

A Review of the Impact of Internal Pay Gaps on Corporate Performance

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Abstract. According to tournament theory, internal pay gap is an important corporate pay incentive, and the existence of internal pay gap can improve the performance level of company. However, the social comparison theory believes that the widening of internal pay gap makes ordinary employees have unfair cognition and sense of exploitation, which is not conducive to the improvement of corporate performance. At present, there is no consensus on the empirical research conclusions of scholars. Some scholars advocate supporting the tournament theory; Some scholars support the combination of tournament theory and social comparison theory, that is, internal pay gap has an inverted U-shaped effect on performance. This paper integrates and summarizes the research on the influence of internal pay gap on corporate performance, in order to provide suggestions for corporates to formulate effective pay structure, which is conducive to the sustainable and healthy development of corporates.

Keywords: Internal pay gap; Corporate performance; Tournament theory; Inverted U-shaped curves.

1. Introduction

After the reform and opening up, in order to promote social development and enhance economic efficiency, the economy was revitalized as never before in accordance with the more efficient, the more distribution, while ensuring as much equity as possible, method of distribution, i.e. differential pay, was generally introduced. However, with the rapid development of market economy and fierce competition as well as the continuous improvement of executive compensation disclosure system, the "sky-high compensation" of senior executives has become a hot spot of concern. The income gap within corporates is gradually widening, resulting in a variety of unequal phenomena, and then the emergence of new social differentiation, corporates also appear stratification. Whether the salary gap is reasonable or not is more of a subjective feeling. If the salary distribution system is reasonable, the widening of the gap will be more conducive to the incentive of employees and the improvement of corporate performance. However, if the salary distribution system is not reasonable, even a small salary gap may discourage the enthusiasm of employees, which is not conducive to the improvement of corporate performance (Li Heng, 2021)^[1]

Salary is the main source of income for the vast majority of people. Whether it is for the sustainable development of corporates or for the state to maintain social fairness and stability and improve the quality of people's life, salary is the focus of government management. In order to strike a better balance between efficiency and fairness, and prevent the occurrence of sky-high salaries, many state-owned corporates have reformed their compensation systems. China has issued the Reform Plan for the Compensation System for Heads of Centrally administered Corporates, which limits the salaries of heads of centrally administered corporates. For the academic circle, the relationship between salary and corporate performance is also the key issue of research. Although many scholars have conducted in-depth studies on the relationship between corporate salary gap and corporate performance in various aspects, there are many factors affecting corporate performance, and the salary gap has not reached a universal conclusion due to the different statistical calibers of various studies. Is the pay gap of existing employees optimal? Can internal pay gaps promote employee productivity and thus improve corporate performance? How does the prevalence of internal pay gap affect corporate performance? Based on the above doubts, this paper summarizes and evaluates the influence of

internal salary gap on corporate performance, in order to provide suggestions for corporates to formulate effective salary structure, which is conducive to the sustainable and healthy development of corporates.

2. Related Concepts

2.1. Internal pay gap

"compensation" is translated from the western management compensation, and people have different names for it in different periods of history. In ancient China, "Feng Lu", "military pay" and "Gong Qian" can be regarded as the synonym of salary. Milkovich(2014) proposed that salary occurs between two parties in an employment relationship, and is a variety of tangible or intangible rewards provided by the employer to the employee. Pay Gap has gradually become a hot topic in relevant studies because it can effectively motivate employees and influence employee performance and corporate performance. Scholars have studied the concept of pay gap, its actual measurement, its impact, and its effect on key organizational variables (such as performance). Gupta(2012)^[2] proposed that the pay gap can be expressed as the degree of difference in the pay of employees in an organization. On this basis, Pan Xin (2014)^[3] proposed that the pay gap of an organization reflects the distribution idea of an corporate. A larger pay gap reflects the fairness of an corporate, while a smaller pay gap reflects the equality of an corporate. The concept definition and measurement of pay gap may directly affect the objectivity of the mapping of pay gap to the principle of pay distribution.

In terms of comparison objects of pay gap, scholars adopt different classification methods according to different research objects. When studying the pay gap within corporates, Bloom(1999)^[4] divided the pay gap into horizontal pay gap and vertical pay gap, horizontal pay gap refers to the salary comparison of the same position level within a corporate or the salary comparison of employees at similar position level across organizations. The Vertical pay gap, also known as vertical pay gap, is generally used to compare employees at different levels within the same organization. In foreign academic researches, scholars pay more attention to the pay gap in different types of organizations, such as virtual team(Bloom,1999)^[4] and self-management team(Zhang,2016)^[5]. Domestic researches focus more on the effect of vertical pay gap in teams, which may be related to the release of the "salary limit" and the society's attention to the current situation of excessive executive compensation.

2.2. Corporate Performance

Academic circles have long paid attention to corporate performance, dating back to the 14th century, but the definition of corporate performance has not been unified. According to the existing literature, the definition of corporate performance can be divided into three perspectives: result-oriented, behavior-oriented and comprehensive oriented. The first result-oriented view holds that corporate performance refers to the results of various corporate activities conducted by corporates according to their goals (Wei Meng et al., 2017)^[6]. The second behavior-oriented view holds that corporate performance refers to the activities that corporates engage in, which is a kind of behavior (Campbell, 1990)^[7]. The third view of comprehensive orientation holds that corporate performance is the unity of corporate process and corporate results (Zhao Xing, 2015)^[8]. Under the modern corporate system, in order to alleviate the principal-agent problem caused by "separation of two rights", shareholders often establish effective compensation contracts with senior executives, and the results of corporate operations are more often used to measure executive compensation. Therefore, based on the research theme and data availability, this paper defines corporate performance as the corporate operating benefits and managers' performance during a certain operating period.

3. The influence of internal pay gap on corporate performance

3.1. Research on the positive effect of internal pay gap on corporate performance

According to the tournament theory, the salary of employees is determined by various factors such as their contributions to the company, skill rank and so on. Rosen(1986)^[9] believes that by setting a large salary gap, corporates can motivate employees' enthusiasm for work and motivation, and employees will work harder to obtain more generous salaries. Meanwhile, the phenomenon of large salary gap is also widespread in corporates.

In foreign studies supporting the tournament theory, Smulowitz(2021)^[10] took the Bank of the United States from 2007 to 2013 as a sample to test the promoting effect of pay gap on corporate performance. The study showed that high pay gap would have a positive impact on corporate performance, while low pay gap would have an unsatisfactory impact on corporate performance. Wojciech and Fernando(2021)^[11] believe that under certain conditions, widening the internal salary gap can, on the one hand, motivate employees to strive for promotion, and on the other hand, retain talents through generous compensation, so as to improve enterprise performance. ZHU's (2020)^[12] study also verified that the internal pay gap of senior executives has a relatively significant positive effect on corporate performance. Downes and Choi(2014)^[13] not only verified the positive correlation between the pay gap and corporate performance through empirical analysis, but also showed that with the increase of the pay gap, the financial risk of enterprises would be increased correspondingly. Pablo, Laura(2019)^[14] and GUO(2021)^[15] proved that the pay gap of non-CEO executives has a positive impact on corporate performance.

There are numerous domestic studies on the salary gap and corporate performance. Some scholars also believe that the tournament theory has strong applicability in China's listed corporates, that is, the gradual expansion of the salary gap can effectively enhance the work enthusiasm of employees and thus improve the corporate performance of corporates. Lin Junqing et al. (2003)^[16] studied the internal pay gap of senior executives and corporate performance and found that the positive effect of the pay gap between ceos and non-ceos was greater than the negative effect, which was conducive to improving the company's future performance. Li Shaolong, Long Lirong and He Wei (2012)^[17] took A-share listed companies from 2008 to 2009 as research samples, and focused on exploring the mechanism of executive pay difference on corporate performance. The analysis of data showed that the greater the salary difference between ceos and non-ceos, the greater the promotion effect on performance, and the technology intensity in the industry inhibited it. Liang Hong (2021)^[18] conducted an empirical study on the listed companies in 2019, and the results showed that the executive pay gap had a significant promoting effect on corporate performance. It should be pointed out that the state-owned corporates had a more perfect system and more fair and transparent promotion mechanisms. Therefore, the internal salary gap of the senior executive team in state-owned corporates has a more prominent incentive effect on employees than that in private corporates. Xu Moh Enthalpy and Sun Dantong (2021)^[19] take the financial data of listed corporates in the entrepreneurial manufacturing industry from 2017 to 2019 as samples and use multiple regression empirical evidence to test that the internal salary gap of the senior management team has a significant promoting effect on the corporate performance of corporates. Corporates must design the salary structure scientifically and reasonably, and make full use of the incentive effect of the salary difference to generate huge feedback for the company. Wu Chengcheng et al. (2020)^[20] took the financial data of listed corporates from 2009 to 2018 as samples to conduct an in-depth study on the relationship between executive pay gap and corporate performance, and verified the promoting effect of executive pay gap on corporate performance. Moreover, through the heterogeneity analysis of corporates, it is found that the executive pay gap of state-owned corporates has a better promoting effect on corporate performance than that of non-state-owned corporates. He Hongwei and He Hongli (2018)^[21], taking listed companies from 2011 to 2016 as research objects, also analyzed the promoting effect of internal and external pay gap on corporate performance in heterogeneous enterprises and verified its positive promoting effect. Liang Shangkun, Zhang Yu and Wang Yanchao (2019)^[22]

studied certain internal pay gap had a significant promoting effect on the increase of corporate performance, which supported the championship theory.

Although the above studies on pay gap and corporate performance have achieved rich results, it should not be ignored that the executive pay gap is only considered from a single level, and the mechanism of the more influential pay gap between senior executives and ordinary employees on corporate performance has not been considered. When analyzing the relationship between salary gap and enterprise performance, Liu Chun and Sun Liang (2010)^[23] made an empirical analysis based on the endogenous perspective of salary and performance, and showed that a large salary gap in state-owned enterprises can better promote the enthusiasm of employees and improve the performance of the company's operation and management. Dai Yun and Shen Xiaoyan (2013)^[24] respectively studied enterprises with different levels of competition, and the results showed that the pay gap had a more significant positive effect on enterprise performance in monopoly enterprises. Chang Jian (2014)^[25] listed corporates from 2007 to 2010 as the object, classified the samples according to the average salary of the employees of the company, and made an in-depth study on the mechanism of the salary gap between senior executives and ordinary employees in different levels of corporates on corporate performance, so as to give suggestions for the development of detailed systems for corporates. Finally, it is found that the salary gap has a positive effect on corporate performance. Not only that, but this study also proves that the higher the salary gap in corporates with higher average salary level has a more significant promoting effect on corporate performance than that in corporates with smaller average salary level. Sun Qiheng and Zhang Lanxia (2021)^[26] took listed manufacturing corporates on GEM that applied for invention patents from 2013 to 2018 as research objects, and used their financial data to study the relationship between executive - employee pay gap and corporate innovation performance under the nature of ultimate controller. Through empirical test, it is found that the pay gap between non-state-owned corporates' executives and ordinary employees has a more significant promoting effect on corporate performance than that of state-owned corporates.

In order to analyze the relationship between pay gap and performance in different types of corporates in detail, quite a number of scholars have conducted sample comparison studies. Based on the full sample study, specific opinions can be provided for corporates with different ownership properties through sub-samples. Xu Yixuan (2010)^[27] took the financial data of A-share corporates as samples to conduct an empirical study on companies with different ownership properties and found that the pay gap had a more positive impact on the corporate performance of non-state-owned corporates. Cao Hui (2015)^[28] comprehensively analyzed the mechanism of the pay gap between state-owned corporates and senior executives, as well as between senior executives and employees, on corporate performance in a unified framework, and the results showed that the influence of the pay gap on corporate performance varied with the change in the nature of corporates. For state-owned corporates, a large executive-employee pay gap will cause employees' negative emotions, thus affecting the work efficiency, but a large internal executive pay gap can improve the satisfaction of senior executives, so as to be more enthusiastic about work, which is conducive to the improvement of corporate performance.

3.2. Research on the negative effect of internal pay gap on corporate performance

For different corporates, the effect of a large salary gap is not the same. Some studies show that a large salary gap is often counterproductive, which will not only have no good results, but also hinder the solidarity and cooperation among employees, thus leading to the regression of corporate performance. Lee et al. (2019)^[29] dug into the impact of employee salary gap on enterprise performance and found that the larger the salary gap, the more difficult it is to build harmonious teamwork atmosphere among employees, which is obviously not conducive to the improvement of enterprise performance. Colak et al. (2021)^[30] will further reduce the corporate performance of the corporate, and even aggravate social inequity, leading to the reform of the corporate and even the government's salary system. Lei (2019)^[31] also verified the negative impact of pay gap on corporate performance.

Many domestic scholars believe that the pay gap will have a negative effect on corporate performance. Zhang Zhengtang (2007)^[32] took listed companies from 2001 to 2004 as the research object and found through empirical analysis that salary gap would affect team cooperation and fail to improve corporate performance. Li Wenjing and Hu Yuming (2012)^[33] took the state-owned listed manufacturing enterprises in Shanghai and Shenzhen A-market as the research object, and empirically-demonstrated that when the salary gap within state-owned enterprises is too large, the promotion effect on employee enthusiasm is not significant, and the incentive effect is more significant when the salary gap is small. Liu Ye et al. (2014)^[34] took 150 listed high-tech corporates from 2008 to 2012 as the research object, dug deeply into the mechanism of executive pay gap on corporate performance and whether the relationship between the two changes when there is a huge difference in industrial pay gap, and finally found that executive pay gap has a significant negative impact on corporate performance. However, its effect will not be immediate and there is a certain time lag. Moreover, through the comparison with the empirical analysis results of American high-tech corporates, it is found that the pay gap among the top executives of American corporates is generally higher than that of Chinese corporates. However, if corporates reduce the pay gap between the top executives, it will significantly promote the performance of corporates.

3.3. Internal pay gap to the corporate performance comprehensive effect research

In view of the pay gap, many empirical studies for "contingency" theory, emphasizes the compensation gap's influence on the corporate scale, namely pay the difference with the company's corporate performance is a kind of "inverted U" which have effect of interval relations, namely the pay gap in a positive impact on corporate performance within a certain range, but if the pay gap continues to expand, can produce adverse consequences.

Michael, Claus and Marina (2020)^[35] take listed enterprises in Denmark as objects, comprehensively consider human capital variables, divide employees into white collar and blue collar employees according to their pay grade, and conduct classification regression analysis. The results show that the salary gap among white collar employees has a first positive and then negative comprehensive effect on corporate performance, that is, within a certain range, the salary gap has a promoting effect on corporate performance, but once the threshold is crossed, the salary gap will have a hindering effect on corporate performance. However, there is no significant relationship between the pay gap among blue-collar employees and corporate performance. Atif (2020)^[36] found an "inverted U-shaped" relationship between executive-employee pay difference and firm performance.

In terms of domestic research, the research of Wang Huaming and Shi Xiaoming (2009)^[37] shows that the salary difference between management and ordinary workers has a nonlinear relationship with enterprise performance. In the corresponding category, the expansion of salary difference will promote the improvement of enterprise performance, but beyond this category, the expansion of salary difference will reduce the business performance of enterprises. Zhao Rui (2012)^[38] took listed domestic manufacturing enterprises from 1999 to 2009 as the research object and concluded that there was an "inverted U-shaped" relationship between pay gap and enterprise performance. When the promotion effect of tournament theory was greater than the negative impact of behavioral theory, the two presented a positive effect expressed by tournament theory. When the value is less than, both of them show the negative influence expressed by behavioral theory. Yu Fusheng and Zhang Ying (2013)^[39] took the listed enterprises in Shanghai and Shenzhen Stock Market from 2004 to 2010 as the research object, conducted an empirical study on the relationship between executive-employee compensation and corporate performance, and also verified the conclusion that there is an "inverted U-shaped" relationship between pay gap and corporate performance. The empirical results also show that the pay gap plays a significant role in promoting earnings management. Shi Yongshuan and Yang Hongfen (2013)^[40] took the listed enterprises in Shanghai and Shenzhen Stock Market from 2005 to 2010 as the research object, explored the relationship between the internal compensation of the senior management team and corporate performance, and verified the "inverted U-shaped" relationship between the two. Garnet Hong, Zhang Shimiao and Feng Zhaozhen (2013)^[41] took the financial data

of listed corporates as the research object and not only found the conclusion of the "inverted U-shaped" relationship, but also found that the salary gap in state-owned corporates has a greater impact on corporate performance than that in non-state-owned corporates. Lu Jun (2014)^[42] took listed enterprises in Shanghai and Shenzhen as research objects to deeply analyze the relationship between pay gap and corporate performance, and proved through robustness test that the relationship between absolute pay gap and relative pay gap and corporate performance showed an "inverted U-shaped" relationship. Gan Lona (2017)^[43] took 168 Shanghai and Shenzhen A-share companies from 2011 to 2016 as the research object, and also found the "inverted U-shaped" relationship between the salary gap and enterprise performance among new industries. Therefore, for enterprises, the salary gap should be controlled within a certain range, so as to help enterprises obtain the internal foundation for long-term development. Li Lu (2018)^[44] classified the samples according to property rights heterogeneity, compared and analyzed the mechanism and path of salary gap affecting enterprise performance, and finally found that the salary gap in state-owned enterprises has a significant role in promoting enterprise performance, while the salary gap in private enterprises has no obvious effect on improving enterprise performance. Zhang Rui, Liao Jia and Wang Yangyang (2018)^[45] took A-share listed companies in Shanghai and Shenzhen from 2006 to 2016 as objects to investigate the impact of the pay gap between key subordinate executives and CEOs on corporate performance and its volatility, and finally found that the pay gap can have both positive and negative effects on corporate performance. Ruan Ao, Sun Bo and Peng Biyu (2019)^[46] studied the data of listed companies from 2007 to 2016 and showed that the salary difference between CEO management and non-CEO management had a significant role in promoting enterprise performance. The compensation gap between non-CEO management has a comprehensive relationship of first positive and then negative impact on corporate performance.

4. Research on moderating variables of the relationship between internal pay gap and corporate performance

Shaw(2007) et al. ^[47]pointed out that the impact of pay gap on various outcome indicators of enterprises may be affected by various other factors. Therefore, most scholars add moderating variables when studying the relationship between internal pay gap and performance, that is to say, situational factors of corporates are taken into account. These situational factors can be divided into micro and macro levels. Since the research on the management pay gap is similar to that on the internal pay gap, this section also reviews the relevant research on the relationship between the management pay gap and performance with the addition of the moderating variables.

At the micro level, moderating variables include management power, property right nature, employee compensation level, corporate life cycle, characteristics of non-CEO, etc. Zhang Liping et al. (2013) ^[48] proved that both the power of management and the nature of state ownership have inhibitory effects on the performance incentive effect of internal pay gap, and the nature of state ownership strengthens the inhibitory effect of management power. Chang Jian (2014)^[49] argued that state-owned corporates would weaken the positive incentive effect of internal pay gap on corporate performance, and employee compensation would play a positive moderating effect on this positive relationship, supporting the efficiency wage hypothesis. Liang Shangkun et al. (2019)^[50] added the corporate life cycle as a moderating variable to the study of the relationship between the two, and found that as the corporate life cycle went on, the value enhancing effect of the internal pay gap showed a gradual weakening trend. Luo J H(2020)^[51] found that there is an approximately inverted U-shaped relationship between internal pay gap and corporate performance, in which state-owned ownership plays an important moderating role. Talavera et al (2021)^[52] added the adjustment of age diversity of non-CEOs and took China's listed companies from 2005 to 2015 as the research sample to prove empirically that it adjusted the relationship between CEO pay gap and performance. When non-CEOs came from the same age group, the tournament effect would be enhanced. That is, age difference has a negative moderating effect, and this moderating effect is more significant in state-owned enterprises and cultural areas of the North China Plain. After expanding the internal pay gap to a wider range of

pay gap, including the management pay gap, the micro-moderating variables also include the degree of communication of the pay system (Shaw J. D, 2007)^[47], characteristics of CEO (Kale, 2010)^[53], external unfairness of executive compensation (Huang Hui, 2012)^[54], control rights of controlling shareholders (Gong Na, 2015)^[55], ownership structure (Huo Xiaoping, 2019)^[56], relative psychological perception of managers (Chen Ding, 2019)^[57],

Macro-level moderating variables include regional factors, industry factors, marketization process, and government intervention degree. Wang Huaming and Shi Xiaoming (2009)^[37] discussed the relationship between different ownership properties and economic development levels, and argued that employees in non-state-owned corporates and areas with higher economic development levels could afford a higher salary gap. Liu Chun and Sun Liang proved the robustness of the positive relationship between state-owned and listed companies by changing the measurement methods of internal salary gap and performance, and the positive relationship weakened with each year. The results of sub-sample regression showed that the decline rate in central and western regions was significantly less than that in coastal areas. Their further research results show that the lower the relative position of the corporate compensation industry and the difficulty of obtaining information within the industry, the greater the incentive effect of the salary gap, and these regulatory effects are also affected by the region. YMC Yeh (2013) et al.^[58] studied the heterogeneity of industries After empirical analysis, Lu Jun (2014)^[42] found that the nature of the corporate, the nature of the industry it is in, the degree of perfection of the compensation system and the degree of government intervention all play a moderating role in the inverted U-shaped relationship between the internal pay gap and performance. Hu Xiuqun (2016)^[59] investigated the influence of marketization process on the relationship between the two and the differences in the moderating effects of marketization process under different property rights.

After expanding the internal salary gap to a wider range of salary gap, including the salary gap of management, the macro adjustment variables also include environmental uncertainty (Xu Lin, 2015)^[60] and national characteristics (Burns, 2017)^[61].

5. Review and prospect of existing research

By summarizing the existing literature, it is found that the theory of explaining the salary gap and corporate performance has been gradually improved. The empirical research at home and abroad has obtained convincing conclusions from the perspectives of market competition degree, industry type and corporate attributes. However, it has to be pointed out that the relevant studies can not form consistent conclusions. There is no denying that the existing researches have made great contributions to the research field of salary gap, but there are still many shortcomings in the relevant researches:

(1) In most studies, when analyzing the influence of internal pay gap on corporate performance, industry variables are used as the control variables of industry analysis, while ignoring the influence of internal pay gap. Industry salary level is often an important reference basis for companies to formulate salary systems. At the same time, it is also the anchor point for employees to conduct self-salary evaluation, which affects employees' evaluation of current salary satisfaction, and then affects their work attitude. Therefore, the influence of industry variables on corporate performance should be taken into account in future studies.

(2) Many studies focus on the impact of the pay gap between the company's top management teams or the pay gap between executives and employees on corporate performance, but rarely take the two into account. Therefore, future studies can combine the pay gap between executives and executives and between executives and employees to explore the impact of the overall internal pay gap on corporate performance.

References

- [1] Pay gap and corporate performance [J]. *Journal of Guiyang University (Natural Science Edition)*, 2021, 16(04): 24-27.
- [2] Gupta N, Conroy S A, Delery J E.T many faces of pay variation [J]. *Human Resource Management Review*, 2012, 22(2): 100-115.
- [3] Pan Xin, Li Shaolong, He Wei, Research Progress on the relationship between executive team pay differences and corporate performance [J]. *China Human Resource Development*, 2014, 000(003): 43-49.
- [4] Bloom M. The Performance Effects of Pay Dispersion on Individuals and Organizations [J]. *Academy of Management and Journal*, 1999 (1): 25 to 40.
- [5] Zhang Rukai. Research on the Multi-level Influence Mechanism of Team compensation Distribution on Job Performance [D]: Doctoral Dissertation. Nanjing: Nanjing University, 2016.
- [6] Wei Meng. A study on the influence mechanism of financing structure on corporate performance [D]. Shanghai Academy of Social Sciences, 2017.
- [7] Campbell J P. Modeling the performance prediction problem in industrial and organizational psychology.1990.
- [8] Zhao Xing. An Empirical Study on the Impact of Corporate Culture on Corporate Performance of CRRC Corporation [D]. Dalian University of Technology,2015.
- [9] Rosen, S.1986.Prizes and incentives in elimination tournaments. *American Economic Review*, 76:701-715.
- [10] Smulowitz SJ, Almandoz J. Reprint of "Predicting employee wrongdoing: The complementary effect of CEO option pay and the pay gap" [J]. *Organizational Behavior and Human Decision the Processes*, 2021162:123-135.
- [11] Przychodzen Wojciech, Gomez Bezares Fernando. CEO-Employee Pay Gap, The Productivity and Value Creation [J]. *Journal of Risk and Financial Management*, 2021, 14 (5).
- [12] ZHU Jiajun, GAO Jing, TAN Hongping. Data of CEO power,chair-CEO age dissimilarity and pay gap of Chinese listed corporates[J]. *Data in Brief*, 2020, 32.
- [13] Patrick E. Downes, Daejeong Choi. Employee reactions to pay dispersion: A typology of existing research [J]. *Human Resource Management Review*,2014,24(1).
- [14] Pablo de Andres, Laura Arranz-Aperte.Are European CEOs paid equally? A study of the UK-continental Europe pays gap[J]. *Finance Research Letters*,2019(29):169-177.
- [15] Diaoyu Guo, Vishal K. Gupta, William E. Jackson III, Sandra C. Mortal. Is there a racial gap in CEO compensation? [J]. *Journal of Corporate Finance*, 2021(69) :102043.
- [16] Lin Junqing, Huang Zuhui, Sun Yongxiang. [Lin Junqing, Huang Zuhui, Sun Yongxiang. Compensation gap, corporate performance and governance structure of top management team [J. *Economic Research*,2003(4):31-40.
- [17] Li Shaolong, Long Lirong, He Wei. Research on the relationship between executive team pay differences and corporate performance: The cross-layer moderating effect of industry characteristics [J]. *Nankai Management Review*,2012,15(04):55-65.
- [18] Liang Hong. Research on executive pay gap, property rights nature and corporate Performance: A Case study of Anhui Listed Companies [J]. *Shanghai Commerce*,2021(04):154-156.
- [19] Xu Mo Stewed, Sun Dantong. Research on the relationship between executive compensation incentive and corporate performance of Listed manufacturing companies [J]. *China Economic & Trade Guide (Middle)*,2021(04):122-124.
- [20] Wu Yueyue, Wu Ziai, Song Guie, Chen Suping. The impact of executive compensation and executive pay gap on corporate performance: An empirical study based on listed agricultural companies [J]. *Journal of Chongqing University of Science and Technology (Social Science Edition)*,2020(06):43-48.
- [21] And Hong Wei, and Hong Li. Research on Equity of Executive Compensation, Property right nature and Corporate Performance: Empirical data from listed companies in Shanxi Province [J]. *Friends of Accounting*,2018(20):91-95.
- [22] Liang Shangkun, Zhang Yu, Wang Yanchao. Internal pay gap and corporate value: A New Exploration based on Life Cycle Theory [J]. *Journal of Financial Research*,2019(04):188-206.
- [23] Liu Chun, Sun Liang. Internal Pay gap and Corporate Performance: Empirical evidence from State-owned listed companies [J]. *Nankai Management Evaluation*,2010, (2):30-39.
- [24] Dai Yun, Shen Xiaoyan. Research on the Relationship between executive-employee pay gap and corporate Performance in monopoly corporates [J]. *Journal of Nantong University (Social Science Edition)*,2013,29(06):110-116.
- [25] Chang Jian. Internal Pay Gap and Corporate Performance: An Empirical Study Based on Listed Companies [J]. *Southern Economics*,2014, (8): 71-90.
- [26] Sun Qiheng, Zhang Lanxia. *Journal of Finance and Accounting*,2021(07):66-69+75.
- [27] Xu Yixuan. Internal Pay Gap, Corporate Performance and Corporate Governance: Empirical Evidence from China's Listed Companies [J]. *Journal of Shanxi University of Finance and Economics*,2010,32(07):86-93.

- [28] Cao H. Pay gap and corporate performance: A Comparative study of State-owned and non-state-owned listed companies [J]. *Journal of Finance and Accounting*,2015(18):56-58+62.
- [29] Gilsoo Lee, Sam Yul Cho, Jonathan Arthurs, Eun Kyung Lee. CEO pay inequity, CEO-TMT pay gap, and acquisition premiums [J]. *Journal of Corporate Research*,2019 (98) :105-116.
- [30] Gonul Colak, Dimitrios Gounopoulos, Panagiotis Loukopoulos, Georgios Loukopoulos. Tournament incentives and IPO failure risk [J]. *Journal of Banking and Finance* ,2021 (130): 106193.
- [31] Qianhua Lei, Rui Lu, Liuyang Ren. Non-CEO top managers' monitoring power and CEO pay-performance sensitivity in state-owned corporates: Evidence from Chinese state-owned listed corporates[U]. *China Journal of Accounting Research*, 2019(12): 411—430.
- [32] Zhang Zhengtang. Top Management team Collaboration Needs, Pay Gap and corporate Performance: A competition theory perspective [J]. *Nankai Management Review*,2007,10(02):4-11.
- [33] Li Wenjing, Hu Yuming. Who is motivated by the pay gap within soes? [J]. *Economic Research*,2012,47(12):125-136.
- [34] [Liu Ye, Pei Dongxue, Liu Weinan. An Empirical Study on Pay Gap, Governance Structure and Performance of high-tech Companies -- and a Comparative analysis with American high-tech Companies [J]. *Industrial Engineering and Management*,2014,19(05):82-89.
- [35] Michael Oberfichtner, Claus Schnabel, Marina Topfer. Do unions and works councils really dampen the gender pay gap? Discordant evidence from Germany[J]*Economics Letters*, 2020 (196): 109509.
- [36] Muhammad Atif, Allen Huang, Benjamin Liu. The effect of say on pay on CEO compensation and spill-over effect on corporate cash holdings: Evidence from Australia[J]. *Pacific-Basin Finance Journal*, 2020 (64) :101105.
- [37] Wang Huaiming, Shi Xiaoming. An empirical analysis of the impact of executive-employee pay gap on corporate performance [J]. *Economic and Management Research*,2009(08):23-27.
- [38] Zhao Rui. Executive-employee Pay Gap and Corporate Performance: An Empirical Study based on Panel Data of Listed Manufacturing companies in China [J]. *Economic Management*,2012,34(05):96-104.
- [39] Yu Fusheng, Zhang Ying. Pay gap and earnings management [J]. *Economic Problems*,2013(04):112-117.
- [40] [Shi Yongshuan, Yang Hongfen. An empirical study on the Impact of Internal and external pay Gap on Corporate Future Performance [J]. *Economic Jingwei*,2013(01):104-108.
- [41] Garnet Hong, Zhang Shimiao, Feng Zhaozhen. Research on the Relationship between pay gap and Corporate Performance of Listed Companies Based on Panel Data [J]. *Contemporary Economic Science*, 2013,35(04):64-73+126.
- [42] Lu Jun. Heterogeneous corporates, pay gap and corporate performance [J]. *Research on Financial Issues*,2014(01):71-79.
- [43] Gan L N. The impact of executive and employee pay gap on corporate performance [J]. *Jiangxi Social Sciences*,2017,37(08):216-221.
- [44] Li L. Analysis of the mechanism and path of pay gap affecting corporate performance from the perspective of property rights heterogeneity [J]. *Corporate Economics Research*,2018(07):94-96.
- [45] [Zhang Rui, Liao Jia, Wang Yangyang. Key subordinate executives-CEO pay Gap and Corporate Performance and its Volatility: Empirical evidence from China's securities Market [J]. *Securities Market Review*,2018(09):11-21.
- [46] Ruan Ao, Sun Bo, Peng Biyu. Can Pay Gap within executive Team Promote innovation Performance? -- An empirical study based on vertical pay gap and horizontal pay gap [J]. *Journal of South China Normal University (Social Science Edition)*,2019(04):130-139+191.
- [47] Shaw J.D. Gupta N. Pay System Characteristics and Quit Patterns of Good, Average and Poor Performers. *Personnel Psychology*, 2007,60(4): 903-928.
- [48] Zhang Liping, Yang Xingquan, Chen Xudong. Management Power, Internal pay Gap and corporate value [J]. *Economics and Management Research*,2013(05):5-17.
- [49] Chang Jian. Internal Pay Gap and Corporate Performance: An Empirical Study Based on Listed Companies [J]. *Southern Economics*,2014(08):71-90.
- [50] Liang Shangkun, Zhang Yu, Wang Yanchao. Internal pay gap and corporate value: A New Exploration based on Life Cycle Theory [J]. *Journal of Financial Research*,2019(04): 188-206.
- [51] Luo J H, Xiang Y, Zhu R When Are Pay Gaps Good or Bad for Corporate Performance? Evidence from China[J]. *Management and Organization Review*, 2020: 1-27.
- [52] Talavera O, Yin S, Zhang M. Tournament incentives, age diversity and corporate performance[J]. *Journal of Empirical Finance*, 2021(2): 139-162.
- [53] Kale J.R., Reis E, Venkateswaran A. Rank-Order Tournaments and Incentive Alignment: The Effect on Corporate Performance. *Journal of Finance*,2010,64(3):1479-1512.

- [54] Huang Hui. External Unfairness, Internal Disparity and Corporate Performance of Executive Compensation [J]. *Economic Management Journal*,2012,34(07); 81-92.
- [55] Gong N.Empirical analysis of the relationship between executive pay gap, Controlling shareholders and performance of private listed companies [J]. *Journal of Central University of Finance and Economics*, 2015(07): 64-73.
- [56] Huo Xiaoping, Li Huawei, Qiu Sai. Equity structure, executive pay gap and Corporate Performance [J]. *Friends of Accounting*,2019(18): 25-31.
- [57] Chen Ding, Li Yutong, Zhang Shun. Pay gap, managers' relative psychological perception and corporate performance [J]. *Journal of Beijing Technology and Corporate University (Social Science Edition)*,2019,34(04):87-99.
- [58] YMC Yeh, L Yingfen, S Yuting. Tournament theory's perspective of executive paygaps.2013(66): 585-592.
- [59] Hu Xiuqun. Research on Incentive effect of Executive and Employee pay gap under regional marketization process [J]. *Journal of Management*,2016,13(07): 980-988.
- [60] Xu Lin, Liu Chunlin, Yang Xinyue. The Impact of compensation differences among top management teams on corporate performance: A moderating effect based on environmental uncertainty [J]. *Economic Management*, 2015,37(04): 61-70.
- [61] Burns N, Minnick K,Starks L. CEO Tournaments: A Cross-Country Analysis of Causes,Cultural Influences,Consequences[J]. *Journal of Financial & Quantitative ,52 Analysis*, 2017 (2): 519-551.
- [62] Jensen Michael C., Meckling William H. Theory of the corporate: Managerial behavior, agency costs and ownership structure[J]. *Journal of Financial Economics*,1976,3(4):305-360.
- [63] Michael C.Jensen,Kevin J.Murphy. Performance Pay and Top-Management Incentives[J]. *Journal of Political Journal of Economy*,1990,98(2): 225-264.
- [64] Smulowitz S J, Almandoz J. Reprint of "Predicting employee wrongdoing: The complementary effect of CEO option pay and the pay gap"[U]. *Organizational Behavior and Human Decision the Processes*, 2021162:123-135.
- [65] Przychodzen Wojciech, GomezBezares Fernando. CEO-Employee Pay Gap, The Productivity and Value Creation [J]. *Journal of Risk and FinancialManagement*, 2021, 14 (5).