

# Empirical Study on Senior Managers and Performances in Companies of High-Tech based on SPSS Software Regression Analysis

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**Abstract**—Different from the separation between ownership and corporate right of control in traditional companies, human capital and the invisible assets under its control contributes more to the corporate value in high-tech companies than the visible ones. There are many differences between the corporate governance in high-tech companies and the standardized ones, some of which are even essential differences. Such differences come mainly from the value of human capital and collective cooperation in high-tech companies. An empirical study can be conducted here on senior managers' characteristics and performances of high-tech companies by SPSS software. The results indicate that in the heated competition among high-tech companies there is a significant positive correlation between ROE and Tobin's Q, and between ROE and the summation of proportion of stocks held by senior managers, and also between ROE and the average salary of senior managers. It is suggested that high-tech companies should well select the managers, increase the proportion of stocks held by them and improve the salary system for them, and all of these will lead to the reduction of the agency cost and also the improvement of company's performances.

**Index Terms**— high-tech company, senior managers, corporate governance, SPSS software, empirical study

## I. INTRODUCTION

In the past 40 years, scholars has analyzed many different models of corporate governance and found that the increasing path and life cycle of common companies are different from high-tech ones. The development features of high-tech companies are quite different from common ones. They internationalize themselves quickly; set up branches overseas; rely on international partners and the structure of shareholders changes constantly. All those factors show that high-tech companies need an appropriate corporate governance model. The key point

for corporations to grow from small to large one and become from closed to open one is to take advantages in the period of the next life cycle. Lerner (2000) expresses some views on corporate governance of Silicon Valley. Numerous researches indicate that the work history and experiences of the entrepreneur are crucial for entrepreneurial success (Bruno and Tyebjee, 1985; Hisrich and Peters, 2002; Roberts, 1991; Sandberg and Hofer, 1987; Starr and MacMillan, 1990). Kakati (2003) finds, counter to Sandberg and Hofer's view (1987), that entrepreneurial quality plays a critical role in gathering and applying resources. A recent study (Carter et al., 2003) attempted to probe entrepreneurs' career motivations.

Human capital, especially senior manager is the starting point of corporate governance analysis in high-tech companies, and the uncertainties involved in its various characteristics play a key part in the corporate governance and its development. However, current governance mechanism can not deal with the uncertainties inside such a company, which will lead to the uncertainties in the corporate development. Therefore, it is necessary to rebuild the corporate governance mechanism if we want to ensure the development and economic system in high-tech companies to be stable. With the blooming of the high-tech industry, more and more capitals are focused on high-tech companies and everyone, from ordinary investors to professional risk investors, plunge into such companies in the hope of sharing the vast value-added revenue from capital. However, the reality is there is no corporate governance structure coinciding with the modern corporate managing system and the influence from the general manager or some important ones is always more important than the regulations and rules of the company because some of the companies has expanded from medium and small-sized individually-run enterprises. When the outside investors begin to enter, it is always difficult for them to place effective supervision over the management of the company, and they will finally face tremendous risk in corporate governance. From Ref. [1] to Ref. [5], one notable hypothesis difference between high-tech company's principal agent

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models and traditional ones is that there is multi-level principal agent relationship. Currently, papers, home and abroad, on the study of corporate governance in high-tech companies is relatively less. Therefore, this paper focuses on the study of the characteristics of senior managers in high-tech companies and tries to find out other new views in the corporate governance in high-tech companies.

## II. AN OVERVIEW AND THEORETICAL HYPOTHESIS

### A. *The Influence of Senior Manager Ownership of Stocks on Company's Performances*

Some researches revealed that there was a positive correlation between the company's performances represented in the form of Tobin Q and the amount of stocks owned by the members of the committee of directors, which proved that the directors' ownership of stocks would have some encouraging power. The higher proportion of stocks the directors own, the better the company's performances would be. Hanson and Song (2008) believed that holding of stocks by the company's directors was an effective interior governance system of a company. On the other hand, the study of Himmelber, Hubbard and Parin (2002) found that the company's performances didn't relate to the stock-holding of directors. They discovered that the encouraging reward for CEO was a great drive power for them to improve the company's performance, and his empirical study had demonstrated that the company's performances had a positive correlation with the proportion of stocks owned by CEO, especially with the proportion of their reward in the form of stocks. However, Wei (2009) did a descriptive statistic and relative analysis of 816 stock companies on the correlation between the situation of stock-holding by the senior managers and the company's performances represented by the asset yield, and the result was that there was no notable correlation between them.

H1: The summation of proportion of the stocks held by senior managers in the top ten directors has significant positive correlation to the company's performances.

### B. *The Influence of Senior Manager's Salary on the Company's Performances*

Jensen and Murphy (1990) looked into the correlation between senior managers' salary and the company's performances in terms of cash reward, interior stock-holding plan and demission threat, and they found that senior managers' salary has certain correlation between senior managers' salary and the measurements of company's performances such as accounting index and market index. Boschen (2008) figured out that the unexpected good accounting index would increase the senior managers' salary on a short-term basis, but decrease it in a long run, and unexpected good market index would increase the senior managers' salary in a long run. Cordeiro and Veliyath (2003) found that there was an obvious correlation between senior managers' salary and the market index, the company's diversified business, the proportion of exterior stockholders and the company's venture index. The research proved that the

size, the potential of development and the performances of one company were the major deciding factors of the senior managers' salary.

H2: There is an obvious correlation between the average salary of the senior managers and the company's performances.

### C. *The Influence of the Leadership Structure of Senior Managers on Company's Performances*

Ref.[6] shows that many studies have explored the link between executive leadership and organizational outcomes (Hooijberg, Cannella, Carpenter, Geletkanycz, and Sanders, 2009), but the results are inconsistent. Some studies showed that chief executive officers (CEOs) are critically important for an organization to achieve a high level of performance (Peterson, Smith, Martorana and Owens, 2003). Other scholars have argued that CEOs are inconsequential to organizational effectiveness. These mixed results were also found in recent studies (Agle, Nagarajan, Sonnenfeld and Srinivasan, 2006; Ling, Simsek, Lubatkin and Veiga, 2008a; Ling, Simsek, Lubatkin and Veiga, 2008b; Tosi, Misangyi, Fanelli, Waldman and Yammarino, 2009; Waldman, Javidan and Varella, 2009). Ref.[7] focus on the top manager of the firm, i.e. the CEO, and provide an empirical investigation of the relationship between CEO and firm performance. Wu Shukun, Baijie and Xi Youmin (2008), based on the data of the stock companies in China, found that in current China there was no distinct relationship between the company's performances and the situation whether the senior managers undertook a pluralistic post at the same time or not. Boyd and Jensen (2003) believed that when the CEO of one company was also the chairman of the committee of directors, he possessed the power to make decision and to supervise. Obviously, the CEO could not effectively implement the authority relating to his own interests and thus he had more authority to pursue his own interests rather than that of other stockholders. Furthermore, it was really difficult for the small stockholders to declare themselves on important issues. Then, the opportunism behaviors of the major stock-holding ones were likely to take place, and the company's performances would be affected.

H3: There is a negative correlation between the company's performances and the situation that the senior managers undertake a pluralistic post at the same time.

### D. *The Influence of Senior Manager's Educational Background on the Company's performances*

Many high-tech corporations are founded by those who master the core technology and most of the employees have relatively higher diplomas. The corporate key capability is the "key resources", and the core technologists are the most important key resource of the corporations. For the corporations, equity capital is scarce, but the R&D capability is much scarcer than that. The core technologists' capability directly affects the R&D capability and the creation of corporate surplus value. Zhu (2008) pointed out that in the process of rapid development, the influence of the general manager or some key people always overweighed the company's

rules and regulations when the corporate governance structure had not been established to coincide with the modern corporate management system. Gao (2009) also thought that balance was to be built between the typical pattern of authority governance and the company's continuous development in the corporate governance system. In other words, the capabilities of some senior managers in high-tech companies, especially the chairman of the board of directors and the general manager, such as deciding capability and the innovative capability, decided whether the company would succeed or not. However, it is difficult to quantitatively measure these capabilities, so I use the educational background as measurement of capabilities according to signal convey model, though educational background is not necessarily the resource of capabilities.

H4: There is a positive correlation between the senior managers' educational background and the company's performances.

### III. MODELS ON STOCKHOLDER, BOARD OF DIRECTOR AND SENIOR MANAGER IN HIGH-TECH COMPANY

Ref. [8] shows some models on senior manager. Multi-level principal agent relationship of high-tech Company is as shown in Fig.1.

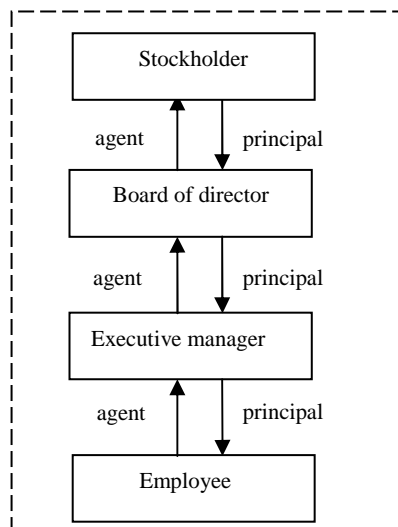


Figure 1 Multi-level principal agent relationship

Suppose consigner is neutral risk, attorney is evadable risk, and reward payment function is linear, let

$$s(\pi(a_0, \theta), z) = m + n\pi(a_0, \theta) \quad (1)$$

Here,  $m$  means fixed salary;  $n$  means index compensation coefficient,  $0 \leq n \leq 1$ .

Target function of high-tech companies is as follows:

$$\begin{aligned} & \max \int_V [(1-n)\pi(a_0, \theta) - m] f(\pi, a_0) d\pi \\ & s.t. \int \mu((m+n\pi(a_0, \theta)) f(\pi, a_0) d\pi - c(a_0) \geq \mu_0 \\ & \int \mu((m+n\pi(a_0, \theta)) f(\pi, a_0) d\pi - c(a_0) \\ & \geq \int \mu((m+n\pi(a_0, \theta)) f(\pi, a_0') d\pi - c(a_0')) \\ & \forall a_0' \in A \end{aligned} \quad (2)$$

Lagrange function is as follows:

$$\begin{aligned} L = & \int_V [(1-n)\pi(a_0, \theta) - m] f(\pi, a_0) d\pi \\ & + \lambda \left\{ \mu_0 + C(a_0) - \int \mu[m+n\pi(a_0, \theta)] f(\pi, a_0) d\pi \right\} \\ & - \delta \int \mu[m+n\pi(a_0, \theta)] [f(\pi, a_0) - f(\pi, a_0')] d\pi \\ & + \delta [C(a_0) + C(a_0')] \end{aligned} \quad (3)$$

Then, by calculating differential coefficient to  $m$  and  $n$  respectively, we will get the best power contract as follows:

$$\begin{aligned} L'_m = & -V' f(\pi, a_0) - \lambda \mu' f(\pi, a_0) \\ & - \delta \mu' [f(\pi, a_0) - f(\pi, a_0')] \end{aligned} \quad (4)$$

$$\begin{aligned} L'_n = & -\delta \mu' \pi(a_0, \theta) [f(\pi, a_0) - f(\pi, a_0')] \\ & - V' \pi(a_0, \theta) f(\pi, a_0) - \lambda \mu' \pi(a_0, \theta) f(\pi, a_0) \end{aligned} \quad (5)$$

$$\begin{aligned} & - V' f(\pi, a_0) - \lambda \mu' f(\pi, a_0) \\ & - \delta \mu' [f(\pi, a_0) - f(\pi, a_0')] = 0 \end{aligned} \quad (6)$$

$$\begin{aligned} & - V' f(\pi, a_0) = \lambda \mu' f(\pi, a_0) \\ & - \delta \mu' [f(\pi, a_0) - f(\pi, a_0')] \end{aligned} \quad (7)$$

$$\frac{V'}{\mu'} = -\lambda - \delta \left[ 1 - \frac{f(\pi, a_0')}{f(\pi, a_0)} \right] \quad (8)$$

### IV. THE DEFINITION OF VARIABLES

This paper takes cross-section samples of all the listed high-tech companies in the Shanghai Stock Exchange and Shenzhen Stock Exchange in 2006 as object of research. (In selecting the samples, all the companies of H stock and B stock, and the ST companies are removed, and 104 companies are finally selected as object of research.) All the data come from the annual report of stock companies on the website such as [www.jrj.com.cn](http://www.jrj.com.cn), [www.cnlist.com](http://www.cnlist.com) and [www.cninfo.com.cn](http://www.cninfo.com.cn) by SPSS13.0 software.

#### A. The Explained Variables

In this paper, the company's value and its growth potential are defined as the explained variables, and the company's value is still measured by ROE according to the method of performances evaluation which is acknowledged by the mathematicians. In order to make easy statistics, ROE is calculated in the manner of fully diluted ROE = (Net Profit/ Stockholders' Interests at the end of the year) X100%. ROE is apt to reflect the company's value under current circumstance and thus is

suitable for horizontal comparison among companies, while the Tobin's Q will be adapted to measure vertically the growth potential of the company's value. As is pointed out in some researches, the prices of non-tradable shares are only 20%- 30% of the price of the shares on the stock market. Therefore, in calculating the Tobin's Q, certain adjustments are done, and the prices of the non-tradable shares are calculated as 30% of the shares. The Tobin's Q is calculated as following: the company's value is added to debts and then divided by the total assets of the company. The debts and the total assets of the company are available in the company's annual report, and the market value of the non-current stocks equals 30% of the price of each stock multiplied by the amount of the non-current stocks.

### B. The Explaining Variables

There are 4 explaining variables in this paper: MH, MS, CEO and HC, whose definitions and descriptive statistics as shown in Tab. 3. The senior managers in the top ten stockholders are the directors, supervisor, and the secretary of the board of directors, the general manager, the deputy manager and the financial commissioner and so on. The degree of undertaking-a-pluralistic-post (CEO) is measured by the ranking variables: when the board chairman is meanwhile the general manager of the company, the evaluation will be 1; when it is not so, the evaluation will be 0. The evaluation of the educational backgrounds of the board chairman and the general manager is listed as following: doctor's degree is 5; master's degree is 4; bachelor's degree is 3; training school's degree is 2; the degree of high school or schools bellow is 1, and the actual education background is the average of both the board chairman and the general manager.

### C. The Control Variables

Some other factors, besides those mentioned above, may also affect the company's performances, such as the field of trade, the structure of capital, the size of company, the ability of company's growth and so on. In order to control the influence of these factors on the company's performances, the following control factors on the basis of data availability are selected: (1) DAR, which is the ratio of the amount of the company's debts to its total book assets and which is actually debt-to-asset ratio. DAR could reflect the structure of the company's capital and the governing mechanism of the debts. Higher debt-to-asset ratio may decrease the running cost on a short term and thus help improve the company's performances and value, because the debt financing is apt to shield the tax in comparison to the Equity financing. However, higher debts will trigger fiscal problems and the risk of bankruptcy, thus decreasing the evaluation from the market on the company's value. Therefore, the balance between the improvement in the company's value caused by the tax-shield and the decrease in the company's value caused by the risk of bankruptcy has its basis on the relationship between the company's profit margin and the capital cost. (2) SIZE. It is, in fact, the Natural Logarithm of the company's total book assets

and it may reflect the impact of the company's size on its performances. Generally speaking, the bigger the company is, the more difficult it is for the activities of the management to be controlled, and the more likely it is for the bad behaviors to take place which may damage the company's interest (see TABLE 1).

## V. EMPIRICAL STUDY AND RESULTS

### A. The Descriptive Statistic of the Variables

According to relevant data, the ROE of the stock companies in China is 7.45% in 2004, and 5.30% in 2005, and the average of these two years is 6.375%; the ROE of the small and medium-sized enterprises (SMEs) is 10.02% in 2004, 10.89% in 2005, and the average of these two years is 10.46%. Obviously, the ROE of high-tech companies (8.15%) is higher than the general average ROE of all the stock companies in China, but lower than that of the small and medium-sized enterprises (SMEs). It's easy to see from TABLE 2 that the senior managers' salaries vary greatly in different stock companies even if all of them are in the field of high-tech. The highest salary is in Cheng Xin (600271) and the lowest is in DaQinghuake (000985), while the biggest proportion of stock-holding in the top ten stockholders is 57.22% in HuaShengtiancheng (600410).

TABLE I  
DEFINITION OF THE VARIABLES

Variable		Description
Explained Variables	ROE Q	Rate of Return on Common Stockholders' Equity (%) Value of company ( Tobin's Q )
Explaining Variables	MH MS CEO HC	Sum of the shares proportion of the senior managers in the top ten stockholders (%) Average salary of the senior managers CEO Duality Human capital-Average education level both the board of director and general manager
Control Variables	DAR SIZE	debt-to-asset ratio (%) Natural Logarithm of the company's total book assets

TABLE 2  
DESCRIPTIVE STATISTICS RESULTS OF THE VARIABLES

	Explained Variables		Explaining Variables				Control Variables	
Index	ROE	Q	MH	MS	CEO	HC	DAR	SIZE
Max	35.12	4.17	57.22	151.1	1	5	0.86	16.53
Min	-10.66	0.81	0	3.44	0	2	0.06	10.29
Mean	8.15	1.45	5.19	17.25	0.19	3.47	0.48	11.90
SD	6.84	0.59	13.00	18.90	0.39	0.71	0.16	0.91

### B. The Analysis of Correlation

The correlation, taking the two control variables of DAR and SIZE in consideration, as shown in TABLE 3.

From TABLE3, it shows as follows:

- (1) There is a significant positive correlation between ROE and Tobin's Q;
- (2) There is a significant positive correlation between ROE and MH;
- (3) There is a significant positive correlation between ROE and MS;
- (4) There is a significant positive correlation between ROE and SIZE;
- (5) There is a significant negative correlation between Tobin's Q and DAR ;
- (6) There is a significant negative correlation between MH and SIZE;
- (7) There is a significant negative correlation between MH and DAR;
- (8) There is a significant positive correlation between MS and HC;
- (9) There is a significant positive correlation between MS and SIZE;
- (10) There is a significant negative correlation between HC and DAR.
- (11) There is a significant positive correlation between SIZE and DAR.

TABLE 3  
CORRELATION

\*\*\* Correlation is significant at the 0.01 level (2-tailed).

		ROE	Q	MH	MS	CEO	HC	SIZE	DAR
ROE	Pearson Correlation	1	.431(***)	.182(*)	.463(***)	-.034	.107	.338(***)	.095
	Sig. (2-tailed)		.000	.078	.000	.746	.305	.001	.361
Q	Pearson Correlation		1	.097	.146	.076	.116	-.164	-.253(**)
	Sig. (2-tailed)			.355	.159	.469	.264	.113	.014
MH	Pearson Correlation			1	.039	.077	.107	-.203(**)	-.194(*)
	Sig. (2-tailed)				.711	.460	.304	.049	.061
MS	Pearson Correlation				1	-.068	.196(*)	.434(***)	-.082
	Sig. (2-tailed)					.513	.058	.000	.433
CEO	Pearson Correlation					1	.041	-.013	.095
	Sig. (2-tailed)						.694	.901	.365
HC	Pearson Correlation						1	-.002	-.220(**)
	Sig. (2-tailed)							.983	.033
SIZE	Pearson Correlation							1	.391(***)
	Sig. (2-tailed)								.000
DAR	Pearson Correlation								1
	Sig. (2-tailed)								

\*\* Correlation is significant at the 0.05 level (2-tailed).

\* Correlation is significant at the 0.10 level (2-tailed).

### C. Research Methods and the Establishment of Model

It is a simple analysis of the data from the sample companies, and only correlations between two variables are discussed there. In fact, the performances of the company are the result of various factors, so it is a multi-function. From the analysis of scatter diagram, it is obvious that there is linear correlation among these factors. Therefore, the method of multiple linear regressions may help to make further analysis.

$$ROE = a + b_1MH + b_2MS + b_3CEO + b_4HC + b_5SIZE + b_6DAR + \varepsilon \quad (9)$$

$$Q = a + b_1MH + b_2MS + b_3CEO + b_4HC + b_5SIZE + b_6DAR + \varepsilon \quad (10)$$

Here,  $a$  is intercept;  $b_1$ - $b_6$  are regression coefficients

and,  $\varepsilon$  is random error.

### D. The Result of Multivariate Regression Analysis

From TABLE 4 and TABLE 5, it is known that in model, F-Test of the regression equation is 5.942, its significance test is  $0.000 < \alpha = 0.05$ , which proves that it is sensible in statistics.

From the regression coefficient, MH and MS indexes are showing significance, significances of the other variables are above  $\alpha = 0.05$ , they are not showing adequate significances. For model 2, under the level of 0.1, there is statistical significance in the regression equation. Its relativity of the multiple regression analysis is as shown in TABLE 6.

TABLE 4  
REGRESSION COEFFICIENTS (MODEL 1)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	VIF
		B	Std. Error	Beta			
1	(Constant)	-13.847	9.920		-1.396	.166	
	MH	.118	.050	.224	2.382	.019	1.087
	MS	.136	.039	.377	3.517	.001	1.412
	CEO	-.605	1.582	-.035	-.382	.703	1.028
	HC	.339	.911	.035	.373	.710	1.098
	SIZE	1.322	.869	.176	1.521	.132	1.644
	DAR	4.617	4.364	.112	1.058	.293	1.370
Other results: $R^2=0.242$ , Dubin-Waston=2.013, $F=5.942$ (0.000)							

TABLE 5  
REGRESSION COEFFICIENTS (MODEL 2)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	VIF
		B	Std. Error	Beta			
2	(Constant)	2.994	.969		3.090	.003	
	MH	.000	.005	.006	.060	.953	1.087
	MS	.007	.004	.217	1.815	.073	1.412
	CEO	.153	.155	.101	.991	.324	1.028
	HC	.028	.089	.033	.315	.754	1.098
	SIZE	-.127	.085	-.193	-1.497	.138	1.644
	DAR	-.579	.426	-.160	-1.358	.178	1.370
Other results: $R^2=0.116$ , Dubin-Waston=1.985, $F=1.906$ (0.089)							

TABLE 6  
MULTIPLE REGRESSION RESULTS

Explained Variables	Explaining Variables				Control Variables	
	MH	MS	CEO	HC	DAR	SIZE
ROE	↑	↑				↑
Q		↑			↓	

↑ significant positive correlation; ↓ significant negative correlation

On the basis of the analysis above, the results of hypothesis are as follows:

- (1) There is a significant correlation between MH and ROE, which means H1 is tenable.
- (2) There is a significant correlation between MS and ROE, which means H2 is tenable.
- (3) There isn't a significant correlation between the average educational background and the company's performances. This may be out of the fact that the human capital should specialize in certain environment, and its formation is a complex process which needs a lot of time, and its

value may not be reflected in a short run. What's more, there isn't a significant correlation between undertaking a pluralistic post and the company's performances. In one word, H3 and H4 are not tenable.

## VI COUNTER MEASUREMENTS OF THE CORPORATE GOVERNANCE OF THE HIGH-TECH COMPANIES

### A. Accelerate the Construction of Senior Managers' Encouragement System in High-tech Companies

The high-tech companies with the application of stock option system creatively compensates the incentive targets for their human capital by the price spread caused by the appreciation of stocks. So it will impel the executives to consider both the short-term and long-term goals of the corporation. The close relationship between the incentive targets' salary and the corporate long-term business performance will urge them to pay more attention to the long-term and sustainable development of the corporation rather than the changes of short-term accounting index, so it will overcome the disadvantage of the incentive targets' short-term behavior in the conventional incentive system. The application of stock option system is an approach to keep the human capital steady in the development of high-tech corporations by

using capital market. If the executives want to acquire the returns on the stock option, they'll have to work hard to improve the management, make the value of corporations appreciate, enhance the profitability, and then raise the price of stock higher and higher. In high-tech companies, the suitable method of property incentive is the share incentive scheme, which is decided by the unique characteristics of the high-tech companies. In certain high-tech companies which use the stock option as an encouragement, it is innovative to make the increase of the stock's value as a compensation for the human capital of the ones who need to be encouraged. Therefore, the operator cares for the company's object both in the long run and in the short run, and the encouraged ones pay more attention to the company's long-term and continuous development because their salaries relate closely to the company's performances in the long run. Accordingly, their short-term behaviors which are popular in the traditional encouraging mechanism will be well regulated, because what they care for is not only the changes in short-term fiscal data. The implementation of equity ownership incentive is an effective way to solve the problem of stability of human resource in the high-tech companies by means of stock market: if the operator wants to obtain the option return, he will make effort to improve the management, increase the company's assets and value, enhance the company's ability to make profit, and then make the price of the company's stock grow higher and higher.

Therefore, one conclusion can be made that there is a significant positive correlation between MH and ROE, which proves that it is imperative in current China to establish the senior managers encouraging mechanism in high-tech companies.

#### *B. Make the Salary Mechanism of the Senior Managers Effective on a Long-Term Basis and Avoid Their Behaviors on a Short-term Basis*

There is a strong positive correlation between the company's performances and the senior managers' salary in the high-tech companies in China. Therefore, performances should be taken into consideration when the senior managers' salaries are decided, and the measurement of performances should be defined considering specific salary structure. If we do this on the basis of the fiscal performances, short-term encouragement will be achieved; if on the basis of market performances, long-term encouragement will be achieved. Thus, the two should be combined together and then the best combination will promote the development of both of the company and the individuals there. The experience of the regulations about yearly salary and option in the developed countries should be well considered to make the holding of the company's stocks by senior managers be an encouraging mechanism in a long run, and encourage and restrict them to make efforts for the continuous interests of the company and the stockholders.

The surrogate then is tempted to work out the decision which may maximize the interests of the principals, and create more surplus value for the company, for himself

and for all the stockholders of the company. However, it is found out that in the stock companies in the field of high-tech which are analyzed in this paper, the proportion of stocks held by the senior managers is remarkably low although they still hold some, and the encouragement of this mechanism cannot take effect. Moreover, the salary of senior managers is not combined with the potential of the company's development. Therefore, it is suggested that the salary system of high-tech companies, consisting of basic yearly salary, risk income and the stock option, should be established.

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