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Stock Incentives as a Long-Term Retention Mechanism and Corporate Performance Enhancer: A Case Study of Hikvision's Stock Plans

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Abstract: This study analyzes Hikvision's stock incentive plans implemented from 2017 to 2022, assessing their role in employee retention, R&D innovation, and corporate performance improvement. Stock incentives serve as a long-term mechanism to align employees' interests with the company's objectives, thereby reducing agency costs and boosting organizational performance. The case study reveals that Hikvision's governance structure has been continuously adjusted to meet the evolving needs of the company and its industry. The company's focus on core employees, particularly in R&D and technological fields, through stock incentives has led to a marked reduction in turnover rates and an increase in R&D investment. Performance-based metrics, such as return on equity (ROE), revenue growth, and economic value added (EVA), demonstrate the success of these initiatives in enhancing financial performance. The analysis suggests that stock incentives have played a crucial role in Hikvision's competitiveness and profitability, providing valuable insights for other companies, particularly state-owned enterprises, seeking to optimize their incentive mechanisms.

Keywords: stock incentives; employee retention; R&D innovation; corporate performance; Hikvision

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1. Introduction

1.1. Overview

Stock incentive is a long-term incentive mechanism aimed at retaining core employees, aligning their interests with the company's, reducing agency costs, and improving corporate performance [1]. After being introduced in China, stock incentives have faced multiple challenges [2]. Currently, the implementation of stock incentive mechanisms in state-owned enterprises (SOEs) is still not perfected, and there is a lack of effective supervision. Through a case analysis of Hikvision's implementation of four stock incentive plans from 2017 to 2022, it was concluded that the company's governance structure is unreasonable. Under the constraint of stock nature, Hikvision has continuously adjusted its plans according to the needs of the industry and the enterprise to improve performance [3]. Therefore, this study will explore the possibility of stock incentives in SOEs from three aspects: talent retention, R&D innovation, and corporate performance improvement.

1.2. Case Introduction

Hikvision was listed on the Shenzhen Stock Exchange on May 28. The company's business initially focused on security, divided into two main parts: front-end and back-end operations. Later, the company expanded into fields such as cameras, security, cloud computing, big data, and AI, forming a relatively complete industrial chain from algorithm development and implementation to product development and maintenance [4].

CETC (China Electronics Technology Group Corporation) is the largest shareholder of Hikvision, and its shareholding structure is as follows:

From April 24, 2017, to February 16, 2022, Hikvision announced four restrictive stock incentive plans, adopting a targeted issuance of new shares method with a 10-year validity period. The unlocking period begins 24 months after the grant date, with stock being unlocked over 36 months in three stages, depending on the employee's performance. The number of employees and the corresponding unlockable stock ratio differ for each stage (Table 1).

Table 1. Key Details of Hikvision's Stock Incentive Plans.

Plan Period	First Plan	Second Plan	Third Plan	Fourth Plan
Draft Announcement Date	2017.4.24	2019.4.22	2021.10.21	2023.8.16
Grant Date	2017.8.23	2019.10.24	2021.12.23	2023.12.20
Incentive Model	Restricted Stock	Restricted Stock	Restricted Stock	Restricted Stock
Source of Stock	Targeted Issuance of New Shares	Targeted Issuance of New Shares	Targeted Issuance of New Shares	Targeted Issuance of New Shares
Validity Period	10 years	10 years	10 years	10 years
Lock-in Period	24 months	24 months	24 months	24 months
Unlocking Period	24-60 months	24-60 months	24-60 months	24-60 months
Unlocking Proportion Based on Employee Rating	Excellent/Good 100, Needs Improvement 95, Unqualified 0	Excellent/Good 100, Needs Improvement 95, Unqualified 0	Above Qualified, Needs Improvement 100, Below Unqualified 50, Unqualified 0	Above Qualified, Needs Improvement 100, Below Unqualified 50, Unqualified 0
Employee Category Breakdown	Senior Management	0	10	18
	Mid-level Management	32	22	92
	Junior Management	179	755	144
	Core Employees	422	394	2738
Incentive Participants/Total (%)	9.86	11.86	19.64	24.74
Number of Grantees (Persons)	590	1128	2936	6095
Repeated Incentive Participants (Persons)	516	1068	2757	2743
Repeated Incentive Ratio (%)	87.46	94.68	93.90	45.00
Number of Incentive Shares (Shares)	8,611,611	52,910,082	52,326,858	121,195,458
Percentage of Total Shares (%)	0.43	1.32	0.86	1.31
Grant Price (Yuan/Share)	10.65	9.50	12.63	16.98

Grant Value (10,000 Yuan/Person)	16.14	21.97	22.75	27.17

1.3. Conditions for Exercising Stock Incentives and Achievement

Before 2023, the performance evaluation over the past few fiscal years greatly exceeded the performance targets. From 2017 to 2019, the first round of stock incentives successfully locked, meeting the required return on equity (ROE) and compound revenue growth rate. During the period from 2019 to 2021, the second round of stock incentives introduced additional performance measures such as net profit and non-recurring net profit. The third round (2021-2022) adopted a new evaluation standard — Economic Value Added (EVA), in addition to maintaining previous metrics such as ROE and revenue growth (see Table 2).

Table 2. Performance Achievement of Stock Incentive Plans.

Phase	Year	Indicator	Target Value	Performance	Benchmark (75th Percentile)
First Phase	2017	ROE	15%	30.02%	10%
		Revenue Growth	30%	43%	13%
	2018	ROE	16%	34.79%	7.16%
		Revenue Growth	30%	49%	18%
	2019	ROE	17%	33.69%	8.63%
		Revenue Growth	30%	48.25%	21.96%
Second Phase	2019	ROE	20%	33.69%	12.22%
		Revenue Growth	35%	53.35%	20.72%
		Net Profit		5.869 billion	2.228 billion (2011–2013 Avg)
		Non-recurring Profit		5.605 billion	2.175 billion (2011–2013 Avg)
	2020	ROE	20%	33.86%	15.22%
		Revenue Growth	30%	43.76%	21.41%
		Net Profit		7.422 billion	2.228 billion (2011–2013 Avg)
		Non-recurring Profit		7.271 billion	2.175 billion (2011–2013 Avg)
	2021	ROE	20%	34.09%	11.54%
		Revenue Growth	26%	40.53%	22.90%
		Net Profit		9.411 billion	2.228 billion (2011–2013 Avg)
		Non-recurring Profit		9.177 billion	2.175 billion (2011–2013 Avg)
Third Phase	2021	ROE	20%	34.09%	11.28%
		Revenue Growth	25%	28.77%	25.58%
		EVA		8.389 billion (2016)	6.514 billion (Prev Year)
		EVA		10.718 billion (2017)	
	2022	ROE	20%	32.88%	13.87%
		Revenue Growth	23%	25.40%	19.37%
		EVA		10.718 billion (2017)	6.514 billion (Prev Year)

		EVA	13.502 billion (2018)
2023 Unlocking	Unknown		

2. Case Analysis

2.1. Motivation for Stock Incentive Design

2.1.1. Choice of Incentive Model

Hikvision adopted a stock incentive system in four distinct development stages. In this model, employees use their own money to purchase company stock, and if the company's performance does not meet expectations, employees lose their initial investment returns. The stock incentive system effectively retains outstanding employees, stimulates their enthusiasm for work, and promotes the company's development.

2.1.2. Distribution of Incentive Recipients

In the employee categories receiving stock incentives, the proportion of senior and mid-level management remained relatively low and stable. However, in the third and fourth phases, the proportion of junior management decreased significantly, while the proportion of core employees increased sharply. This shift indicates Hikvision's focus on retaining key technological talent. To better motivate urgently needed core talent, the company gradually expanded its stock repurchase plan, and the proportion of stock incentives also increased. Due to Hikvision's frequent implementation of stock incentives, the company is able to continuously adjust the structure to retain those employees most likely to bring value to the organization.

2.2. Stock Incentives and Non-Financial Performance

2.2.1. Employee Retention

By comparing the annual turnover rate of employees with the industry's overall turnover rate (calculated as the number of employees leaving divided by the total number of incentivized employees), two significant years were observed: 2017 and 2019. In 2019, the company published the number of employees prior to the first stock incentive unlocking. Given that there was overlap between the first and second phases, and that the company did not disclose an explicit resignation list, a "double-counting" possibility existed. By analyzing the stock issuance lists for the first and second rounds, it was found that the combined number of stock grants for the first two rounds was 314. Based on this data, the turnover rate for 2015 employees was estimated to range from 2.42% to 3.42%. Similarly, the turnover range for 2017 employees was calculated between 3.67% and 4.03%. From this, we selected the maximum turnover rate for that year to define the overall employee turnover.

From Figure 1, it can be seen that Hikvision's employee turnover rate has always been lower than the overall turnover rate in the high-tech industry. This is attributed to the brand effect of being a state-owned enterprise. Additionally, as a result of stock incentives, Hikvision's incentivized employees effectively became "dual salary workers". Besides receiving their regular short-term salary, they also benefited from the company's stock market performance. As the company's performance improved, so did its growth potential, aligning the interests of employees with those of the company. After implementing stock options, employee turnover noticeably decreased, although there were some fluctuations, it remained consistently lower than before the implementation of stock incentives.

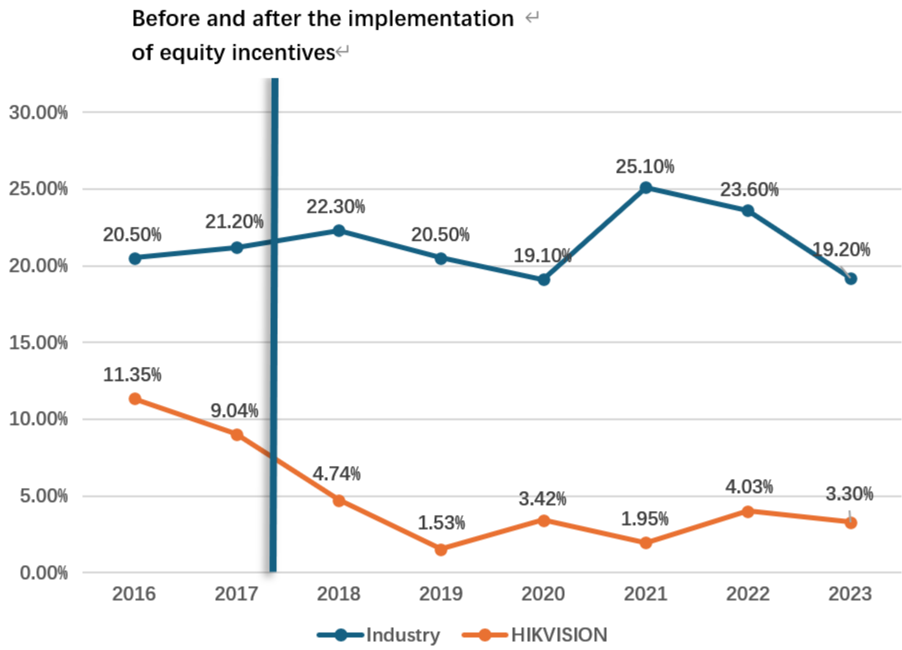

Figure 1. Hikvision Separation Rate vs. Industry Separation Rate.

2.2.2. R&D Innovation

Investment in research and development (R&D) is not only in terms of human resources but also financial capital. R&D, as a high-risk, long-cycle, and slow-return mechanism, requires a long-term strategic perspective. This is beneficial in altering risk preferences, enhancing the capacity to bear the risks associated with R&D, and promoting increased R&D investment. Although no initial equity incentives were granted to senior executives, all 32 senior executives who received stock options in the first round were part of the senior management, and they held considerable influence in the overall scheme. In the early stages of Hikvision, its R&D expenditure was only 6.8%. However, after the implementation of stock options, this proportion stabilized at 6.8%, reaching a peak of 8.99%. In absolute terms, R&D expenditure in 2010 was $244 million, whereas it had risen to $4.483 billion by 2022, an 18-fold increase. In contrast, Dahua's R&D expenditure in 2013 was only $500 million, and by 2022, it had increased to $2.284 billion, a fourfold increase.

The equity incentive mechanism can effectively motivate employees, encouraging them to contribute their intelligence and technology to the company, thus driving R&D investment. According to the company's *prospectus*, Hikvision currently holds 29 patents and 63 software copyrights. Although the number of patents did not significantly increase during the initial phase of the stock incentive program, from 2019 onwards, this number remained stable, with a significant increase to 907 patents by 2022. Since the implementation of the stock incentive plan, the number of copyrights held by Hikvision has steadily increased. At the end of 2017, the company owned 205 copyrights, and by the end of 2023, this number had grown to 881.

2.3. Equity Incentives and Financial Performance

2.3.1. Profitability Analysis

Following the implementation of its equity incentive plan, Hikvision's return on equity (ROE) has risen from 27.70% in 2012 to 33.03% in 2023, demonstrating the company's strong long-term growth momentum.

As shown in Figure 2, between 2015 and 2023, Hikvision's equity investment return was lower than that of Dahua. However, starting from 2017, Dahua's return on equity began to decline, and in 2019, Hikvision surpassed Dahua. Since then, Hikvision has continued to widen the gap. Therefore, compared to Dahua, the equity incentive plan at Hikvision has had a far more positive effect on improving the company's profitability. When compared to secondary-listed companies that did not implement equity incentives, Hikvision's equity returns exhibited an inverse trend, indicating that the implementation of equity incentives has led to an improvement in Hikvision's profitability, which has remained at a high level. Moreover, the equity incentive program has a positive effect on the company's profitability.

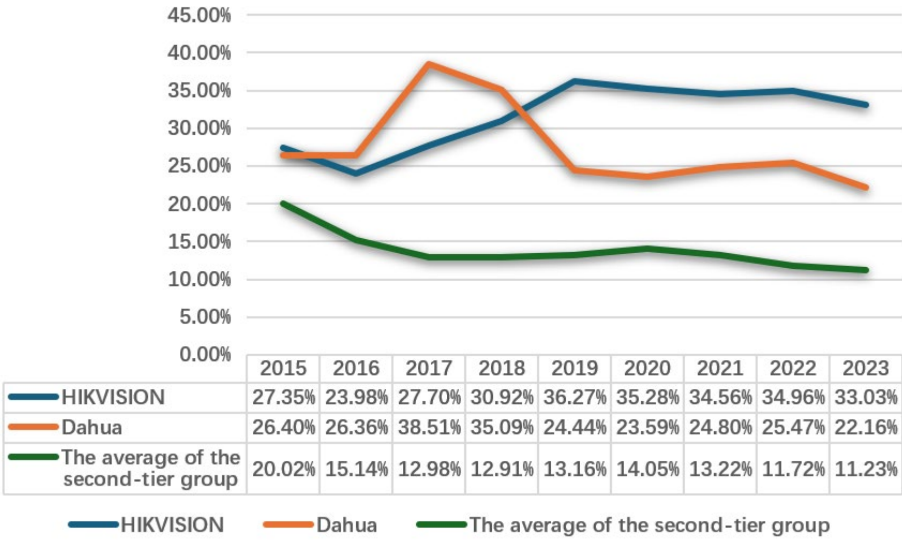

Figure 2. Comparison of Return on Equity (ROE) Trends between Hikvision and Comparable Companies.

2.3.2. Debt Repayment Capacity Analysis

Return on equity (ROE) is one of the key evaluation criteria included in each equity incentive plan. Hikvision's overall return on assets (ROA) has remained above 20% for a prolonged period, significantly higher than the company's debt ratio. If the company can effectively utilize its financial leverage to reduce its asset-liability ratio, it could enhance the "tax shield" effect and increase shareholder value.

Before implementing the equity incentive program, Hikvision had a much lower debt ratio compared to its peers, such as Dahua, and a significantly higher current ratio. After the implementation of the equity incentive plan, Hikvision's current ratio saw a sharp decline, far outpacing the growth of other companies in the same period. However, both Hikvision's current ratio and quick ratio remained above 2 and 1, respectively, indicating that the company maintained a strong debt repayment capacity. Simultaneously, Hikvision's debt ratio showed an upward trend. This suggests that through the equity incentive program, Hikvision was able to better leverage financial mechanisms, optimize its capital structure, and reduce agency costs.

3. Conclusion

The implementation of equity incentives at Hikvision has proven to be an effective solution to address various challenges. The introduction of stock options has reduced employee turnover, thus promoted R&D innovation and improved company performance. In particular, stock incentives align the interests of employees with the long-term development of the company, maximizing employees' work enthusiasm and creativity, fostering technological progress, and enhancing the company's competitiveness.

Moreover, stock options also contribute to increasing the company's profits, improving its debt level, enhancing its financial health, and reducing agency costs. These positive changes not only elevated Hikvision's reputation within the industry but also provide valuable insights for other companies considering equity incentive programs. Through continuous improvement and implementation, Hikvision is poised to gain a competitive edge and achieve sustained growth in the fiercely competitive market.

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