid short-sighted behavior of management, and improve the efficiency of innovative R&D activities.

Xiao Shuguang, Yang Jie (2018)^[20] studied the relationship between executive equity incentives and corporate upgrades using companies that implemented equity incentives from 2011 to 2016. They believed that equity incentives promoted corporate upgrading through interest bundling and interest driving and confirmed that equity incentives promote the advancement of technical structure.

3.2 Foreign understanding of the impact of equity incentives on corporate performance

3.2.1 Equity incentives have a negative or no significant relationship with corporate performance

Manager defense hypothesis: Morck, SHLEIFER, Vishny (1988)^[21] proposed the trench defense hypothesis that executives' control over the company continues to strengthen as the proportion of executives' shareholding increases, and other constraints from outside the company gradually being weakened, executives can pursue personal interests on a larger scale, increase agency costs, and reduce corporate value.

Brown and Lee (2010) selected 8,084 companies between 1998 and 2006 as research samples for research and analysis. They found that equity incentives could not achieve the same level of management interests and shareholder interests, which means that the effect of corporate equity incentives is invalid. There is no significant correlation between the number of shares held by senior managers and the operating performance of listed companies. The higher the proportion of shares held by senior managers, the worse the correlation with the operational performance of listed companies.

Khan A (2014)^[22] selected 7 Australian listed companies between 2000 and 2006 as samples, conducted research after eliminating the interference of endogenous problems and reverse causality, and concludes that there is a non-monotonic relationship between managerial shareholding ratio and corporate performance.

3.2.2 Equity incentives are significantly positively correlated with corporate performance

The convergence of interests hypothesis: The convergence of interests hypothesis proposed by Jensen and Mckling (1976)^[9] reckons that the increase in the proportion of shares held by executives can help reduce agency costs and make the objective functions of shareholders and executives converge. After a certain number of company shares are managed, part of the remaining claim rights will also be transferred to the executives. Specifically, the interests of the company and the shareholders are tied to the executives' interests to some extent. At the same time, the executives have a sense of ownership so that the objective functions of shareholders and executives no longer have absolute conflicts. Senior management's shareholding can effectively reduce managers' on-the-job consumption, overinvestment, and earnings management, and reduce the possibility of information asymmetry, moral hazard, and adverse selection, thereby improving corporate performance.

Aboody, Johnson, and Kasznik (2010)^[23] analyzed the financial statement data and accounting indicators of 1,773 companies between 1990 and

1996 and found that various indicators of companies that implemented executive equity incentives such as the company's operating profit and cash flow are significantly higher than the industry average, indicating that equity incentives can improve performance; Mazlina Mustapha (2011)^[24] studied the financial data of 235 listed companies and found that the implementation of equity incentives for management can help improve the effectiveness of decision-making, which indirectly promotes the improvement of corporate performance.

4. Conclusion

Through reviewing and summarizing the relevant literature of domestic and foreign scholars, we can see that there is no unified conclusion on the relationship between equity incentives and corporate performance at home and abroad. Most scholars hold a positive attitude towards the equity incentive mechanism. Still, there are also a few scholars who say that there are non-incentive motives in the implementation of incentive mechanisms in enterprises. In empirical research, there have also been cases where the correlation between incentives and corporate performance is not obvious or even negative. Nowadays, in some private listed companies, equity incentives can significantly reduce agency costs, while in some large state-owned enterprises, equity incentives are often not very effective due to the relatively low proportion of equity held by senior executives. Since China's equity incentive mechanism started late compared to Western countries, it is possible to learn from the successful experience of Western countries and learn from their theories and researched models. With the improvement of the Chinese market system, equity incentives will become a long-term incentive tool for listed companies. Theoretical research in this field will have important practical significance for companies to effectively and rationally use equity incentives. At the same time, the effect of corporate equity incentives in the Chinese capital market will also be changed. Therefore, while drawing on the advanced experience of the West, we must also consider the actual situation in

China, and combine the equity incentive mechanism with corporate governance and market environment. The effectiveness of equity incentives should consider factors such as the equity structure and the level of managerial ownership. We should formulate a developed equity incentive mechanism that considered local conditions to improve the company's own performance.

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