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The executive external pay gap and firm innovation performance: An empirical study from the perspective of the market competition environment

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Abstract: *Based on a sample of A-share listed companies from 2011 to 2022, this study empirically examines the influence of the executive's external pay gap on enterprise innovation performance. It also investigates the effects in different environments and the role of market competition, comparing high-tech enterprises with general enterprises. The results show that when executive compensation exceeds the industry average, the external pay gap can motivate executives to improve enterprise innovation performance. However, when executive compensation is lower than the industry average, the external pay gap becomes more significant and has a negative inhibitory effect on innovation performance. The higher the market competition intensity, the more likely executives are to increase investment in innovation, thereby mitigating the negative impact of the executive pay gap on enterprise innovation performance.*

Keywords: *executive compensation; External pay gap; Enterprise innovation performance; Market competitive environment*

1. Introduction

Innovation has been the internal driving force for the economic development of enterprises and even the country. With the emergence of the "mass innovation" boom, how to promote enterprises to carry out innovation activities has become a topic of widespread concern in academia. In implementing an innovation strategy, senior management and employees play an indispensable role. Employees are the main body that carries out enterprise innovation activities, and senior executives are the "helmsmen" who grasp the direction of enterprise innovation. To promote the development of enterprises and carry out practical innovation activities, salary is the most direct and vital incentive way. How to set the internal salary level and gap has become an inevitable key issue for public enterprises. In addition, there are apparent differences in the salary gap between industries. The industries with higher salaries are mainly technology and financial services, while the sectors with lower salary increases are mostly general operation and basic service positions in traditional industries. The overall salary expectation gap between different industries is more than 3-6 times. There is no doubt that the reasonable industry wage gap can reflect the efficiency and fairness of income distribution policy. It is also the inevitable result of the market economy mechanism and, to some extent, can arouse the enthusiasm of social workers' production.

2. Literature review and theoretical analysis

2.1. Literature review

The current academic research on the corporate pay gap mainly covers two perspectives: the internal pay gap and the external pay gap. The academic community has little research on the industrial pay gap, most of which is based on the internal pay gap.[1][2]. When analyzing the reasons for the industrial pay gap, many domestic scholars pay attention to the monopoly factor. From the perspective of the nature of monopoly, administrative monopoly is considered to be one [3]of the main reasons for the pay gap in the industry in China. The research of Long and Zhang (2010) shows that monopoly factors lead to the expansion [4] of the inter-industrial income gap. The scholars also find that the level of industry level, industry labor productivity, human capital, and institutional factors impact [5][6][7] industry pay levels.

Research on compensation gap economic consequences for business performance, research and

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development innovation, risk-taking, company development, investment behavior, and surplus management, the perspective are mainly from two kinds of competitive theories, tournament theory and enterprise behavior theory. Tournament theory points out that the pay gap is the championship-winning bonus promotion organization when employees' salary rewards after the promotion have great expectations, can increase the degree of hard work, and promote enterprise performance improvement[8]. Therefore, part of the research conclusion to support the tournament theory is that the pay gap, the more it can stimulate the staff's innovation power, and it is beneficial[9] to improve the innovation performance of enterprises. It is not limited to improving the traditional enterprise performance but also has a particular impact[10][11][12] on the enterprise's investment behavior, risk-taking, earnings management and so on. However, there is also research pointing out that the pay gap is not endlessly positive, stimulating enterprise performance; a salary gap that is too big can also cause performance to decline. Studies by Chen et al. (2019) and Li and Jiao (2021) found that there is a nonlinear inverted U-shaped relationship [13][14] between the pay gap within the top management team and corporate performance. Different from the tournament theory, the behavioral theory advocates reducing the pay gap. The tournament theory emphasizes the incentive of employees by increasing the bonus for winning the tournament. In contrast, the behavioral theory turns its attention to the possible adverse effect of the pay gap. Zhang (2008) found that an excessive executive pay gap within the team is not conducive to group collaboration and would have a negative impact on the future of the enterprise's performance, while the negative impact by enterprise scale and nature of the regulation[15]. Xia and Dong (2014) suggested that senior management team, executive pay gap, and employee compensation gap are negatively related to the company's growth, but the scale of the pay gap and regulating effects of firm growth, namely when enterprise scale widening wage gap can promote enterprise development[16].

This study contributes by comparing executive compensation to the industry average, which is divided into two cases: above and below the average, in order to examine its influence on enterprise innovation performance. It provides insights for the executive compensation system. Additionally, this paper incorporates market competition uncertainty as a moderating variable into the model, analyzing its effect on the executive external pay gap and its impact on enterprise innovation performance.

2.2. Basic theoretical analysis

The tournament theory points out that the setting of the pay gap can motivate the hardworking members[8] of the enterprise. Senior executives, when their salary level is higher than the industry average, have a stronger incentive to maintain this advantageous position because it is related to their social status, self-image and future salary growth. To maintain or improve this beneficial position, senior executives may work harder to promote corporate innovation to enhance corporate performance and competitiveness. The widening of the external pay gap means that executives' pay is more competitive compared with other executives in the same industry. This gap can be seen as a "tournament" reward that motivates executives to work hard to win higher pay and status. In terms of innovation, senior executives may invest resources more actively to promote technological innovation and product innovation of enterprises to stand out in the fierce market competition. From the perspective of principal-agent theory, executives are the agents of the enterprise, and their behavior may be affected by the salary incentive. When the executive compensation level is higher than the industry average, they are more motivated to perform their duties, reduce moral hazard, and make decisions that are beneficial to the long-term development of the enterprise. In addition, risk theory holds that to obtain high remuneration, senior executives will strive to improve their performance level and consider more high-risk projects when selecting investment projects. When executive pay levels are higher than the industry average, they may be more willing to take on risk in pursuit of higher returns. Executives, to maintain their pay, may be more inclined to invest in innovative projects with high risk, but the potential gains are high. This risk-taking spirit can push enterprises to break through technological bottlenecks and achieve innovation breakthroughs.

Social comparison theory points out that people tend to compare their salary, status, and so on with others to assess their value and status. When executives are paid less than the industry average, they may face an enhanced sense of unfairness. Executives will compare their compensation with that of other executives in the same industry. When they find that their compensation is less than the industry average, they may develop a strong sense of unfairness. This sense of unfairness may lead to executives' dissatisfaction with the existing working environment and remuneration, which in turn affects their enthusiasm for work and innovation. Therefore, executives may take some negative behaviors to cope with this gap, such as reducing innovation investment and reducing work efficiency. These negative behaviors will directly affect the innovation performance and overall competitiveness of enterprises. In

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addition, the theory of manager myopia points out that executives may focus too much on short-term interests and neglect the long-term development of enterprises. When executives' salary is lower than the industry average, they may be more inclined to pursue short-term benefits to make up for the psychological imbalance caused by the salary gap. Executives may choose investment projects and innovation directions more carefully to avoid the salary loss caused by innovation failure. This risk-averse behavior may inhibit enterprises' innovation activities and reduce innovation performance.Therefore, this paper puts forward the following hypothesis:

H_{1a}: When the executive compensation level is higher than the industry average, the external pay gap has a positive effect on corporate innovation performance.

H_{1b}: When executive pay levels are below the industry average, the external compensation gap has adverse effects on the enterprise innovation performance.

The market environment is a dynamic and complex system, which usually depends on a variety of factors, including industry characteristics, market structure, technological development, competitors, laws and regulations, and macroeconomic conditions. In increasingly competitive market conditions, the enterprise faces pressure to improve its innovation ability to remain competitive. Gu (2016) found that market competition is positively correlated with enterprise innovation investment, and the more intense the industry competition is, the more potent the sensitivity of enterprise innovation return is. The external pay gap may motivate executives and employees to pursue higher pay and rewards to meet their own economic needs or improve their social status. This incentive mechanism can encourage employees to work harder to explore creative thinking and practice to seek an advantageous position in market competition, thus promoting exploratory and incremental innovation. According to the tradeoff theory (Prospect and Found), executives, when considering innovation strategy, will weigh the innovation risk and potential return. Widening the external pay gap may affect their risk tolerance for innovative activities, and they may be more willing to bear the uncertainty and risk that innovation brings if the pay reward is attractive enough. Taking high-tech enterprises as samples, Zhai et al. (2017) found that the increase in the external pay gap can encourage enterprises to increase innovation investment, and the improvement of market competition can strengthen the promotion effect of the external pay gap on enterprise innovation. Therefore, the degree of industry competition may exacerbate management pressure and encourage enterprises to increase R&D investment, promoting the effect on firms' innovation performance.Thus, this paper puts forward the following assumptions:

H_2: The higher the intensity of the market competition environment is, the greater the promotion effect of the executive external pay gap on enterprise innovation performance is.

3. Research design

3.1. Sample selection and data sources

This paper selects A-share listed companies in Shanghai and Shenzhen from 2011 to 2022 as the research sample. The relevant data are from the CSMAR database and the annual reports of listed companies. ST, PT and *ST companies and financial industry companies were excluded. Delete the samples with missing values. To avoid the influence of extreme values, all continuous variables were winsorized according to the upper and lower 1%. After the above processing, 21,767 observations were finally obtained.

3.2. Variable Definition

3.2.1. Explained variable

Executive external pay gap. Referring to the definition of the external pay gap by Li Wenjing et al. (2014), the sum of the top three executives' pay is selected as the proxy variable of executive pay. At the same time, referring to the practice of Zhang and Zhu (2018), we calculate the average executive salary of enterprises with the same ownership in the same industry and determine the external pay gap by the ratio of the above two values.

3.2.2. Explanatory variables

Enterprise innovation performance. According to the method of Li et al. (2022), the natural logarithm of the number of patent applications in the current year is taken as the proxy variable to measure enterprises' innovation performance.

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3.2.3. Moderating variable

Intensity of market competition. Referring to the practice of Sheng Yuhua (2016), this paper uses the Herfindahl-Hirschman index (HHI) as a proxy indicator of industry competition intensity. When the number of enterprises in the sector remains constant, a smaller value of the Herfindahl-Hirschman index (HHI) means a more significant number of enterprises of similar size in the same industry, which indicates that the overall competition intensity of the industry faced by enterprises is greater.

3.2.4. Control variables

Referring to the literature of relevant scholars, To control the influence of other factors on enterprise innovation performance, the following control variables are set: Asset-liability ratio, enterprise Size, Growth, profitability, asset structure, board independence, Dual, ownership nature, ownership concentration, investment opportunities, net operating cash Cash flow, management shareholding listed fixed number of year and whether the losses. See Table 1 for details.

Table 1 Control variable definition

Variable name	Indicator calculation
Firm Size (Size)	Natural logarithm of a firm's total assets
Asset-liability ratio (Lev)	The ratio of total liabilities to total assets
Profitability (ROA)	The ratio of net profit to total assets
Asset structure (Fixed)	The ratio of fixed assets to total assets
Growth (Growth)	Growth rate of operating income
Board Independence (Indep)	The number of independent directors at year-end divided by the number of board members.
Two jobs in one (Dual)	If the chairperson and the general manager are the same person, the value is 1; otherwise, it is 0
Nature of property rights (SOE)	The value is 1 for state-owned enterprises and 0 otherwise
Net operating cash flow (Cashflow)	Ratio of net cash flow from operations to total assets at the end of the period
Loss or not (Loss)	1 for a loss and 0 for no loss
Ownership concentration (Top1)	The shareholding ratio of the largest shareholder
Investment Opportunities (TobinQ)	Business market value divided by book value
Management shareholding ratio (Mshare)	Number of shares held by management divided by total share capital
Years on the market (Listage)	Ln(year of the year - year of listing +1)

3.3. Model setting

To verify the impact of the executive external pay gap on enterprise innovation performance in Hypothesis 1, the model is designed as follows:

$$InnE_{it} = \alpha_0 + \alpha_1 EGap1_{it} + \sum Controls_{it} + \sum Industry + \sum Year + \varepsilon_{it} \quad (1)$$

$$InnE_{it} = \beta_0 + \beta_1 EGap2_{it} + \sum Controls_{it} + \sum Industry + \sum Year + \varepsilon_{it} \quad (2)$$

Among them, *InnE* is the explained variable, indicating enterprise innovation performance; *EGap1 and EGap2* are core explanatory variables, indicating the executive external pay gap; *Controls* are the control variables of this paper, specifically a series of enterprise and industry characteristic variables that may affect the innovation performance. ε_{it}Is the random disturbance term. To improve the reliability of regression results, this study controls the time dummy variable (Year) and Industry dummy variable (Industry) to absorb fixed effects as much as possible.

According to Hypothesis 2, the interaction term of the variables is used to test the moderating effect, and the model is designed as follows:

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$$\mathrm{InnE}_{it} = \pi_0 + \pi_1 \mathrm{EGap1}_{it}(\mathrm{EGap2}_{it}) + \pi_2 \mathrm{EGap1}_{it}(\mathrm{EGap2}_{it}) \times \mathrm{HHI}_{it} + \sum \mathrm{Controls}_{it} + \sum \mathrm{Industry} + \sum \mathrm{Year} + \varepsilon_{it} \quad (3)$$

Where HHI is the market competition environment, the moderating effect of the market competition environment is identified through the significance of the coefficients and in Model (3) to verify Hypothesis $\pi_1\pi_2 2$.

4. Analysis of empirical results

4.1. Descriptive statistics

Table 2 shows the descriptive statistics of the main variables. In Table 2, the mean value of enterprise innovation performance is 0.162, the minimum value is 0, the maximum value is 0.333, and the standard deviation is 0.0815, indicating that the innovation performance of most enterprises is still at a low level. In terms of the external pay gap indicator, when the executive pay is higher than the industry average, the mean value of the external pay gap is 1.712, and the standard deviation is 0.864. When the executive compensation is lower than the industry average, the mean value is 1.868, and the standard deviation is 0.902, indicating that the executive compensation gap varies significantly among different industries. However, there is still ample space for the compensation incentive effect to play. In addition, the standard deviation, the extreme value and the mean value of each control variable are all in the acceptable range.

Table 2 Descriptive statistics

Variables	(1)	(2)	(3)	(4)	(5)
	N	mean	sd	min	max
InnE	21,767	0.162	0.0815	0	0.333
EGap1	7,914	1.712	0.864	1.006	5.814
EGap2	13,853	1.868	0.902	1.002	5.840

Note: Due to limited space, this table does not show the descriptive statistics of other variables.

4.2. Correlation analysis

We also conducted a correlation analysis, but due to space limitations, we do not present the specifics here. In terms of correlation coefficients, most of the correlation coefficients between variables are significant at the level of 1%, indicating that the selection of model variables conforms to the purpose of the study. At the same time, the absolute value of the correlation coefficient between the explanatory variables and the control variable group is less than 0.5, and there is no serious multicollinearity risk, which meets the basic requirements of correlation analysis and provides a reasonable basis for the subsequent empirical regression.

4.3. Benchmark regression analysis

Table 3 shows the benchmark regression analysis results of Model 1. Since the measurement units among variables are inconsistent, the variables except the two dummy variables of Dual and SOE are centered by z-score. By analyzing the benchmark regression results, it can be found that models (1) and (2) only control year fixed effect and industry fixed effect, and the regression coefficient of EGPA1/EGPA2 is significant at the level of 1%. Model (3) and Model (4) are the results of adding control variables but not adding industry and year fixed effects, and the relevant regression coefficients are still significant. Model (5) and Model (6) control the industry and year fixed effects on the basis of the former, and the relevant regression coefficients are significant at the level of 1%. It shows that after controlling a series of enterprise characteristic variables, when the executive external compensation is higher than the industry average, it will encourage the executive to work hard, improve the enterprise innovation performance to maintain their advantages, and has a positive promotion effect on the enterprise innovation performance, which is in line with the tournament theory, and Hypothesis H is verified$_{1a}$. On the contrary, when the external compensation is lower than the average of the industry, the executives are more likely to have unfair psychology or pay more attention to short-term interests and ignore the long-term development of the enterprise, thus reducing the enthusiasm of the executives and inhibiting the innovation activities of the enterprise, which has a negative inhibitory effect on$_{1b}$ the innovation performance of the enterprise.

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Table 3 Benchmark regression analysis

	(1)	(2)	(3)	(4)	(5)	(6)
	InnE	InnE	InnE	InnE	InnE	InnE
EGap1	0.153***		0.081***		0.072***	
	(6.469)		(3.183)		(3.276)	
EGap2		-0.151***		-0.143***		-0.130***
		(-9.693)		(-8.727)		(-8.769)
Constant term	-0.988***	-1.032***	0.139***	-0.046*	-0.999***	-0.931***
	(-6.608)	(-7.330)	(4.185)	(-1.757)	(-7.007)	(-6.464)
Control variables	No	No	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	No	No	Yes	Yes
Industry fixed effects	Yes	Yes	No	No	Yes	Yes
Sample size	7914	13853	7914	13853	7914	13853
R^2	0.250	0.205	0.117	0.072	0.354	0.261

Note: *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

4.4. Test for endogeneity

There may be endogeneity problems between the executive external pay gap and corporate innovation performance due to missing variables and reverse causality $\alpha_1\beta_1$, which leads to the estimated coefficient and the generation of bias. To solve this reverse causality problem, this paper refers to the practice of Gu et al. (2021). It uses the one-period lagged executive external pay gap as the instrumental variable of the explanatory variable to examine its impact on enterprise innovation performance. It can be seen from Table 4 that the results obtained from the one-period lagged internal pay gap instrumental variable, the coefficients EGap1 and EGap2 of the instrumental variable and external pay gap in the first stage are both significant at the level of 1%. In the second stage, the coefficients of internal pay gap EGap1 and EGap2 and innovation performance InnE are significantly positive and negative, respectively, at the level of 1%, which excludes the existence of reverse causality and verifies the robustness of the above benchmark regression analysis results to a certain extent.

Table 4 Endogeneity test

	Stage 1	Stage 2	Stage 1	Stage 2
	(1)	(2)	(3)	(4)
	EGap1	InnE	EGap2	InnE
L_EGap1	0.8093***			
	(0.0151)			
EGap1		0.0815***		
		(0.0301)		
L_EGap2			0.7655***	
			(0.0128)	
EGap2				0.1641***
				(0.0226)
Control variables	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Kleibergen-Paap rk LM	126.09***		254.92***	
IKleibergen-Paap rk Wald F	2858.79***		3549.43 ***	
Observations	5,371	5,371	10,040	10,040

Note: *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively.

4.5. Robustness test

To eliminate the interference of the measurement methods of explained variables on the estimation results, this paper uses a variety of enterprise innovation performance measurement methods for robustness tests. Specifically, referring to the practice of Tang Yaojia et al. (2022), the number of invention patent applications, the number of utility model patent applications and the total number of design patent applications are respectively added by 1 to take the natural logarithm to measure the innovation output of the enterprise. The weight of the three kinds of patents is calculated according to

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3:2:1. The innovation performance of enterprises calculated by this method is defined as (InnE1). It can be seen from the results in Table 5 that the regression results are significantly positive at the level of 1% when different methods are used to measure enterprise innovation performance. According to the above results, the research conclusion of this paper is relatively robust.

5. Moderating effect of market competition environment

This paper argues that the intensity of the market competition environment may promote the positive effect of the executive external pay gap on corporate innovation performance. The regression results in columns (1) and (2) of Table 5 show that the coefficient of EGap2*HHHIA is significantly positive at the significance level of 10%, which verifies Hypothesis H2. This shows that the higher the intensity of market competition is, the more incentivized executives are to increase innovation investment, thus reversing the negative effect of the executive pay gap on innovation performance.

Table 5 Moderating effect of market competition environment

	(1)	(2)
	InnE	InnE
EGap1	0.073***	
	(3.348)	
EGap2		-0.132***
		(-8.872)
HHIA	0.022	-0.017
	(1.170)	(-1.072)
EGap1*HHIA	0.016	
	(0.929)	
EGap2*HHIA		0.026*
		(1.873)
Constant term	-1.044***	-0.917***
	(-7.232)	(-6.209)
Control variables	Yes	Yes
Year fixed effects	Yes	Yes
Industry fixed effects	Yes	Yes
Sample size	7876	13801
R^2	0.352	0.261

Note: *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

6. Conclusions

Based on the perspective of fairness and efficiency, with A 2011-2022 a-share listed companies as samples, this paper empirically examines the executives outside the pay gap's influence on the enterprise innovation performance and investigates the effect in different environments and market competition in high-tech enterprises and the general difference. Conclude as follows: first, when executive pay is higher than the industry average, the external compensation gap has a positive effect on the promotion of enterprise innovation performance. When the executive compensation is lower than the industry average, the external pay gap is more significant, and the comparison and myopic behavior of the executives will have a negative inhibitory effect on the innovation performance of the enterprises. Secondly, the intensity of the market competition environment has a positive moderating effect on the promotion of corporate innovation performance by the executive external pay gap. In a market environment of uncertainty, enterprise innovation returns sensitivity. External compensation gaps may inspire executives to pursue higher pay and rewards to satisfy the demands of their own economic or social status.

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References

[1] Pablo DE Andres, Laura Arranz - Aperte. All European CEOs who Paid Equally? A Study of the UK-continental Europe Pay Gap[J]. Finance Research Letters, 2018. 29(C): 169-177.
[2] Jiang Anyin, Zhang Qingguo. Internal pay gap, policy burdens, and state-owned enterprises to fulfill social responsibility - in the case of G province [J]. Jilin university journal of social science, 2021, 21 (4): 81-93 + 235-236.
[3] Yu Liangchun, Men Qi. Empirical analysis of the industry monopoly and income gap of our country, in the oil industry and textile industry, for example [J]. Business Review, 2013 (01): 106-110.
[4] Long Y, Zhang S Y. Research on income mobility under the background of continuous widening income gap [J]. Journal of Zhejiang Gongshang University,2011,(01):66-72.]
[5] Ma L. An empirical study on the formation mechanism of inter-industrial income gap: A case study of Zhejiang Province [J]. Technical Economics and Management Research,2010(S2):107-110.
[6] Martins P S. Industry Wage Premia: Evidence from the Wage Distribution [J]. Economics Letters, 2004(83):157-163.
[7] Sun Jingshui, Yu Siyuan. Research on the influencing factors and contribution rate of inter-industrial income gap: based on the analysis of 4085 questionnaires from 19 industries in China [J], Journal of Shanxi University of Finance and Economics,2014(2):16-26.
[8] Lazear E P, Rosen S. Rank-Order Tournaments as Optimum Labor Contracts[J]. Journal of Political Economy, 1981, 89(5): 841-864.
[9] Fan S W. The impact of executive pay gap on technological innovation performance [J]. Technoeconomics and Management Research,2022(09):51-56. (in Chinese)
[10] Zhang Rui, WANG Yangyang, Liao Jia. Research on innovation incentive effect of promotion tournament for Key Subordinate executives [J]. Accounting Research,2020(02):143-153.
[11] Liu W W, Zhang Y. External Salary comparison and enterprise performance: from the perspective of management and ordinary employees [J]. China Soft Science,2020 (05):104-117.
[12] Wang Xin-lan, Shen Qiu-feng. Does the external pay gap affect corporate risk-taking? Communication of Finance and Accounting,2023(10):54-58.
[13] Chen Ding, Li Yutong, Zhang Shun. Pay gap, managers' relative psychological perception and enterprise performance [J]. Journal of Beijing Technology and Business University (Social Science Edition),2019,34(04):87-99.
[14] Li Qian, Jiao Hao. Pay gap and firm performance within the top management team: a dual perspective of customer demand uncertainty and firm growth [J]. Business Management Journal,2021,43(06):53-68
[15] Zhang Z T. An empirical study on the impact of the internal pay gap on organizational future performance [J]. Accounting Research,2008(09):81-87.
[16] Xia N, Dong Y. Executive compensation, employee compensation and firm growth: Based on the empirical data of small and medium-sized listed companies in China. Accounting Research, 2014(9):89-95.