Empirical Study on Executive Compensation of Chinese Listed Companies

ZHAI Yan Sheng, HUANG Ying
School of Management, University of Science and Technology of China, P.R.China, 230026
fengyun0126@163.com

Abstract: Executive compensation of Chinese listed companies has been the focus of social concern. According to the data of annual report of Chinese A-share listed companies in 2006, this paper uses regression analysis to make an empirical research of executive compensation. The results show that executive compensation has notable relationship with company performance and company scale. However, there is no significant relationship between executive compensation and the proportion of executive shares. In addition, the phenomenon of “Zero Share” is fairly general. Finally, the author suggests that we adopt stock option mechanism to inspire executives.

Key words: executive, compensation, listed companies, incentive, company performance, company scale

1 Introduction

Executives are senior management staff that engaged in the strategic decision-making and take charge of the business activities of enterprises. Executives are different from general managers. They can carry out the strategic decision, and they are directly responsible for benefits of companies. They are the highest managers in enterprises. They have direct and comprehensive influence on enterprises’ survival and development. They are very important to companies, so how effectively inspire executives, raise their enthusiasm and loyalty becomes an important issue.

There are many problems of Chinese executive compensation in amount and structure, in particular the lack of an effective long-term incentive mechanism. All these indicate that incentive system of Chinese enterprises management is not effective to inspire executives. From 1998 Chinese listed companies’ annual reports begin to disclose information of annual compensation and shares of senior management. Thus, the encouragement question of executives has been an important problem of perplexing the economical circles of our country. And some scholars produced some valuable research results, which made helpful contributions to solve the problem of inadequate incentives in Chinese enterprises.

Research on executive compensation has drawn a lot of attention from economists in the past two decades, but most work on executive compensation has been concentrated on a few developed countries such as the U.S. and Britain, mainly due to data availability. Because executive compensation is a major component of the incentive mechanisms adopted by companies to align the interests of their management with those of their shareholders, one might argue that barring the issue of data availability, it is just as important, if not more important, to study how companies in developing countries compensate their top executives, because these are the countries that will benefit the most from adopting more efficient incentive mechanisms and better corporate governance practices.

Western academe has done many researches on incentives of executives. From overseas analytical results, company performance and company scale have positive correlation with executive compensation. In China, the empirical research on executive compensation has just been raised in recent years, Wei Gang, Chen Zhiguang, Wang Peixin etc. make use of Chinese listed companies’ annual reports to study correlation between executive compensation and company performance, company scale. In my opinion, the problem is that with annual report data of Chinese listed companies changes each year, the results are likely to change. So we should use the latest data of annual report to study.

Based on previous research, according to the data of annual report of Chinese A-share listed companies in 2006, this paper uses regression analysis to make an empirical research of executive compensation. Finally, it gives some suggestions to inspire executives.
2 Study Design

2.1 Study hypothesis

Hypothesis one: there is a significant positive correlation between executive compensation and company performance.

As there exists asymmetric information between shareholders and executives, and their objectives is inconsistent, so in order to make executives work hard, executive compensation should be linked to company performance by shareholders. That is to say, executive compensation is decided by company performance. Therefore, executives will work hard to increase their own compensations, through improving the company performance to increase their salaries.

Hypothesis two: there is a significant positive correlation between executive compensation and company scale.

The larger the company, the more staff and the greater scale it has. Therefore, executives need to face more complicated problems. So they can gain more compensations.

Hypothesis three: there is a significant positive correlation between executive compensation and proportion of executive shares.

When executives hold company stocks, their interests are consistent with shareholders’. This greatly raises their enthusiasm, and they will work hard to enhance company performance, thereby the value of stocks increases and it will enhance their incomes.

2.2 Construction of model

In this paper, it takes executive annual compensation (AP) as a variable of compensation, returns on equity (ROE) as a variable of company performance, the total assets of the company (ASSET) as a variable of company scale, the ratio of executive stocks (MSR) accounting for the total amount of company stocks (SIZE) as a variable of the executive shareholding. In order to test the above hypotheses, it constructs the following linear model to analyze.

\[ \ln(\text{AP}) = \beta_0 + \beta_1 \ln(\text{ASSET}) + \beta_2 \text{ROE} + \beta_3 \text{MSR} + \epsilon \]

Which \( \beta_1, \beta_2 \) and \( \beta_3 \) is the regression coefficient, \( \epsilon \) is the random error.

2.3 Sample selection and data source

This paper uses 841 Chinese A-share listed companies in 2006 as samples. The data source is the Wind financial information terminal. Executives mean directors, supervisors and senior management of Chinese listed companies’ annual reports. In view of that the extreme value will bring adverse effects to statistical results, so we remove the 85 ST companies whose performances fluctuated significantly. And then remove 114 companies which did not disclose executive annual compensation. After the above data processing, there are 642 Chinese A-share listed companies as our study samples. And we can calculate numerical value of MSR, \( \ln(\text{ASSET}) \) and \( \ln(\text{AP}) \).

3 The findings of the study and analyses

3.1 Descriptive analysis

We use the statistical software SPSS to make a descriptive statistical analysis of the samples’ data, and we can gain Table 1, which is a descriptive statistical table. From Table 1, we can see that the average of executive annual compensation is 305,490 Yuan in Chinese listed companies. Although it has been enhanced compared to previous study results of domestic scholars, but it lags far behind foreign executive compensation. Our executive compensation level is not high. Among the samples, the maximum is 14,255,000 Yuan, and the minimum is 20,000. Incredibly, the maximum is 700 times larger than the minimum. This indicates that the difference of executive compensation is very large in Chinese listed companies.

In Chinese listed companies, the average of the proportion of executive stocks is only 1.12%. Among them, the highest proportion of executive shares is 58.13%. Surprisingly, there are 264 companies whose executives have “Zero Share” which account for 41.12% of total samples. Among
samples, there are three companies whose percentage of executive shares are between 50% and 60%, four companies between 40% and 50%, five companies between 30% and 40%, two companies between 20% and 30%, five companies between 10% and 20%, twelve companies between 1% and 10%, three hundred and forty seven companies between zero and 1%. Generally speaking, in Chinese listed companies, the percentage of executive shares is very low, and the phenomenon of “Zero Share” is fairly general.

### Table 1 Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP (million Yuan)</td>
<td>642</td>
<td>2.0</td>
<td>1425.5</td>
<td>30.549</td>
<td>63.5586</td>
</tr>
<tr>
<td>ASSET (million Yuan)</td>
<td>642</td>
<td>1.1602</td>
<td>78808.06</td>
<td>262.6044</td>
<td>3205.2164</td>
</tr>
<tr>
<td>MSR (%)</td>
<td>642</td>
<td>0</td>
<td>58.13</td>
<td>1.12</td>
<td>6.401</td>
</tr>
<tr>
<td>ROE (%)</td>
<td>642</td>
<td>-101.22</td>
<td>45.20</td>
<td>7.2859</td>
<td>11.3930</td>
</tr>
<tr>
<td>lnAP</td>
<td>642</td>
<td>0.6931</td>
<td>7.2623</td>
<td>3.0466</td>
<td>0.7790</td>
</tr>
<tr>
<td>lnASSET</td>
<td>642</td>
<td>0.1486</td>
<td>11.2748</td>
<td>3.1792</td>
<td>1.2979</td>
</tr>
</tbody>
</table>

### 3.2 Multiple regression analysis

In order to test the model test, we use SPSS software to make a multiple regression analysis of the samples’ data, and we can gain Table 2, which is a coefficient table. From Table 2, we can see that lnASSET, ROE and MSR three variables are tested by T tests and related tests. There is a significant difference between regression coefficient and zero, so corresponding variables should be retained in the equation.

The final regression equation:

\[
\ln{AP} = 2.428 + 0.155 \ln{ASSET} + 0.016 \\text{ROE} + 0.667 \text{MSR}
\]

The final standardized regression equation:

\[
\ln{AP} = 0.258 \ln{ASSET} + 0.240 \text{ROE} + 0.055 \text{MSR}
\]

The linear relationship between three variables and lnAP is weaker. And three variables do not explain the change of lnAP well. So it shows that the influence of other factors on executive compensation is stronger.

### Table 2 Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>2.428</td>
<td>0.077</td>
<td>-</td>
<td>31.390</td>
</tr>
<tr>
<td>lnASSET</td>
<td>0.155</td>
<td>0.022</td>
<td>0.258</td>
<td>6.974</td>
<td>0.000</td>
</tr>
<tr>
<td>ROE</td>
<td>0.016</td>
<td>0.003</td>
<td>0.240</td>
<td>6.494</td>
<td>0.000</td>
</tr>
<tr>
<td>MSR</td>
<td>0.667</td>
<td>0.451</td>
<td>0.055</td>
<td>1.479</td>
<td>0.140</td>
</tr>
</tbody>
</table>

### 3.3 Correlation Analysis

In order to test the above hypotheses, we use SPSS software to make a correlation analysis between lnAP, lnASSET, ROE and MSR, and we can gain Table 3, which is a Pearson correlation coefficient matrix. From Table 3, we can draw the following conclusions:

### Table 3 Correlations

<table>
<thead>
<tr>
<th></th>
<th>lnAP</th>
<th>lnASSET</th>
<th>ROE</th>
<th>MSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>lnAP</td>
<td>1</td>
<td>0.274**</td>
<td>0.260**</td>
<td>0.046</td>
</tr>
<tr>
<td>lnASSET</td>
<td>0.274**</td>
<td>1</td>
<td>0.076</td>
<td>-0.037</td>
</tr>
<tr>
<td>ROE</td>
<td>0.260**</td>
<td>0.076</td>
<td>1</td>
<td>0.006</td>
</tr>
<tr>
<td>MSR</td>
<td>0.046</td>
<td>-0.037</td>
<td>0.006</td>
<td>1</td>
</tr>
</tbody>
</table>

**Correlation is significant at the .01 level (2-tailed)
Correlation is significant at the .05 level (2-tailed)

(1) There is a significant positive correlation between lnAP and ROE. This shows that the higher company performance, the higher possibility of greater rewards is. Contrarily, the lower possibility of greater rewards is. Therefore the hypothesis one is right. So the level of incentives to executives should be linked to company performance.

(2) There is a significant positive correlation between lnAP and lnASSET. This indicates that if company scale is larger, executives more likely have greater rewards. Therefore the hypothesis two is right.

(3) There is not a significant positive correlation between lnAP and MSR. That is to say, there is no notable positive correlation between executive compensation and the proportion of executive shares. It is probably due to our imperfect securities market. Therefore the hypothesis three is wrong.

4 Suggestions

Whether company runs well or not depends on the quality, dedication and effort of executives to a great extent. Thus to establish a rational incentive mechanism is the key to improve the economic efficiency of enterprises. Through the above analyses we can find our incentive mechanism is far from perfect. How to design an effective incentive mechanism has become a problem which is urgent to solve. This paper refers to foreign experience, and gives several suggestions to Chinese listed companies on executive compensation in light of Chinese actual situation.

First, we can adopt the incentive mechanism of executive stock options. Stock options are contracts which give the recipient the right to buy a share of stock at a pre-specified “exercise” price for a pre-specified term. Executive options typically become “vested” over time: for example, 25% might become exercisable in each of the four years following grant. Executive options are non-tradable, and are typically forfeited if the executive leaves the firm before vesting. Executive stock options can reduce agency costs, and can encourage executives to work hard. If companies do not run well, stock prices will decline, and the value of stock options will decrease. Therefore, executives must strive to improve company performance, so that stock prices and the value of stock options will rise.

Second, we are supposed to improve correlative measure. We should adjust the structure of executive compensation and establish the incentive restrictive mechanisms of executives. Moreover, we ought to constitute canonical system of executive stock options plan.

Finally, we should attach importance to effect of spirit incentive. I think this point is very important, but other papers don’t refer to. There is a trend that we give emphasis to material incentive but ignore spirit incentive. Such incentive mechanism is unscientific. Consequently, when we raise executive material interests, we also have to give spirit incentive to them, and form a comprehensive incentive mechanism. However, as spirit incentive does not directly relate to company performance, so the effect of spirit incentive is limited. We should use material incentive and spirit incentive at one time to inspire executives.

5 Conclusion

Because executive compensation is a major component of a company’s incentive structures, which are at the core of the company’s corporate governance, our study on executive compensation helps evaluate the quality of corporate governance. Since both economic theory and empirical evidence shows that an efficient compensation system involves close links between company performance and executive compensation, in this study we attempt to determine the existence and magnitude of such links in Chinese listed companies.

This paper studies the situation of executive compensation in Chinese listed companies, and uses regression analysis to make an empirical research of executive compensation. By the above analyses we can draw the following conclusions.

First of all, the difference of executive compensation is very large in Chinese listed companies. Moreover the percentage of executive shares is very low, and the phenomenon of “Zero Share” is fairly
general.
In addition, there is a notable positive correlation between executive compensation and company performance. Therefore, the level of incentives to executives should be linked to company performance.

Third, there is a notable positive correlation between executive compensation and company scale.
Finally, there is no notable positive correlation between executive compensation and the proportion of executive shares.

References