


Internal Compensation Gap and Firm Performance With the Mediating Effect of Compensation Level: Evidence From Listed Energy Companies in China

Wenkai Ma, College of Graduate Studies, Walailak University, Thailand

Pankaewta Lakkanawanit, Logistics and Business Analytics Center of Excellence (LOGBIZ), Walailak University, Thailand*

 <https://orcid.org/0000-0002-8609-6132>

Muttanachai Suttipun, Faculty of Management Sciences, Prince of Songkla University, Thailand

Pornpen Thipayana, Logistics and Business Analytics Center of Excellence (LOGBIZ), Walailak University, Thailand

ABSTRACT

The study aimed to investigate (1) the influence of internal compensation gap on firm performance (FP) and (2) the mediation effect of executive compensation level on the relationship between internal compensation gap and FP of listed energy companies in China. The sample was sourced from all upstream companies in energy industry on the Shanghai and Shenzhen stock markets. The data were collected from the companies' annual reports from 2015 to 2020. Descriptive analysis, correlation matrix, and unbalanced panel data analysis were used to analyze the data. The results show that internal compensation gap has a positive influence on FP and compensation level has a mediating effect on such influence. This study provides insight into the determination of compensation for companies to incentivize executives to demonstrate their abilities for the organization's advantage. Additionally, the findings demonstrate that tournament theory and agency theory can explain how compensation gap and level affect FP.

KEYWORDS

Agency Theory, China, Compensation Level, Energy Industry, Executive Compensation, Firm Performance, Internal Compensation Gap, Tournament Theory

INTRODUCTION

The separation between ownership and management rights is one of the most important aspects of a modern organization. The company is owned by the shareholders, while the management rights are owned by the management of the company. The separation between ownership and management causes owners and executives to have different interests (Elsayed & Elbardan, 2018). It is believed that every human being in an organization is motivated to behave for personal advantage. The appropriate

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*Corresponding Author

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compensation incentive can reduce agency costs (Jensen & Meckling, 1976; Zhao, 2017) and encourage the management to boost their initiative to make greater efforts to generate rewards for themselves (Gong & Liu, 2015; Heyman, 2005; Lazear & Rosen, 1981) by creating results in the form of good business performance (Conyon & He, 2011). Different compensation is one motivator for executives. Increased pay disparities can successfully foster rivalry among executives. Some studies have found the important role of the compensation gap in motivating executives to devote their energy to improving company performance (Canarella & Gasparyan, 2008; Gong & Liu, 2015; Kepes et al., 2009; Kini & Ryan 2012). At the same time, the high compensation gap spurs the executive to want to raise salaries and promote higher positions (Lazear & Rosen, 1981). Designing an appropriate compensation system to motivate executives is essential to business development. Therefore, researching the influence of the internal compensation gap on firm performance (FP) is important to demonstrate how companies can use the compensation system as an incentive for management (Firth et al., 2015; Harbring & Irlenbusch, 2004). Moreover, the impact of executive compensation level should also be considered when studying the impact of the executive compensation gap on FP. This is because the relationships between executives are both competitive and collaborative (Han, 2011) and these relationships are intervened by individual incentives (Kepes et al., 2009). Executives not only compare compensation within the team, but also with other organizations, particularly among peers in the same industry. The internal compensation gap generates an analogy to stimulate competition for performance to earn promotion, while the compensation level creates job satisfaction and commitment (Chiu et al. 2002), consequently leading to lower conflict between shareholders and executives (Li, 2020; Xu et al, 2016).

In China, the energy industry is rapidly expanding to keep up with the country's economic development. Since the turn of the century, energy consumption will have shifted from a system dominated by coal and fossil to one dominated by renewables. Those companies that produce fossil fuels are at a crossroads, while the companies that produce renewable energy are expanding (Ahmad et al., 2021). The new energy development policies and traditional energy reforms, especially electric power and new energy vehicles, have led to a huge expansion of business. The listed companies involved in the production of new energy vehicles and lithium batteries have become the focus of the market. Leading lithium battery companies have grown in popularity and become the top 10 companies in the Chinese stock market, being the only new economic companies in the top 10. There has never been an emerging technology company with such a large market valuation in the history of China's stock market. The government's promotion initiatives coupled with its rapid growth have made the industry watching for its future development (Guo, 2021; Lu et al., 2022).

Establishing the right management incentives is critical for energy companies in order to improve corporate performance and support rapid growth (Yang, 2016). Companies need to reduce agency costs and ineffective investments, as well as promote organizational transformation (Li, 2017). For new energy companies, the change and rapid growth will make the information more asymmetric. As the executives play a vital role in company decision-making, they should not only respond to the expectations of the entrusting party to lead the company with a good performance, but they must also take some responsibility for the social economy to a certain extent. Therefore, it is intriguing to study the role of the executive internal compensation gap and compensation level on FP in the energy industry in China. Although some studies are available on this matter (Liu, 2014; Zhang, 2017; Zhao, 2017), no studies have been conducted in recent times during which great changes have taken place in this industry (Guo, 2021). Moreover, Xu et al.'s (2016) study shows the positive relationship between compensation gap and executive compensation level and demonstrates the influence of compensation level on pay gap efficiency in listed companies in China. Therefore, it can be assumed the mediation role of compensation level on the relationship between internal compensation gap and FP. Most of the past studies that chose the companies in China as their sample examined the relationship of either internal compensation gap (Cao et al., 2017; Dong & Zhang, 2017; Hu & Huang, 2012) or compensation level (Dai, 2014; Wang et al., 2021; Zhou, 2010) to FP, even if both of these variables are the tools that companies use to manage the performance of executives to achieve corporate goals.

Moreover, in China, both the internal compensation gap and compensation level have considerably increased in scholars' focus since the market-oriented reforms (Li, 2020). However, no research has examined how both variables affect FP. A combined analysis of the two variables, which has not been investigated so far, reveals more insight regarding the impact of executive compensation mechanism on corporate performance, rather than studying only either compensation gap or compensation level. In addition, a study that looks at compensation level as a mediator in the relationship between the internal compensation gap and FP is also lacking. Unlike previous studies, the study examining the influence of the internal compensation gap on FP through the mediation of executive compensation, therefore, can visualize whether the company benefits in the form of high FP from its compensation management efforts.

According to the research problems above, this study aimed to test the influence of internal compensation gap on FP and examine the mediation effect of executive compensation level on the relationship between internal compensation gap and FP of listed energy companies in China. This study is supposed to provide several contributions to both theory and practice. In terms of its theoretical contribution, the study demonstrated that tournament theory and agency theory can explain the advantages of businesses motivating the executive with a high compensation gap through a high compensation to encourage the executive to make a greater contribution to FP. In terms of its practical contribution, this study also demonstrated the mediation role of compensation level on the influence of the internal compensation gap on FP, which could help companies to see the importance of compensation to formulate appropriate strategies to drive the executive to achieve high corporate performance.

The reminder of this study is divided into five sections. The next section offers literature review and hypotheses development including theoretical perspectives. The third section outlines the research method, including details about population and sample, data collection and variable measurement, and data analysis. The fourth section provides the results and their discussion. Finally, the fifth section provides the conclusion, including contributions and implications and limitations of the study, and suggestions for future research.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Theoretical Perspective

Tournament Theory

Lazear and Rosen's (1981) tournament theory states that employees can be rewarded based on their rank in the organization, illustrating why organizations offer substantial compensation to top management to reward those who work hard to get one of the highest positions. A person's promotion is determined not only by their productivity, but also by the basis of their position in the organization in comparison to others. Incentives for promotion of those in lower positions depend on the salary that will be increased after promotion. Employees are promoted not merely because they execute their jobs well, but because they do them better than others (Connelly et al., 2013). Therefore, if a common belief is that humans are rational and respond only to incentives, actually the wider the difference in rewards for each promotion, the greater the incentive for employees to make an effort. Increasing the compensation disparity between senior managers can successfully foster rivalry among managers, enhance their initiative to work more (Kini & Ryan, 2012) to increase their salary and advance their careers, and, as a consequence, increase the company's performance (Heyman, 2005; Gong & Liu, 2015).

However, the organization's competitive environment has limited the salary rank in the. While tournaments can encourage more effort, they can also encourage counterproductive conduct (Henderson & Fredrickson, 2001). Salary disparities will push employees to work more, but they will also make the workplace unappealing. The high competition may destroy the motivation to work as

a team and negatively affect the organization (Bloom & Michel, 2002; Siegel & Hambrick, 2005). Therefore, the compensation structure must be balanced between the incentives provided for the effort and the mitigation of potential negative impacts on the organization. As a result, companies should not utilize the compensation gap as an incentive, but should also take into account the satisfactory compensation of their employees (Bloom & Michel, 2002; Xu et al, 2016).

Agency Theory

Agency theory, also known as principal-agent theory, states that separation between the principals and the agents occurs in most firms. In the principal-agent relationship, the owner is the principal and the senior management is the agent (Amrstrong, 2012). The company's performance is the expected goal of principals as well as the responsibility of agents. However, the principals may not have entire control over their agents; the latter may act in ways that are not in line with the desires of the principals and are kept hidden from them. This creates the agency cost, including the extent to which the amount a manager receives from a company as agents is greater than what might have been earned if the principals had been in charge as the managers (Jensen & Meckling, 1976). The compensation the principal pays to the agent is the agency cost.

Balancing agency costs and shareholder interests is a concern of corporate governance (Elsayed & Elbardan, 2018). As the owner of the company takes more risks and obligations and enjoys greater benefits, they have higher expectations for the company's management and performance growth. However, the managers can know the condition of development in real-time, while obtaining the information through a variety of channels and control operations, resulting in a scenario of asymmetric information from two sides. Because of the human nature of self-interest, senior executives may have a significant conflict of interest with the company's and shareholders' interests. As a result, it is desirable to find out a satisfactory incentive system to motivate the acceptable behavior of executives (Amrstrong, 2012). It suggests the direct link between compensation and performance, where better FP is a result of higher executive compensation (Jensen & Murphy, 1990).

In this paper, the authors use tournament theory and agency theory to explain the relationship between internal compensation gap, executive compensation, and FP. Tournament theory highlights that the high internal compensation gap initiates strong FP, while agency theory views that high executive compensation leads to high FP. The internal compensation gap between executives can foster competition among them to enhance FP (Gong & Liu, 2015; Heyman, 2005). At the same time, it is reasonable to believe that companies that use the internal compensation gap as a motivating force to drive executives need to balance the competition among executives to not cause adverse effects by satisfactory compensation. Nonetheless, no studies have implied the use of tournament theory and agency theory together to describe the impact of the internal compensation gap and FP through the mediation of compensation level. Using both theories provides a clearer picture of the effect of executive compensation mechanism on business performance than using each theory alone. As a result, when motivating executives, it is necessary to foster both a sense of rivalry and a sense of fulfillment in order to generate a commitment to work that will improve the organization's performance. Drawing on theoretical perspectives from tournament theory and agency theory, together with the findings of previous studies led, to the following hypotheses on the influence of internal compensation gap on FP and mediation effect of compensation level on such impact.

Internal Compensation Gap and Firm Performance

The internal compensation gap within the senior executive team represents the different compensation between the CEO and other senior management. It illustrates the effectiveness of incentive and promotion mechanisms by indicating the difference in remuneration executives get before and after promotion (Siegel & Hambrick, 2005). Many researchers have looked into the link between the internal compensation gap and FP (Gao, 2019). Their assumptions are founded on the concept that salary and promotion are incentives that can give agents more effort and reduce sluggish behavior

(Jensen & Meckling, 1976), hence widening the gap can enhance attitude and boost performance (Lazear & Rosen, 1981). Canarella and Gasparyan (2008) investigated executive pay disparities in publicly traded companies in the United States and found that they have a positive impact on business performance. According to Harbring and Irlenbusch's (2004) study, pay disparity and business success are linked. Due to the existence of a pay disparity, managers are compelled to seek high compensation in order to increase company performance. These findings are backed up by a number of studies in China. Hu and Huang (2012) compared the influence of the salary disparity on company performance in the United States and China, discussing and analyzing CEO compensation incentive models in both countries. The findings suggest that the compensation gap has a favorable impact on business performance. The wider the overall monetary pay disparity and the better the company's success; similar results are achieved in both the United States and China. Li and Hu (2012) discovered that the executive compensation gap was positively connected with organizational efficiency and operating margin in Chinese state-owned firms. The findings demonstrate that the internal compensation gap can help a company to improve performance. Dai and Lin (2013) looked at China's publicly traded real estate companies and discovered that the bigger the CEO pay difference, the more noticeable the improvement in corporate performance. Zhang and Liu (2015) studied Chinese state-owned listed enterprises and found a positive relationship between internal pay gap and company performance. From the perspectives of traditional manufacturing and high-tech manufacturing, Cao et al. (2017) investigated the relationship between CEO remuneration and firm success. They found a link between the executive compensation gap and company performance in those companies. They believed that one way for businesses to improve their performance is to promote the salary gap.

While some studies have discovered a positive relationship between internal compensation gap and FP, a few have found a different direction of the relationship. Dong (2017) found that internal salary gap and corporate performance have an inverted-U connection. The findings suggest that, within a specific range, the wage difference might have a favorable impact on business performance. However, when the gap widens, the rate of improvement in company performance decreases. Wu (2011) and Firth (2015), on the other hand, found that pay gap within management is inversely related to corporate performance. According to Firth (2015), a high compensation disparity is unacceptable, since it produces dissatisfaction and distrust, which are not favorable to team cooperation and togetherness, resulting in a reduction in the company's performance. Wu (2011) stated that the negative relationship could be attributable to the serious unfairness of the salary structure.

The different directions of a relationship between the internal compensation gap and FP may be due to the different stages of the company's development (Chen, 2014; Chen et al., 2017). Lu (2010) examined the relationship between the two different perspectives and discovered that, when the CEO had been recently replaced, the wage disparity favored performance. However, if the CEO is successful on the outside, the larger wage disparity is not helpful to performance. Wang (2013) discovered that the notion of tournament theory, which states that the internal compensation gap affects performance, is more applicable to enterprises in the growth or maturity stages. This study focused on companies in the energy sector in China, which is in the growing phase. In this research, therefore, the authors employed the concept of tournament theory positing that an internal compensation gap creates a competition incentive, with the wider the gap, the better corporate performance, for formulating the first hypothesis as follows:

Hypothesis One: There is a positive influence of the internal compensation gap (Lngap) on FP.

Mediation Effect of Executive Compensation Level

As a result of China's market-oriented reforms, the focus on the executive compensation mechanism has shifted to not only the compensation gap, but also the compensation level (Bloom & Michel, 2002; Xu et al., 2016). Several studies investigated the effects of either compensation

gap or compensation level on corporate performance (Li, 2020). However, just a few studies have looked at the two together (Xu et al., 2016). According to Oldham et al. (1986), the evaluation of an organization with comparative reference objects is based on both internal and external organizational justice. For the evaluation of compensation, internal organizational justice is influenced by the internal compensation gap, while external organizational justice is influenced by the compensation level. These two types of justice are not mutually exclusive, but rather interact (Trevor & Wazeter, 2006). Therefore, scholars and practitioners need to learn more about how interactions between internal and external compensation factors affect executive behaviors in order to consider the compensation gap and level to be suitable for the company's context (Bloom & Michel, 2002). Executives compare salaries not only inside their own company, but also with other companies, particularly in the same industry. Internal compensation disparities rivalry stimulate executives for performance in order to seek promotion, whereas compensation level encourages job satisfaction and commitment (Chiu et al., 2002), resulting in less conflict between executives and shareholders (Li, 2020). Trevor and Wazeter (2006) argued that a greater compensation level frequently signifies a competitive advantage over peers in the industry, which may foster a sense of fairness. A lower pay position, on the other hand, usually implies a pay disadvantage in comparison, which can contribute to a sense of unfairness and deprivation. At the same time, high earners have been observed to respond positively to the greater compensation gap, but low earners have been found to react negatively. The reason is that the compensation of executives is higher than that of other employees in the company. As a result, this leads to the assumption that executives are enthusiastic about compensation gap. Additionally, when executives find that their compensation is greater than that of their peers in other companies, this impacts their feelings of fairness and eagerness to work.

Moreover, a few studies demonstrate that compensation level potentially affects the efficiency of compensation gap. Bloom and Michel (2002) suggested that companies may be able to mitigate some of the negative effects of compensation dispersion by paying at rates that are higher than market rates. Employees may take lower-paying status, if the compensation is assessed to exceed the marginal product. He and Long (2018) studied the compensation dispersion of Chinese employees and found that compensation dispersion has a positive impact on turnover intention only in high-level employees, and compensation level satisfaction has a mediating effect on the relationship between internal compensation dispersion and employees' turnover intention. He and Hao (2014) found that internal pay gap has a negative impact on employees' commitment, when the overall pay level is lower. Messersmith et al. (2011) investigated the effects of pay dispersion on turnover intentions of executives and discovered that top executive turnover is more likely for those who earn a low fraction of overall team compensation and lower compensation than the market.

Prior studies evidence that the compensation level, which represents external justice, affects the efficiency of the compensation gap, which represents internal justice, in motivating executives. In addition, the effect was found as a mediation of the compensation gap to executive motivation relationship. Thus, it leads to the assumption that compensation level plays the mediating role in the impact of the compensation gap on FP. According to Xu et al.'s (2016) research, both the internal compensation gap and compensation level influence FP; at the same time, their study showed the relationship between compensation gap and compensation level. Therefore, the authors' focus in this study is on the impact of the internal compensation gap on corporate performance through the mediation of the compensational level. The second hypothesis is as follows:

Hypothesis Two: Executive compensation level (Ln pay) mediates the influence of internal compensation gap (Ln gap) on FP.

RESEARCH METHOD

Data Collection and Sample Selection

The study looked at the whole upstream energy industry listed companies on the Shanghai and Shenzhen stock markets on China's mainland. This study used purposive sampling technique to select the companies that would be proper for the study. According to the Global Industry Classification Standard (MSCI, 2020), these companies' major activities are coal, oil, lithium, new energy power, and other such commodities (Yang, 2016). To ensure the indicators' objectivity, comparability, and comprehensiveness, the study excluded all ST companies. ST stands for "special treatment" in the Chinese stock market; these businesses have been flagged by the China Securities Regulatory Commission as posing major risks, such as financial fraud. The data were sourced from 2015 to 2020 annual reports of those companies. Listed companies in China are required to provide their annual reports on a timely basis, and these reports can be viewed on the mandated websites. The data in annual reports of publicly traded companies are relatively standardized, and they have been audited by the auditors with high reliability (Organisation for Economic Cooperation and Development, 2017). Furthermore, in this study the authors did not include companies with serious financial problems or inadequate information disclosure. As the result, the samples are 40 companies with 233 valid observations.

Variable Measurement

This study includes four main groups of variables, namely dependent, independent, mediating, and control variables. Table 1 summarizes all the variable measurements the authors used in this study.

Dependent Variable

The dependent variable is FP measured by ROE (Fan, 2016). According to the standards for the preparation of information disclosure by China Securities Regulatory Commission, the calculation formula for weighted average ROE is as follows:

$$ROE = P / (E_0 + NP \div 2 + E_i \times M_i \div M_0 - E_j \times M_j \div M_0)$$

where P refers to the profit in the reporting period, NP is the net profit in the reporting period, E₀ is net assets at the beginning of the period, E_i is the newly increased added net assets in the reporting

Table 1. Variable measurements

Variable	Notation	Measurement
Firm performance	<i>FP</i>	Return on equity (ROE)
Internal compensation gap	<i>Lngap</i>	The logarithm of the difference between the average monetary remuneration of the top three executives and the average monetary compensation of all executives.
Executive compensation level	<i>Lnpay</i>	The logarithm of the average monetary compensation of all executives.
Proportion of independent directors	<i>IND</i>	The number of independent directors divided by the total number of board members.
Executive size	<i>ESIZE</i>	Total number of executives.
Share concentration	<i>CR10</i>	The total of the shares held by the top 10 shareholders.
Size	<i>LnSIZE</i>	The logarithm of total assets.

period, E_j is the net assets reduced by repurchase or cash dividend in the reporting period, M_0 is the number of months in the reporting period, M_i is the number of months from the next month of newly added net assets to the end of the reporting period, and M_j is the number of months from the next month to the end of the reporting period.

Independent Variable

The independent variable is the internal compensation gap of executives, which is the difference between the average monetary compensation of the top three executives and all executives (Fan, 2016; Zhang & Liu, 2015). The value of this difference is converted to a logarithm, with the final value used in the hypothesis testing.

Mediating Variable

The mediating variable is the executive compensation level measured by the logarithm of the average monetary compensation of all executives (Buck et al., 2008).

Control Variables

Consistent with previous studies (Buck et al., 2008; Canarella & Gasparian, 2008; Zhang & Liu, 2015), in this research the authors used four control variables, namely the proportion of independent directors, executive size, share concentration, and corporate size. Independent directors were calculated by the number of independent directors divided by the total number of board members. The executive size was measured by the total number of executives. Share concentration was determined by the shareholding ratio of the top 10 major shareholders of the company. Corporate size is calculated by the natural logarithm of total assets.

RESULTS AND DISCUSSION

Descriptive Statistics and Correlation

From 233 firms-year of observations, Table 2 presents the descriptive statistics which indicate the mean and standard deviation of the three main variables. The data are shown annually, from 2015 to 2020, and overall five years. The number of companies has changed due to mergers and acquisitions. The data highlight that the FP had an upward trend from 2015 to 2018 and a downward trend after 2018. This finding may be due to the pandemic situation since December 2019. However, the internal compensation gap demonstrated a different direction. The internal compensation gap was relatively stable, with a slight increase from 2017 to 2019 and a decline back to the same in 2020. For the average compensation level of senior executives, Table 2 shows an upward trend year by

Table 2. Descriptive analysis of FP, internal compensation gap (Lngap), and executive compensation level (Lnpay)

Variable	Year	2015	2016	2017	2018	2019	2020	Total
		N=40	N=39	N=39	N=38	N=38	N=39	N=233
FP	Mean	-0.0865	0.0101	0.0790	0.0999	0.0703	0.0374	0.0332
	SD	0.2628	0.1625	0.1328	0.0721	0.0845	0.1200	0.1662
Lngap	Mean	10.7842	10.7553	11.0097	11.0003	11.3027	10.8720	10.9438
	SD	1.4685	1.0400	0.8884	1.2834	0.8352	0.9767	1.1200
Lnpay	Mean	12.6841	12.7256	13.0554	13.1760	13.4081	13.3392	13.0546
	SD	0.6269	0.6040	0.3783	0.5595	0.4645	0.5074	0.5958

year; however, it relatively decreased in 2020. This demonstrates that, even though the company's performance dropped, the internal compensation gap and compensation level were not significantly decreased, comparing to the decline of FP. Even in 2020, when FP was down drastically, the internal compensation gap and compensation level were only slightly reduced.

Table 3 shows the results of the correlation matrix amongst the variables the authors employed in this study. It is apparent that the coefficient of correlation for each pair of variables is less than 0.7. The authors undertook additional tests using the variance inflation factor (VIF) and tolerance; the results showed that the VIF values were less than 4.0 and the tolerance values were higher than 0.2. These indicate that multicollinearity is not a severe problem in the models the authors used in this study.

Results of the Regression Analysis, Path Analysis, and Sobel Tests

The regression analyses show that internal compensation gap directly influences FP. Table 4 evidences the coefficient of internal compensation gap is 0.029. The results indicate the positive influence of internal compensation gap on FP. Thus, hypothesis one is supported.

Table 5 reports the results of path analysis and Sobel test to examine the mediation effect of compensation level on the relationship between internal compensation gap and FP. The simple linear regression analysis was conducted twice; Panel A for testing path *a* and Panel C for testing the total effect or path *c*. The results from Panel A and Panel C indicate the positive effect of compensation gap on compensation level (*a*) and FP (*c*). At the same time, multiple regression analysis was conducted in Panel B to test the mediation. Panel B shows the direct effect of compensation gap on FP (*ca*) and the indirect effect of compensation level on FP (*b*). As Baron and Kenny (1986) highlighted, the mediation effect on the relationship between two variables exists if the coefficient of the independent variable decreases where the mediating variable is included in the relationship. It can be seen that the coefficient of compensation gap is reduced from 0.032 (total effect or *C*) in Panel C to 0.014 (direct effect or *C'*) in Panel B. This indicates that compensation level plays mediating role in the relationship between gap and FP.

In order to verify the results of path analysis, the researchers also conducted the Sobel test. Table 5 also presents the calculation of the total effect (*C*). The calculation shows that the coefficient of the direct effect of (*C'*) is 0.014, the coefficient of the indirect effect (*a*b*) is 0.018, and the total effect (*c'+(a*b)*) is 0.032. This indicates that the coefficient of the total effect (*C*) in Panel C is equal to direct effect (*C'*) plus indirect effect (*a*b*). Overall, the results showed that the influences

Table 3. Correlation matrix

Variable	FP	Ln _{gap} Ln _{pay}	Ln _{pay}	IND	ESIZE	CR10	LnSIZE
FP	1	0.214**	0.293**	-0.154*	0.073	0.159*	0.144*
Ln _{gap}	-	1	0.495**	0.125	-0.091	0.037	0.322**
Ln _{pay}	-	-	1	-0.021	0.251**	0.052	0.171**
IND	-	-	-	1	-0.049	0.093	0.153*
ESIZE	-	-	-	-	1	0.080	0.161*
CR10	-	-	-	-	-	1	0.639**
LnSIZE	-	-	-	-	-	-	1
Tolerance		0.679	0.601	0.957	0.841	0.541	0.471
VIF		1.473	1.665	1.045	1.189	1.849	2.125

** is significant at 0.01 level, and * is significant at 0.05 level.

Table 4. Results of regression analysis

Variable	$FP = \beta_0 + \beta_1 Lngap + \beta_2 IND + \beta_3 ESIZE + \beta_4 CR10 + \beta_5 LnSIZE + \varepsilon$	
	Coefficient	t (sig)
Constant	-.221	-1.074 (.284)
Lngap	.029	2.964 (.003**)
IND	-.814	-2.666 (.008**)
ESIZE	.000	-.051 (.959)
CR10	.132	1.590 (.113)
LnSIZE	.006	.637 (.525)
R Square	.097	
Adj. R Square	.077	
F-value (sig)	4.857 (.000**)	
N	233	

** is significant at 0.01 level, and * is significant at 0.05 level.

Table 5. Results of path analysis and Sobel test

Panel A: $Lnpay = \beta_0 + \beta_1 Lngap + \varepsilon$			Panel B: $FP = \beta_0 + \beta_1 Lngap + \beta_2 Lnpay + \varepsilon$			Panel C: $FP = \beta_0 + \beta_1 Lngap + \varepsilon$		
Variable	Coefficient	t (sig)	Variable	Coefficient	t (sig)	Variable	Coefficient	t (sig)
Constant	10.175	30.405 (.000**)	Constant	-1.016	-4.429 (.000**)	Constant	-.315	-3.002 (.003**)
<i>Lngap (a)</i>	.263	8.649 (.000**)	<i>Lngap (c')</i>	.014	1.276 (.203)	<i>Lngap (c)</i>	.032	3.336 (.001**)
			<i>Lnpay (b)</i>	.069	3.416 (.001**)			
R Square	.245			.092			.046	
Adj. R Square	.241			.084			.042	
F-value (sig)	74.806 (.000**)			11.656 (.000**)			11.129 (.000**)	
N	233			233			233	
Sobel Test Variables (Path)					Coefficient			
Direct effect $Lngap \rightarrow FP (c')$.014			
Mediation effect $Lngap \rightarrow Lnpay (a)$ $Lnpay \rightarrow FP (b)$.263 .069			
Total effect $Lngap \rightarrow FP (c = c' + (a*b))$.032			
Indirect effect $(a*b)$.018			

of compensation gap and compensation level on FP are consistent with the prediction. Therefore, hypothesis two is supported.

CONCLUSION

The main purpose of this study was to provide empirical evidence on the impact of internal compensation gap on FP, as well as the mediation effect of executive compensation level on the relationship between internal compensation gap and FP of listed energy companies in China. The

results support both hypotheses, suggesting the positive influence of the internal compensation gap on FP together with the mediating role of compensation level in the relationship between compensation gap and FP. The findings of this study highlight how internal compensation gap incentivize executives through high pay level to deliver excellent performance.

The finding demonstrating the positive influence of the internal compensation gap on FP is in line with prior studies (Canarella & Gasparyan, 2008; Cao et al., 2017; Harbring & Irlenbusch, 2004; Hu & Huang, 2012; Zhang & Liu, 2015). This implies that increasing compensation disparities among executives is a good motivator that impacts the company's performance. Additionally, the findings of a mediation analysis suggest that both the internal compensation gap and the compensation level should be investigated simultaneously to illustrate the internal and external justice of executives (Oldham et al., 1986). Executives tend to compare their compensation not only to those on their own team, but also to those from other companies. In terms of the mediating effect of compensation level, it may be explained that, in an intriguing and growing industry such as the energy industry in China, a large compensation gap is beneficial, but a high enough compensation is also required. The internal compensation gap as a motivator for corporate growth necessitates a consideration of the internal challenges of executives to exhibit their potential, which leads to higher positions and pay. These challenges are also influenced by higher pay levels than other companies, which makes the executives feel valued and fair gaming in comparison to their peers in the industry. This explanation corresponds to Trevor and Wazeter's (2006) study. They stated that employees respond to the internal pay gaps depending on their pay level. If the high-paid employees, which include the executives, find their compensation compared to their peers in the industry is high, they feel that their compensation is fair and respond positively to the gap.

The findings of this study provide contributions to both practical and theoretical perspectives. Practically, this study serves as a guideline for companies in determining compensation mechanisms in order to incentivize executives to demonstrate their abilities to work for the organization's financial performance. The findings of the study show that incentive compensation must include high internal compensation gap and high compensation level. Listed companies in China are mandated to disclose information about the compensation of executives. This allows executives to know about the compensation of other executives, both within and outside their company. Therefore, the company must define internal compensation gap, in order to create competition and promotion opportunities among executives. The excessive internal compensation gap, on the other hand, might lead to emotional dissatisfaction and dissension in management (Bloom & Michel, 2002; Firth et al., 2015). Consequently, the company must provide the satisfaction and assurance of justice that executives demand in exchange for their dedication, by paying them more than their industry rivals. In other words, it is indicated that companies need to consider compensation that not only has a substantial internal gap, but also a sufficient pay level. This will make executives feel as though they must compete with the team. However, in order to prevent strong rivalry that could result in bad outcomes, the company must pay competitively high compensation until the management is satisfied and committed to working for the organization.

Theoretically, this study demonstrates that tournament theory and agency theory can be used to explain the impact of compensation on FP in the energy industry in China. The findings of this study support the notion of tournament theory, which states that companies can incentivize the executives to make their efforts by widening the compensation gap among them. This is consistent with Wang's (2013) study, which allowed to find out that tournament theory is applicable to businesses in their growing and maturing stages of development or maturity. Concerning agency theory, the findings on the positive relationship between compensation level and FP back up the assumption that rewarding executives with high compensation could lead to performance improvement. In addition, the findings demonstrate that using these two theories provides insight into the impact of internal and external compensation disparities on FP. The findings bridge the gap in understanding how internal compensation gap works through the mediation of compensation level to increase FP. This indicates

that, when compared to employing just one of the theories on its own, utilizing both of them produces a more understanding of the impact that the executive compensation mechanism has on the success of the company. It is obvious that the compensation level increases the importance of compensation dispersion between executives. The corporation should establish a competitive atmosphere through the internal compensation gap to drive executives to achieve good performance. This motivator works effectively when the executives are satisfied with their compensation compared to their peers.

This study has some limitations that could be addressed in future research. Firstly, the authors did not collect the other proxies of compensation and FP for the energy companies listed in China. This is associated with possible impacts on FP, if the company provides more in other compensation or FP proxies. Secondly, this study focused only on the listed companies in the energy industry, excluding the other industries. Lastly, this study used secondary data from annual reports. Information utilized in computations is influenced by estimates, assumptions, and the various accounting methods used by companies. As the source of data are secondary and the sample size is limited, the generalizability of the findings may not be somehow applicable to other industries or to different data sources or collection techniques. Therefore, while applying the findings of this study, the constraints of secondary data and sample size must be considered. To address these limitations, in future studies the researchers could collect data on other compensation and financial performance proxies of the listed companies, including other industries. Using a more diverse sample and more comprehensive financial performance proxies will enable comparisons of research findings and lead to a greater understanding of the effects of compensation mechanisms on FP.

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Wenkai Ma obtained a bachelor's degree in accounting from Nanjing University in 2019. In 2022 he obtained a master's degree of management from Walailak University.

Pankaewta Lakkanawanit received her PhD from the Universiti Utara Malaysia. She was hired as assistant professor in accounting by the School of Accountancy and Finance, Walailak University. She is a member of the Logistics and Business Analytics Center of Excellence. She writes and presents widely on issues of sustainability reporting, firm performance, and accounting for decision making.

Muttanachai Suttipun has worked as an accounting lecturer from the Faculty of Management Sciences, Prince of Songkla University, Thailand, since 2004. He received his Ph.D. in Accounting and Finance from the University of Newcastle, Australia, in 2012. His research areas include voluntary reporting (CSR, ESG, TBL, and SD), mandatory reporting (IFRS and audit reporting), and corporate governance.

Pornpen Thippayana received her PhD from the National Institute of Development Administration, Thailand. She was hired as a finance lecturer by the School of Accountancy and Finance, Walailak University. She is a member of the Logistics and Business Analytics Center of Excellence. She writes and presents widely on issues of corporate finance, entrepreneurial finance, and feasibility study.