




HOW CAN FEMALE EXECUTIVES SHAPE THE EFFECTIVENESS OF EXECUTIVE COMPENSATION?- A MULTI-DIMENSIONAL APPROACH

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ABSTRACT

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This paper attempts to build and analyze a conceptual model to systematically study the impact mechanism of female executives on the following dimensions of executive compensation including pay-performance sensitivity, executive pay level, executive pay component and pay gap from multiple theoretical perspectives of managerial power, principal-agent and employee discrimination theory, etc. The paper concludes as follows: (1) seven specific impact mechanisms of female executives on executive pay-performance sensitivity have been identified including enhancing monitoring role, lowering insider trading, increasing remuneration disclosure and adopting more balanced setting rules; (2) six specific impact mechanisms of female executives on executive pay level have been clarified such as reducing corporate tax avoidance, mitigating unethical earnings manipulation behavior or accounting fraud behavior and choosing lower level of leverage ratio ;(3) it is found that female executives would enhance executive pay components diversity by adding additional pay components to compensation package, mainly including social responsibility-based pay, environmental performance-based pay, innovation performance-based pay and reducing extra unethical pay due to financial statement fraud or earnings manipulation and (4) female executives would enlarge executive-employee compensation pay gap, moderate the gender compensation gap among employees and narrow executive compensation gap due to the female executives' need for affiliation, etc. Taking 499 Chinese A-share listed companies selected in the corporate social responsibility rating report issued by Rankings CSR Ratings from 2012-2016 as the research sample, we examine the above theoretical propositions by adopting the multiple regression method based on OLS.

Contribution/Originality: This paper's primary contribution is finding seven specific impact mechanisms of female executives on executive pay-performance sensitivity, six specific impact mechanisms of female executives on executive pay level and female executives would enhance executive pay components diversity.

1. INTRODUCTION

In recent years there has been an ever-increasing focus on females in management roles, perhaps due to the fact that executives have made considerable advances. On the other hand, despite improvement in overall employment trends, females still remain underrepresented as a whole as top executives and CEOs, making gender a relevant topic of consideration for both researchers and practitioners. The increased presence of female executives and directors in recent years has resulted in a subset of the literature suggesting that female executives play a major

role in setting executive compensation. Such studies generally report that the presence of female executives or board members would reduce or enhance the degree to which the rationality of executive compensation can reach.

The mostly mentioned rationale offered for the documented difference in setting executive compensation between men and women is that women are more risk-averse and more likely to follow ethical standards. Hence, male executives tend to exhibit more hubris in executive compensation decision making than their female peers. Though prior research has provided some insight into the role of female executives in manipulating executive compensation, the literature is nascent and the reported results are scattered. To be specific, the existing literature on this topic fails to address the following points: (1) To capture and describe the effects of female executive compensation on multiple dimensions within an integrated research framework; (2) To identify and describe as many as possible association paths between female executives and each single dimension of executive compensation from more theoretical perspectives beyond risk-aversion and ethical behavior.

In order to fill this gap, this paper attempts to systematically investigate the impact mechanisms of female executives on executive compensation from both multi-dimensional and multi-theoretical perspectives by constructing and analyzing a conceptual model shown as Figure 1.

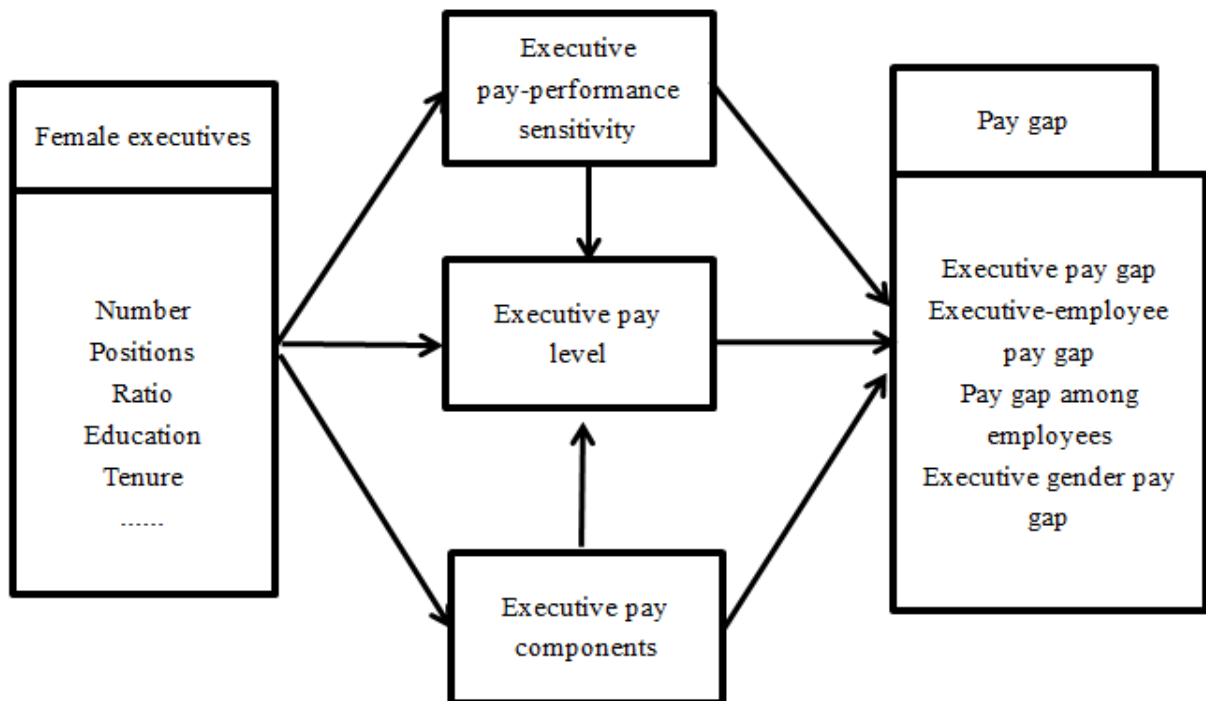


Figure-1. Conceptual model on the manipulation effects of female executives on executive compensation: A multi-dimensional perspective.

2. IMPACT MECHANISMS OF FEMALE EXECUTIVES ON PAY-PERFORMANCE LINK

Agency theory suggests that high pay-performance sensitivity of executive compensation is an important motivation mechanism to the CEO to improve corporate performance. Literature has proven the positive effect of female executives on pay-performance sensitivity under the background of European companies (Cambini *et al.*, 2018) Middle East and North African companies (Ahmed *et al.*, 2019). American companies (Gomez-Mejia *et al.*, 2019) and Chinese companies (Zhang *et al.*, 2019) and so on. Seven specific impact mechanisms of female executives on executive pay-performance sensitivity are captured in the literature, respectively (1) enhancing monitoring role, (2) lowering insider trading, (3) increasing remuneration disclosure, (4) adopting more balanced setting rules, (5) respecting shareholders' requirements, (6) favoring higher social responsibility performance, and finally (7) being better at performing strategic execution than males.

First, facing the fact that under the higher participation degree of female executives in corporate governance practices, the executive pay-performance sensitivity is higher than in male-dominated firms, it seems that female

executives provide an incentive as well as a monitoring effect. Moreover, when the female executives holds the majority of the top positions, the pay-performance sensitivity is less affected by the CEO power, and the CEOs are less likely to be entrenched with boards and succeed in raising their pay. Besides, gender diversity of compensation committee enriches the number of directorships held by members and the number of committee meetings, which can enhance the monitoring role of the board. Hence higher presence of female directors on board can improve significantly the sensitivity of executive compensation to performance.

Second, because insider trading profits represent an alternative form of executive compensation, it can be expected that firms will consider the executive compensation component provided by insider trading when designing compensation packages. Considering the fact that insider trading proxy the private benefits of executives (CEOs), a decreased level of insider trading is significantly associated with an increased pay-performance sensitivity (Zhang *et al.*, 2005). Presence of female executives is found to be negatively related to insider trading due to their higher ethical preferences than male executives. Hence female executives can increase pay-performance sensitivity via lowering insider trading.

Third, the increased shareholder oversight and disclosure about executive remuneration can determine the executive pay-performance link. To be specific, the increased sensitivity of reported executive compensation to firm performance is found evidence to be primarily related to the enhanced remuneration disclosure and the stricter non-binding shareholder vote on the compensation report (Clarkson *et al.*, 2011). Higher ratio of female executives in the TMT would draw higher attention from shareholders, and furthermore, female executives have stronger intention to enhance remuneration disclosure to stakeholders. Hence female executives would increase executive pay-performance sensitivity via enhancing shareholder oversight and remuneration disclosure.

Fourth, managerial power theory predicts an unbalanced executive pay-performance sensitivity conditioned on firm performance. Based on this theory, it has been confirmed that when the CEO is more powerful in affecting his compensation scheme, he achieves a much higher pay-performance sensitivity in good periods in terms of firm performance, compared to similar powerful CEOs in bad periods of poor performance, and also compared to less powerful CEOs in good periods of higher firm performance (Amzaleg *et al.*, 2014). Female executives can moderate the too higher pay-performance sensitivity in good periods of better performance due to their risk aversion, while can increase the too lower pay-performance sensitivity in bad periods of worse performance due to their higher ethical preferences. In other words, female executives can improve the balance degree of executive pay-performance sensitivity.

Fifth, following the literature of catering executives' incentives, it can be found that firms tie the executive compensation to accounting metrics according to shareholders' preferences for specific accounting goals. The improvement of accounting comparability improves the usefulness of equity compensation, so enterprises are willing to provide more equity compensation contracts to CEOs and improve their compensation performance sensitivity (Choi and Sang, 2019). Moreover, firms with powerful CEOs are less affected by shareholders' demand for accounting metrics when setting their own compensation (Marcet, 2018). Out of more intense ethical values as the agents, female executives would like to response to shareholders' demand more heavily than the male executives. In this case, with the increase of female executive proportion, the pay-performance sensitivity based on accounting metrics instead of stock market performance metrics would get higher.

Sixth, Firms increasingly tie their executives' compensation to CSR-related objectives. When firms have better corporate governance, non-formulaic, Subjective CSR-contingent compensation help improve companies' social performance (Ikram *et al.*, 2019). Female executives can enhance executive pay-performance sensitivities via positively determining accounting conservatism and social responsibility performance. Accounting conservatism has a positive relation with the executives' compensation-performance sensitivity after controlling for critical firm-specific factors and control variables (Zhang *et al.*, 2019) while female executives show higher accounting conservatism than male peers due to their gender nature. Therefore, TMTs with higher ratio of female executives

would intend to choose higher executives' compensation-performance sensitivity. Besides, the good social responsibility performance is closely and positively associated with performance sensitivity of executive pay, which suggests that social responsibility performance increases the relevance of potential positive consequences of executive pay-performance sensitivity (Jean *et al.*, 2019). Since it is well proved that female executives would invest higher effort in enhancing social responsibility performance than their male peers do (Maretno and Fabrizio, 2019) higher proportion female executives would increase pay-performance sensitivity via favoring higher social responsibility performance.

Seventh, compared with male executives, female executives are better at performing strategic execution in an uncertain world, and can manage to overcome any potential crisis or changes in industry structure that threaten strategic execution (Connell, 2019). Therefore, they have better confidence in reaching better firm performance, even under the poor conditions. In this case, female executives would set a higher pay-performance sensitivity for top executives compared with willingness of male executives.

3. IMPACT MECHANISMS OF FEMALE EXECUTIVES ON EXECUTIVE PAY LEVEL

Six specific impact mechanisms of female executives on executive pay level are captured in the literature, respectively (1) benchmarking effect, (2) reducing corporate tax avoidance, (3) mitigating unethical earnings manipulation behavior or accounting fraud behavior, (4) lowering the executives' legal and decision-making responsibilities, and (5) choosing lower level of leverage ratio.

First, when considering the effect of directors on designing top executive compensation, it is found strong evidence that directors' benchmarking compensation is closely related to the compensation of the top CEOs and executives. Causally, when the directors' benchmarking figures overturns their excess compensation from negative to positive, the powerful CEOs and top executives would be more likely to have similar upward change in the following year (Francis *et al.*, 2019). As for female directors, their benchmarking objects are mostly located in the median executive compensation level among the same industry, while the male directors usually choose the highest compensation level of the top executives among the same industry (Albuquerque *et al.*, 2013). In addition, diversity on the corporate board could contribute to improving equality in pay (Mostak *et al.*, 2019). Therefore, higher presence of female directors lower the growth rate of top executive compensation level due to their lower benchmarking level relative to their male peers in setting executive compensation. This effect of female executives on executive compensation sheds new light on the process of the executives compensation design, in regard to the information being utilized in the design procedure.

Second, there is a positive and significant relationship between executive compensation and corporate tax avoidance, which enhances the willingness of top managers to engage in risky activities that provide them additional pay by extracting extra rents from typical tax-saving positions (Jihene and Moez, 2019). However, it is found a negative association between variable executive compensation and tax avoidance in well-monitored firms, which is defined by owning higher ratio of female executives in TMTs because female executives are regarded as effective monitoring mechanisms (Frye and Pham, 2018). Hence, there is a moderating effect of female executives on the relation between CEO compensation and tax avoidance. Such facts suggest that female executives are an efficient corporate governance mechanism, while protecting firms against the opportunistic and fraudulent rent-seeking actions of top managers.

Third, CEOs are a group of overconfident and highly narcissistic figures, whose accounting choices are driven by the self-serving motive rather than by the intention to maximize firms' value. Moreover, a CEO who exhibits high narcissism is more likely to be involved in earnings management to compensate for her/his performance (Chen *et al.*, 2019). Female executives are reviewed as a group of figures who show higher respect towards rules and ethics compared with their male peers. It has been proved that female executives can moderate the relationship between CEOs' overconfidence and unethical behavior (Fengyi *et al.*, 2019). In other words, when female executives can

affect the accounting choices to a certain degree, their ethical attitudes would restrain the CEOs' unethical behavior essentially. For another example, [Liao et al. \(2019\)](#) confirm that firms with female CFOs or CEOs are significantly less likely to engage in accounting fraud by using a sample of Chinese listed firms for the period from 2003 to 2015. Referring to this logic, female executives can reduce the extra pay (rents) by mitigating unethical earnings manipulation behavior or accounting fraud behavior.

Fourth, CEOs of public firms, especially those are subject to higher scrutiny, such as larger firms and firms that are followed by more analysts and institutional investors, actually earn more than their counterparts in similar private firms. The reason may either be because rent extraction is easier in public firms than in private firms, or because managing a public firm requires additional legal and institutional responsibilities than operating and running an otherwise similar private firm. For the first reason, female executives can play an effective monitoring role in restraining the CEOs and other top executives' extra compensation; while for the second reason, since female executives can weaken the possibility of environmental or economic litigations ([Liu, 2018](#)) there is a relatively weaker need for the shareholders to afford the top executives (CEOs) due to bearing additional legal and institutional responsibilities. This conclusion is also supported by the latest research, which shows a negative effect for the presence of female directors on CEO incentive compensation by using a hand-collected dataset of FTSE350 UK public companies between 2007 and 2015 ([Alkalbani and Nasser, 2017](#))(1). Presence of females on board, especially on a compensation committee, plays a significant role in determining CEO pay by shaping shareholders' dissent via say-on-pay voting. A panel data from the UK's FTSE 350 firms between 2003 and 2015 finds that the gender diversity of directors on the compensation committee is associated with a reduction in shareholders' dissent via say-on-pay voting and leads to lower CEO cash growth in terms of bonus compensation ([Harakeh et al., 2019](#)).

Fifth, public scrutiny has negative effect on executive compensation level, especially their perk compensation. Firms with higher ratio of female executives in TMTs choose to alter levels of specific perk items more sensitively in response to increased public scrutiny and legislated compensation restrictions ([Carrothers, 2019](#)) since the female executives have higher intention to obey the requirements of external stakeholders than their male peers .

Sixth, male executives issue debt more often and adopt higher leverage ratio than female executives ([Huang and Kisgen, 2013](#)). Firms with higher leverage ratio tend to compensate top executives for their human capital risk, which leads to higher executive compensation as compared to that of firms with lower leverage ratio. Therefore female executives may lower executive compensation by choosing lower level of leverage ratio.

4. IMPACT MECHANISMS OF FEMALE EXECUTIVES ON PAY COMPONENT

Gender diversity can enhance executive pay components diversity and simultaneously change the relative importance of existing pay components. In practice, female executives (1)add additional pay components to compensation package, mainly including social responsibility-based pay, environmental performance-based pay and innovation performance-based pay; (2) reduce extra unethical pay due to financial statement fraud or earnings manipulation; and (3) conditionally decide the relative proportion of long-termed compensation, such as stock options.

First, diversity reputation has positive strong effects on firm performance ([Huda and Makeen, 2019](#)). Female executives must keep or even increase diversity reputation by acting as the expectation of "gender diversity" in order to realize their positive performance consequences. In other words, female executives should perform their leadership behavior very differently with that of the male executives instead of selecting the same management styles as their male peers. For example, female executives should pay more attention to social responsibility than the male executives do and there are also differences in risk preference between male and female CEOs. Female managed enterprises are less likely to be in high-risk industries ([Maretno and Fabrizio, 2019](#)). Moreover, board gender diversity intends to improve the communication of corporate social responsibility information in the marketplace by linking executive compensation with social responsibility performance ([Alazzani et al., 2019](#)). In

other words, female executives would diversify the executive compensation components by adding social responsibility performance-based pay into their compensation packages.

Second, firms that experience financial statement fraud pay their executives a higher proportion of equity compensation across the entire executive's tenure (Papakroni and Erlina, 2019) while female executives would directly reduce such a proportion due to their risk aversion and indirectly decrease such a proportion of equity compensation via restraining financial statement fraud out of their higher ethical preferences. Some evidence is found that executives who perpetrate fraud have idiosyncratic compensation preferences and negotiate different pay packages compared to other executives in the same firm. In other words, the TMTs with more executives perpetrating fraud would own more diversified compensation packages among each executive. According to a similar logic, female executives restrain the idiosyncratic compensation preferences of the other male executives via limiting the possibility of financial statement fraud.

Third, existing findings support the positive impact of TMTs with higher female representation on a proactive environmental agenda (Kumar and Paraskevas, 2018). Furthermore, the results reveal that the preference for a proactive environmental agenda in TMTs with increasing female representation can benefit from the female executives' additional presence in the functions of product management, financial resource management and supply chain management, where traditional is dominated by males. According to this logic, a firm with higher ratio of female representation intends to improve proactive environmental agenda by adding environmental performance-based compensation into executive compensation packages.

Fourth, there is a negative relationship between women on boards and earnings management in most of the related literature on the forming mechanism of earnings management from the perspective of gender diversity (Fan *et al.*, 2019) especially those female directors in supervisory positions (Koo and Kim, 2019). Moreover, when the number of women directors reaches three or more, earnings management declines greatly, and when women directors have higher education levels and more board experience, they can reduce earnings management to a great degree. As it has been found, female directors try to reduce the earnings management-linked compensation with the purpose of restraining earnings manipulation and thus improving earnings quality.

Fifth, stock options are one of the most widely used equity-based compensation mechanisms to mitigate misalignment between executives' and shareholders' interests. And yet, when opportunistic timing of option grants happens, it is suspiciously adopted as a method of extracting shareholders' wealth to executives, and especially CEOs. Opportunistic timing of option grants increases the incidence of lucky grants, and it is found that innovation decreases if CEOs received lucky grant in the previous year (Zalata *et al.*, 2019) implying that lucky grants would weaken the incentive for executives to invest in risky, long-term projects and negatively influence firm innovation performance. Female executive, out of their firm-serving motivations, would try to avoid opportunistic timing of option grants by reducing stock options grants when stock price is lower and appropriately increasing stock options grants in booming time. In addition, studies have found that the risk of price collapse has a significant negative impact on the power of CEOs which means the power of CEOs becomes smaller after the stock price collapse and it is more powerful for companies with female CEOs (Mirko *et al.*, 2018).

Sixth, from the perspective of principal-agent theory, the willingness of shareholders to endow female executives with stock options as the compensation is various in different life cycles. It has been found that executives that score high on conscientiousness are more likely to decrease their firm's strategic risk taking as the value of their stock options increases (Harper *et al.*, 2020). That is, the tendency of executives to become more risk averse in their strategic choices as their option wealth increases is stronger for more conscientiousness executives. In order to align incentives of executives with shareholder risk preferences, considering the higher conscientiousness of female executives than their male peers, when the firm is in a period needing higher risk-taking intention (e.g., startup period), the male executives should be endowed with more stock options, while when

the firm is in a period needing conservative risk-taking behavior (maturity period), the female executives may be endowed with more stock options than their male peers.

Seventh, firms with higher gender diversity offer compensation packages that incentivize top executives to adopt strategies that lower risk and promote long-term firm survival. On the one side, the presence of women in top managerial positions can benefit strategic orientation, as female executives are more likely to formulate and implement strategy through advanced management control tools than their male peers (Truant *et al.*, 2019). When female executives has certain power in determining executive compensation, they intend to realize their strategic orientation by enhancing the long-termed compensation components; On the other side, when women executives negotiate their salaries with the shareholders and the board, they may sacrifice high short-termed salaries for their future financial security (Ellwood *et al.*, 2019) signalling their gender traits differences with the male executives.

Eighth, even in the condition of isolating the specific effect of gender diversity on innovative performance from the effects of other forms of diversity, particularly in terms of age, nationality, status and seniority, the innovative performance of both individuals and teams would be increased by more females' participation at the team level and the firm level (Laure, 2009). Two factors of success for improving firm innovation performance are allowing more females executives to take an active part in core R&D and developing more appropriate diversity management strategies within research teams and firms. On the whole, female executives, rather than male executives, are more likely to introduce innovations, and more importantly, are better at executing R&D strategies (Naomi and Kazuhiko, 2013). Gender diverse actually encourage indirectly higher R&D investments that are better correlated with the organization goals by positively affecting equity based remuneration (Almor *et al.*, 2019). Female executives would enrich executives' compensation components via adding innovation-based compensation to the whole compensation packages.

5. IMPACT MECHANISMS OF FEMALE EXECUTIVES ON PAY GAP

Female executives can (1) enlarge executive-employee compensation pay gap, (2) moderate the gender compensation gap among employees, (3) narrow executive compensation gap due to the female executives' need for affiliation, (4) moderate executive compensation gap due to weak narcissistic personality, (5) set lower executive compensation gap with the purpose of maintaining good relationships, (6) narrow executive compensation gap by obeying male CEOs, (7) narrow executive gender compensation gap by taking the role as the chair of the compensation committee; and (8) narrow gender pay gap among employees.

First, both male and female workers receive small but significant compensation premiums when working with female executives against their tastes for discrimination, even when the researchers separate the discrimination premiums against female executives that would otherwise cause a bias from the firm-level unobserved output and unobserved workers' characteristics by gender of top managers. Though female executives lower the compensation growth by restraining their extra unethical pay extracted from manipulated earnings, financial statement fraud or too high pay-firm size link by utilizing their managerial power, the relationship between female executive numbers or ratio and executive compensation level is still positive in most of existing literature. The reason may rely on the interaction effects among female executives' heterogeneous human capital in improving decision-making, higher strategic execution capability and higher pay-performance sensitivity favored by female executives. Though the positive link between female executives and executive compensation and the link between female executives and employee compensation are rather similar in magnitude, the much higher original level of executive compensation than that of the employees' compensation determines that female executives actually enlarge executive-employee compensation pay gap.

Second, the share of female executives in the workplace has a causal impact in reducing the gender compensation gap among employees (Nikolaos *et al.*, 2019). The effect of female executives in narrowing the gender compensation gap among employees is more pronounced when employees are paid for performance, consistent with

the proposition that female employees are more likely to be paid equitably when executives have discretion in the way they reward performance and those executives are women. Such findings suggest a higher presence of women in executive and managerial positions can help tackle the gender compensation gap among employees.

Third, female executives' monitoring enhancing effect can be viewed as a substitution mechanism of compensation pay gap among executives (Restaino and Kate, 2016) which originally set as a monitoring mechanism motivating the non-executives to monitor their CEO. Hence the need for setting higher compensation pay gap with the purpose of stimulating monitoring among executives is weakened with the increase of female executive ratio in TMTs. Moreover, relational and reputational shocks derived from too high executive-employee compensation gap would lead to higher executives' turnover rate, which would naturally do harm to satisfy the female executives' need for affiliation. Hence, female executives with higher need for affiliation would attempt to restrain executives' turnover intention via pursuing for moderate executive compensation gap instead of enlarging it too much.

Fourth, at present the improvement of female executive ratio in TMTs mostly attribute to the external pressure. However, whether higher ratio of female executive can realize higher female executives' participation degree in governance practice or not depends on recognition degree of the original male executives towards female executives. If the male executives do not accept the female executives as "the insiders", female executives would fail to fit into the TMTs. In this case, female executives have to prove themselves to be the male executive intimate partners by exerting their power in reducing the pay gap among executives. Moreover, it has been proved that when female executives become the CEOs, they are less likely to exhibit narcissistic personality traits compared to men CEOs (Alicia *et al.*, 2019). And in companies with female directors, male CEOs are less likely to be stuck in capital choices (Shi *et al.*, 2019). In other words, female CEOs would narrow the pay gap among executives in charge of different functions out of weak narcissistic personality.

Fifth, as for the known meaning-making domains, including character, vision, relationships, wisdom, and inspiration, female executives have to imitate male executives who are better at character, vision, wisdom and inspiration in order to create meaning for themselves and their followers. However in this four domains male executive always dominate over female executives, at least in the mind of the followers. The only domain that female executives are better at is building relationships. Female executives' wishes to develop high-qualified behaviors across the domain of building relationships should make decisions based on a moral compass, invest in equality seeking behaviors, as well set aside certain time for self-reflection and self-development. Hence female executives would like to set lower executive compensation gap with the purpose of maintaining good relationships between themselves and the other male executives within the TMTs.

Sixth, CEO-female executives "language style matching", i.e., a form of unconscious verbal mimicry based on function words, can provide insights into social interaction processes between CEOs and female executives (Jie *et al.*, 2019). High CEO-female executives language style matching reflects female executives' strong attempts to ingratiate themselves with CEOs due to females' submissive gender characteristics. In the presence of high CEO-female language style matching, female executives are less likely to voice different viewpoints and challenge CEOs in strategic decision processes. Because ingratiation with CEOs would lead to the CEOs' positive evaluations of female executives, the later who exhibit higher language style matching with CEOs than male executives do will receive higher compensation and are more likely to become key members of the TMTs. In addition, the proposed relationships will be stronger when CEOs are more powerful.

Seventh, can adding females into the board reduce executive gender pay gap? Research results suggest it depends. It is not a matter of simply including more females into the board or integrating females into key board committees. If firms really attempt to stimulate change in executive gender pay gap through board diversity, then they need to empower women directors or executives and place them in the key leadership positions. It is found that females' integration on the board of directors and on the compensation committee has no significant impact on lessening the executive gender compensation gap (Cook *et al.*, 2019). However, when females affect compensation

decisions through the role as the chair of the compensation committee, the executive gender compensation gap is nearly diminished. Three mechanisms that may enable females to overcome limitations with respect to gender pay equity: integration, direct decision making and influence. Existing findings suggest that not all types of power are equal, and the more direct influence females executives have over compensation decisions, the smaller the executive gender compensation gap. Eighth, female leadership has a negative impact at the bottom of the female wage distribution (Flabbi *et al.*, 2019) which is consistent with a model of statistical discrimination in which female managers are better at interpreting signals of output from female employees than their male peers. Hence the gender pay gap among employees due to mis-interpreting the signals of output from female employees by the male executives is reduced by the female executives' equal understanding in the outputs of female and male employees.

According to the above theoretical analysis, we expect the following conclusions: (1) large proportion of female directors have a significantly positive impact on the compensation-performance sensitivity, (2) female executives have a positive moderating impact on the relation between executive-employee pay gap and corporate performance, (3) female executives tend to enhance pay level, (4) female executives have a negative effect on the executive-employee compensation gap and (5) female directors would narrow executive compensation gap.

6. EMPIRICAL TEST

6.1. Sample Construction

Our sample takes 499 A-share listed companies in the corporate social responsibility rating report issued by Rankins CSR Ratings (RKS) as the research objects, and spans the period 2012-2016. We apply a few restrictions to our sample according to following conditions: (1) drop companies that were publicly punished in those years, (2) drop companies with abnormal financial conditions and significant losses in the current year, then (3) drop companies that didn't disclose complete data in the current year. Our final sample consists of 2495 pieces of data. The data required for this study are mainly obtained through the following ways. We firstly purchase the corporate social responsibility rating data released in 2012-2016 through RKS. And then we download part of the data required for the study through CSMAR database according to the list of companies published by RKS, and compare some of the database data with the annual report data released by the company to ensure the reliability of the downloaded data. Finally we manually enter the information that cannot be downloaded in other databases. We mainly use spss23.0 for data processing.

Table-1. Variables definition.

Variable	Definition
PERF	Ratio of net profit relative to average total assets
CSR	Scoring results from RKS
FEP	Percentage of female executives, including supervisors and directors
FEN	Number of female executives
COM	Natural logarithm of top three executives' compensation
PGAP	Natural logarithm of executive-employee pay gap
EGAP	Natural logarithm of pay gap between male and female executives (When the gender pay gap is a negative value, we take the logarithm of the absolute value and mark the logarithm with a negative sign)
SIZE	Natural logarithm of total sales revenue
FA	Difference between the responding year of the sample company and the year of establishment of the same company
TDS	Dummy variable that takes the value as 1 if the CEO serves as the role Chairman on board and zero otherwise
EN	Dummy variable that takes the value as 1 if the firm is state-owned enterprise and zero otherwise
IDR	Percentage of independent directors on the board
SUP	Ratio of the number of board of supervisors to the number of senior executives
GGGM	Number of overall executives

Source: Sort out from the literature review of (Ahmed *et al.*, 2019), (Cook *et al.*, 2019), etc.

6.2. Variables Measures

The main variables we focus on include PERF, CSR, EGAP, FEP, FEN, COM, PGAP, and the control variables include SIZE, FA, TDS, EN, IDR, SUP, GGGM. The above variables are shown in Table 1. The descriptive results and correlation coefficients of the research variables are shown in Appendix 1.

6.3. Empirical Models

Taking PERF as the dependent variable, COM, FEP, COM*FEP as the independent variables, SIZE, FA, TDS, EN, IDR, SUP and GGGM as the control variables, an OLS regression named Model (1) is built. Model (1) can test the moderating effect of the ratio of female executives on the link between executive compensation and firm financial performance.

$$\begin{aligned} \text{PERF}_{it} = & \alpha + \beta_1 \text{SIZE}_{it} + \beta_2 \text{FA}_{it} + \beta_3 \text{TDS}_{it} + \beta_4 \text{EN}_{it} + \beta_5 \text{IDR}_{it} + \beta_6 \text{SUP}_{it} \\ & + \beta_7 \text{GGGM}_{it} + \beta_8 \text{COM}_{it} + \beta_9 \text{FEP}_{it} + \beta_{10} \text{COM}_{it} * \text{FEP}_{it} + \varepsilon_{it} \end{aligned} \quad (1)$$

To replace FEP in Model (1) with FEN, an OLS regression model named Model(2) is built. Model (2) can test the effect of number of female executives on the executive compensation-financial performance sensitivity.

$$\begin{aligned} \text{PERF}_{it} = & \alpha + \beta_1 \text{SIZE}_{it} + \beta_2 \text{FA}_{it} + \beta_3 \text{TDS}_{it} + \beta_4 \text{EN}_{it} + \beta_5 \text{IDR}_{it} + \beta_6 \text{SUP}_{it} \\ & + \beta_7 \text{GGGM}_{it} + \beta_8 \text{COM}_{it} + \beta_9 \text{FEN}_{it} + \beta_{10} \text{COM}_{it} * \text{FEN}_{it} + \varepsilon_{it} \end{aligned} \quad (2)$$

Taking CSR as the dependent variable, COM, FEP, COM*FEP as the independent variables, SIZE, FA, TDS, EN, IDR, SUP and GGGM as the control variables, an OLS regression named Model (3) is built. Model (3) can test the moderating effect of the ratio of female executives on the link between executive compensation and corporate social responsibility performance.

$$\begin{aligned} \text{CSR}_{it} = & \alpha + \beta_1 \text{SIZE}_{it} + \beta_2 \text{FA}_{it} + \beta_3 \text{TDS}_{it} + \beta_4 \text{EN}_{it} + \beta_5 \text{IDR}_{it} + \beta_6 \text{SUP}_{it} \\ & + \beta_7 \text{GGGM}_{it} + \beta_8 \text{COM}_{it} + \beta_9 \text{FEP}_{it} + \beta_{10} \text{COM}_{it} * \text{FEP}_{it} + \varepsilon_{it} \end{aligned} \quad (3)$$

To replace FEP in Model (3) with FEN, an OLS regression model named Model(4) is built. Model (4) can test the effect of number of female executives on the executive compensation-social responsibility performance sensitivity.

$$\begin{aligned} \text{CSR}_{it} = & \alpha + \beta_1 \text{SIZE}_{it} + \beta_2 \text{FA}_{it} + \beta_3 \text{TDS}_{it} + \beta_4 \text{EN}_{it} + \beta_5 \text{IDR}_{it} + \beta_6 \text{SUP}_{it} \\ & + \beta_7 \text{GGGM}_{it} + \beta_8 \text{COM}_{it} + \beta_9 \text{FEN}_{it} + \beta_{10} \text{COM}_{it} * \text{FEN}_{it} + \varepsilon_{it} \end{aligned} \quad (4)$$

Taking PERF as the dependent variable, PGAP, FEP, PGAP*FEP as the independent variables, SIZE, FA, TDS, EN, IDR, SUP and GGGM as the control variables, an OLS regression model named Model(5) is built. Model (5) can test the moderating effect of the ratio of female executives on the link between executive-employee compensation gap and firm financial performance.

$$\begin{aligned} \text{PERF}_{it} = & \alpha + \beta_1 \text{SIZE}_{it} + \beta_2 \text{FA}_{it} + \beta_3 \text{TDS}_{it} + \beta_4 \text{EN}_{it} + \beta_5 \text{IDR}_{it} + \beta_6 \text{SUP}_{it} \\ & + \beta_7 \text{GGGM}_{it} + \beta_8 \text{PGAP} + \beta_9 \text{FEP}_{it} + \beta_{10} \text{PGAP}_{it} * \text{FEP}_{it} + \varepsilon_{it} \end{aligned} \quad (5)$$

To replace FEP in Model (5) with FEN, an OLS regression model named Model (6) is built. Model (6) can test the effect of number of female executives on the link between executive-employee compensation gap and firm

financial performance.

$$\begin{aligned} \text{PERF}_{it} = & \alpha + \beta_1 \text{SIZE}_{it} + \beta_2 \text{FA}_{it} + \beta_3 \text{TDS}_{it} + \beta_4 \text{EN}_{it} + \beta_5 \text{IDR}_{it} + \beta_6 \text{SUP}_{it} \\ & + \beta_7 \text{GGGM}_{it} + \beta_8 \text{PGAP}_{it} + \beta_9 \text{FEN}_{it} + \beta_{10} \text{PGAP}_{it} * \text{FEN}_{it} + \varepsilon_{it} \end{aligned} \quad (6)$$

Taking CSR as the dependent variable, PGAP, FEP, PGAP*FEP as the independent variables, SIZE, FA, TDS, EN, IDR, SUP and GGGM as the control variables, an OLS regression named Model(7) is built. Model(7) can test the moderating effect of the ratio of female executives on the link between executive compensation and corporate social responsibility performance.

$$\begin{aligned} \text{CSR}_{it} = & \alpha + \beta_1 \text{SIZE}_{it} + \beta_2 \text{FA}_{it} + \beta_3 \text{TDS}_{it} + \beta_4 \text{EN}_{it} + \beta_5 \text{IDR}_{it} + \beta_6 \text{SUP}_{it} \\ & + \beta_7 \text{GGGM}_{it} + \beta_8 \text{PGAP}_{it} + \beta_9 \text{FEP}_{it} + \beta_{10} \text{PGAP}_{it} * \text{FEP}_{it} + \varepsilon_{it} \end{aligned} \quad (7)$$

To replace FEP in Model (7) with FEN, an OLS regression model named Model (8) is built. Model (8) can test the effect of number of female executives on the link between executive compensation and corporate social responsibility performance.

$$\begin{aligned} \text{CSR}_{it} = & \alpha + \beta_1 \text{SIZE}_{it} + \beta_2 \text{FA}_{it} + \beta_3 \text{TDS}_{it} + \beta_4 \text{EN}_{it} + \beta_5 \text{IDR}_{it} + \beta_6 \text{SUP}_{it} \\ & + \beta_7 \text{GGGM}_{it} + \beta_8 \text{PGAP}_{it} + \beta_9 \text{FEN}_{it} + \beta_{10} \text{PGAP}_{it} * \text{FEN}_{it} + \varepsilon_{it} \end{aligned} \quad (8)$$

Taking COM as the dependent variable, FEP as the independent variable, SIZE, FA, TDS, EN, IDR, SUP and GGGM as the control variables, an OLS regression model named Model(9) is built. Model (9) can test the effect of the ratio of female executives on executive compensation level.

$$\begin{aligned} \text{COM}_{it} = & \alpha + \beta_1 \text{SIZE}_{it} + \beta_2 \text{FA}_{it} + \beta_3 \text{TDS}_{it} + \beta_4 \text{EN}_{it} + \beta_5 \text{IDR}_{it} \\ & + \beta_6 \text{SUP}_{it} + \beta_7 \text{GGGM}_{it} + \beta_8 \text{FEP}_{it} + \varepsilon_{it} \end{aligned} \quad (9)$$

We construct Model(10) by taking COM as the dependent variable, FEN as the independent variable, SIZE, FA, TDS, EN, IDR, SUP and GGGM as the control variables to test the effect of the number of female executives on the executive pay level.

$$\begin{aligned} \text{COM}_{it} = & \alpha + \beta_1 \text{SIZE}_{it} + \beta_2 \text{FA}_{it} + \beta_3 \text{TDS}_{it} + \beta_4 \text{EN}_{it} + \beta_5 \text{IDR}_{it} \\ & + \beta_6 \text{SUP}_{it} + \beta_7 \text{GGGM}_{it} + \beta_8 \text{FEN}_{it} + \varepsilon_{it} \end{aligned} \quad (10)$$

We construct Model(11) by taking PGAP as the dependent variable, FEP as the independent variables, SIZE, FA, TDS, EN, IDR, SUP and GGGM as the control variables. Model (11) is used to test the effect of the ratio of female executives on the executive pay level.

$$\begin{aligned} \text{PGAP}_{it} = & \alpha + \beta_1 \text{SIZE}_{it} + \beta_2 \text{FA}_{it} + \beta_3 \text{TDS}_{it} + \beta_4 \text{EN}_{it} + \beta_5 \text{IDR}_{it} \\ & + \beta_6 \text{SUP}_{it} + \beta_7 \text{GGGM}_{it} + \beta_8 \text{FEP}_{it} + \varepsilon_{it} \end{aligned} \quad (11)$$

We construct Model(12) by taking by replacing FEP in Model(11) with FEN. Model (12) is used to test the effect of the number of female executives on the executive pay level.

$$\text{PGAP}_{it} = \alpha + \beta_1 \text{SIZE}_{it} + \beta_2 \text{FA}_{it} + \beta_3 \text{TDS}_{it} + \beta_4 \text{EN}_{it} + \beta_5 \text{IDR}_{it}$$

$$+\beta_6 SUP_{it} + \beta_7 GGGM_{it} + \beta_8 FEN_{it} + \varepsilon_{it} \tag{12}$$

We construct Model(13) by taking EGAP as the dependent variable, FEP as the independent variables, SIZE, FA, TDS, EN, IDR, SUP and GGGM as the control variables. Model (13) is used to test the effect of the ratio of female executives on the executive gender compensation gap.

$$EGAP_{it} = \alpha + \beta_1 SIZE_{it} + \beta_2 FA_{it} + \beta_3 TDS_{it} + \beta_4 EN_{it} + \beta_5 IDR_{it} + \beta_6 SUP_{it} + \beta_7 GGGM_{it} + \beta_8 FEP_{it} + \varepsilon_{it} \tag{13}$$

We construct Model(14) by replacing FEP in Model(13) with FEN. Model (14) is used to test the effect of the number of female executives on the executive gender compensation gap.

$$EGAP_{it} = \alpha + \beta_1 SIZE_{it} + \beta_2 FA_{it} + \beta_3 TDS_{it} + \beta_4 EN_{it} + \beta_5 IDR_{it} + \beta_6 SUP_{it} + \beta_7 GGGM_{it} + \beta_8 FEN_{it} + \varepsilon_{it} \tag{14}$$

Table-2. Moderating effects of female executives on the link between executive compensation and firm financial performance & social responsibility performance.

Column	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Model	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)
CONS	-0.078*** (-4.041)	-0.089*** (-4.639)	1.428*** (14.538)	1.414*** (14.305)	.102*** (7.495)	.106*** (7.850)	1.771*** (25.833)	1.792*** (26.603)
SIZE	-0.257*** (-10.855)	-0.253*** (-10.701)	.496*** (24.293)	.500*** (24.532)	-0.131*** (-6.024)	-0.131*** (-6.000)	.541*** (29.535)	.541*** (29.552)
FA	-0.075*** (-3.820)	-0.081*** (-4.133)	-0.100*** (-5.933)	-0.101*** (-5.985)	-0.043** (-2.149)	0.041** (2.053)	-0.088*** (-5.246)	-0.086*** (-5.125)
TDS	.027 (1.373)	.026 (1.310)	-0.028 (-1.614)	-0.035** (-2.067)	.024 (1.172)	.025 (1.202)	-0.023 (-1.336)	-0.029* (-1.687)
EN	-0.033 (-1.567)	-0.034 (-1.615)	.029 (1.592)	.027 (1.523)	-0.057*** (-2.624)	-0.060*** (-2.746)	.005 (.252)	.004 (.246)
IDR	.004 (.193)	.003 (.139)	-0.029* (-1.764)	-0.025 (-1.498)	-0.002 (-.109)	-0.001 (-.065)	-0.027* (-1.664)	-0.024 (-1.465)
SUP	-0.024 (-1.120)	-0.011 (-.519)	-0.006 (-.310)	-0.003 (-.175)	-0.042* (-1.894)	-0.044* (-1.934)	-0.012 (-.619)	-0.017 (-.919)
GGGM	-0.005 (-.198)	-0.003 (-.132)	.073*** (3.468)	.051** (2.563)	.063** (2.554)	.042* (1.787)	.101*** (4.894)	.066*** (3.379)
COM	.316*** (13.708)	.325*** (14.026)	.099*** (4.995)	.098*** (4.896)				
PGAP					.152*** (7.395)	.148*** (7.241)	.000 (-.021)	-0.006 (-.329)
FEP	.013 (.552)		.049** (2.445)		.048** (2.052)		.068*** (3.439)	
FEN		.018 (.874)		.082*** (4.619)		.041** (1.995)		.083*** (4.778)
COM*FEP	-0.050*** (-2.615)		-0.061*** (-3.692)					
COM*FEN		-0.099*** (-5.007)		-0.073*** (-4.301)				
PGAP*FEP					-0.048** (-2.434)		-0.063*** (-3.771)	
PGAP*FEN						-0.043** (-2.200)		-0.052*** (-3.188)
N	2495	2495	2495	2495	2495	2495	2495	2495
F	30.614	32.571	128.074	129.908	16.522	16.394	124.809	125.849
R ²	0.110	0.116	0.340	0.344	0.062	0.062	0.334	0.336
Adjusted R ²	0.106	0.112	0.338	0.341	0.059	0.058	0.332	0.334

***, **, and * indicate significant correlation at 99%, 95%, and 90% confidence levels (two tailed), respectively. All coefficients are standardized except for constants.

6.4. Results

a. Female Executives and Executive Pay-Performance Link

Regression results of Model (1) are shown in Column (1) of Table 2. The coefficient of COM*FEP is -0.050 and significant at the 1% level, which suggests that female executives have a negative impact on the compensation-performance sensitivity.

Regression results of Model (2) are shown in Column (2) of Table 2. The coefficient of the interaction term is -0.099 (P=0.000) suggesting the increased number of female contributes to decreasing the executive compensation-financial performance sensitivity.

Regression results of Model (3) are shown in Column (3) of Table 2. The results show that the coefficient of COM*FEP is significantly negative ($\beta=-0.061$, P=0.000), which indicates that ratio of female executives has a negative impact on the sensitivity of executive compensation to social responsibility performance.

Regression results of Model (4) are shown in Column (4) of Table 2. The coefficient of the interaction is -0.073 (T=-4.301) and significant at the 1% level indicating more female executives bring about lower sensitivity of executive compensation relative to social responsibility performance.

b. Effect of Female Executives on the Relationship between Executive-Employee Pay Gap and Firm Performance

After examining the moderating effect of female executives on compensation-performance sensitivity, we move on to explore the effect of females on the relation between executive-employee pay gap and financial performance.

Regression results of Model(5) are shown in Column (5) of Table 2. The coefficient of PGAP*FEP is negative and statistically significant at the 5% level. The results indicate that the higher proportion of female executives leads to the weaker relation between executive-employee pay gap and financial performance.

Regression results of Model(6) are shown in Column (6) of Table 2. There is a negative and significant coefficient of the interaction term PGAP*FEN ($\beta=-0.041$, P=1.995), which suggests the number of female executives has a negative moderating impact on the relation between executive-employee pay gap and financial performance.

Regression results of Model (7) are shown in Column (7) of Table 2. As far as our main variables of interest are concerned, the coefficient of PGAP*FEP is -0.063 (T=-3.771) and significant at the 1% level, which indicates that the ratio of female executives has a negative moderating impact on the correlation of executive-employee pay gap and social responsibility performance.

Regression results of Model (8) are shown in Column (8) of Table 2. We find that the coefficient of the PGAP*FEN is negative and statistically significant at the 1% level. The results indicate that a higher number of female executives lower the relation of the executive-employee pay gap and social responsibility performance.

c. Effect of Female Executives on Executive Pay Level

After examining the impact of female executives on executive compensation-performance sensitivity on one hand and the impact of female executives on relation between executive-employee pay gap and firm performance on the other hand, we move on to test the impact of female executives on executive compensation level.

Regression results of Model (9) are shown in column (1) of Table 3. The coefficient of FEP is 0.076 (T=3.838) and significant at the 1% level suggesting the ratio of female executives can significantly improve the executive pay level.

Regarding our variables of interest, column (2) in Table 3 shows the regression results of Model (10). In column (2), we find the coefficients of control variables are significant except TDS, and that of the independent variable (FEN) is 0.119 (T=6.841) which is positive and significant suggesting that the more female executive, the higher compensation level.

Table-3. Effects of female executives on the executive pay level, executive-employee pay gap and executive gender compensation gap.

Column	(1)	(2)	(3)	(4)	(5)	(6)
Model	Model (9)	Model (10)	Model (11)	Model (12)	Model (13)	Model (14)
CONS	9.738*** (52.017)	9.973*** (53.528)	.800*** (4.055)	.801*** (4.125)	6.457*** (21.289)	6.842*** (23.403)
SIZE	.478*** (26.115)	.475*** (26.129)	.150*** (7.099)	.150*** (7.096)	0.348*** (16.610)	.340*** (16.525)
FA	.116*** (6.855)	.118*** (7.060)	.044** (2.256)	.044** (2.265)	0.082*** (4.231)	.096*** (5.046)
TDS	.026 (1.498)	.013 (.737)	.081*** (4.017)	.081*** (4.029)	-.003 (-.132)	-.019 (-.942)
EN	-.205*** (-11.491)	-.203*** (-11.543)	-.299*** (-14.530)	-.299*** (-14.658)	-.195*** (-9.535)	-.205*** (-10.276)
IDR	-.039** (-2.343)	-.032* (-1.913)	-.018 (-.955)	-.018 (-.950)	-.016 (-.840)	.000 (-.802)
SUP	-.055*** (-2.887)	-.065*** (-3.426)	.023 (1.033)	.023 (1.028)	-.001 (-.055)	-.017 (-.802)
GGGM	.226*** (10.830)	.175*** (8.907)	.058** (2.392)	.057** (2.515)	.250*** (10.245)	.094*** (4.230)
FEP	.076*** (3.838)		.000 (.020)		.259*** (11.115)	
FEN		.119*** (6.841)		.001 (.028)		.288*** (14.493)
N	2495	2495	2495	2495	2495	2495
F	148.477	154.370	34.338	34.338	79.174	92.420
R ²	0.324	0.332	0.100	0.100	0.228	0.257
Adjusted R ²	0.321	0.330	0.097	0.097	0.225	0.254

***, *, and * indicate significant correlation at 99%, 95%, and 90% confidence levels (two tailed), respectively. All coefficients are standardized except for constants.

d. Effect of Female Executives on Executive-Employee Pay Gap

The regression results of Model (11) are shown in column (3) of Table 3. The coefficient of FEP is not significant ($\beta=0.000$, $P=0.020$) suggesting the ratio of female executives has no notable effect on executive-employee pay gap.

The regression results of Model (12) are shown in column (4) of Table 3. It can be known that the coefficients of all variables are almost the same as those in Column (3). The coefficient of FEN is 0.001($T=0.028$) and not significant, which shows that female executives' number has no significant impact on the executive-employee compensation gap.

e. Effect of Female Executives on Executive Gender Pay Gap

After the previous empirical exploration, we continue to explore the effect of female executives on executive gender compensation gap.

The regression results of Model (13) are shown in column (5) of Table 3. We can find the coefficient of FEP is 0.259($T=11.115$) and significant at the 1% level, which indicates that the ratio of female directors would enlarge executive gender compensation gap.

The regression results of Model (14) are shown in Column (6) of Table 3. The coefficient of FEN is 0.288($T=14.493$) and significant at the 1% level. The results demonstrate that number of female executives have a significantly positive effect on executive gender compensation gap.

7. CONCLUSIONS

The paper attempts to systematically investigate the impact mechanisms of female executives on executive compensation from both multi-dimensional and multi-theoretical perspectives. Two points have been addressed: (1) how to capture and describe the effects of female executive compensation on multiple dimensions within an integrated research framework; and (2) how to identify and describe as many as possible association paths between

female executives and each single dimension of executive compensation from more theoretical perspectives beyond risk-aversion and ethical behavior.

Theoretical analysis and logic reasoning according to literature review and facts observation conclude as follows:

First, seven specific impact mechanisms of female executives on executive pay-performance sensitivity are captured in the literature, respectively (1) enhancing monitoring role, (2) lowering insider trading, (3) increasing remuneration disclosure, (4) adopting more balanced setting rules, (5) respecting shareholders' requirements, (6) favoring higher social responsibility performance, and finally (7) being better at performing strategic execution than males.

Second, six specific impact mechanisms of female executives on executive pay level are captured in the literature, respectively (1) benchmarking effect, (2) reducing corporate tax avoidance, (3) mitigating unethical earnings manipulation behavior or accounting fraud behavior, (4) lowering the executives' legal and decision-making responsibilities, and (5) choosing lower level of leverage ratio.

Third, gender diversity can enhance executive pay components diversity and simultaneously change the relative importance of existing pay components. In practice, female executives (1) add additional pay components to compensation package, mainly including social responsibility-based pay, environmental performance-based pay and innovation performance-based pay; (2) reduce extra unethical pay due to financial statement fraud or earnings manipulation; and (3) conditionally decide the relative proportion of long-termed compensation, such as stock options.

Fourth, female executives can (1) enlarge executive-employee compensation pay gap, (2) moderate the gender compensation gap among employees, (3) narrow executive compensation gap due to the female executives' need for affiliation, (4) moderate executive compensation gap due to weak narcissistic personality, (5) set lower executive compensation gap with the purpose of maintaining good relationships, (6) narrow executive compensation gap by obeying male CEOs, (7) narrow executive gender compensation gap by taking the role as the chair of the compensation committee; and (8) narrow gender pay gap among employees.

Empirical tests based on Chinese listed companies reach the following results, part of which confirms to our theoretical expectations, while some others betray our theoretical results.

First, female executives have a significantly negative impact on the executive compensation-performance sensitivity, inconsistent with the expected theoretical conclusion. The possible reason may be that female executives pay more attention to the safety of their own income due to their risk-aversion.

Second, female executives have a negative moderating impact on the relation between executive-employee pay gap and corporate performance, inconsistent with expected conclusion. The possible alternative explanation may be that there is a substitution effect between the female executives' positive performance consequences and the executive-employee pay gap's positive performance consequences.

Third, female executives tend to improve the executive pay level, consistent with the expected conclusion. The presence of female executives bring about heterogeneous human capital and resources, hence remuneration committee tend to pay executives more. Moreover, female executives have higher moral standards and pay more attention to social responsibility. The increase in the proportion of female executives will restrain the extra growth rate of executive pay level.

Fourth, female executives have no significant effect on the executive-employee compensation gap, partially inconsistent with the expected conclusion. The possible reason may partially rely on the limited sample size of this study.

Fifth, female executives would enlarge executive gender compensation gap, inconsistent with the expected conclusion. One possible reason is that the lower positions of females in the top management teams and discrimination against women lead to a lower compensation for female executives and thus a wider pay gap. That

the role of females in business has not been fully identified by the male executives/CEOs or proactively exerted by the female executives themselves may be another reason that female executives enlarge the executive gender compensation gap.

In the future, researcher should pay more attention to the following issues: (1) what are the impacts of female executives on various dimensions of employee compensation? (2) what are the differences in the female executives' impacts on executive compensation between females with different background characteristics, such as foreign experience, age, major, and so on; (3) can the manipulation effects of female executives on executive compensation improve future firm performance? and finally (4) how to measure female executive participation degree in corporate governance practice more exactly?

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Appendix-1. The descriptive results and correlation coefficients of the research variables.

Variables	Mean	Std.	1	2	3	4	5	6	7	8	9	10	11	12	13
1.PERF	.039	.048	1												
2.CSR	42.658	13.068	-.012	1											
3.FEP	3.397	1.927	.055**	.099**	1										
4.FEN	.459	.276	.043*	-.083**	.722**	1									
5.COM	13.700	.725	.155**	.334**	.164**	.075**	1								
6.PGAP	13.648	1.428	.038	.193**	-.083**	-.249**	.391**	1							
7.EGAP	23.532	1.854	-.127**	.599**	.051*	-.144**	.490**	.304**	1						
8.SIZE	12.740	5.592	-.058**	-.086**	.001	.087**	.079**	.032	.009	1					
9.FA	.140	.344	.099**	-.088**	-.014	-.002	-.036	-.033	-.122**	-.100**	1				
10.TDS	.660	.475	-.146**	.119**	-.091**	-.175**	-.081**	.008	.241**	.173**	-.198**	1			
11.EN	.375	.058	-.015	.017	-.061**	-.021	-.011	-.051*	.078**	-.044*	.096**	.019	1		
12.IDR	.199	.054	-.095**	.041*	.064**	.234**	.085**	-.037	.136**	.054**	-.087**	.171**	.023	1	
13.SUP	21.557	5.181	-.064**	.396**	.189**	-.294**	.246**	.234**	.516**	-.078**	-.092**	.190**	-.167**	.032	1

Note: N=2495; *,** respectively indicates the significance level of 0.01 and 0.05.

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