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# DETERMINANTS OF DIRECTORS' REMUNERATION: MALAYSIAN EVIDENCE 1998-2001

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## ABSTRACT

*The objective of this study is to identify the factors associated with the directors' remunerations. The sample comprises 180 companies listed in the Kuala Lumpur Stock Exchange during the period 1989 to 2001. Instead of focussing on the pooled sample, this research also sub-sampled the firms based on economic condition in order to determine the effect of economic recession on the factors related to the directors' remunerations. The findings show that the size of the firm, growth and industry are the significant explanatory variables of directors' remuneration. This research also found that the explanatory power of the independent variables is less during the time of economic recovery compared to the recovered period.*

## INTRODUCTION

The managers of the company's affairs are usually referred to as a group of people called the directors. The directors are deemed to be the agents and they are responsible in managing the resources owned by the shareholders collectively known as the principal. The directors are paid accordingly for the services, legal obligation and the ever-increasing responsibility put on their shoulders. Thus, to a certain extent, it is look reasonable for the directors to draw and enjoy a certain portion of the wealth generated by the company. The levels of remuneration should be sufficient to attract and retain the directors needed to run the company successfully.

However, there are many controversial issues arising from the directors' remuneration. For example some directors are awarded millions in salary while many ordinary workers have problems obtaining a modest living wage. Recent headlines in Malaysian Business (2002), suggest that the directors' remuneration is too high, especially for those whose firms are in decline.

The growing public concern is that business executives are paid exorbitantly and that their pay increases in recent years cannot be matched by the performance of the firms they run (Culpan et al., 1992). The most frequently asked question by the public at large is, "Are the compensation paid, especially to chief executives, well deserved?" Some of the researchers criticise that the salaries paid to top executives are too excessive, while some defend that top executives are worth every nickel they get. To answer these questions, many empirical investigations on executive compensation have been done in attempting to show that salaries and bonuses can be explained by relating them to factors such as firm size, profitability or growth. According to O' Reilly et al. (1988), top compensation is thought to be justified if it is related to the factors mentioned above.

There are many empirical researches done to identify the factors associated with the directors' remuneration. However most of these studies were done in UK and US and little is known about the determinants of the directors' remuneration in Malaysia. In an attempt to fill the gap, the primary objective of this study is to examine the factors that are associated with the directors' remuneration in the Malaysian Main Board companies from the year 1998 to 2001. As Malaysia is one of the Asian countries that experienced financial crisis in 1997, we would expect that from 1998 to 1999, the Malaysian economy was still in the recovery process and the economy recovered during the year 2000 to 2001. Thus, the second objective is to look at the effect of these factors and their explanatory power on the directors' remuneration in combined years of 1998 to 1999 and 2000 to 2001.

After the Asian economic crisis, companies listed on the KLSE are required to be more transparent on the directors' remuneration. Many questions were raised on whether the directors are paid fairly with the performance and growth of the companies. In order to enhance good governance among Malaysian companies, the KLSE introduced new rules regarding the disclosure of the directors' remuneration in the year 2000. Thus, our third objective is to find out whether there is a link between performance and the directors' remuneration of the companies across the years, especially in the year 2001.

## **MOTIVATION AND HYPOTHESES DEVELOPMENT**

### **The Association of Firm Size and Directors' Remuneration**

There are many researches which concluded that the director's compensation is positively correlated with the firm size for e.g. Culpan et al. (1992); Rajagopalan and Prescott (1990); Sharma and Smith (1997); Roberts (1959) and McGuire et al. (1962). In those studies, the sales, the number of employee and the net assets are most commonly used as proxy to firm size. According to Murphy (1999) it is not surprising that compensation increases with companies' sizes. Moreover Baker et al. (1988) found that a firm that is 10% larger would pay its CEO about 3% more.

Large firms are more complex, thus the responsibility of the big firm's executives would be more compared to smaller firms and the executives would demand more rewards for heavier responsibility (O'Reilly et al., 1988). Simon (1957) argued that larger firms have

more hierarchical levels and because firms attempt to insure adequate pay differentials between hierarchical levels, those at the top are more likely to be paid more. Simon's view was also supported by Coughlan and Schmidt (1985) that higher compensation for the management of larger firms may be necessary because managing those firms involves more complex and demanding tasks. Size could attribute to more complex responsibilities of directors and large firms tend to pay their directors more than smaller firms due to the fact that they need to retain the skill workforce. A stiff competition in retaining the best directors is crucial in any organisation.

Researchers like Ueng et al. (2000), Rajagopalan and Prescott (1990) used book value of net assets (BVNA) as proxy to firm size and both studies have found that there is a positive statistically significant relationship with executive compensation. In this study, we have chosen BVNA as our proxy to firm size. The first hypothesis established in this study is:

*H<sub>1</sub>: There is a significant positive association between firm size and directors' remuneration.*

#### *The Association of Firm Performance and Directors' Remuneration*

Firm performance is another important factor that is associated with executive compensation. O'Reilly et al. (1988), argued that the relationship between the directors' remuneration and firm performance is obvious because the directors form a group of people who are responsible for the overall performance of the organisation. Thus, rewards should be in congruent with this criterion. Although the argument made by O'Reilly et al. (1988), is logical, many empirical studies found that the relationship between the executive pay and performance is mixed and inconclusive.

Nevertheless, some studies do show some correlation between executive compensation and performance as indexed by measures such as earning per share and return on equity (Lewellen and Huntsman, 1970). Basically, the executive will be rewarded in accordance with the performance of the firm. The executives would be highly compensated if there is an improvement in the company performance. The performance measurements that are widely used to determine the firm performance are profit (Murphy, 1998; Culpan et al. 1992; Fatt and Lin, 2002), return on assets (Ramaswamy et al., 2000; Ueng et al., 2000), return on equity (O'Reilly, 1988; Rajagopalan and Prescott, 1990; Murphy, 1985) and earning per share (Lewellen and Huntman, 1970; Conyon et al., 2000; Gregg et al., 1993).

However, in our study, we have chosen EPS as the proxy to the performance since in Malaysia according to the survey by Asiaweek (2000) and Watson Wyatt (2001), EPS is one of the most common performance measure that companies use to evaluate directors. Thus it can be hypothesized that:

*H<sub>2</sub>: There is a significant positive association between performance of the company and directors' remuneration.*

*The Association of Firm Growth and Directors' Remuneration*

Sharma and Smith (1997) explained variation in executive compensation by using the "sales maximisation hypothesis". It states that as firms grow, the owners become and have troubled monitoring management, therefore executives pursue their own interests instead of trying to maximise shareholders' wealth. Alternatively, as firms grow, they become more complex and the owners would have difficulty in monitoring the management. Thus to make sure that both interests are aligned in the same direction, more costs have to be incurred by the owner.

Furthermore, by increasing sales, they will achieve greater prestige and eventually higher compensation. In this study, the annual change in sales is used as an indicator for growth. By linking pay and sales growth, a board can tie pay to measurable results in a manner that protects the CEO from the effects of outside events on stock prices (Coughlan and Schmidt, 1985). According to Murphy (1985), the sales increases portrayed as a good performance and prestige, will eventually lead to a higher compensation. A study conducted by Sharma and Smith (1997) and Murphy (1985) shows that there is a significant effect of revenue growth on the executive compensation. Since annual revenue growth does have an effect on the directors' remuneration, it can be hypothesized that:

*H<sub>3</sub>: There is a significant positive association between the annual growth of the company and directors' remuneration*

*The Association of Industry and Directors' Remuneration*

A study done by Deckop (1988) observed that there is industry effect in the executive compensation. Many practitioners and compensations consultants such as Hay Associates and Watson Wyatt have argued that the levels and types of compensation schemes vary across industries. The fact that certain industries pay consistently more than other industries is an evident from reports in magazines like Asiaweek (2000) and Malaysian Business (2000). In these magazines, it was found that the proportion of different components of pay package (such as salary, bonus and benefits) varies significantly across industries. According to Deckop (1988), these variations reflect the fact that different industries have different "critical success" factors. He further emphasised that these industry results are most useful as a caution against making generalisations concerning executive compensation across industries. Therefore, the fourth hypothesis, in the alternative form, is:

*H<sub>4</sub>: There is a significant difference between the sectors and directors' remuneration.*

## RESEARCH DESIGN

### Data Set

The sample consists of 180 companies listed on the main board of Kuala Lumpur Stock Exchange (KLSE). The sample excluded companies in finance sector and those listed after the year 1998. The stratified random sampling based on companies' size (market capitalisation) was used to select the sample. This procedure was undertaken to ensure that the sample selected, adequately represents large, medium and small companies. The detashown in table 1.

Table 1: Sample Selection

| Categories | Market Capitalisation Range                                   | Population size | Sample size | Percentage |
|------------|---|-----------------|-------------|------------|
| Large      | More than or equal to RM 382.4 millions.                      | 182             | 60          | 33%        |
| Medium     | More than RM 130.87 millions and less than RM 382.4 millions. | 182             | 60          | 33%        |
| Small      | Less than and equal to RM 130.87 millions.                    | 181             | 60          | 33%        |
| TOTAL      |   | 545*            | 180         | 100%       |

\*Total number of companies as at 31 July 2002

The sample companies are categorised based on sectors of trading/services, consumer, industrial, construction, properties and hotels, plantation, technology, mining, IPC and PN4. The companies listed under technology, mining, IPC and construction are combined as the samples selected under these sectors are too small for further analysis.

### Empirical Models

The model used by Ueng et al. (2000) was modified to test the relationship between the directors' remuneration and firm size, performance, industry and growth. The ordinary least square regression was conducted to the following equation:

$$LGDR_j = \lambda_0 + \lambda_1 SIZE_j + \lambda_2 PERFORMANCE_j + \lambda_3 GROWTH_j + \lambda_4 SEC1_j + \lambda_5 SEC2_j + \lambda_6 SEC3_j + \lambda_7 SEC4_j + \lambda_8 SEC5_j + \lambda_9 SEC6_j + \varepsilon \quad (1)$$

Where:

- LGDR<sub>j</sub> = Directors' remuneration of company j in its log term
- SIZE<sub>j</sub> = Book Value of Net Assets of company j.
- PERFORMANCE<sub>j</sub> = Earning per share of company j.
- GROWTH<sub>j</sub> = Annual Revenue Growth of company j.

|                           |   |   |
|---------------------------|---|---|
| SEC 1 <sub><i>j</i></sub> | = | Dummy variable taking the value of 1 for Technology, Construction, IPC and Mining Sector. |
| SEC 2 <sub><i>j</i></sub> | = | Dummy variable taking the value of 1 for Consumer Sector.                                 |
| SEC 3 <sub><i>j</i></sub> | = | Dummy variable taking the value of 1 for Industrial Sector.                               |
| SEC 4 <sub><i>j</i></sub> | = | Dummy variable taking the value of 1 for Trading and Services Sector.                     |
| SEC 5 <sub><i>j</i></sub> | = | Dummy variable taking the value of 1 for Property/Hotel Sector.                           |
| SEC 6 <sub><i>j</i></sub> | = | Dummy variable taking the value of 1 for Plantation Sector.                               |
| ε                         | = | Error term  |

This research used dummy variables to represent the firm sectors. Six Dummy variable are used to represent the 7 sectors as suggested by Gujarati (1995), to avoid the perfect multicollinearity problem. The general rule is; if a qualitative variable has *m* categories use only (*m*-1) dummy variables.

Barth et al. (1998) found that negative and positive values for certain variables do capture certain meaning in explaining the dependent variable. In doing so, we are particularly interested in identifying the effect of the signs (negative or positive values) of the independent variables (performance, growth and size) on the directors' remuneration. This research also tries to capture the effect of negative sign by assigning the negative signs of BVNA, EPS and ARG as one, otherwise zero value. According to Barth et al. (1998), permitting the coefficient for negative variables to differ from those with the positive values will add extra explanations regarding directors' remuneration. By doing so, it permits us to test whether or not our findings reflect incremental to those captured by positive or negative BVNA, EPS and ARG. By summarising this line of reasoning, we performed the ordinary least square regression on the following model:

$$\begin{aligned}
 LGDR_j = & \lambda_0 + \lambda_1 SIZE_j + \lambda_2 SIZENEG_j + \lambda_3 PERFORMANCE_j + \\
 & \lambda_4 PERFORMANCENEG_j + \lambda_5 GROWTH_j + \lambda_6 GROWTHNEG_j + \quad (2) \\
 & \lambda_7 SEC1_j + \lambda_8 SEC2_j + \lambda_9 SEC3_j + \lambda_{10} SEC4_j + \lambda_{11} SEC5_j + \lambda_{12} SEC6_j + \varepsilon
 \end{aligned}$$

Where:

SIZENEG<sub>*j*</sub> = Negative BVNA of company *j* are given dummy variable =1, otherwise 0.

PERFORMANCENEG<sub>*j*</sub> = Negative EPS of company *j* are given dummy variable =1, otherwise 0.

GROWTHNEG<sub>j</sub> = Negative ARG for company *j* are given dummy variable =1, otherwise 0.

The first equation is conducted on the pooled sample. We further extended our test with sub-samples constructed according to the year in order to test the robustness of the result. The period under study is from the years 1998 to 2001. The sub-samples are further divided into two areas firstly, the effect of economic crisis on the directors' remuneration and secondly, the year-to-year analysis.

## EMPIRICAL RESULTS

### Descriptive Statistics

Table 4 shows that trading and services sector represents the highest number of observations which is 22%, followed by IP, PN4, Consumer Products, Property & Hotels and Plantation. Whereas, the other combined sectors (Technology, Mining, IPC and Construction) represent the lowest number of observations.

Table 2: Descriptive Statistics

| Sector                                   | Overall    |            | 2001       |            | 2000       |            | 1999       |            | 1998       |            |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|  | Qty        | %          |
| Technology, Mining, IPC and Construction | 64         | 9.3        | 16         | 9.2        | 17         | 10.05      | 16         | 9.2        | 15         | 8.7        |
| Consumer Products                        | 86         | 12.5       | 22         | 12.6       | 20         | 11.8       | 22         | 12.7       | 22         | 12.7       |
| Industrial Products                      | 145        | 21         | 36         | 20.7       | 36         | 21.3       | 36         | 20.9       | 37         | 21.4       |
| Trading and Services                     | 158        | 22         | 41         | 23.6       | 37         | 21.9       | 40         | 23.1       | 40         | 23.1       |
| Property & Hotels                        | 72         | 10.4       | 18         | 10.3       | 18         | 10.7       | 18         | 10.4       | 18         | 10.4       |
| Plantation                               | 68         | 9.9        | 17         | 9.8        | 17         | 10.05      | 17         | 9.8        | 17         | 9.8        |
| PN4                                      | 96         | 13.9       | 24         | 13.8       | 24         | 14.2       | 24         | 13.9       | 24         | 13.9       |
| <b>TOTAL</b>                             | <b>689</b> | <b>100</b> | <b>174</b> | <b>100</b> | <b>169</b> | <b>100</b> | <b>173</b> | <b>100</b> | <b>173</b> | <b>100</b> |

According to table 4, when we divide the observations by year, the number of observations for each sector does not vary much across the years. For example the trading and services sector still constitutes the largest number of observations. 37 observations and 41 observations come from the year 2000 and the year 2001, respectively. The rest of the sectors have more or less the same number of observations across the year.

### Factors Associated With Directors Remuneration

Table 3 summarises the statistics resulting from running equation (2). The econometric problem of heteroscedasticity was discovered when estimating this cross-sectional valuation. A procedure established by White (1980) which is known as the heteroscedasticity-consistent covariance matrix estimators (HCCME) was carried out to overcome the heteroscedasticity problem. The summary on the extension of the basic

Table 3: Ordinary Least Square Regression Results (Pooled Sample)

| Variable                | Basic Model                            | Basic Model based on White's Heteroscedasticity |
|-------------------------|--|---|
| Intercept               | 7.249<br>(33.465)***                   | 7.249<br>(39.023)***                            |
| SIZE                    | 0.259(10 <sup>-6</sup> )<br>(8.578)*** | 0.259(10 <sup>-6</sup> )<br>(5.746)***          |
| SIZENEG                 | -0.419<br>(-1.794)***                  | -0.419<br>(-1.926)**                            |
| PERFORMANCE             | 0.019<br>(0.246)                       | 0.019<br>(0.334)                                |
| PERFORMANCENEG          | -0.3436<br>(-2.625)***                 | -0.3436<br>(-2.715)***                          |
| GROWTH                  | 0.704(10 <sup>-6</sup> )<br>(0.795)    | 0.704(10 <sup>-6</sup> )<br>(4.252)***          |
| GROWTHNEG               | 0.037<br>(0.371)                       | 0.037<br>(0.371)                                |
| SECTOR 1                | -0.213<br>(-0.821)                     | -0.213<br>(-0.895)                              |
| SECTOR 2                | 0.087<br>(0.356)                       | 0.087<br>(0.412)                                |
| SECTOR 3                | -0.451<br>(-2.085)**                   | -0.451<br>(-1.449)                              |
| SECTOR 4                | -0.147<br>(-0.652)                     | -0.147<br>(-0.722)                              |
| SECTOR 5                | -0.203<br>(-0.818)                     | -0.203<br>(-0.976)                              |
| SECTOR 6                | -0.909<br>(-3.499)***                  | -0.909<br>(-3.918)***                           |
| Adjusted R <sup>2</sup> | 0.162                                  | 0.162   |
| N                       | 689                                    | 689   |

Notes: The table indicates significance at 1% (\*\*\*) and 5% (\*\*) levels

$$\begin{aligned}
 \text{LGDR}_i = & \lambda_0 + \lambda_1 \text{SIZE}_i + \lambda_2 \text{SIZENEG}_i + \lambda_3 \text{PERFORMANCE}_i + \lambda_4 \text{PERFORMANCENEG}_i \\
 & + \lambda_5 \text{GROWTH}_i + \lambda_6 \text{GROWTHNEG}_i + \lambda_7 \text{SEC1}_i + \lambda_8 \text{SEC2}_i + \lambda_9 \text{SEC3}_i + \lambda_{10} \text{SEC4}_i \\
 & + \lambda_{11} \text{SEC5}_i + \lambda_{12} \text{SEC6}_i + \varepsilon
 \end{aligned}$$

Based on table 3, SIZE was found to be positively related to the directors' remuneration as hypothesized (H1). This finding is consistent with the fact that executives in large firms usually earn more than executives in small firms and this support findings made by Ueng et al. (2000), Rajagopalan and Prescott (1990), O'Reilly et al. (1988) and Simon (1957). As for the SIZENEG variable, it was found that there is no significant relationship between this variable and the directors' remuneration.

The result shows that the firms' performance is not significantly related to the directors' remuneration. This finding is consistent with the findings made by Conyon et al. (2000), Murphy (2000) that in the past several years, there is no relationship between performance and compensation. Jensen and Murphy (1987) found a relationship between pay and performance but the links seem to have been weakening. In the US, O'Reilly et al. (1988) and Conyon et al. (2000) argued that this may be due to the fact that most of the studies excluded the long-term compensation, when in fact the usage of share incentive schemes or share options is increasingly popular and by excluding them, some important findings might not be captured. However, this reasoning might not be applied in Malaysia, since research done in 2000 by Hay Management Consultants (M) Sdn Bhd found that Malaysian companies continue to prefer short term benefits compared to long term benefits and there is a long way to go for Malaysian companies to follow the US and the UK. The lack of statistical significance is probably attributable to the fact that most Malaysian employers do not mind paying for good talent because they expect the company's performance to improve in the near future (Shanmugam, 2000).

Despite the insignificant results produced by PERFORMANCE, PERFORMANCENEG does convey added information regarding the directors' remuneration. The significant relationship between PERFORMANCENEG and the directors' remuneration implies that the companies with negative EPS (proxy for PERFORMANCENEG) are more likely to pay lower directors' remuneration compared to companies with positive EPS.

The GROWTH is positively significant to the directors' remuneration. It was found that the higher the growth of the companies, the more likely that companies pay higher remuneration. This is consistent with the findings made by Sharma and Smith (1997) and Murphy (1985). As for the GROWTHNEG variable, it was found that there is no significant relationship between this variable and the directors' remuneration.

For industry, only one of the six industry dummies was statistically significant to the directors' remuneration. The results implied that the plantation sector pay their directors lower than their counterparts in other industries and more surprisingly lower than PN4 companies. This is probably because of the claim that many troubled companies in Malaysia are willing to pay high remuneration to attract talented directors, hoping that these people could improve the performance of the companies in the future, Hewitt Associates (2001)<sup>2</sup>.

*The Economic Crisis Effects on Directors' Remuneration*

The second objective of our study is to look at the effects of the economic crisis on the directors' remuneration. According to Gregg et al. (1993), during the time of economic recovery, the explanatory power of independent variables would be less compared to the recovered period. Applying the same principle, we would expect that the explanatory power of the independent variables during the years 2000 and 2001 would be more than during the years 1998 to 1999, since it is believed by many Malaysian economists that our economy had recovered during those years.

<sup>1</sup> This article can be found at <http://www.apmforum.com/news/apam43.htm>

<sup>2</sup> Available at <http://www.hewitt.com/hewitt/resource/newsroom/pressrel/2001/01-101asia.htm>

Table 4: Ordinary Least Square Regression Results  
(Sub-Sample B based on Economic Condition)

| Variable                | Basic Model                           |  | Basic Model based on White's Heteroscedasticity |                                       |
|-------------------------|---------------------------------------|--|---|---------------------------------------|
|                         | 2000-2001                             | 1998-1999                              | 2000-2001                                       | 1998-1999                             |
| Intercept               | 6.987<br>(19.085)***                  | 7.244<br>(25.800)***                   | 6.987<br>(25.325)***                            | 7.244<br>(29.806)***                  |
| SIZE                    | .337(10 <sup>-6</sup> )<br>(8.688)*** | .1391(10 <sup>-6</sup> )<br>(2.913)*** | 0.337(10 <sup>-6</sup> )<br>(6.608)***          | 0.139(10 <sup>-6</sup> )<br>(2.257)** |
| SIZENEG                 | 0.002<br>(0.006)                      | -0.528<br>(-1.622)                     | 0.002<br>(0.007)                                | -0.528<br>(-1.315)                    |
| PERFORMANCE             | 0.054<br>(0.439)                      | 0.027<br>(0.253)                       | 0.054<br>(0.550)                                | 0.027<br>(0.300)                      |
| PERFORMANCENEG          | -0.557<br>(-2.921)***                 | -0.165<br>(-0.904)                     | -0.557<br>(-2.804)***                           | -0.165<br>(-0.931)                    |
| GROWTH                  | 0.626(10 <sup>-5</sup> )<br>(0.713)   | -0.148(10 <sup>-5</sup> )<br>(-0.435)  | .6261(10 <sup>-5</sup> )<br>(3.339)***          | -0.148(10 <sup>-5</sup> )<br>(-0.913) |
| GROWTHNEG               | 0.018<br>(0.124)                      | 0.117<br>(0.773)                       | 0.018<br>(0.126)                                | 0.117<br>(0.756)                      |
| SECTOR 1                | -0.061<br>(-0.144)                    | -0.072<br>(-0.208)                     | -0.061<br>(-0.179)                              | -0.072<br>(-0.206)                    |
| SECTOR 2                | 0.416<br>(1.027)                      | 0.021<br>(0.068)                       | 0.416<br>(1.276)                                | 0.021<br>(0.079)                      |
| SECTOR 3                | -0.109<br>(-0.289)                    | -0.551<br>(-2.027)**                   | -0.109<br>(-0.367)                              | -0.551<br>(-1.313)                    |
| SECTOR 4                | 0.176<br>(0.466)                      | -0.186<br>(-0.639)                     | 0.176<br>(0.574)                                | -0.186<br>(-0.693)                    |
| SECTOR 5                | 0.140<br>(0.341)                      | -0.306<br>(-0.942)                     | 0.140<br>(0.417)                                | -0.306<br>(-1.245)                    |
| SECTOR 6                | -0.773<br>(-1.809)*                   | -0.765<br>(-2.203)**                   | -0.773<br>(-2.235)**                            | -0.765<br>(-2.304)**                  |
| Adjusted R <sup>2</sup> | 0.266                                 | 0.055                                  | 0.266   | 0.055                                 |
| N                       | 343                                   | 346                                    | 343   | 346                                   |

Notes: The table indicates significance at 1% (\*\*\*), 5%(\*\*) level and 10%(\*) levels.

$$LGDR_j = \lambda_0 + \lambda_1 SIZE_j + \lambda_2 SIZENEG_j + \lambda_3 PERFORMANCE_j + \lambda_4 PERFORMANCENEG_j + \lambda_5 GROWTH_j + \lambda_6 GROWTHNEG_j + \lambda_7 SECI_j + \lambda_8 SEC2_j + \lambda_9 SEC3_j$$

$$+ \lambda_{10}SEC4_j + \lambda_{11}SEC5_j + \lambda_{12}SEC6_j + \varepsilon$$

Table 4 shows the result of the ordinary least square regression of two periods that is during and after the economic crisis. The results show that SIZE and SECTOR 6 are statistically significant to the directors' remuneration for both regressions conducted. This could indicate that big companies are more likely to pay higher directors' remuneration compared to small companies, irrespective of the economic recovery period. The same argument can be put forward in the case of the plantation sector (SECTOR 6).

However, GROWTH and PERFORMANCENEG were only significant in the years 2000 to 2001. The result implied that, during the years 1998 to 1999, the growth of the companies had no relation with the directors' remuneration. Moreover, companies with negative EPS (proxy for PERFORMANCENEG) were more likely to pay lower directors' remuneration compared to companies with positive EPS in years 2000 to 2001, but not in years 1998 to 1999.

As a result, there are more independent variables that have relationships with the directors' remuneration in years 2000 to 2001 compared to years 1998 to 1999. This was reflected in the value of the explanatory power of independent variables (R<sup>2</sup>) of 27% in years 2000 to 2001 but only 5.5% in years 1998 to 1999. Thus this finding is consistent with Gregg et al. (1993).

## SUMMARY AND CONCLUSION

The main purpose of this research is to provide evidence on the factors or the determinants of the directors' remuneration in Malaysia. The findings show that of all the variables tested, the size of the firm, growth and industry are significantly associated with the directors' remuneration. Clearly our study is consistent with many studies done in other setting, who found that size (Ueng et al., 2000; Rajagopalan and Prescott, 1990; O'Reilly et al., 1988; Simon, 1957), growth (Sharma and Smith, 1997 and Murphy, 1985) and industry (O' Reilly et al., 1988; Rajagopalan and Prescott, 1990; Deckop, 1988 and Ramaswamy et al., 2000) are significant factors in determining executive compensation. Moreover, we also examined the explanatory power of these factors during the period when the Malaysia economy was in recovery process and when the economy recovered. We found that the explanatory power of independent variables (R<sup>2</sup>) is less during the time of economic recovery compared to the recovered period. This result is consistent with those claimed by Gregg et al. (1993). To achieve good corporate governance, companies should adopt a compensation contract that links compensation with performance. As proven by our research there is no relationship between performance and the directors' remuneration.

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