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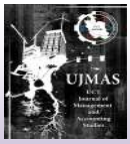

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Evaluation the Relationship between Costs Stickiness and Corporate Governance

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ABSTRACT

One of the basic assumptions of management accounting indicates that changes in costs are related to increase and decrease of activity level, this inappropriate behavior of costs is known Costs Stickiness. The aim of this study is to examine the Costs Stickiness in the Tehran Stock Exchange, also the relationship between general and administrative Costs Stickiness and corporate governance for listed companies in Tehran Stock Exchange during the years 2006-2015 will be studied and analyzed. Finally, to test hypotheses and also additional tests, the regression model independent of SPSS software was used and descriptive and inferential statistics such as correlation analysis were analyzed. According to the results, it can be said that strong corporate governance has positive impact to reduce the Stickiness of the general administrative costs and sales

Keyword:
- ✓ *Costs Stickiness*
- ✓ *General Administrative Expenses and Selling*
- ✓ *Corporate Governance.*

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INTRODUCTION

Knowledge of how to change the cost behavior toward changing the level or level of sale are important information for management decisions on planning and budgeting, pricing of products, determine breakeven points and other management (Namazi, 2008) (Nowravesh and Sadeghian, 2008). In the traditional models of costs behavior in accounting management, variable costs are decreased or increased proportional to the changes activities volume. This means that a huge variation in costs only is related to large changes in volume activities and changes (increase or decrease) in the volume of activity has no effect on the magnitude of changes in costs (Hilton, 1997).

Compared with the classic linear cost behavior model described by traditional management accounting, expense stickiness fits better with the management decision of resource adjustment in practice. The existence of expense stickiness is strongly connected to management's active behavior (e.g., Anderson et al. (2003) and Banker et al. (2011)). Thus, to truly understand stickiness, it is essential to investigate the reasons why management deliberately adjusts resources.

The results of some researchers (Noreen , 1997), (Calleja et al., 2006) in recent years indicate that increasing the costs during increase in activity levels is more than the reduction in costs during decrease in the volume of activity. Such cost behavior is called "cohesion costs". In order to evaluate adhesion of the costs, for example, behavior of administrative costs, general and selling to the level of sales could be examined significantly; because sale level of costs of administrative costs are general and sales. (Cooper and Kaplan, 1998) Also this test is very important; because the ratio of administrative costs, general and sales to the level of sales for companies listed on Tehran Stock Exchange is close to 9.5%. (Namazi and Davani pour, 2010).

In the earnings management literature, few studies have explored earnings management's effect on expense stickiness. Chen (2008) investigated the relationship between managerial empire building and expense stickiness. Dierynck and Renders (2009) observed the stickiness of labor costs in firms that reported small positive ROAs and slightly increased earnings. Kama andWeiss (2010) provided evidence that firms reduced the stickiness of operating costs to avoid losses or earnings decreases. Compared with the cost of sales, expense is a different type of cost. In this paper, we shed light on the relationship between expense stickiness and earnings management incentives.

Given the importance of administrative, general and sales costs in the company's cost structure, in this study, the behavior of these costs rather some elements of corporate governance and Stickiness to these costs is investigated. Awareness of the results of this research is important in a more accurate assessment of financial performance, anticipated profitability and more accurate decision making managers.

2. Related studies

There have been different theories about the severity of Stickiness costs including management desire to preserve resources in terms of income due to unwillingness to bear the costs of adjustment and equipping of new sources. (Anderson, 2003) and a group of researchers such as (Chen, 2008) and (Medeiros, 2004) analyzed such a phenomenon from the perspective of agency theory and managers personal motives to maintain production capacity during periods of declining revenues.Researchers such as (Anderson and Banker, 2007) and (Banker and Chen, 2006) have introduced a new model by examining the behavior of costs in evaluating the performance of company and analysis of the rate of return on investments and compared their model with the traditional models and showed their model predict the rate of return on investments more accurately. Anderson and Banker (2007) showed to the traditional view, increase distribution, selling, general and administrative costs to net sales is not bad news about the company's current and future performance. They found that this view is true only in terms of increased revenue and decreased vision in terms of sales, should be measured more carefully.

Balakrishnan et al., 2014 examined the structure and adhesion cost and focused on the theory of adhesive costs and the results showed that long-term decisions of the cost structure is effective to identify management decisions in the short term.(Nicola and Perego, 2014) examined whether the Costs Stickiness has happened or not in small and medium Italian companies in 1992-2010. Their findings showed that the adhesion of costs only occurs in relation to labor costs and there is no adhesion of the costs in administrative, general and selling costs.(James and Cannon, 2014) investigated the factors affecting Costs Stickiness in cost behavior in the aviation industry in the United States of America and concluded that at the time of increase in demand management to increase capacity and at a time when demand is reduced excess capacity to hold directors which lead to the adhesion costs.

Hashemi et al., 2014examined the impact of cost adhesion on conditional conservatism and asymmetric information and showed positive relationship between information asymmetry and adhesion costs that the positive relationship reduces significance between conservatism on condition information asymmetry.

3- Hypothesis Development

H1. Upward earnings management significantly decreases expense stickiness.

H2a. Under the pressure of realizing upward earnings, managers typically reduce R&D or advertising expenses.

H2b. Under the pressure of realizing upward earnings, managers typically reduce other general expenses.

4. Research Methodology

This research is inductive-deductive based on the purpose of the research and is descriptive in term of method. The study is quantitative to collect data and analysis method. It uses objectively approach to gather real data and analysis using statistical deals. Hence, due to reliable financial reporting r of Tehran Stock Exchange companies, this report is used as the main source of information for research. This report includes financial statements and basic board of director's reports of financial companies which is obtained through Exchange organization website, www.Codal. ir for 2006 - 2015.

The proposed model has been presented by Anderson and his colleagues and other researchers have used it,

$$log\left[\frac{SGA_{i,t}}{SGA_{i,t-1}}\right] = \beta_0 + \beta_1 \log\left[\frac{REV_{i,t}}{REV_{i,t-1}}\right] + \left[\gamma_0 + \sum_{j=1}^{n} \gamma_j CON_{i,t,j}\right] * DUM * log\left[\frac{REV_{i,t}}{REV_{i,t-1}}\right] + \varepsilon_{i,t} \quad (1)$$

Here

SGA = natural log of total administration and operation expenses;

REV = natural log of revenue;

DUM = a dummy variable with a value of 1 if the current year REV decreases ($REV_{i,t}$ / $REV_{i,t-1}$ < 1), and 0 otherwise;

CON = control variables. Here, we mainly use CAPR and TOBQ as control variables because most of the variables used by existing studies have already been considered in relation to corporate governance. The details of CAPR and TOBQ are as follows:

CAPR = capital intensity, measured as the net value of fixed assets scaled by operating revenue;

TOBQ = growth rate, measured as Tobin's Q (i indicates firm and t indicates year).

Hence, we restate model (1) as follows:

$$log\left[\frac{SGA_{i,t}}{SGA_{i,t-1}}\right] = \beta_0 + \beta_1 \log\left[\frac{REV_{i,t}}{REV_{i,t-1}}\right] + * \beta_2 DUM * log\left[\frac{REV_{i,t}}{REV_{i,t-1}}\right] + \beta_3 DUM * CAPR_{i,t} * log\left[\frac{REV_{i,t}}{REV_{i,t-1}}\right] + \beta_4 DUM * TOBQ_{i,t} * log\left[\frac{REV_{i,t}}{REV_{i,t-1}}\right] \quad (2)$$

According to the definition of expense stickiness, a significant negative sign of β2 in model (2) indicates the existence of expense stickiness.

To test H1, we regress model (2) with the earnings-management and non-earnings-management subsamples, separately. As H1 indicates, we expect a lower level of expense stickiness in the earnings-management sub-sample. Thus, we expect β2 in the earnings-management sub-sample to be significantly higher than in the non-earnings-management sub-sample. The sign of β2 in the non-earnings-management sub-sample should be significantly negative due to the existence of expense stickiness.

To investigate whether the reduction of expense stickiness reflects efficient behavior, we further divide expenses (SGA) into R&D, advertising (ADV), and other general expenses (GSGA). H2a indicates that managers reduce expense stickiness at the expense of firms' long-term benefits, whereas H2b indicates that managers use an efficient way to reduce expenses.

To test H2a and H2b, we replace SGA with R&D, ADV, or GSGA in model used to test H1. If H2a holds, because managers choose to mainly reduce R&D or advertising expense to increase earnings, b2 in the earnings-management sub-sample should be significantly higher than in the non-earnings-management subsample, and the sign of b2 in the non-earnings-management sub-sample should be significantly negative when using R&D and ADV instead of SGA. The inter-sample difference of b2 is not expected to be significant when using GSGA instead of SGA. However, if H2b holds, the above expected results should be opposite.

After a brief analysis of the data, the unit root test variables to assess the reliability of the estimated regression is not false, white test to determine the variance of difference and also Brivesh Godfrey test for autocorrelation problem statement is considered waste. Then, using the so-called F Limer marked individual differences in levels are heterogeneous or homogeneous sections together and Housman test to determine the point of difference is fixed or random. Furthermore, we estimate models and analyzed the results used to analyze data collected from Excel and for test the hypothesis, as well as additional tests to ensure independent EVIEVS software and SPSS regression model was used.

Table 1- statistics analysis

	Mean	Median	Min.	Max.	Std.dev
REV	4768.35	1012.43	10.90	1873165.20	39604.43
SGA	421.63	123.35	4.30	119075.23	5.6
SGA/REV	8.88	12.1	4.77	6.3	141.3
Log[REV_t/REV_{t-1}]	0.148	0.149	-4.265	3.706	0.342
Log[SGA_t/SGA_{t-1}[	0.153	0.128	-2.754	2.564	0.352
DUM*log[REV_t/REV_{t-1}]	-0.054	0.000	-4.987	0.000	0.185
CAPR	0.562	0.421	0.000	19.542	0.865
TOBQ	1.654	1.119	0.000	22.131	1.118
R&D/REV (%)	0.73	0.02	0.00	5.56	1.4
ADV/REV (%)	0.56	0.02	0.00	5.32	1.38
GSGA/REV(%)	7.14	10.56	5.54	28.19	5.83

Table 1 shows that the mean (median) values of REV and SGA are 4768.35 (1012.43) and 421.63 (123.35). Both variables are right-skewed and it is reasonable to take the natural log of the initial amount in the subsequent regression.

The standard deviations of REV and SGA are 39604.43 and 5.6, respectively, significantly larger than their means, which indicates that there is large variation in these variables. We report a mean (median) SGA=REV, which is smaller than the value that reported in the work of Anderson et al. (2003). Here, we suggest that this may be due to the difference between Chinese Accounting Standards and U.S. GAAP.

On average, firm revenues and expenses increase during the sample period due to the positive values of log

[REVt/REVt_1] and log[SGAt/SGAt_1]. The mean (median) of log[REVt/REVt_1] and log[SGAt/SGAt_1] are 0.148 (0.149) and 0.153 (0.128), respectively. However, log[REVt/REVt_1] has a minimum of -4.265 (indicatingthat some firms have a significant decrease in revenue), a maximum of 3.706 (indicating that some firms havelarge growth in revenue), and a standard deviation of 0.342 (indicating that the annual changes in firmrevenues are quite different). The same characteristics are found in log[SGAt/SGAt_1]. The mean (median) of DUM * log[REVt/REVt_1] is -0.054 (0) and it is therefore left-skewed. It has a minimum of -4.987, a maximum of 0, and astandard deviation of 0.185, indicating that the annual variances in revenues for decreasing firms are also quitelarge.

The mean (median) values of CAPR and TOBQ are 0.562 (0.421) and 1.654 (1.119), and their standarddeviations are 0.865and 1.118, respectively, which indicates significant cross sample variance.

After further dividing SGA into R&D, ADV, and GSGA, we find that the mean (median) values of (R&D/REV) and (ADV/REV) are 0.73% (0.02%) and 0.56% (0.02%), respectively. Given that (GSGA/REV) has amean (median) value of 7.14% (10.56%), on average, other general expenses comprise the majority of totalexpenses.

5- EXPERIMENTAL RESULTS

HYPOTHESES TESTS

The first hypothesis

H1. Upward earnings management significantly decreases expense stickiness.

The regression results of upward earnings management on expense stickiness are reported in Table 2. Compared with the results in Columns (1) and (2), Columns (3) and (4) add CAPR and TOBQ.

As Table 2 shows, β2 in Column (1) is positive and not statistically significant, indicating that upward earnings management decreases expense stickiness.

To summarize, the results in Table 5 provide evidence that expense stickiness is mainly found in the nonearnings-management sub-sample. Moreover, the value of b2 in the earnings-management sub-sample is larger than that in the non-earnings-management sub-sample and the difference (not tabulated) is statistically significant at the 1% level (v2 test = 22.37). Thus, consistent with H1, the evidence suggests that upward earnings management significantly decreases expense stickiness.

Table 2 Regression results of earnings management incentive on expense stickiness.

	Coefficient (t-statistics)			
	(1)	(2)	(3)	(4)
	EAMG=1	EAMG=0	EAMG=1	EAMG=0
β0	0.031	0.053	0.031	0.049
β1	0.38 (15.98)***	0.64 (9.67)***	0.38 (15.47)***	0.53 (30.93)***
β2	**0.013** **(0.23)**	**-0.443** **(-10.33)*** **	**0.07** **(1.47)**	**-0.553** **(-10.12)*** **
β3			-0.001 (-0.11)	-0.006 (-0.72)***
β4			-0.039 (-1.82)***	0.053 (4.97)***
Adj-R^2	0.131	0.245	0.131	0.251
F	20.31	20.21	31.32	37.30
N	320	576	320	576

The superscripts ** and * indicate two-tailed statistical significance at the 5% and 10% levels, respectively.
*** indicates two-tailed statistical significance at the 1% level.
The bold variable(s) is the tested variable(s) we focus on.

The second hypothesis

H2a. Under the pressure of realizing upward earnings, managers typically reduce R&D or advertising expenses.

H2b. Under the pressure of realizing upward earnings, managers typically reduce other general expenses.

What expense types do managers tend to reduce under earnings pressure? The results of R&D are shown in Columns (5) and (6) of Table 3. The values of β2 in both columns are negative and statistically significant, indicating the existence of expense stickiness in both samples. In the earnings-management sub-sample, R&D decreases with every 1% of revenue. The results suggest that R&D in both sub-samples is sticky. Although the amount of R&D reduction is greater in the earnings-management subsample than in the non-earnings-management sub-sample, the difference between these two sub-samples is not statistically hold an upward earnings management incentive.

significant. The results in Columns (3) and (4) provide evidence that there is little stickiness of ADV in either sub-sample. The results of GSGA are represented in Columns (5) and (6).

The value of β2 in Column (1) is statistically significant at the 1% level and that in Column (2) is not statistically significant, indicating that upward earnings management significantly reduces the stickiness of GSGA.

The results in Table 3 imply that when facing the pressure of upward earnings management, managers mayreduce R&D (which may be seen as a way to pursue a short-term target at the expense of long-term benefits),but it is more likely that managers choose to decrease other general expenses that lead to a lower level of expense stickiness. Thus, the evidence suggests that the ways in which managers reduce expense stickiness are efficient when they

Table 3 Efficiency of reducing expense stickiness

	Independent variable GSGA		Independent variable ADV		Independent variable R&D	
	(1)	(2)	(3)	(4)	(5)	(6)
	EAMG=0	EAMG=1	EAMG=0	EAMG=1	EAMG=0	EAMG=1
β0	0.075 (12.06)***	0.025 (4.75)***	0.053 (3.09)***	0.045 (3.47)***	0.039 (2.83)***	0.019 (2.06)**
β1	0.556 (38.76)***	0.469 (18.78)***	0.749 (32.83)***	0.439 (17.66)***	0.309 (25.83)***	0.331 (9.83)***
β2	**-0.508 (-13.4)*** **	**0.08 (1.43)**	**-0.09 (-1.41)**	**0.08 (0.45)**	**-0.309 (-5.33)*** **	**-0.165 (-2.45)** **
β3	-0.014 (-0.7)	-0.006 (-0.15)	-0.024 (-0.67)	-0.004 (-0.17)	0.242 (5.87)***	0.210 (5.38)***
β4	0.059 (6.87)***	0.049 (-2.17)**	0.001 (0.01)	0.004 (0.02)	0.04 (4.17)***	0.034 (-1.43)
Adj-R^2	0.185	0.378	0.353	0.336	0.337	0.335
F	28.54	11.85	44.65	16.9	45.13	18.18
N	576	320	576	320	576	320
X^2 Test	12.3***		1.9		1.59	

The superscript and * indicates two-tailed statistical significance at 10% level.
** indicates two-tailed statistical significance at 5% level.
*** indicates two-tailed statistical significance at 1% level.
The bold variable(s) is the tested variable(s) we focus on.

The purpose of the study was to examine the relationship between cohesion of administrative, general cost and sale of company and governance corporate in the companies listed in Tehran stock exchange. In this regard, 143 companies listed in Tehran stock exchange were examined.

6- Conclusion

Cost and expense stickiness is an important issue in accounting and economics research. The literature has shown that cost stickiness cannot be separated from managers' motivations. Based on the literature, we first study the influence of earnings management on expense stickiness. Defining small positive profits or small earnings increases as earnings management, we find that there is significantly more expense stickiness in our non-earnings-management sub-sample than in our earnings-management sub-sample, which indicates that managers prefer to reduce more expenses under the pressure of reporting sound earnings.

The results show that the difference in the reduction in stickiness between the earnings-management and non-earnings-management sub-samples is much more significant in other general expenses than in R&D or advertising expenses. We also analyze the influence of corporate governance on the stickiness of expenses. Based on Larcker et al. (2007), we extract eight main factors from the summarized corporate governance indices and find that good corporate governance has a negative effect on expense stickiness.

The final purpose of each business unit is to maximize earning and stakeholder's equity. Manager of private unit tries to acquire highest earning and efficiency using at least resources. Managing cost is one of simple way to reduce resource consumption. This requires complete knowledge about cost behavior and factors influencing the cost behavior. Cost cohesion is one most important issue to analyze cost behavior. Common view is that cost should be changed by reducing sale, but this is not happened in the reality. According to conscious decision theory, costs are adhered under management decision making. In fact, mangers try to maintain their resources to acquire earning in the long term and this leads to not reduce cost during reducing sale. In the study, below results are obtained.

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