Analysis of ESOP implementation determinants at companies in Indonesia

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Abstract: Employee stock option plan (ESOP) represents one of the compensation forms conducted by a company to overcome the agency cost problems. The objective of this study is to analyse the ESOP implementation determinants. They include total assets (TA), debt to equity ratio (DER), market to book value ratio (MBR), growth, current ratio (CR), and time interest earned ratio (TIER) on the implementation of ESOP for companies in Indonesia. The population of the research was all of the companies which implement the ESOP and which are listed on Indonesia Stock Exchange (IDX). Its samples were 34 companies. The result of this study shows that the company size, leverage, growth, and liquidity has a significantly negative effect on the ESOP implementation. The enterprises which valued from the MBR and TIER have a significant positive effect on the ESOP implementation.

Keywords: ESOP; employee stock option plan; agency cost; compensation; signalling theory; employee; stock option.


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This paper is a revised and expanded version of a paper entitled ‘Analysis of Esop implementation determinants at companies in Indonesia’ presented at SIBR-Thammasat 2017 Conference Interdisciplinary Business and Economics Research, Emerald Hotel, Bangkok, Thailand, 25–26 May, 2017.

1 Introduction

Employee stock option plan (ESOP) is one of the compensation forms given to employees. In the beginning, the ESOP was only given to executive employees, but now it is applied to the whole employees. The ESOP application aims at appreciating the long-term corporate performance. The ESOP dominates the payment of top executives (Aboody, 1996). In Indonesia, Bapepam’s (2002) team of ESOP application studies claimed that ESOP is a human resource management program in the form of employee ownership program in company shares by employees where they work. ESOP is a way to gain the capital in the form of shares sold to employees.

In Indonesia, the employee stock option program is not popular yet for companies, especially for go public companies. It is still new. Researches, therefore, need to be conducted further on the employee stock option program implementation in Indonesia. Several studies have been conducted on it. Sukarjasa (2002) studied how the companies applied the ESOP Indonesia. Defusco et al. (1990) claimed that the ESOP application has a positive correlation with the market reaction. Furthermore, Beatty (1995) concluded that there is a reaction to the ESOP announcement by examining their tax interests, employee interest, and capital structure. In addition, Ding and Sun (2000) investigated the ESOP implementation in Singapore, and the result of their investigation showed that the company’s performance has a positive correlation with the ESOP, and there is an increase of prosperity among the shareholders. Uzliawati and Djati (2015) studied that corporate governance structure affects firm value. Matsunaga (1995) studied the financial statement effect (agency cost) on the companies applying the ESOP with financial ratios proxies.

2 Theory and hypotheses development

2.1 Agency theory or contracting theory

Jensen and Meckling (1976) stated that there is a conflict of interest among the owners, and they hire an agent to manage the companies in order to reduce the agency cost. Samina and Zaman (2015) stated that the company should keep in mind that an attractive compensation can motivate the employees to work properly for the organisation and can
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bring better returns. Praveen and Karuppasamy (2017) concluded that a good compensation system must be based on pay for the person, which can be based on actual performance levels exhibited by the employees. There are many kinds of compensation given to employees. One of them is ESOP implementation. It is a company policy. ESOP will raise the sense of belonging toward the company. It is expected that the performance and productivity will increase, but the agency costs will decrease.

2.2 Signalling theory

Maditinos et al. (2007) concluded that the individual investors in Greece want dividends. It provided strong support for signalling theory. Brickley et al. (1985) and Defusco et al. (1990) concluded that the ESOP has a positive correlation with the market reaction and the company’s performance. Lacker (1983) studied that there is a positive correlation of the capital investment for the company applying long-term performance base – incentive plan. Won and Ryu (2017) studied that firms with higher board member shareholdings were dedicated to improving operational efficiency. Tse et al. (2014) concluded that governments and the media should focus less on cash and cash bonuses and more on the impact of stock options on executive compensation.

2.3 Hypothesis development

Agency theory stated that the smaller the portion of management ownership on the company stock ownership, the larger the agency problem is. The management ownership in the big company is usually a minority ownership. Mechanical alternatives can be used to control the agency problem between management and shareholders (Agrawal and Knober, 1999). Management supervision in the big companies will be more difficult to do if compared to the management supervision in medium or small companies. Therefore, as to reduce the expensive agency costs, a big company can issue or sell shares to employees in the form of employee stock options. Other research which studied the results of researches on public companies applying the ESOP in productivity and performance was done by testing whether the implementation of the ESOP has a different effect on the big and small companies in terms of corporate productivity and performance (Borstadt and Zwirlein, 1995). The result of the research showed that the size of a company affects the ESOP implementation. When the company gets bigger, it is necessary to have a control to minimise the agency problem. In this study, SIZE was used to measure the size of companies that would influence the implementation ESOP as to reduce agency costs and demonstrate to external and internal parties the company’s abilities to provide compensation for employees in the form of ESOP. Namwong (2015) stated that firm size had an effect on executive compensation in which the relationship was positive in all industries. A company with large total assets or large firm size is likely to pay a high level of executive compensation. It is a signal for the internal and external parties that the companies implementing the ESOP are big ones and have a great asset. Therefore we propose the first hypothesis as follows:

\[ H1: \text{Company size has a positive correlation with the application of the employee stock option program.} \]
The implementation of an employee stock option program in a company will encourage managers to maximise profits for shareholders. Creditors, therefore, will also oversee its management because there is a presumption if the debt used to raise the capital, there will be a wealth transfer from creditors to shareholders. The higher of corporate debt in the capital structure (leverage) is, the less the tendency for the employee stock option program implementation will be. Borstadt and Zwirlein (1995) studied the ESOP related with productivity and performance, and one of them measured the long-term debt. They claimed that there is a negative effect on the company performance, Knopf et al. (2002), studied the stock option program in managers, which is proxied with financial ratios, such as long-term debt argued that there is a significant effect on long-term debt. In this study, the level of leverage is measured using a debt equity ratio (DER); the higher the leverage is, the less the number of companies implements the ESOP will be, and the greater the debts are, the companies will strive to increase its capital structure in cash much more to pay debts. It is risky if cash acquisition is obtained through the issuance of shares because it is feared that profits will be used to pay debts and not to pay the owner dividend (shareholders). It shows that there is a lack of confidence of investors and creditors in giving loans. Therefore we propose the second hypothesis as follows:

H2: Leverage has a negative correlation with employee stock option program implementation.

Investors assessing the company will analyse the prospects or the company future condition, by predicting the prospect. Investors will be more secure in investing their capital. The assessment of value firm for investors is very important because investors will know the future return projection. Iqbal and Hamid (2000) concluded that there is a great contribution between company performance and company stocks return in this case the ESOP. Mauldin (1999) studied the contribution of the ESOP to the company’s performance, the misjudging of the value firm proxied by using ESOP stock returns prior to and following the analysis of the ESOP implementation. The result of the study showed that there is an increase in the ESOP return. The greater the return is received, the higher the owners of the company will increase their performance. Value firm is determined by the return projection of the future investor. The higher the market value to book value is, the greater the company’s employee stock options are issued. Therefore we propose the third hypothesis as follows:

H3: The value of company measured by the market to book value has a positive correlation with the implementation of the employee stock option program.

The company’s growth in the future depends on the rate of the previous year return on equity (ROE) and the percentage of retained earnings. ROE is the ratio of net income to common shares. This ratio is used to measure the return on investment of shareholders (Brigham and Houston, 1998, p.91). The result of investment in stocks is the return. The return can be dividend/yield which is the percentage of periodical cash receipts to the investment price of a certain period of an investment, and capital gain/loss is the gap of profit/loss of investment prices from the relative current price to the price of the previous period (Jones, 1996). The smaller the dividend is shared or the greater the retained earnings are, the greater the internal fund sources will be. Thereby, the company can expand its business. Thus the future growth of a company can be predicted that the
growth will be faster, and the company is able to generate a higher return. Due to the success of management in improving the growth of the company, its management can be awarded with the compensation in stock. Thus, the higher the ROE is, the greater the level of shares issued by the company will be. Therefore we propose the fourth hypothesis:

\[ H4: \text{The ratio of the growth of earnings has a positive correlation with the implementation of employee stock option program.} \]

The implementation of employee stock option program is a source of corporate funding; the implementation of an employee stock option is a payment in shares. The compensation payments in cash will affect the company’s liquidity. Matsunaga (1995) studied the current ratio and the result showed that there is a current ratio effect on the ESOP implementation. McDaniel et al. (1995, p.162) concluded that the company’s liquidity through ESOP implementation leads to the increase in capital structure. Therefore, the company which has financial difficulties will spend more stock options to the management to improve its capital structure because the company has difficulties in providing compensation in cash. Implementing the stock option will help the liquidity of the company. Thus, the lower level of liquidity is, the more the company implements employee stock option program. Therefore, we propose the fifth hypothesis as follows:

\[ H5: \text{Liquidity has a negative correlation with the implementation of employee stock option program.} \]

When the level of time interest earned ratio (TIER) is low, there is an increase in credit limitation violation. In order to avoid the violation, the company will implement the employee stock option program to change bonuses in cash and incentives, and this will increase the TIER. Knopf et al. (2002) stated that there is a positive and significant correlation between the interest ratio and stock options. The greater the TIER value is, the higher the solvability of the company will be to meet its obligations to pay the debt interest, and the less the possibility of the company to experience default in debts payments will be. Therefore we propose the sixth hypothesis as follows:

\[ H6: \text{Time interest earned ratio (TIER) has a positive correlation with the implementation of employee stock options.} \]

3 Research method

The population of the research was all of the companies listed on the Indonesia Stock Exchange (IDX). Purposive sampling technique was employed to determine its samples with the following criteria:

1. the companies implemented employee stock ownership program
2. the companies issued financial statements prior to and following the implementation of the employee stock ownership program.

The samples were 34 companies listed in the IDX. The period was eight years from 2000 until 2008.
The multiple regression developed in this study is as follows:

$$ESOPTA = \alpha + \beta_1 TA - \beta_2 DER + \beta_3 MBR + \beta_4 GROWTH - \beta_5 CR + \beta_6 TIER + e$$

where

- $ESOPTA$ = ESOP price
- $\alpha$ = Constanta
- $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ = Regression coefficient
- $TA$ = Total asset
- $DER$ = Debt equity ratio
- $MBR$ = Market to book value ratio
- $GROWTH$ = Company growth
- $CR$ = Current ratio
- $TIER$ = Time interest earned ratio.

Measurement of independent variables

Debt equity ratio (DER) is a proxy of a leverage measured by the ratio between the total value of the company’s debt book and that of company’s equity. Market to book value ratio (MBR) is the ratio to assess the prospect or the future conditions of the company, measured by the Total value of equity market divided by book value of the Company’s equity. $GROWTH$ is the size of company growth in the future which depends on the previous year rate of ROE and the percentage of retained earnings. The company growth rate in this study was measured by $\frac{Net \ income \ divided \ by \ Total \ value \ of \ equity \ book \ x \ 1 - \ Total \ dividend \ divided \ by \ Earnings}$. $CR$ is a proxy for company liquidity that shows the company’s ability to meet short-term liabilities, and it is related to the size and composition of its working capital. $CR$ was measured by the $\frac{Total \ Current \ Assets}{Total \ Current \ Debt}$. $TIER$ is one of solvability measurement of the company. It is the measurement of the company’s ability to pay debt interest on company’s profit. It was measured by $\frac{Net \ income \ before \ tax + interest \ expense \ divided \ by \ interest \ expense}$.

4 Result

Descriptive statistic provides an overview or description of data in terms of mean, deviation standard, variant, maximum, minimum, sum, range, kurtosis, and skewness (skewed distribution).

Table 1 shows that the mean of $TA$ is 0.29471 and the standard deviation is 0.373178; the mean of $DER$ is 1.519118, and the deviation standard is 0.77411717; the mean of $MBR$ is 1.960588 and the deviation standard is 0.5434232; the mean of $GROWTH$ is 0.158529, and the deviation standard is 0.1095758; the mean of $CR$ is 2.630000, and the deviation standard is 3.6973529; the mean of $TIER$ is 6.654412 and the deviation standard is 7.46973529; and the mean of $ESOPTA$ is 382.9138, and the deviation standard is 400.951234.
Table 1  Descriptive statistic

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. dev</th>
<th>Std. error</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA</td>
<td>0.029471</td>
<td>0.0373178</td>
<td>0.0064000</td>
<td>0.0030</td>
<td>0.2180</td>
</tr>
<tr>
<td>DER</td>
<td>1.519118</td>
<td>0.7411717</td>
<td>0.1271099</td>
<td>0.4600</td>
<td>2.9800</td>
</tr>
<tr>
<td>MBR</td>
<td>1.960588</td>
<td>0.5434232</td>
<td>0.0931963</td>
<td>1.0300</td>
<td>2.9300</td>
</tr>
<tr>
<td>GROWTH</td>
<td>0.158529</td>
<td>0.1095758</td>
<td>0.0187921</td>
<td>0.0000</td>
<td>0.4600</td>
</tr>
<tr>
<td>CR</td>
<td>2.630000</td>
<td>3.6973529</td>
<td>0.6349085</td>
<td>0.2500</td>
<td>15.6300</td>
</tr>
<tr>
<td>TIER</td>
<td>6.654412</td>
<td>7.4963911</td>
<td>1.2856205</td>
<td>1.0100</td>
<td>28.4300</td>
</tr>
<tr>
<td>ESOPTA</td>
<td>382.9138</td>
<td>400.95124</td>
<td>68.76257</td>
<td>7.25</td>
<td>1605.00</td>
</tr>
</tbody>
</table>

Based on Table 2, we can formulate the equation as follows:

\[
ESOPTA = 551.929 - 3036.693 \cdot TA - 116.585 \cdot DER + 3.982 \cdot MBR - 53.947 \cdot GROWTH - 7.760 \cdot TIER + 29.353 \cdot CR + e
\]

Table 2  Collinearity statistic

<table>
<thead>
<tr>
<th>Model</th>
<th>Coefficienta</th>
<th>Unstandardised coefficients</th>
<th>Standardised coefficients</th>
<th>Collinearity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>Std. error</td>
<td>Beta</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>551.292</td>
<td>267.129</td>
<td>–</td>
<td>2.064</td>
</tr>
<tr>
<td>TA</td>
<td>–3036.693</td>
<td>1301.987</td>
<td>-0.283</td>
<td>-2.332</td>
</tr>
<tr>
<td>DER</td>
<td>–166.585</td>
<td>77.692</td>
<td>-0.308</td>
<td>-2.144</td>
</tr>
<tr>
<td>MBR</td>
<td>3.982</td>
<td>113.601</td>
<td>0.005</td>
<td>2.035</td>
</tr>
<tr>
<td>GROWTH</td>
<td>-53.947</td>
<td>487.759</td>
<td>-0.015</td>
<td>-2.111</td>
</tr>
<tr>
<td>CR</td>
<td>-7.760</td>
<td>18.399</td>
<td>-0.072</td>
<td>-2.422</td>
</tr>
<tr>
<td>TIER</td>
<td>29.353</td>
<td>9.328</td>
<td>0.549</td>
<td>3.147</td>
</tr>
</tbody>
</table>

*aDependent variable: ESOPTA.

Source:  Secondary data was processed

T-test

The t-test was used to determine the effect of independent variables (TA, DER, MBR, GROWTH, CR and TIER) on the dependent variable (ESOPTA). The results of the data processing are as shown in Table 3.

F test

F test was used to determine the simultaneous effect of independent variables (TA, DER, MBR, GROWTH, CR, and TIER) on ESOPTA. Based on the table above, it can be concluded that the value of the F test (7.571) is greater than that of F table (2.40) with the level of significance of 0.000, meaning that the independent variables significantly affect the dependent variable at the significant level of 5%. Therefore the variables of TA, DER, MBR, GROWTH, CR and TIER have an effect on the ESOPTA.
Table 3  \( t \)-test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>( T ) test</th>
<th>( -t ) table</th>
<th>( PV ) (2-tailed)</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA</td>
<td>-3030.693</td>
<td>-2.332</td>
<td>1.96</td>
<td>0.0135</td>
<td>Ha not accepted</td>
</tr>
<tr>
<td>DER</td>
<td>-116.585</td>
<td>-2.144</td>
<td>1.96</td>
<td>0.0205</td>
<td>Ha accepted</td>
</tr>
<tr>
<td>MBR</td>
<td>3.982</td>
<td>2.035</td>
<td>1.96</td>
<td>0.036</td>
<td>Ha accepted</td>
</tr>
<tr>
<td>GROWTH</td>
<td>-53.947</td>
<td>-2.111</td>
<td>1.96</td>
<td>0.013</td>
<td>Ha not accepted</td>
</tr>
<tr>
<td>CR</td>
<td>-7.760</td>
<td>-2.422</td>
<td>1.96</td>
<td>0.0385</td>
<td>Ha accepted</td>
</tr>
<tr>
<td>TIER</td>
<td>29.353</td>
<td>3.147</td>
<td>1.96</td>
<td>0.002</td>
<td>Ha accepted</td>
</tr>
</tbody>
</table>

Coefficient of determination (\( R^2 \))

The coefficient of determination test was used to measure the model in explaining the variation of the dependent variable (ESOPTA) by using Adjusted \( R^2 \) values. Based on Table 4, the Adjusted \( R^2 \) value is 0.544, meaning that 54.4% of the independent variables affect the dependent one.

Table 4  The coefficient of determination (\( R^2 \))

<table>
<thead>
<tr>
<th>Model</th>
<th>( R )</th>
<th>( R ) square</th>
<th>Adjusted ( R ) square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.792</td>
<td>0.627</td>
<td>0.544</td>
</tr>
</tbody>
</table>

5  Conclusion, implication and suggestions

5.1 Conclusion

We can conclude that company size which is valued from TA has a significant negative effect on the ESOP implementation. It is not consistent with the hypothesis that the company size has a positive effect on the ESOP implementation. Leverage which is valued from DER has a significant negative effect on the ESOP implementation. It is consistent with the hypothesis that leverage has a positive effect on the ESOP implementation. An enterprise which is valued from market to book value has a significant positive effect on the ESOP implementation. Growth which is valued from GROWTH has a negative significant effect on the ESOP implementation. It is not consistent with the hypothesis that growth has a positive effect on the ESOP implementation. Liquidity which is valued from CR has a negative effect on the ESOP implementation. TIER has a positive effect on the ESOP implementation.

5.2 Implications

In this study, the company size has negative effect, meaning that the companies with less assets have a tendency to implement the ESOP because they strive to maintain their existence so that their employees have a sense of belongings to the companies by implementing the ESOP, and the companies can reduce the agency costs, while the
companies with more assets, they afford to give a better compensation to their employees so the companies prefer implementing another compensation system to the ESOP.

The growth of companies has a negative effect, indicating that the companies with a higher growth prefer implementing another compensation system to the ESOP because they can afford to give a more advantageous and favourable compensation to their employees.

The result of this study is useful for the companies implementing the ESOP because the employees will participate in owning the companies, so they willing to increase the productivity and minimise the agency conflict. The contribution of this study for the companies is giving a new concept of ESOP for them. They can enhance the value of the company by employee ownership.

5.3 Suggestions

Based on the result of the study, we offer the following suggestions:

• it needs a limitation in taking long-term debt

• investment income should be increased that it will raise the investor’s trust on the future prospects of the companies

• the companies need to increase their growth by increasing the profits. They must also be concerned with the share of dividends

• the companies need to consider the provision of compensation in cash as this will affect the companies of capital structure, especially their liquidity and solvability.

References


