

An Effective Interests Alignment Mechanism or a Tool to Expropriate: A Review of Malaysian ESOS Adoption

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ESOS is theorised as a solution to bridge the interest of managers with owners of the firms particularly in setting where ownership is widely held. Modern corporations in developing countries are characterised by controlling shareholders who are also actively involve in the management of the firms. The resultant conflict of interests between majority and minority shareholders questions the suitability of ESOS in aligning their interests towards firms' common goal. Findings from the study suggest that the usual determinants of ESOS adoption in the West do not hold in the environment of high ownership concentration. The post-adoption performance has not improved and there is no significant difference between adopting and non-adopting firms after controlling for size and industry. Nonetheless, there is evidence of better performance for adopting firms in terms of profitability albeit very weak in magnitude.

Key Words: Employee Shares Option Scheme, interest alignment, agency problems, post-adoption performance.

1.0 Introduction

The introduction of a modern corporation has marked a new era in managing business. Owners no longer manage the business themselves instead hiring professional managers to do so on their behalf. Whilst the philosophy helps to overcome the lack of competency to manage firms, it has at the same time brought with it a new set of problems (agency problems).

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Agency problems arise when one party (managers) has more knowledge than the others and whose behaviour cannot be directly observed or monitored at all times. As Jensen and Meckling (1976) point out, professional managers have the incentives to take on decisions that may not be in the best interest of the owners but may well be maximizing the utility of the decision makers (managers). One of the ways to converge the managers' interest with that of its owners is by introducing Employees Stock Options Scheme (ESOS). Since the value of ESOS is a function of prevailing firm's share price, managers have incentives to take on positive net present value projects, minimise shirking behaviours and start aligning their interest with owners' to maximise firm's value. By making managers part of the owners, they will ensure that the objective of the firm is met.

Although ESOS is fast gaining popularity as the converging tool, the appropriate use of ESOS has been questioned. In an environment where firm's ownership is dispersed, the use of ESOS is logical as it is expected to bring together the interest of owners and managers. However, firms with high ownership concentration where agency problem exists between majority shareholders and minority shareholders, the use of ESOS would only exacerbate the situation. In emerging markets the occurrence of controlling shareholders or his family members managing the firm is also quite widespread. As such ESOS adoption would not align the interest but could be used as a tool to expropriate wealth instead. With this conjecture as a background, this study is set to find evidence to see if the above proposition is substantiated.

Findings from the study suggest that the usual determinants of ESOS adoption in the West do not hold in the environment of high ownership concentration. The post-adoption performance has not improved and there is no significant difference between adopting and non-adopting firms after controlling for size and industry. Nonetheless, there is evidence of better performance for adopting firms in terms of profitability *albeit* very weak in magnitude.

The immediate section reviews all the relevant literature before a research methodology is proposed next to capture the intended effect. This is followed by findings and a discussion of the study before a conclusion is offered.

2.0 Literature Review

Conceptually, there are two (2) types of agency problem faced by firms around the world. The first type of agency problem is between principals and agents and is known as type I problem. This type of agency problem is more prevalent in countries where ownership is rather dispersed. In contrast type II agency problem, exists between majority and minority shareholders, where there is high ownership concentration among firms. While the former condition (dispersed ownership) is common among the developed countries the latter type of problem is unique to the emerging markets or developing countries (Claessens, Djankov

& Lang, 2000; Haniffa & Hudaib, 2006; Khatri, Leruth & Piesse, 2002; and Mitton, 2002).

Theoretically ESOS should serve as interest alignment tool to converge managers' interest in line with the owners', particularly for type I agency problem. For a country like Malaysia whose ownership pattern is reported to be highly concentrated (Capulong, Edwards, Webb and Zhuang, 2000), the use of ESOS or ESOP is highly questionable. High ownership concentration induces type II not type I agency problem. Hence, the use of ESOS or ESOP is not likely to solve the misalignment problem. Giving ESOS or ESOP to controlling shareholders who are typically involve in the running of the business will not help to solve the convergence of interest as there is no asymmetric information problem except between controlling (majority) and minority shareholders. The act of adopting ESOS or ESOP could very well signal wealth expropriation is taking place.

Evidence from the developed countries lends some support to ESOS being the alignment tool, *albeit* weakly. Yermack (1995) provides a comprehensive study on the determinants of ESOP (Employees Share Option Plan) for American firms based on agency and financial contracting theory and finds only weak support for the relationship between agency cost reductions and ESOP. Matsunaga (1995), also an American based study on the effectiveness of ESOS to curb agency cost on the other hand, reports that the lower the value of reported income relative to a target level, the greater the value of ESOP per employee issued. This shows that firms do value ESOS / ESOP as an interest alignment catalyst to achieving their financial goals. In contrast, Hartzell and Starks (2003) find that institutional investors do not favour ESOS adoption as reveal by a negative relation between institutional-investor concentrations to the level of executive compensation especially share option grants.

Evidence from the emerging market as depicted by Ding and Sun (2001) study's indicate that in Singapore the value of ESOP is positively associated with firms' growth opportunities but negatively related to debt servicing capacity. While high growth opportunities firms need to retain the key employees in the company, this is offset by the probability of violating debt covenants that could bring negative consequences. Since ESOS / ESOP literature from the emerging markets is sparse its effectiveness has not been thoroughly evaluated.

Malaysian corporate sector is characterized by an insider system of corporate governance where in certain firms, high levels ownership concentration, cross holdings and significant participation of owners in management is apparent (Claessens, Djankov & Lang, 2000; Lemmons & Lins, 2001, and Mitton, 2002).

A review of prior studies suggests that most studies on ESOS post performance in developed market have short-term positive accounting and financial outcomes. Some studies report no association while most of the earlier studies document

significant positive association between ESOS adoption and improved performance (Lewellen and Huntsman (1970), Coughlan and Schmidt, 1985; Murphy, 1985). Recent literature [such as Core & Guay (2001), Core & Larcker (2002), Himmelberg, Hubbard & Palia (1999), Ittner et al. (2003)] however, report mixed results that fuel the current debate further.

The above discussion thus far has questioned if ESOS or ESOP is effective as a mechanism to mitigate agency problems or is just another tool of wealth expropriation. The answer to this question is crucial as the implications or consequences of these findings are far reaching. ESOS or ESOP is considered as effective if it meets the intended objectives which include changes in size, changes in leverage, higher growth and income above its target level. This includes improvement in firms' performance after ESOS adoption. Conversely, ESOS is only a tool of wealth expropriation if the usual determinants of ESOS adoption are not met and the post-adoption performance has not improved.

3.0 Methodology

3.1 Data and Sample Selection

This study covers an observation period from 1st January 1989 to 31st December 2004. It is believed that 16 years period would encompass various Malaysian economic and financial market scenarios of stable (1989–1992), boom (1993–1996), decline (1997–1998), recovery (1999–2001) and stable (2002–2004) periods. Moreover, this study limits its observation to events no earlier than 1989 due to unavailability of data. Furthermore, this study also limits its observation window events in ESOS post performance to no later than 31st December 2001 due to limitations of post performance analysis. This study requires that each firm has at least three (3) years post adoption performance data to ascertain the impact of ESOS adoption. For simplicity, the study uses ESOS or ESOP interchangeably. Table 1 displays the number of firms issuing ESOS for the first time through out the study period.

Table 1: First Time ESOS adopters 1989 – 2001

	Frequency	Percent
1989	9	4.21
1990	11	5.14
1991	13	6.07
1992	10	4.67
1993	16	7.48
1994	4	1.87
1995	6	2.8
1996	12	5.16
1997	4	1.87
1998	2	0.93
1999	13	6.07
2000	41	19.16
2001	17	7.94
2002	28	13.08
2003	14	6.54
2004	20	9.35
Total	214	100.0

This study includes all listed firms in Malaysian Bourse regardless of its trading board. However, for financial and insurance companies, and companies trading in other than Malaysian Ringgit domicile are excluded from the initial sample due to different regulatory environments and difficulties in assessing exchange rate. Initially 277 firms that have adopted executive's share option are identified during the study period. However, this figure is reduced to 214 as 62 firms are excluded due to delisting, mergers and acquisitions, regulatory and currencies differences, unavailability of data, and no suitable matched firms.

In order to see the impact of ESOS adoption on firms' performance, we use match pair methodology similar to the one used by Teoh, Welch, and Wong (1998). To avoid size and industry bias, the non-adopting firms are to be at least 75 percent of the asset-scale and within the same industrial sector. Table 2 summarises the sample selection for the study.

Table 2: Sample Selection

	Number of firms
First time ESOS adopters from 1 st Jan 1989 – 31 st Dec 2004	277
Less:	
Financial and insurance firms	8
Delisting	2
Foreign domicile	1
Untraceable and unavailability of data	28
Matched firms unavailable	24
Total number of ESOS adopter in the sample	214
Total number of ESOS non-adopter in the sample	214
Total number of sample	428

3.2 Source of Data

All financial information in this study is based on Malaysian Bourse (MB) Annual Handbook and respective firms' annual reports. As suggested by Suret et.al (1997), should there be any discrepancies between the two data source the latest data from firms' annual reports will take precedence.

Initially, ESOS adopted firms were detected using MB owned monthly publication 'Investor Digest'. Nonetheless, further detection is made using MB web information under 'Change in Shareholdings', and 'Circular to Shareholders' of respective firms. This action is necessary due to changes in publication content, which eliminate 'Company's announcements' on ESOS adoption post 1999 period.

3.3 Determinants of ESOS Adoption

This study employs the uses logit regression model to test the hypotheses built. The logit analysis is use when the linear probability model is unable or not suitable to describe the pattern of the data. The linear probability can be written as;

$$y_i = \beta X_i + u_i \quad \text{with } E(u_i) = 0 \quad (\text{eq. 1})$$

where X_i is the vector of explanatory variables, β is the vector of unknown parameters and u_i is the random error. The conditional expectation $E(y_i | X_i)$ is equal to $\beta' X_i$. It can be interpreted as the probabilities that the event will occur

given X conditions. The difference between the linear probability model and logit model is that in logit model $\beta' X_i$ is not $E(y_i | X_i)$ but it is $E(y_i^* | X_i)$ where y_i^* is the unobserved variable. The logit model usually solves this by using the maximum likelihood method. Moreover, logit model does not assume multivariate normality or equality in variance covariance matrices as in discriminant analysis. Therefore, it is expect that the model should perform better than the discriminant analysis. In the logit model, it is assume that there is an underlying response variable y_i^* defined by the regression relationship.

$$y_i^* = \beta' X_i + u_i \quad (\text{eq. 2})$$

where β is a vector of unknown parameters, X_i is a vector of predictors for the i th observation and u_i are independent and identically distributed random variables with mean = 0. The observed variable, y , is related to y_i^* through the relation;

$$\begin{aligned} y &= 1 \quad \text{if } y_i^* > 0 \text{ and} \\ y &= 0 \quad \text{otherwise.} \end{aligned}$$

If u is to have a logistic distribution, then a logit model is produce. The likelihood function for the logit model is given by;

$$L = \prod_{y_i=0} F(-\beta' X_i) \prod_{y_i=1} [1 - F(-\beta' X_i)] \quad (\text{eq. 3})$$

where $F(\cdot)$ is the distribution of u . For the logit model, $F(-\beta' X_i)$ is simplifies;

$$F(-\beta' X_i) = \frac{1}{1 + \exp(\beta' X_i)} \quad (\text{eq. 4})$$

hence F have a close form expression as it does not involve integrals explicitly. The model can also be written as;

$$\text{Pr} = \frac{1}{1 + \exp(-Z)} \quad (\text{eq. 5})$$

where Z is the linear combination of β , which is the coefficients estimated from the data, and X, which is the independent variables,

$$Z = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p. \quad (\text{eq. 6})$$

The use of this model is an adaptation of similar model used by Ding and Sun (2001) that simplifies Matsunaga's (1995) model. The model is as follows:

Original model,

$$V_{it} = b_0 + b_1 \ln(TA) + b_2 D/E + b_3 MBR + b_4 INC + b_5 MSH + b_6 IDVSH + b_7 INSSH + b_8 GLC + e \quad (\text{eq. 7})$$

Since a match pair is used, where size is controlled, this study purposes,

$$V_{it} = b_0 + b_1 \text{Chg}T/A_{-1,0} + b_2 \text{Chg}DE_{-1,0} + b_3 \text{Tobins_}Q + b_4 MSH + b_5 IDVSH + b_6 INSSH + b_7 GLCSH + b_8 INC + b_9 \text{Dum}F + e \quad (\text{eq. 8})$$

where dependence variable V_{it} is = 1 for adopting firms and = 0 for non-adopting firm, which is a categorical data, thus, the use of logistic regression is deemed suitable. Logistic regressions is use to differentiate characteristic between those of adopting and non- adopting firms. Furthermore, the logistic approach (model) does not assume multivariate normality or equality in variance matrices as in discriminant analysis.

Although the present methodology leaves size out of the model, change in TA (Total Assets) is still included to capture changes in firm's size that may trigger adoption of ESOS. Similarly, change in Debt Equity ratio is introduced for the same reason. It is believe that changes in financial performance rather than current performance would provide better understanding of the 'push' factor in adopting the scheme.

While Ding and Sun (2001) uses MBR (market-to-book ratio) as proxy of growth, this study make use of the approximate Tobin's Q as a proxy for growth. Tobin's Q is defined as, the market value of assets divided by the book value of the assets (BVA). Market value of the asset is measure as the sum of market value of the equity (MVE) measured at the fiscal year end plus the book value of liabilities (BVL).

$$\text{Tobin's_}Q = \frac{MVE + BVL}{BVA} \quad (\text{eq. 9})$$

Furthermore, increase in revenue (INC) measures extent of firms' income that is higher than its target level:

$$\text{INC} = (\text{Income} - \text{Target}); \quad \text{if } \text{Income} > \text{Target}, \text{ otherwise, } \text{INC} = 0$$

Income is the net income of the firm for the year and Target is set based on previous year's income. The logic behind this definition of Target is to benchmark the income against some adaptive expectation that is not below the previous year's income with allowance for growth (Ding and Sun, 2001).

$$\text{Target} = \text{Income}_{t-1} + (\text{Income}_{t-1} - \text{Income}_{t-3})/3;$$

if $\text{Income}_{t-1} > \text{Income}_{t-3}$,
otherwise, $\text{Target} = \text{Income}_{t-1}$

Family owned firms (DumF) variable is added into the model to provide a better picture of Malaysian corporate scenarios. Although this variable is rarely seen in developed market based models, Claessens et al. (2002) and Khatri et al. (1999) have purported that family influence is evident in Malaysian corporate culture. In this study, a firm is considered as a family-owned firm if a family shareholding (directly or indirectly owned, or combined) is more than 50 percents with at least two (2) persons from the same family (immediate or intermediate) sit in the firm's board of directors.

Each of ownership variables (managerial, individual, institutional, and government ownership) is denoted using cumulative percentages. Institutional ownership refers to share owned by other firms including banks, insurance, and trust fund companies. Moreover, government link companies (GLCs) are differentiated from other institutional blockholders due to investment preferences. In this study, b_0 is a constant; b_1 to b_{10} are the coefficients corresponding to the independent variables; and e is a Gaussian residual term.

3.4 ESOS Adoption and Firms Post Performance

If the adoption of ESOS is to converge the interest of managers and shareholders, the firms' performance after the adoption of ESOS should improve. To facilitate the comparison, firms' performance are not just compared against itself but also against a match-pair firm who resembles the adopting firm in terms of size and industry as explained earlier.

Several financial ratios are analysed to measure various aspects of performance. The indicators (ratio) selected for this purpose includes: operating income to sales [operating profit margins (OPM)]; net income to sales [net profit margin (NPM)]; net income to total asset [return on assets (ROA)]; net income to total equity [return on equity (ROE)]; Tobin's Q; and debt to asset ratio (D/A). These variables are similarly used by other ESOS based studies such as Jain and Kini (1994), Pugh et al. (2000) and Yeo et al. (1999) study. While the first four ratios are focused on profitability and operating performances, D/A is a proxy for leverage, and Tobin's Q is for growth. As for the years (unless noted, all years are fiscal years) following and including the ESOS adoption, each ratio is being compared to its corresponding value at the end of the year before ESOS adoption (referred as the base year). The base year is noted as year -1, the year of ESOS adoption is year 0, and so forth. Therefore, a (-1,0) event window presents the change in the financial ratio from the end of year -1 to the end of year 0; thus, the change in the ratio is concurrent with ESOS adoption. Changes

are being tested for up to three years after the adoption as longer event window will produce fewer observations.

$$\text{Change is calculated as } \frac{PT_t - PT_{-1}}{PT_{-1}}, \text{ and } \frac{PC_t - PC_{-1}}{PC_{-1}} \quad (\text{eq. 10})$$

where PT refers to the relevant ratios for the ESOS firm and PC refers to the corresponding ratio for the industry control. If ESOS had no effect, then one would expect the change in the ESOS firm ratio to be no different, on the average, from the change in the overall industry.

The growth in these measures is able to provide some explanations for the change in performance experienced by ESOS adopted firms during the first few years after the adoption of the scheme. Tests are based on two-tailed Wilcoxon Signed Rank test, a non-parametric alternative to paired-samples *t* test. This test, as well as other standard parametric tests, assumes that the observations are independent. Moreover, Yeo et al. (1999) pointed out that Barber and Lyon (1996) have shown that this method performs better than *t*-test in detecting abnormal performance.

4.0 Findings and Discussion

4.1 Determinants of ESOS Adoption

We first report the size of the two groups (adopting and non-adopting firms) to ensure that they are more or less homogeneous within the acceptable range. Panel A of Table 3 shows that the firms' size between the two groups are almost similar.

To casually see the differences of the two groups based on other independent variables, the same test (matched pair *t*-test) is re-run. Results as displayed in Panel B of Table 3 indicate that the two groups differ particularly in terms of changes in firm size and level of managerial shareholdings. Under both variables, the adopters have higher mean than the non-adopting firms. At the surface (first level of analysis), the results do indicate as though ESOS has been used for the right reasons (to improve efficiency).

Table 3: Descriptive Matched-Paired Samples Statistics between ESOS Adopters and Non-adopters.

	Adopters Mean	Non-adopters Mean	t	Sig. (2-tailed)
Panel A				
Firms Size (lg TA)	12.43	12.44	-.57	.57
Panel B				
Change in Total Asset -1,0 (Chg TA 1/0)	.18	.09	3.48	.00
Change in Debt Equity Ratio -1,0 (Chg DE 1/ 0)	.00	-.05	.80	.42
Growth Proxy (Tobins Q)	1.03	1.03	.65	.52
Managerial Shareholdings (MSH)	.15	.12	2.14	.03
Individual Shareholdings (IDVSH)	.18	.20	-1.15	.25
Institutional Shareholdings (INSSH)	.53	.55	-.68	.50
Government Linked Companies Shareholdings (GLCSH)	.11	.11	-.51	.61

We run logistic regressions on equation 8 and the result is as displayed in Table 4. Recall that one of the main objectives of this paper is to find evidence to see if ESOS is used for efficiency reasons and thus help mitigate the agency problems. ESOS adoption is to act as a catalyst to firms improved performance in terms of changes in size, changes in leverage, higher growth and to strive for income above its target level.

Table 4: Determinants of ESOS Adoption

Variables	Predicted Sign	Beta Coefficient	Std.Error	Sig.
Chg_TA_1__0	+	2.51	0.62	0.00
Chg_DE1__0	±	-0.17	0.22	0.45
Tobins_Q	+	7.21	5.37	0.18
MSH	-	-0.53	2.01	0.79
IDVSH	-	-2.36	1.98	0.23
INSSH	-	-1.31	1.88	0.49
GLCSH	+	-0.31	1.96	0.87
INC	+	-0.65	0.25	0.01
DumF	+	1.31	0.26	0.00
Constant		-6.94	5.84	0.24
Model				
-2 Log likelihood		396.52		
Sig.		.00		
Nagelkerke R Square		.19		

Results in Table 4 yield interesting stories when three variables are found to be significant in explaining the decision to issue ESOS when size is kept the same. Changes in total asset (Chg_TA_1_0), increases in revenue (INC), and family owned firms (DumF) are able to explain 19% of the decision to issue ESOS. This model is significant with at least 99% confidence level and has a pseudo R² of 0.19. Although the explanatory power is not huge, it does indicate that the model is able to explain 19% of the ESOS adoption decision. Moreover, it is not the focus of this study to predict which factors are important in ESOS adoption but rather to see if the reasons behind the adoption do follow what the theory suggests.

Firm' size growth appears to be an important 'push' factor to adopt ESOS. This variable is adopted from Parthasarathy et al. (2006) with the intention to capture not only firms' size (this has been controlled in this study) but also to incorporate transformation in firm' asset size. Descriptive statistics in Table 3 confirm that ESOS adopting firms have almost double in size growth rate compares to that of the non-adopters. This rapid growth if left unchecked could pose a threat for a possible moral hazard problem as claimed by Choe (1999), who suggests that agents forsake firms' best interest for their own due to abundance of assets. Therefore, one way of interpreting the result would be that shareholders are taking proactive measure (by adopting ESOS) to ensure executives' (agents) future actions are for firms' best interest.

However, the above finding could also be interpreted differently as there is a possibility of managing the accounting figures to justify the decision to issue or adopt ESOS. The sudden growth of firm size over a short period (between a year after adoption and the adoption year) does raise concern if such numbers are orchestrated given a long process of ESOS adoption. There are at least four (4) phases of ESOS adoption including; (i) initiating idea (first intention to introduce ESOS) (ii) the planning phase, (iii) endorsement by shareholders usually in Annual General Meeting (AGM), and (iv) approval from the Securities Commission. Each phase would roughly take about a year. Combining all the phases, the whole process of ESOS adoption could take between 3 to 4 years from the inception of the idea to the adoption of ESOS. Given the time spent, the growth of firm size could have been 'planned' so that it shows to justify the decision to adopt ESOS.

Recall that the objective of adopting ESOS is to act as a 'push factor' for firms below their target incomes to meet the specified level of income (Ding and Sun, 2001). However, result of this study suggests otherwise. Firms who are already achieving their target incomes are the ones eager to adopt ESOS. Implicitly the finding suggests that ESOS is not being issued to 'push' managers to work harder i.e. to increase profitability. The lower the extent of income compared to that of the target (last year income or the average of last three years income) the more is the likelihood of adopting ESOS. This is evidence that ESOS is not being used to mitigate agency problems.

Another potential explanation is that managers are taking advantage of the lower share price as a result of having lower income to exercise their rights to buy the firm's share at discounted prices. Since managers have more information about future well being of the firm than the shareholders, they would be able to cash in their ESOS when good news is released in future. The setting is convenient for the managers if shareholders buy the idea that ESOS is being issued to align the interest of managers and shareholders (or between majority and minority shareholders) but instead is just another means of siphoning wealth from the firm.

The practice of issuing ESOS is more prevalent among the family owned firms than any other types of firms. Indirectly this evidence supports the contention made by Claessens et al. (2002), Khatri et al. (2002), and Lim (1981) that presence of family owned firms could pose interference or bring about conflict of interests in firms' management. This is made possible as owners of family owned firms would normally sit or have their proxies in the board of directors and make decisions that would ultimately benefit them. ESOS adoption is one of the many instances of where such conflict of interests could happen. Anecdotal evidence suggest that ESOS is typically awarded to executives who are related (or with extended family ties) to the firm's controlling or dominant shareholders to preserve/gain wealth within/for the family. This is confirmed in a number of ESOS circulars to shareholders of respective firms.

4.2 ESOS Adoption and Firms Post Performance

Post performance of ESOS adopting firms should improve if ESOS has been effective in aligning the interest of managers and shareholders (or between majority and minority shareholders). Each adopting firm's performance is compared against its equivalent performance in base year (one year before the adoption). Of the six measures that are chosen to measure various aspects of performance only return on assets (ROA) is found to be significant. However, the result is opposite to the expectation. Instead of improving in terms of return on assets over the three years after the adoption, the adopting firms' performances are deteriorating as evidenced by the negative value in Table 5.

Table 5: Performance of ESOS Adopting Firms

Measure of Performance	Year -1 to Year 0	Year - 1 to Year 1	Year - 1 to Year 2	Year -1 to Year 3
<u>Operating Profits Margin (OPM)</u> , Median year -1 = 0.10				
Median Change Firms	-0.06	-0.09	-0.17	-0.25
Asymp. Sig. (2-tailed)	0.80	0.08	0.81	0.07
<u>Net Profits Margin (NPM)</u> , Median year -1 = 0.06				
Median Change Firms	-0.07	-0.14	-0.23	-0.11
Asymp. Sig. (2-tailed)	0.31	0.61	0.64	0.56
<u>Returns on Asset (ROA)</u> , Median year -1 = 0.65				
Median Change Firms	-0.05	-0.12	-0.15	-0.25
Asymp. Sig. (2-tailed)	0.00	0.00	0.00	0.00
<u>Returns on Equity (ROE)</u> , Median year -1 = 0.08				
Median Change Firms	-0.09	0.01	-0.37	-0.34
Asymp. Sig. (2-tailed)	0.06	0.25	0.05	0.02
<u>Tobins Q</u> , Median year -1 = 1.19				
Median Change Firms	0.07	0.08	0.03	0.06
Asymp. Sig. (2-tailed)	0.96	0.63	0.96	0.99
<u>Debt / Asset (D/A)</u> , Median year -1 = 0.35				
Median Change Firms	0.00	0.00	-0.02	0.01
Asymp. Sig. (2-tailed)	0.39	0.76	0.83	0.78

The rest of performance measures do not indicate any improvements over the three post-adoption years. It is premature to conclude at this stage that ESOS adoption does not result in better performance as firms' performance are subject to macro economic conditions as well as industry specific environment. To eliminate these biases, the adopting firms' performance is also compared against their matched-pair firms' performance within the same industry with an equivalent size. Findings of the comparative performance between the two groups are as reported in Table 6.

Table 6: Comparative Performance between ESOS Adopting and Non Adopting Firms

Measure of Performance	Year -1 to Year 0	Year -1 to Year 1	Year -1 to Year 2	Year -1 to Year 3
<u>Operating Profits Mgn. (OPM).</u> Firm Median year -1 = 0.10 Industry Adjusted Median year -1 = 0.16 Median Firms Change Median Industry Adjusted Change Asymp. Sig. (2-tailed)				
	-0.05	-0.09	-0.16	-0.25
	-0.05	-0.23	-0.22	-0.38
	0.28	0.32	0.43	0.26
<u>Net Profits Margin (NPM).</u> Firm Median year -1 = 0.06 Industry Adjusted Median year -1 = 0.11 Median Firms Change Median Industry Adjusted Change Asymp. Sig. (2-tailed)				
	-0.07	-0.14	-0.22	-0.10
	-0.05	-0.30	-0.44	-0.60
	0.34	0.04	0.01	0.00
<u>Returns on Asset (ROA).</u> Firm Median year -1 = 0.65 Industry Adjusted Median year -1 = 0.73 Median Firms Change Median Industry Adjusted Change Asymp. Sig. (2-tailed)				
	-0.04	-0.12	-0.15	-0.24
	-0.02	-0.07	-0.08	-0.07
	0.95	0.86	0.37	0.66
<u>Returns on Equity (ROE).</u> Firm Median year -1 = 0.08 Industry Adjusted Median year -1 = 0.06 Median Firms Change Median Industry Adjusted Change Asymp. Sig. (2-tailed)				
	-0.09	0.00	-0.37	-0.34
	-0.10	-0.27	-0.30	-0.58
	0.57	0.04	0.64	0.00
<u>Tobins Q.</u> Firm Median year -1 = 1.19 Industry Adjusted Median year -1 = 1.30 Median Firms Change Median Industry Adjusted Change Asymp. Sig. (2-tailed)				
	0.07	0.07	0.03	0.06
	0.02	0.01	0.03	0.02
	0.37	0.51	0.29	0.29
<u>Debt / Asset (D/A).</u> Firm Median year -1 = 0.35 Industry Adjusted Median year -1 = 0.42 Median Firms Change				
	-0.00	0.00	-0.01	0.01

Median Industry Adjusted Change	0.02	-0.00	0.02	0.00
Asymp. Sig. (2-tailed)	0.34	0.51	0.49	0.70

Apart from net profit margin (NPM) and returns on equity (ROE), other performance measures such as operational profitability (operating profit margins), assets management efficiency (return on assets), growth performance (Tobin's Q) and firm risk (debt over assets) do not show any signs of being statistically different from the overall industry performances (matched pair firms). Even though NPM and ROE of adopting and non-adopting firms are significantly different, the values are still negative implying that the adopting firms' performance has not improved since the base year but fares better than the non-adopting firms.

Given the findings, there is no conclusive evidence of ESOS being an effective tool to mitigate agency problems and bring together the interest of managers (majority shareholders) with that of the shareholders (minority shareholders). Although there is slight evidence of adopting firms faring better performance against their industry-size matched pairs, the measures are more focus towards profitability rather than efficiency. Findings are similar to those reported by Yeo et. al (1999).

5.0 Conclusion

Theory of the firm and agency theory postulates that managers acting as agents for the owners may pursue strategies that maximizes their own utilities rather than that of the owners. By making managers become part of the owners, the interest of managers can be aligned with those of the shareholders. Theoretically, ESOS adoption could help mitigate the agency problems especially in the setting where the ownership of the firm is dispersed (Type I problem). Since there is no dominant shareholders, managers who are also owners of the firm would work harder and would bear part of the consequences of their own decisions. Previous studies have found significant relationship between executive compensations and firm's performance although the more recent literature cast some doubts over the effectiveness of equity based compensation in mitigating agency problems.

The major assumption in these studies is that the agency problem is between managers and dispersed shareholders (type 1 agency problem). The same set of assumptions can not be extended to developing countries or emerging markets that are characterised by an insider system of corporate governance with high level of ownership concentration, cross holdings and significant participation of owners in management is apparent (Claessens, Djankov & Lang, 2000; Lemmons & Lins, 2001, and Mitton, 2002). Since managers are part of the controlling shareholders, the agency problems as reported under developed countries do not exist in the same manner. Instead, the divergence of interests

exists between majority and minority shareholders (type II agency problem). Rewarding managers who are already controlling owners through ESOS may not help solve the agency problems but instead could be viewed as a tool to expropriate wealth from the firm.

Findings from this study suggest that the usual determinants for adopting ESOS as reasoned in the Western literature do not seem to hold in a developing country setting. ESOS is not being adopted to 'push' managers to work harder (i.e. increase profitability) as the relationship between the extent of income compared to the target and likelihood of ESOS adoption is negative. The practice of ESOS adoption is also prevalent among family owned firms than any other types of firms. Whilst significance of firms' size growth may give the impression that shareholders are taking proactive measure to align managers' and shareholders' interest, the sudden jump in firms' size growth over a short period (between a year after adoption and the adoption year) does raise concern if such numbers are 'massaged' given a long process of ESOS adoption. The growth of firm size could have been 'planned' so that its increase can be used to justify the decision to adopt ESOS.

The effectiveness of ESOS in aligning the interest of managers/controlling shareholders and minority shareholders can be gauged by the extent of improvement in performance experienced after the ESOS adoption. Results from internal performance do not reveal increase in performance upon adoption of ESOS. Similarly, performance against industry and size matched pair do not show significant differences between the two groups except for slightly better performance though still not as well as the performance before ESOS adoption.

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