Executive Ability, Industry Competition and Executive Pay : An Empirical Analysis of Chinese Listed Companies

FANG Fang
GAO Minghua
SEMBA Hu Dan

This paper investigates the relationship between executives' ability and executives' compensation based on data concerning Chinese listed companies. We found that executives with higher ability can obtain a higher salary, which partly validates the manager market in China. Further analysis suggests that this correlation exists only in competitive industries and that there is a significant difference in executive pay decision mechanisms between monopoly and competitive industries. This paper enriches studies on determinants of executive pay, and the findings have policy implications for relevant regulators.

Keywords: Executive ability, Industry competition, Executive pay

Ⅰ. Introduction

The compensation system constitutes an important aspect of corporate governance. As scarce human resources, executives are crucial to the survival and the development of enterprises. Accordingly, executive pay has attracted much attention from researchers in terms of both theory and practice, with an executive pay's decision mechanism representing a particularly important focus of study (Fama, 1980; Murphy, 1985; Leone, Wu and Zimmerman, 2006; Jackson, Lopez and Reitenga, 2008). Previous studies (e.g., Fang & Li, 2015) indicate that executive pay is affected by many factors, which correspond to not only business characteristics (including industry, firm size, ownership of property and financial status) but also the internal governance mechanism, the external macroeconomic environment and the government regulation policy.

Effective contract theory is one of the most useful theories for explaining the decision mechanism of executive pay (Kaplan and Minton, 2006; Shen, Richard and Henry, 2010).

In this theory, after controlling firm size, industry and other factors, a relatively higher compensation package implies the executive possesses a relatively higher ability or reflects a higher performance expectation beyond the market average (Fama, 1980). However, studies on executive pay decision mechanisms rarely consider executive ability, which is among the most important factors. This lack of consideration results because executive ability is not a standardized product, and its pricing is highly complex. The few studies that refer to executive ability substitute a modified performance index for executive ability. For example，Garvey and Milbourn (2006) use residual performance as a proxy variable for executive ability. They conduct a regression of enterprise performance using industry data. Some researchers, who have adopted a three-way fixed effects model to measure executive ability, have found that it correlates with executive pay (Graham et al 2012; Coles and Li, 2013; Brookman and Thistle, 2013).

Although these studies modified measures of firm performance to more closely reflect the

performance level generated by executives' ability and effort, the performance index generates significant "noise" and is easily managed (Hill and Snell, 1988). The latter study added the fixed effect of individual managers' characteristics to the two-way fixed effects of firm and year; this addition could help separate the effect of managers' personal skills more accurately. Given the data limitations of manager's characteristics, however, this measure is difficult to apply to the Chinese listed companies. Therefore, this paper will use a comprehensive, objective and systematic entrepreneur ability index database (see Gao et al, 2014 for details) to investigate the relationship between executive ability and executive pay. Furthermore, because the industry competition degree is an important business environment factor, we will explore its impact on the relationship between these two variables.

II. Literature review and hypotheses development

In 1960s, Schultz advanced the theory of human capital, which distinguishes human from material capital (Schultz, 1960). Becker (1965) further expanded this theory into a systematic framework of human capital theory and highlighted that human capital was reflected in a person's ability and accomplishment and that it was thus acquired through training and required large amounts of manpower and material investment. Therefore, the use of human resources should be paid, which essentially represents the income generated from investing in human resources (Becker, 1965). Among the forms of human capital, senior management's human capital, because of its comparatively superior management skills and ability, is considered an idiosyncratic form of human capital, which yields increasing marginal revenue in terms of productivity, personal dependence and scarcity. Therefore, it should be compensated at a higher level compared with general human

capital (Ding Donghong, 1999).

In recent years, foreign scholars have studied the relationship between CEO ability and pay in different enterprises. Rajgopal et al. (2006) showed that managers with greater ability will receive better external employment opportunities. Coles and Li (2013), Graham et al. (2012) found that executives with higher ability tend to obtain higher pay. Brookman and Thistle (2013) expanded the research object from CEO to top management and corroborated these findings. They also showed that executive ability is the most important factor in determining executive pay. Although the manager market in China is imperfect, after more than 20 years of developing the capital market and based on an open and transparent information disclosure mechanism, a manager with higher ability will be able to obtain a higher level of pay in the market. Therefore, this paper hypothesizes the following:

Hypothesis 1：Controlling for other factors, executive ability is significantly positively correlated with executive pay. Institutional economics espouses that the institutional environment exerts an important influence on the transaction cost. Therefore, different institutional environments may require different salary contracts (Liu Fengwei et al. 2007). For example, in a fully competitive market environment, industries will exhibit the same levels of cost and profit. Hence, "profit" can become an index that fully reflects the operating status of enterprises. One can conduct a more accurate evaluation of corporate managers by comparing the accounting profits of enterprises with the average profit margin of the industry (Lin Yifu et al., 1997). Additionally, in a competitive environment, managers' behaviour will more significantly affect enterprises' development; thus, managers will require an even higher pay. Under such circumstances, increasing the incentive of managers would maximize firm value. Therefore, we propose a second hypothesis:

Hypothesis 2: Controlling for other factors, the higher the degree of industry competition, namely, the less the degree of government intervention, the greater the correlation between executive ability and executive pay.

Ⅲ. Methodology

1. Research design

To test Hypothesis 1, we develop the following research model:

$$\text{In } pay = \beta_0 + \beta_1 Ability + \beta_2 Controls + \varepsilon_1 \qquad (1)$$

The dependent variable "ln pay" represents the level of executive pay in listed companies. As the equity incentive is uncommon in China, the shareholding ratio of executives is also low. Therefore, we follow the practice of other scholars to use executives' personal annual monetary compensation as their pay level and calculate the natural logarithm. The independent variable "Ability" indicates the level of executives' ability. We also created the following ten control variables: 1) ownership concentration (Top1), the ratio of the largest shareholders; 2) board size (Boardsz), the number of board directors; 3) the proportion of independent directors (Indpt%), the proportion of numbers of independent directors in the board; 4) the size of the supervisory board (Supbsz), the number of members in the supervisory board; 5) CEO duality, a dummy variable, which assumes the value of 1 if the general manager serves as the chairman of the board, otherwise, 0; 6) firm size (Firmsz), the natural logarithm of a company's total assets; 7) firm performance, the ratio of the return on assets; 8) financial leverage (Lev), the asset-liability ratio; 9) asset structure (Fapct), the proportion of fixed assets in total assets; and 10) regional economy (GDP), the natural logarithm of per capita GDP of the province where the company is located.

Existing literature suggests the following results: (1) A high concentrated equity structure can prevent the free riding phenomenon and

thus exert a good control on executive pay (Xiang Rui et al.2010; Yang Qing et al.2010). Therefore, the degree of ownership concentration may negatively correlate with executive pay. (2) With increasing board size, the board members' regulatory power over managers decreases, while executives' control power over board members increases, thus increasing the likelihood that manager salaries will increase (Su Fangguo, 2011). (3) The introduction of independent directors in China failed to effectively inhibit the expansion of executives' pay, and Chinese listed companies employ more independent directors to comply with regulatory requirements and to increase executive pay "legally" (Du Shengli, Zhai Yanling, 2005). (4) The greater the size of the supervisory board, the greater the power of supervision; thus, supervisory board members are more active to monitor the agents and to control their pay (Li Weian et al., 2010). (5) CEO duality reduces the effectiveness of restriction and supervision on general managers by the board. It also partly indicates that the CEO has a positive impact on the pay decision mechanism, so CEO duality will increase executives' pay level (Du Shengli, Zhai Yanling2005). (6) The larger the company size, the higher the ability will be required for management, and the greater the responsibility will be. Higher levels of management and pay will be established, which will increase the pay of top executives further (Fan Ting, 2006). (7) In a listed company in which ownership and management are separated, if the pay contract is optimal (valid), then the agent will choose to operate a business that can maximize firm value. Therefore, the pay level and the firm performance will be highly related (Murphy, 1985). (8) The greater the debt of a company, the lower the possibility of repayment, which may restrict the increase in executive pay. Executives may choose to operate companies in a low financial leverage to ensure the solvency and maintain high-level salaries (Jiang Haojin, 2012). (9) In listed companies in China, the

managers' incentive is based on firm performance. A high proportion of long-term investment can enhance company's future performance but may negatively affect the company's current performance. Therefore, future-oriented investments will negatively affect the salary level in the current period (Peng Wenping, 2008). (10) In developed areas, executives' pay level will be increase because the living index will be deemed a determinant factor. Subsequently, the competition for human capital will intensify, which forces companies to pay higher salaries to retain high quality human resources (Li Qi, 2003).

We also controlled the nature of ownership and industry effects in the model (1). The specific definitions of the above variables are summarized in Table 1.

To test Hypothesis 2, the cross terms of Ability and Compete are further incorporated into model (1) as follows:

$$\ln pay = \beta_0 + \beta_1 Ability + \beta_2 Controls + \beta_3 Compete + \beta_4 Compete*Ability + \varepsilon_2 \qquad (2)$$

In model (2), "Compete" is a dummy variable that represents the degree of industry competition. Adopting Ding Qijun's approach (2010), we classify the following industries as monopoly industries: coal mining and washing, oil and natural gas mining, non-ferrous metal mining, petroleum processing, coking and nuclear fuel processing, electricity, heat production and supply, gas production and supply, water production and supply, aviation transportation, railway transportation, telecommunication and other information transmission service, banking, tobacco and post. The remaining industries are classified as competitive industries. Other variables are valued as above.

Table 1 Variable definitions

Variables	Definition	Calculation
ln pay	Executive pay	the natural logarithm of personal executive pay
Ability	Ability	the entrepreneur ability index (2014)
Top1	Ownership concentration degree	the ratio of the largest shareholders
Boardsz	Board size	the number of board directors
Indpt%	Independent directors' ratio	the proportion of the number of independent directors in board
Supdsz	Size of supervisory board	the number of members in supervisory board
Dual	CEO duality	a dummy variable, which assumes a value of 1 if the CEO serves as the chairman of the board; otherwise, 0
Firmsz	Firm size	the natural logarithm of company's total assets
ROA	Firm performance	the return on assets
LEV	Financial leverage	the asset-liability ratio,
Fapct	Asset structure	the proportion of fixed assets in total assets
GDP	Regional economy	the natural logarithm of per capita GDP in the province where the company lies
Compete	Degree of industry competition	a dummy variable, which assumes a value of 1 if the company belong to competitive industry; otherwise, 0

2. Sample selection and data sources

The executives we refer to in this paper are the current CEOs in listed companies. We chose all A-share listed companies in 2013[1]. Consistent with similar studies, we remove the samples of the financial sector, samples with missing financial data and ST companies, as well as the samples of missing pay data or abnormal pay data and samples with a CEO term of briefer than one year. We finally obtained 1983 samples. The entrepreneur ability index is evaluated from four aspects: executives' human capital, the ability in relation networks, social responsibility and strategic leadership. All aspects are drawn from the "Report on Entrepreneur Ability Index of China's Listed Companies (2014)" (Gao Minghua et al., 2014). All data are derived from the annual reports of the listed companies. Other financial data are derived from the Wind database.

Ⅳ. Empirical Analysis

1. Descriptive statistics

Table 2 provides the descriptive statistics of the main variables used in the study. The overall pay level is high, and the average pay of senior executives is 618,106 yuan. The maximum pay is 10,900,000 yuan, the minimum pay is 10,000 yuan, and the median pay is 488,400 yuan. These values indicate that the pay gap between individual executives is relatively large. By contrast, the overall level of executives' ability is relatively poor. The mean value is 27.14, the median value is 29.01, the minimum value is only 10, and the maximum value is 85.71. The maximum value is eight times more than the minimum value, indicating that the level of executives" ability in Chinese listed companies is imbalanced.

Table 2 Descriptive Statistics

Variable	Obs	Mean	P50	Max	Min	SD
pay	1983	618,106	488,400	10,900,000	10,000	771,509
lnpay	1983	13.07	13.10	16.20	9.210	0.865
Ability	1983	29.01	27.14	85.71	10	10.50
Top1	1983	35.65	34	86.35	3.622	15.42
Boardsz	1983	8.799	9	19	4	1.825
Indpt%	1983	0.374	0.333	0.714	0.250	0.0543
Supdsz	1983	3.671	3	12	2	1.235
Dual	1983	0.2730	0	1	0	0.4456
Firmsz	1983	21.93	21.74	30.36	16.16	1.404
ROA	1983	0.0458	0.0356	7.109	-1.561	0.180
LEV	1983	0.440	0.4215	8.612	-0.195	0.293
Fapct	1983	0.235	0.1922	7.184	6.11e-06	0.268
GDP	1983	10.93	10.978	11.51	10.04	0.376

Notes: This table reports the descriptive statistics for all variables. *Obs*: sample size. *Mean*: sample average. *Min*: sample minimum value. *P50*: sample median. *Max*: sample maximum value. *SD*: sample standard deviation. *** represents significance at the 1% level. ** represents significance at the 5% level. * represents significance at the 10% level.

Table 3 shows the correlation coefficients between variables. The correlation coefficient between executive pay (ln pay) and entrepreneur ability index (Ability) is 0.028, significant at the 1% level, suggesting a positive correlation between executive ability and executive pay. This finding is consistent with Hypothesis 1. Additionally, from the relationship between executive pay and the control variables, we find that executive pay is positively correlated with the board size, the proportion of independent directors, the firm size, the firm performance and the regional economy. These positive correlations are consistent with the results of previous studies. The asset structure (Fapct) is negatively correlated with executive pay; this finding is also consistent with previous findings (Fang & Li, 2015). The ownership concentration, the size of the supervisory board, and the financial leverage are positively correlated

Table 3 Correlation coefficient of main variables (I)

	ln pay	Ability	Top1	Boardsz	Indpt%	Supdsz
ln pay	1					
Ability	0.028***	1				
Top1	0.031	0.007	1			
Boardsz	0.126***	0.046*	-0.014	1		
Indpt	0.003	0.026	0.074**	-0.396***	1	
Supdsz	0.090**	0.076**	0.028	0.434***	-0.109***	1
Dual	-0.029	0.010	-0.057*	-0.199***	0.120***	-0.188***
Firmsz	0.335***	0.120***	0.247***	0.399***	0.024	0.400***
ROA	0.014	-0.004	-0.026	-0.037	0.029	-0.034
LEV	0.038	0.093***	0.033	0.180***	-0.028	0.208***
Fapct	-0.067**	-0.012	0.024	0.059**	-0.050*	0.056*
lnGDP	0.150***	0.071**	0.076**	-0.023	0.008	-0.064**

Table 3 Correlation coefficient of main variables (II)

	Dual	Firmsz	ROA	LEV	Fapct	lnGDP
Dual	1					
Firmsz	-0.220***	1				
ROA	0.035	-0.089**	1			
LEV	-0.112***	0.381***	-0.253***	1		
Fapct	-0.027	-0.0400	-0.058*	-0.068**	1	
Beta	0.071**	-0.154***	-0.034	-0.068**	-0.093**	
lnGDP	0.050*	0.056*	0.034	-0.068**	-0.099***	1

Notes: *** represents significance at the 1% level. ** represents significance at the 5% level. * represents significance at the 10% level.

with executive pay, and CEO duality is negatively related to executive pay. These findings are inconsistent with previous conclusions and thus require further verification.

2. Empirical results and analysis

(1) Executive ability and pay

Table 4 reports the OLS regression results for the two hypotheses. From the results of Model 1, we can discern a positive correlation between executives' pay (ln pay) and executives' ability (Ability), which is significant at the 5% level. This finding suggests that the higher the executives' ability, the higher level of pay they will obtain. The result supports Hypothesis 1.

Table 4   Results of the multivariate linear regression

Variable	Model 1	Model 2
Ability	0.00883**	-0.0186
Top1	-0.00383**	-0.00362**
Boardsz	0.000342	0.00195
Indpt	-0.181	-0.171
Supdsz	-0.0248	-0.0246
Dual	0.0390	0.0331
Firmsz	0.236***	0.244***
ROA	0.0973	0.105
LEV	-0.225**	-0.229**
Fapct	-0.0950	-0.0658
GDP	0.277***	0.275
Compete		-0.718
Compete*Ability		0.0284*
N	1983	1983
Adj–R^2	0.1440	0.1478
F	30.37	26.61

Notes: *** represents significance at the 1% level. ** represents significance at the 5% level. * represents significance at the 10% level.

(2) Executive ability, executive pay and industry competition

The results of Model 2 in Table 4 indicate the empirical result supporting Hypothesis 2. The full sample test indicates a positive correlation between executives' ability (Ability) and executives' pay (ln pay). However, in monopoly industries (Compete=0), the correlation becomes negative and insignificant, thus showing a fuzzy relation between executives' ability and pay in monopoly industries. This relation may have resulted because monopoly enterprises typically face a more determined business environment. Thus, the marginal effect of managers' ability in terms of firm performance will be lower, which will prompt a fuzzy relation between executives' performance and executives' ability and further leads to a fuzzy relation between firm performance and executives' pay. It is generally assumed that managers in monopoly industries can obtain better results with less effort, an assumption that has restricted executive pay in monopoly industries. The salary restriction further strengthens the fuzzy relationship between executive pay and executives' ability.

For competitive industries (Compete=1), the regression results suggest that the coefficient of industry competition and the cross terms (Compete*Ability) is positive and significant at the 10% level. This result indicates that the higher the degree of competition, the higher the correlation between executives' ability and executives' pay. Hypothesis 2 is thus verified. This result also indicates that the significant positive correlation between executive pay and managerial ability proven in Model 1 is caused mainly by the pay decision mechanism of firms in competitive industries. To verify the stability of the above conclusions, we divide the full sample into a competitive industry group and a monopoly industry group and conduct a subsample regression. The results of the verification are shown in Table 5.

Table 5 Results of grouped regression

Variable	Competitive industry	Monopoly Industry
Ability	0.00953**	-0.00468
Top1	-0.00355**	-0.00998
Boardsz	0.000476	0.0377
Indpt%	-0.195	-0.00193
Supdsz	-0.0283	0.0173
Dual	0.0358	-0.0905
firmsz	0.253***	0.168*
ROA	0.103	1.214
LEV	-0.220**	-0.646
Fapct	-0.0221	-1.0888*
GDP	0.292***	-0.0333
N	1881	102
Adj–R^2	0.1565	0.0521
F	31.64	1.51

Notes: *** represents significance at the 1% level. ** represents significance at the 5% level. * represents significance at the 10% level.

Table 5 further verifies Hypothesis 2. In the competitive industries, executives' ability has a significant positive correlation with executives' pay, indicating that managers can obtain effective pricing in the labour market in a full competition environment. Executive pay has a significant negative correlation with the degree of ownership concentration, thus indicating that the higher the degree of ownership concentration, the lower the executives' pay. Firm size is significantly positively correlated with executives' pay, suggesting that the greater the company size, the higher the executives' pay. There is a significantly negative correlation between financial leverage and executive pay, indicating that the larger the company's debt, the lower the executive pay. Finally, the regional economy has a significantly positive correlation with executive pay. These results are consistent with those of previous studies. However, the fitted level of the pay decision

mechanism model in monopoly industries is poor, indicating a significant difference in the executive pay decision mechanism between monopoly industries and competitive industries. This finding is consistent with China's national condition, and we plan to explore this finding further in future research.

IV. Conclusion

In this paper, we used the data corresponding to the Entrepreneur Ability Index (2014) formulated by the Research Center for Corporate Governance and Enterprise Development of Beijing Normal University to examine the impact of executives' ability on executive pay and to observe the influence of the market environment on the relation between these two variables. We found that managers with greater ability can achieve higher pricing in the labour market and obtain a higher level of pay. This finding suggests that the manager market in China is beginning to show validity to some extent after more than 20 years' development of a capital market. However, considering the degree of industry competition, we found that the effectiveness was reflected only in the competitive industries. That is, in industries with full competition, executives' ability has a significantly positive correlation with executive pay, but no significant relation to the latter in monopoly industries. Moreover, a large difference inheres in executive pay decision mechanism between the monopoly and the competitive industries. This paper enriches studies on determinants of executive pay. It also helps understand the development and the current status of China's manager market and provides information to Chinese listed companies on how to better resolve agency problems. Future studies will improve this study in the two respects. First, the number of samples in this study is limited. With a larger sample size, we can verify the results with greater accuracy. Second, the index system used to

evaluate executive ability must be improved.

Note

1）We use one year of data because information concerning the key variable for the level of entrepreneur ability is available for only one year, which is the most comprehensive and systematic evaluation index developed in 2014 by the Research Center for Corporate Governance and Enterprise Development at Beijing Normal University.

References

Becker G. S. (1965), "Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education", *Annals of the American Academy of Political & Social Science*, Vol. 360, pp.208-209.

Brookman Jeffrey T. and Paul D. Thistle (2013), "Managerial Compensation: Luck, Skill or Labor Markets?" *Journal of Corporate Finance*, Vol. 21, No. 2, pp.252-268.

Coles J. and Li Z. (2000), "Managerial Attributes, Incentives, and Performance", Unpublished working paper. Arizona State University and University of Western Ontario.

Ding Qijun (2010), "The Study on the Source of High-Profit in Administrative Monopoly Industries, High Efficiency, or Monopoly Pricing?" *Industrial Economy Research*, Vol. 5, pp.36-43 (in Chinese).

Du Shengli and ZhaiYanling (2005), "An Empirical Analysis on Determinants of CEO's Annual Remuneration—Based on Chinese Listed Companies," *Management World*, Vol. 8, pp.114-120 (in Chinese).

Fama E. (1980), "The Agency Problems and the Theory of the Firm," *Journal of Political Economy*, VOL. 88, No. 2, pp.288-307.

Fan Ting (2006), "Empirical Research on the Executive Compensation in Chinese Listed Companies," *Journal of Nanjing University of Finances and Economics*, Vol. 6, pp.34-37 (in Chinese).

Fang Fang and Li Shi (2015), "Research on the Disparity in Executive Pay of Chinese Enterprises," *Social Sciences in China*, Vol. 8, pp.47-67 (in Chinese).

Gao Minghua et al, (2014), "Report on Enterpreneur Ability Index of China's Listed Companies," Economic Science Press (in Chinese).

Garvey G. and Milbourn T. (2006), "Asymmetric Benchmarking in Compensation: Executives are Rewarded for Good Luck but not Penalized for Bad," *Journal of Financial Economic*, Vol. 82, No. 1, pp.197-225.

Graham J., Li S. and Qiu J. (2012), "Managerial attributes and executive compensation," *Review of Financial Studies*, Vol. 25, pp.144-186.

Hill C. W. L. and Snell S. A. (1988), "External Control, Corporate Strategy, and Firm Performance in Research Intensive Industries," *Strategic Management Journal*, Vol. 9, No. 6, pp.577-590.

Jackson S., T. Lopezk and A. Reitenga (2008), "Accounting Fundamental and CEO Bonus Compensation," *Journal of Accounting & Public Policy*, Vol. 27, No. 5, pp.360-374.

Jiang Haojin (2012), "Analysis on the Influencing Factors of Executive Compensation in Transportation Industry," *Commercial Accounting,* Vol. 8, pp.86-87 (in Chinese).

John Graham, Campbell Harvey and Shiva Rajgopal (2006), "Value Destruction and Financial reporting decisions," *Security Analysts Journal*, Vol. 46, No. 6, pp.27-39.

Kaplan S. N. and B. Minton (2006), "How has CEO Turnover Changed? Increasingly Performance sensitives boards and increasingly uneasy CEOs," *Ssrm Eletronic Journal*.

Leone A., J. Wu and J. Zimmerman (2006), "Asymmetric Sensitivity of CEO Cash pay to Stock Industry-adjusted Stock Returns," *Ssrm Electronic Journal*, Vol. 42, Issue. 1-2, pp.167-187.

Li Qi (2003), "Analysis of the factors affecting the senior managers of the listing Corporation," *Economic Science*, Vol. 6, pp.113-127 (in Chinese).

Lin Yifu, Cai Fang and Li zhou (1997), "Full information and the reform of state-owned enterprises," Shanghai people's Publishing House (in Chinese).

Liu Fengwei, Sun Zheng and Li Zengquan (2007), "Government intervention, industry competition and pay contract—Empirical data from the state-owned listed Corporation," *Management World*, Vol. 9, No. 9, pp.76-84 (in Chinese).

Liu Xuguang, Li Weian and Chen Jinghan (2010), "Manager Talents, Corporate Governance and Reference Point: The Determinants of Executive Compensation in Chinese Listed Firms," *Nankai Business Review*, Vol. 13, No. 2, pp.4-15 (in Chinese).

Liu Zhibiao and Ding Donghong (1999), "From Human Capital to Heterogeneous Human Capital," *Productivity research*, Vol. 3, pp.7-9 (in Chinese).

Murphy K. J. (1985), "Corporate Performance and Managerial Remuneration: An Empirical Analysis," *Journal of Accounting and Economics*, Vol. 7, Issue 1-3, pp.11-42.

Peng Wenping (2008), "The Explanatory Power of the Decision Factor to the Manager's Remuneration," *Labor Economic Review*, Vol. 1, pp.148-161 (in Chinese).

Schultz T. W. (1960), "Capital Formation by Education," *The Journal of Political Economy*, Vol. 68, pp.571-583.

Shen W., Gentry, R. J. and Tosi, H. L. (2010), "The Impact of Pay on CEO Turnover: A Test of Two Perspectives," *Journal of Business Research*, Vol. 63, No. 7, pp.729-734.

Su Fangguo (2011), "The Human Capital, Organization Factors and Executive Compensation: A Hierarchical Liner Model," *Nankai Business Review*, Vol. 14, No. 3, pp.122-131 (in Chinese).

Xiang Rui and Feng Jian (2008), "The Relationship between Characters of the Board and Firm Operating Performance:Empirical Evidence from Chinese Listed Private Companies," *Financial science*, Vol. 11, pp.91-99 (in Chinese).

Yang Qing, Huang Tong, Steven Toms and Besim Burcin Yurtoglu (2010), "Does CEO Salary of Chinese Listed Corporation Have Incentive Effect?" *Financial research*, Vol. 1, pp.166-185 (in Chinese).

（School of Economics and Business Administration, Beijing Normal University）

（School of Economics and Business Administration, Beijing Normal University）

（Graduate School of Economics, Nagoya University）