Executive Pay Dispersion in Chinese Listed Firms

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ABSTRACT

Using individual executive compensation data on Chinese listed firms between 2000 and 2011, we find that Chinese executive pay dispersion is negatively associated with early voluntary disclosure, positively associated with foreign-control, and positively associated with industry norm. We also find that executive pay dispersion is significantly higher in firms with high industry discretion and significantly lower in firms located in more developed regions. After controlling for endogeneity, we find that Chinese executive pay dispersion is positively associated with firm performance. We also find that CEOs in firms with higher pay dispersion are more likely to turnover in case of poor firm performance. Overall, our results suggest that institutions matter in the determination of Chinese executive pay dispersion.

Key words: Executive Compensation; Corporate Governance; Pay Dispersion; Institutional Theory; China

I. INTRODUCTION

We extend the research on Chinese top management compensation to study determinants and consequences of executive pay dispersion in Chinese listed firms. Apart from compensation level and pay-for-performance incentives, pay dispersion is a powerful incentive mechanism to motivate top management. Only three articles to date have investigated this topic in China (Chen et al., 2011; Kato and Long, 2011; Lin and Lu, 2009). All three are built on the predictions of rank-order tournament theory, which posits that larger pay gaps between hierarchical levels in an organization provides executives with incentives to work hard to increase the probability of advancement (Lazear and Rosen, 1981; Rosen, 1986). Consequently, these studies examine the determinants of pay gap based on economic determinants of tournament successful rates, such as hierarchy levels, number of contestants, firm size, etc. They also focus on establishing a positive link between pay gap and firm performance. Built on the emerging institution-based view of business strategy, the focus of our investigation is to study how Chinese institutional and
contextual factors complement economic determinants in affecting executive pay dispersion and its firm-level and individual-level outcomes. We contribute to the extant literature by providing the first evidence on the influence of institutional factors on Chinese top executive pay dispersion. Our study also goes beyond the traditional tournament theory approach that examines the performance impact of executive pay dispersion by investigating consequences of tournament failure for incumbent CEOs. That is, we examine whether larger pay dispersion will lead to a larger likelihood of CEO turnover in case of poor performance. Doing so enables us to distinguish between competing theories on executive pay dispersion.

II. HYPOTHESES DEVELOPMENT

2.1 Determinants of Pay Dispersion

National culture refers to deep-seated system of shared values, norms, and priorities that taken together constitute a “design for living” for individuals (Hofstede, 1991, 2001). It is also an informal institution that influences other societal structures and imposes informal constraints such as socially sanctioned norms on individuals (North, 1990; Scott, 1995). National culture affects executive compensation practices, because a particular form of executive compensation does not mean the same thing in different cultures, but rather carries different symbolic connotations dependent on the values dominant in a society (Tosi and Greckhamber, 2004). Based on Hofstede (1991, 2001)’s taxonomy, China is a country high on collectivism. A high level of collectivism puts greater emphasis on pay equality and equity, or in the Chinese term-social harmony. Listed Chinese firms are not required to report an individual executive’s compensation until 2005, but instead only have to report the aggregated sum of total compensation for the three highest-paid executives. Some firms, however, did choose to voluntarily disclose individual executives’ compensation during the pre-2005 period. Because Chinese culture appreciates pay equality and equity, we thus expect firms voluntarily disclosing individual executive compensation earlier tend to possess lower pay dispersion than their counterparts, which leads to the following hypothesis:

**H1:** Firms voluntarily disclosing individual executive compensation information are associated with lower pay dispersion than their counterparts.

Not all firms are subject to the same degree of cultural influences. Foreign firms are likely to commit to the institutional logics of their home countries instead of the host country where they operate (Luo, et al., 2009). The influence of foreign culture on listed firms’ corporate governance practices is realized through the ownership structure of Chinese listed firms. Firth et al. (2007) document that the presence of foreign shareholders in a Chinese listed firm is associated with higher financial reporting quality and earnings informativeness. A study by Allen et al. (2010) finds that banks with foreign ownership are associated with fewer diseconomies of diversification. Foreign-controlled Chinese listed firms are also associated with stronger pay performance sensitivity in executive compensation (Firth et al., 2006, 2007; Ding et al., 2010). Overall, these results indicate that foreign ownership has a profound influence on corporate governance practices of Chinese firms. Because other nations are not as high on collectivism as China, but value more individual contribution, we thus expect listed firms subject to foreign control will have larger pay dispersion. At a result, we expect that:
H2: Foreign-controlled listed firms are associated with higher pay dispersion than their counterparts.

Apart from culture, organizational practices are shaped by social norm and social comparison. DiMaggio and Powell (1983) suggest that an organizational practice might get dispersed because of normative imitation, whereby organizations embedded in a social structure seek to conform to shared norms by imitating each other’s behaviors to gain legitimacy. Besides the normative pressure, firms might also choose to converge to a popular practice because of competitive mimicry. Since listed firms have to compete with each other in the managerial labor market, imitating each other’s executive compensation design may become an effective strategy to ensure their pay levels are competitive. A number of executive compensation studies have documented the widespread use of peer groups in the process of setting executive compensation. We thus expect that executive pay dispersion is also influenced by the industry norm. We thereby argue that:

H3: A firm’s pay dispersion is positively associated with the industry median pay dispersion.

Industries differ in terms of the latitude of options top managers have in making strategic choices, so called managerial discretion. High discretion contexts increase potential CEO impact on organizational outcomes because the constraints are typically less severe under such situations. As a result, CEOs’ marginal productivity is higher, which should subsequently affect their pay level. Greater outcome volatility in the high discretion context also suggests that such an environment involves greater uncertainty, complexity, and risk (Hambrick and Finkelstein, 1987). As a result, it becomes more difficult to predict firm performance under such situations. Because high industry discretion involves more latitude and more uncertainty in CEO decision making, it increases uncertainty associated with winning the tournament. We subsequently expect it should also affect the size of the tournament prize: the pay gap. We thus make the following prediction:

H4: Firms in high discretion industries are associated with larger pay dispersion.

The institutional environment is not homogeneous across regions in China. It has been noted that the market development, or so called “marketisation” process has progressed to different extents in China’s different regions. A province with a higher marketization level typically has more effective local governments with less exploitation and less intervention of businesses, more advanced and effective financial intermediaries, more mobile labor markets, and better law enforcement. Prior studies suggest that external governance is weaker in less-developed regions compared with more developed regions. The tournament theory predicts that tournament incentive is most useful when monitoring is difficult (Lazear and Rosen, 1981). When it is costly for shareholders to monitor agents effectively, setting a large pay gap between CEO and other top executives can reduce the monitoring cost and provide efficient incentives for these managers. Based on the arguments above, we make the following prediction:

H5: Firms in more developed regions are associated with smaller pay dispersion.
2.2 Outcomes of Pay Dispersion

The tournament theory argues that a relatively large prize, i.e., a larger pay gap, is able to induce employees to exert more effort and subsequently result in higher outputs and better individual performance (Milgrom and Roberts, 1992). Because the tournament incentives motivate employees to work harder, organizations should subsequently benefit from the combined effort of these employees and hence organizational performance should improve. In contrast, the behavioral theory suggests that hierarchical pay distribution and the feeling of inequity create disincentives for cooperation, generate dissatisfaction, and may actually diminish firm performance (Bloom, 1999). We thus make two competing hypotheses as follows:

H6a: Pay dispersion is positively associated with firm performance.
H6b: Pay dispersion is negatively associated with firm performance.

On the one hand, if pay dispersion is designed to maximize shareholder value, we should observe a larger likelihood of CEO turnover in case of poor performance when executive pay dispersion is large. Because an incompetent CEO does not deserve the higher pay, an effective corporate governance mechanism should be able to successfully discipline the CEO by removing him/her from the post. On the other hand, if larger pay dispersion is a reflection of CEO power to take advantage of shareholders, we would expect their positions to be more secure and they are less likely to be removed even in case of poor performance. We again make two competing hypotheses on this issue:

H7a: CEOs with larger pay dispersion is associated with larger likelihood of turnover in case of poor firm performance.
H7b: CEOs with larger pay dispersion is associated with smaller likelihood of turnover in case of poor firm performance.

III. DATA AND METHODS

3.1 Sample selection and data

Our final sample consists of 6571 firm years representing 1688 unique firms between 2000 and 2011. The primary data on executive compensation, corporate governance, and financial information are obtained from the CSMAR data provided by GuoTaiAn information service (GTA). These data have been used in previous Chinese corporate governance studies.

3.2 Variables

We calculate pay dispersion, denoted as PAY_GAP, as the logarithm transformation of CEO pay minus the logarithm of average executive pay excluding CEO compensation. We measure early disclosure firms using a dummy variable, DISCLOSURE, which is equal to one if a firm has voluntarily disclosed individual executive compensation data in any year before 2005, and zero otherwise. We create FOREIGN to measure the presence of foreign control in listed firms, which is equal to one when the controlling shareholder of the listed firm is a foreign entity. We calculate industry pay dispersion norm, IND_PAYGAP, using the median industry year pay
dispersion for all firms in the sample. We measure industry discretion using Jing et al. (2010)’s discretion index created for Chinese manufacturing industries. We use a dummy variable DISCRETION to capture firms in a high-discretion industry and zero otherwise. We capture regional difference using the widely adopted NERI marketisation index compiled by Fan et al. (2011). We use the location of the listed firms’ headquarter to identify marketisation environment the firm is facing. We use a dummy variable DEVELOPED to indicate a firm locates in a developed region that has above median NERI score. Our models also consist of individual, ownership, governance, and firm level control variables, including number of executives, CEO age and tenure, CEO share, new CEO dummy, board size, leadership duality, the proportion of outside directors, state-owned enterprise dummy variable, shareholding of the largest shareholder, institutional shareholder shareholdings, firm size, firm growth opportunity, leverage ratio, as well as industry and time dummy variables.

IV. RESULTS

We use the OLS model to test determinants of pay dispersion. We find that firms choosing to voluntarily disclose individual executive compensation information before 2005 are associated with significantly lower level of pay dispersion, which supports H1. In addition, foreign-controlled firms are associated with significantly higher pay dispersion as H2 predicts. We also find a significant positive relation between firm-level executive pay dispersion and industry pay dispersion, which confirms H3. Firms in high discretion industries are associated with higher executive pay dispersion, which supports H4. Finally, we find supports for H5 that firms in developed regions are associated with lower pay dispersion.

We use three simultaneous equation models, the two-stage least square model (2SLS), seeming unrelated regressions (SUR), and the three-stage least square results (3SLS) to test the relationship between pay dispersion and firm performance. All three models support H6a that pay dispersion has a significant positive impact on firm performance.

We use a logistic model to test hypotheses related to CEO turnover. Our results suggest that CEOs in firms with poorer performance are associated with significantly higher turnover rate. In particular, the interaction term between abnormal pay dispersion and firm performance is significantly negative, i.e., CEOs with abnormal pay dispersion (overpaid CEOs) are associated with even larger likelihood of turnover when firm performance is poor, which supports H7a.

We apply two alternative measures of pay dispersion in our sensitivity analysis. First, we calculate CEO pay slice (CPS) as total CEO pay divided by the aggregated sum of top three executives’ pay. We also calculate pay dispersion as pay difference between the CEO and an average employee (EMP_GAP). All of our main results hold for these two alternative measures.

V. CONCLUSIONS
Overall, we find that institutions matter in the determination of Chinese executive pay dispersion. Using individual executive compensation data on Chinese listed firms between 2000 and 2011, we find that executive pay dispersion is negatively associated with early voluntary disclosure, positively associated with foreign-control, and positively associated with industry norm. We also find that executive pay dispersion is significantly higher in firms with high industry discretion and significantly lower in firms located in more developed regions. After controlling for endogeneity, we find that Chinese executive pay dispersion is positively associated with firm performance. We also document that CEOs in firms with higher pay dispersion are more likely to turnover in case of poor firm performance. Our results are also robust to alternative measures of pay dispersion. Our study provides important supplements to the extant tournament literature on executive pay dispersion. We find that executive pay dispersion is influenced by institutional factors such as national culture, home country culture, industry norm, industry discretion, and regional regulatory context. These results suggest that institutional factors could well complement economic determinants in explaining corporate governance and executive compensation decisions in China.

Our results provide some evidence that Chinese executive pay dispersion is designed in a way to maximize shareholder value in terms of increasing firm performance and better disciplining poor-performed CEOs. Our findings thus enable us to differentiate the optimal contracting theory, the managerial power theory, and the behavioral theory’s explanations on executive compensation design. We hope that our findings will stimulate further research on the effectiveness of executive compensation and corporate governance in contributing to the development of national economies.

REFERENCES

References available upon request from Lerong He at lhe@brockport.edu