



## Impact of the Management Performance Evaluation Methods on the Data Quality in Accounting

*Hossein Parsamehr<sup>a,\*</sup>, Ali Kasravi<sup>a</sup>, Mohadeseh Fazli<sup>b</sup>*

<sup>a</sup>Department of Management, Arak Branch, Islamic Azad University, Arak, Iran

<sup>b</sup>Department of Accounting, , Islamic Azad University, Arak Branch, Arak, Iran

---

### ARTICLE INFO

#### Article history:

Received 12 November 2016

Accepted 18 January 2017

#### Keywords:

Performance evaluation

Quality management

Accounting data

### ABSTRACT

The impact of the management performance evaluation methods on the information quality in accounting will be studied in this paper. The information plays two roles in the market-oriented economies; first, it allows the investors to evaluate the potential opportunities of the investment (prospective role) and, secondly, it enables the investors to monitor how to allocate and use their capital by the establishment of some mechanisms. The statistical sample includes the 112 companies in Tehran Stock Exchange during 2010 to 2013 that are selected by the systematic elimination method. These companies were totally 560 years old. The hypothesis of the linear regression test was used in this study to analyze the data and Eviews software is used for hypothesis test.

---

## 1. Introduction

Financial statements and information disclosures a potentially important tool for managing the communication between company performance and monitoring by the shareholders. Following the occurrence of financial crises in developed countries and the collapse of major companies, including Enron et al, for the fraudulent financial statements, discuss the financial data quality becomes one of the interesting topics of the professional and scientific researches. Demand for financial statements and disclosure of information are from the asymmetrical data and the agency problems between managers and shareholders. Even if there is no obligation to disclose or lack of standards, the companies gain still the more interests through the disclosure and the reduction of the asymmetrical data between managers and shareholders of the company [12].

Individuals are responsible for the authority is granted to them. Managers of the financial institutions must be responsible for the senior authorities and other stakeholders in connection with the use of resources. The accountability process is performed using a variety of reports, including the evaluation of performance audit or operational audit reports. Operational audit includes three sections; efficien-

---

\* Corresponding author. Tel.: +988633121510  
E-mail address: [hparsa5621@yahoo.com](mailto:hparsa5621@yahoo.com)

cy, effectiveness and economy that evaluation of the performance is one of the most important parts of it [7].

## 2. Statement of Problem

Among the various topics relating to the companies, performance evaluation of the managers and mechanisms to control the manager's behavior has a special role. The firms' performance evaluations are the most important topics for the investors, creditors, government and managers, and it is the basis of many decision-makings for the internal and external organization. The performance evaluation reflects the success rate of the organizations to achieve its goals. As a result, salaries and bonuses of the managers of these companies should be commensurate with their performance. The performance of companies has a close relation with their goals; basically the performance has direct relation to the goals. According to the traditional theories, if the managers can maximize profits or the value of the firms, therefore they have provided a desirable and optimal performance with achieving the firms' aims. The new theories do not principally determine the goal for the firm, but the purpose of the parties is to maximize their benefits, so, the amount of sales, profit, earnings per share (EPS), return on assets (ROA) and return on equity (ROE) are all the traditional standards of the firms' performance evaluation that are obtained from the accounting data [13]. Focusing on the users, qualitative data can be defined as the fulfillment of the users' requirements according to the reasonable and external user perception. The quality of accounting data will increase, if the management authorities are limited by biased reporting of the accounting values by removal of different ways as well as increasing domain that the accounting values reflect the economic situation [14]. In this study, we intend to evaluate the effect of the three criteria the quality of the accounting, including Total productivity, Du Pont ratio system and Tobin's Q ratio, which arising from the three approaches; economic approach, financial management and consolidated management respectively in the performance evaluation of the company's management. Given the above subjects, the main problem of this study is explained as follows:

Does the Samantha's total productivity model is more effective to evaluate the management efficiency than Du Pont Ratio System and Tobin's Q ratio methods on the quality of the accounting data in the companies listed in Tehran Stock Exchange?

Some authors that have studied in this case say that one of the most important difficulties is the presented evaluation model to evaluate the management performance. In the particular financial institutions that are run by professional managers and their aim is quite different from some owners, the common capital of the institute is the center of attention. In the first place these managers are interested to maximize the short-term profits, because, in fact, the profit maximization is an evaluation tool of the manager's performance which is graded by them. In order to keep position, in the annual assemblies, directors should show that the income of the owners has increased; it means that they have made their greatest efforts and have done the best to maximize the short-term profits. In addition, it is needed a qualitative tool to evaluate the manager's performance for the definitive Evaluations to compare the obtained results with the prior periods. Some types of the profits due to ease of their use and in terms of the fact that they satisfy all the requirements listed above; usually they are used to evaluate management performance. In fact, they evaluate exactly the opposite of what the ownerships need to know about it. They evaluate the short-term results rather than the long-term one. In this study, the

total of productivity is the Du Pont ratio system and the Tobin's Q ratio as is considered as an instrument to evaluate the management performance.

In the Figure 1, the conceptual model of the research is given. It includes the relationships between variable.

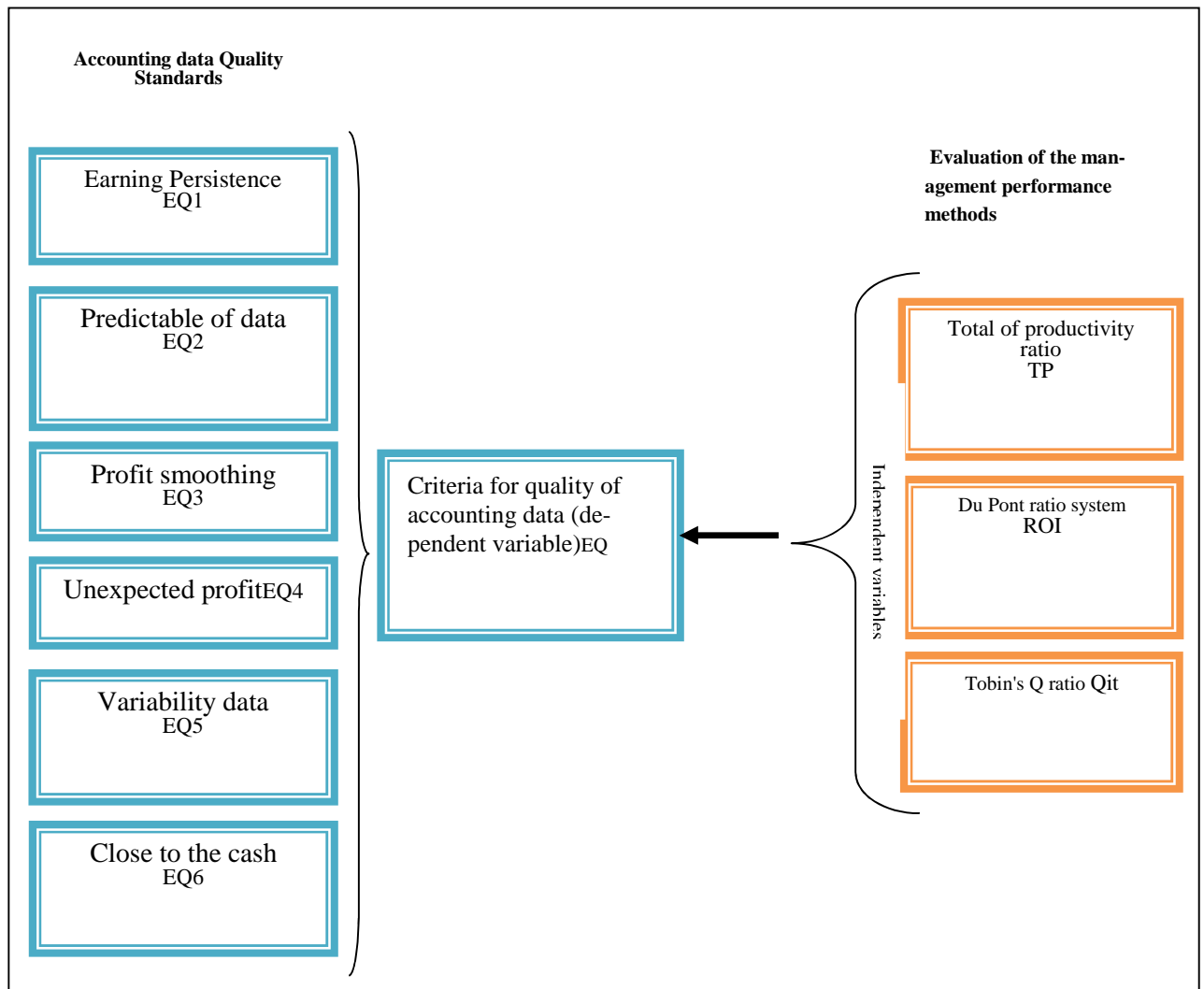


Figure 1: Conceptual model of research-source

### 3. Research Methodology

#### 3.1 Implementation Method of the Research Methodology

The implementation method of the research methodology is "Descriptive-Survey, Correlational type."

This type of research analyzes the relationship between variables based on the research objective. In the Correlation studies, If the goal is to predict the dependent variables based on the independent variables, it is said the dependent variable is the criterion variable and the independent variable is the predictor variable.

### 3.2 Research Model and Method of Variables' Evaluation

**H<sub>1</sub>:** Sumanth's total productivity model has more impact on the evaluation of the performance management of the earning persistence of the firms listed on the Tehran Stock Exchange than other mentioned methods (Du Pont ratio & system Tobin's Q ratio).

$$EQ1_{it} = \beta_1 TP_{it} + \beta_2 \log TP_{it}^2 + \beta_3 ROI_{it} + \beta_4 Q_{it} + \epsilon_{it}$$

**H<sub>0</sub>:**  $\beta_1 + \beta_2 < \beta_3 + \beta_4$

**H<sub>1</sub>:**  $\beta_1 + \beta_2 > \beta_3 + \beta_4$

**H<sub>2</sub>:** Sumanth's total productivity model has more impact for the management performance evaluation on the predictability of the firms listed on the Tehran Stock Exchange than other mentioned methods (Du Pont ratio & system Tobin's Q ratio).

$$EQ2_{it} = \beta_1 TP_{it} + \beta_2 \log TP_{it}^2 + \beta_3 ROI_{it} + \beta_4 Q_{it} + \epsilon_{it}$$

**H<sub>0</sub>:**  $\beta_1 + \beta_2 < \beta_3 + \beta_4$

**H<sub>1</sub>:**  $\beta_1 + \beta_2 > \beta_3 + \beta_4$

**H<sub>3</sub>:** Sumanth's total productivity model has more impact on the management performance evaluation of the profits smoothing of the firms listed on the Tehran Stock Exchange than other mentioned methods (DuPont ratio & system Tobin's Q ratio).

$$EQ3_{it} = \beta_1 TP_{it} + \beta_2 \log TP_{it}^2 + \beta_3 ROI_{it} + \beta_4 Q_{it} + \epsilon_{it}$$

**H<sub>0</sub>:**  $\beta_1 + \beta_2 < \beta_3 + \beta_4$

**H<sub>1</sub>:**  $\beta_1 + \beta_2 > \beta_3 + \beta_4$

**H<sub>4</sub>:** Samantha's total productivity model has more impact for The management performance evaluation of the unexpected profit of the firms listed on the Tehran Stock Exchange than other mentioned methods (Du Pont ratio & system Tobin's Q ratio).

$$EQ4_{it} = \beta_1 TP_{it} + \beta_2 \log TP_{it}^2 + \beta_3 ROI_{it} + \beta_4 Q_{it} + \epsilon_{it}$$

**H<sub>0</sub>:**  $\beta_1 + \beta_2 < \beta_3 + \beta_4$

**H<sub>1</sub>:**  $\beta_1 + \beta_2 < \beta_3 + \beta_4$

## 4. Results of the Research

### Analysis of Hypothesis Test

After ensuring the reliability of the desired model data in the interval of 2010- 2014, it is estimated for 112 companies. For estimation of the pattern related to each hypothesis, using the software EVIEWS8, to perform bound tests for the detection of the panel data and Hausman test is essential for using the fixed or random effects.

### H<sub>1</sub> Test of the Research

H1: Sumanth's total productivity model has more impact on the management performance evaluation of the earning Persistence of the firms listed on the Tehran Stock Exchange than other mentioned methods (DuPont ratio & system Tobin's Q ratio).

$$EQ1_{it} = \alpha + \beta_1 TP_{it} + \beta_2 \log TP_{it}^2 + \beta_3 ROI_{it} + \beta_4 Q_{it} + \epsilon_{it}$$

**H<sub>0</sub>:**  $\beta_1 + \beta_2 + \beta_3 + \beta_4 = 0$

**H<sub>1</sub>:**  $\beta_1 + \beta_2 + \beta_3 + \beta_4 \neq 0$

Where:

TP: Total productivity

TP<sup>2</sup>: Square of total productivity

ROI: Du Pont system

Q: Tobin's Q ratio

EQ1: Earnings persistence

EQ2: Data predictability

EQ3: Profit Smoothing

EQ4: Unexpected Profit

EQ5: Data Volatility

EQ6: Close to the cash

Before evaluation, first, various tests must carry out to determine the *y-intercept* existence and its type in the estimation and also the variance anisotropy existence.

First, to determine the existence or non-existence *y-intercept*, F statistic is separately used for each of the companies. Since F with degree of freedom 111 and 444 at the probability level of 95% for each approximation is equal 0.000, and due to the F computational is more than F-table, the H<sub>0</sub> based on the data fusion method is rejected and the alternative hypothesis will be accepted, meaning the capability existence in the panel data method.

**H<sub>0</sub>: Data Fusion Method Is Appropriate for the Evaluation**

**H<sub>1</sub>: Panel Data Method Is Appropriate for the Evaluation**

**Table 1:** F Limer test of H<sub>1</sub>

Statistic	Statistic	Free degree	Probability	Result
F	114.681532	(111,444)	0.000	Data Panel

After determining *y-intercept* existence separately for each section, the question arises whether this intercept should be considered as the fixed effects or random effects? So, in the regression analysis, the data fusion of evaluation issue is raised by the random effects or fixed effect method. It cannot be decided in advance about the selection of the random effect model or the fixed effects.

**Table 2:** Hausman test hypothesis, H1

Chi-square statistics	Free degree	Probability	Result
3.171546	4	0.5295	Random effects

Since in F Limer test, the data fusion method has not been accepted, so, the Housman test is done according to the conducted computation because the fixed effect method is more appropriate for the model.

**H<sub>0</sub>: The Random Effects Model Is Appropriate for the Evaluation**

**H<sub>1</sub>: The Fixed Effect Model Is Appropriate for the Evaluation**

### H<sub>1</sub> Test Results of the Research

In this section we examine the results of the model estimation. Forth significance of the fit model, it must refer to the probability level section of the F-statistic. The above table shows that it is less than 5%, so we conclude that model is acceptable statistically and the high value of Fisher's exact test indicates that there is a strong relationship between the variables in the model. As the coefficient of determination and adjusted coefficient of determination show the high power explanatory of the model is confirmed. It can be approved that the lack of solidarity in the mentioned model from the provided Durbin-Watson statistic is due to the short time period, there is no need to review the statistic.

Now, the meaningful analysis will be addressed for each of the explanatory variables, given the significant confirmation of the entire fit model. As can be seen in the table below, it is given for each coefficient, the standard error, t-statistic and the p value. For significance of each variable in the model, it is referred to the P-column as the significance level. Now, according to the p-value, it can be studied each variable, if the desired error or  $\alpha$  is compared with p- values.

**Table 3:** Coefficients estimation of H<sub>1</sub> model

Variable	Coefficients	Standard deviation	t-statistic	Probability
Y-intercept	0.268613	0.044585	6.024796	0.0000
Total Productivity	0.558021	0.237602	2.348553	0.0081
Chi-efficiency logarithm of total Productivity	0.001622	9.19E-05	17.63947	0.0000
DuPont system	0.772542	0.123943	6.233027	0.0000
Tobin's Q ratio	0.630614	0.316656	1.992688	0.0468
Coefficient of determination: 0.90		Adjusted Coefficient of determination: 0.89	Durbin-Watson: 2.17	Probability level F: 0.000

$$EQ1_{it}=0.268613+0.558021TP_{it}+ 0.001622\log TP_{it}^2+0.772542ROI_{it}+0.630614Q_{it}$$

As it is specified in the above model, Samantha's total productivity model to evaluate the management performance is less impact than the other methods (Du Pont ratio & system Tobin's Q ratio) on the data persistence of the companies listed on the Tehran Stock Exchange. It is clear that in the above model in which the impact factor of the total productivity is equal with  $\beta_1=0.56$ , in other words, 0.56 unit changes with one-change of unit in the dependent variable. Chi-squared logarithm coefficient of the total productivity is positive and equal with  $\beta_2=0.0016$  that shows its regressive and positive effect

on the dependent variable. Du Pont system coefficient and the Tobin's Q ratio are equal with  $\beta_3=0.77$  and  $\beta_4=0.63$ , which the change of unit in them leads to 0.77 and 0.63 of change in the dependent variable respectively. Being larger these absolute value coefficients than the total productive coefficient shows more impact on them and  $H_1$  is rejected.

**H<sub>2</sub> Test of the Research**

**H<sub>2</sub>:** Samantha's total productivity model has more impact on the management performance evaluation of the predictability data of the firms listed in the Tehran Stock Exchange than other mentioned methods (Du Pont ratio & system Tobin's Q ratio).

$$EQ_{2it} = \beta_0 + \beta_1 TP_{it} + \beta_2 \log TP_{it}^2 + \beta_3 ROI_{it} + \beta_4 Q_{it} + \epsilon_{it}$$

**H<sub>0</sub>:**  $\beta_1 + \beta_2 > \beta_3 + \beta_4$

**H<sub>1</sub>:**  $\beta_1 + \beta_2 < \beta_3 + \beta_4$

Before evaluation, first, various tests must carry out to determine the *y-intercept* existence and its type in the estimation and also the variance anisotropy existence.

First, to determine the existence or non-existence *y-intercept*, F statistic is separately used for each of the companies. Since F with degree of freedom 111 and 444 at the probability level of 95% for each approximation is equal 0.000, and due to the F computational is more than F-table, the **H<sub>0</sub>** based on the data fusion method is rejected and the alternative hypothesis will be accepted, meaning the capability existence in the panel data method.

**H<sub>0</sub>: Data Fusion Method Is Appropriate for the Evaluation**

**H<sub>1</sub>: Panel Data Method Is Appropriate for the Evaluation**

**Table 4:** F Limer test of **H<sub>1</sub>**

Statistic	Statistic	Free degree	Probability	Result
F	7.075309	(111,444)	0.000	Data Panel

After determining *y-intercept* existence separately for each section, the question arises that whether this intercept should be considered as the fixed effects or random effects? So, in the regression analysis the data fusion of evaluation issue is raised by the random effects or fixed effect method. It cannot be decided in advance about the selection of the random effect model or the fixed effects. Since in F Limer test, the data fusion method has not been accepted, so, the Housman test is done according to the conducted computation because the fixed effect method is more appropriate for the model.

**H<sub>0</sub>: The Random Effects Model Is Appropriate for the Evaluation**

**H<sub>1</sub>: The Fixed Effect Model Is Appropriate for the Evaluation**

**Table 5:** Hausman test hypothesis, **H<sub>1</sub>**

Chi-square statistics	Free degree	Probability	Result
4.910754	4	0.2966	Random effects

### Test Results of H<sub>2</sub> of the Research

In this section we examine the results of the model estimation. The forth significance of the fit model, it must refer to the probability level section of the F-statistic. The above table shows that it is less than 5%, so we conclude that model is acceptable statistically and the high value of Fisher's exact test indicates that there is a strong relationship between the variables in the model. As the coefficient of determination and adjusted coefficient of determination show, the high power explanatory of the model is confirmed. It can be approved that the lack of solidarity in the mentioned model from the provided Durbin-Watson statistic is due to the short time period, so there is no need to review the statistic.

Now, the meaningful analysis will be addressed for each of the explanatory variables, given the significant confirmation of the entire fit model. As can be seen in the table below, it is given for each coefficient, the standard error, t-statistic and the p value. For significance of each variable in the model, it is referred to the P-column as the significance level. Now, given, the p-value, it can be studied each variable, if the desired error or  $\alpha$  is compared with p- values.

**Table 6:** Coefficients estimation of H<sub>2</sub>model

Variable	Coefficients	Standard deviation	t-statistic	Probability
y-intercept	0/056661	0/004363	12/98574	0/0000
Total Productivity	0/039879	0/002454	16/25251	0/0000
Chi-efficiency log Logarithm of total Productivity	0/001178	0/000939	1/254421	0/2102
Du Pont system	0/038188	0/012691	3/009131	0/0027
Tobin's Q ratio	0/003612	0/001582	2/283039	0/0228
Coefficient of determination: 0.91		Adjusted Coefficient of determination: 0.90	Durbin-Watson: 1.87	Probability level F: 0.000

$$EQ_{2it} = 0/056661 + 0/039879TP_{it} + 0/0011782\log TP_{it}^2 + 0/038188ROI_{it} + 0/003612Q_{it}$$

As it is specified in the above model, Sumanth's total productivity model to evaluate the management performance is more impact than the other methods (Du Pont ratio & system Tobin's Q ratio) on the predictability of the companies listed in the Tehran Stock Exchange.

It is clear that in the above model in which the impact factor of the total productivity is equal with  $\beta_1 = 0.39$ , in other words, 0.39 unit changes with one-change of unit in the dependent variable. Chi-squared logarithm coefficient of the total productivity is positive and equal with  $\beta_2 = 0.0016$  that shows its regressive and positive effect on the dependent variable.

Du Pont system coefficient and the Tobin's Q ratio are equal with  $\beta_3 = 0.038$  and  $\beta_4 = 0.0036$ , which the change of unit in them leads to 0.77 and 0.63 of change in the dependent variable respectively. Being larger these absolute value coefficients than the total productive coefficient, it shows more impact on them and H<sub>2</sub> is accepted.



### H<sub>3</sub> Test of the Research

**H<sub>1</sub>:** Sumanth's total productivity model has more impact on the management performance evaluation of the profit smoothing of the firms listed in the Tehran Stock Exchange than other mentioned methods (Du Pont ratio & system Tobin's Q ratio).

$$EQ3 \text{ it} = \beta_1 + \beta_2 TPit + \beta_3 \log TPit^2 + \beta_4 ROIit + \beta_5 Qit + \epsilon_{it}$$

**H<sub>0</sub>:**  $\beta_1 + \beta_2 + \beta_3 + \beta_4 = 0$

**H<sub>1</sub>:**  $\beta_1 + \beta_2 > \beta_3 + \beta_4$

Before Evaluation, first, various tests must carry out to determine the *y-intercept* existence and its type in the estimation and also the variance anisotropy existence.

First, to determine the existence or non-existence y-intercept, F statistic is separately used for each of the companies. Since F with degree of freedom 111 and 444 at the probability level of 95% for each approximation is equal 0.000, and due to the F computational is more than F-table, the H<sub>0</sub> based on the data fusion method is rejected and the alternative hypothesis will be accepted, meaning the capability existence in the panel data method.

### H<sub>0</sub>: Data Fusion Method Is Appropriate for the evaluation

### H<sub>1</sub>: Panel Data Method Is Appropriate for the Evaluation

**Table 7:** F Limer test of H<sub>3</sub>

Statistic	Statistic	Free degree	Probability	Result
F	9.790986	(111,444)	0.000	Data Panel

After determining *y-intercept* existence separately for each section, the question arises that whether this intercept should be considered as the fixed effects or random effects? So, in the regression analysis the data fusion of evaluation issue is raised by the random effects or fixed effect method. It cannot be decided in advance about the selection of the random effect model or the fixed effects. Since in F Limer test, the data fusion method has not been accepted, so, the Hausman test is done according to the conducted computation because the fixed effect method is more appropriate for the model.

### H<sub>0</sub>: The Random Effects Model Is Appropriate for the Evaluation

### H<sub>1</sub>: The Fixed Effect Model Is Appropriate for the Evaluation

**Table 8:** Hausman test hypothesis, H<sub>3</sub>

Chi-square statistics	Free degree	Probability	Result
2.438963	4	0.5295	Random effects

### H<sub>3</sub> Test Results of the Research

In this section we examine the results of the model estimation. For the significance of the fit model, it must refer to the probability level section of the F-statistic. The above table shows that it is less than

5%, so, we conclude that model is acceptable statistically and the high value of Fisher's exact test indicates that there is a strong relationship between the variables in the model.

As the coefficient of determination and adjusted coefficient of determination show, the high power explanatory of the model is confirmed. It can be approved that the lack of solidarity in the mentioned model from the provided Durbin-Watson statistic is due to the short time period, so there is no need to review the statistic.

Now, the meaningful analysis will be addressed for each of the explanatory variables, given the significant confirmation of the entire fit model. As can be seen in the table below, it is given for each coefficient, the standard error, t-statistic and the p value. For significance of each variable in the model, it is referred to the P-column as the significance level. Now, given, the p-value, it can be studied each variable, if the desired error or  $\alpha$  is compared with p-values.

**Table 9:** Coefficients estimation of  $H_1$  model

Variable	Coefficients	Standard deviation	t-statistic	Probability
Y-intercept	1.401985	0.070212	19.96776	0.0000
Total Productivity	-0.001646	0.000366	4.499063	0.0000
Chi-efficiency logarithm of total Productivity	0.007249	0.014211	0.510082	0.6102
DuPont system	-0.545360	0.191403	-2.849276	0.0045
Tobin's Q ratio	-0.021106	0.002368	-8.912817	0.0000
Coefficient of determination: 0.901		Adjusted Coefficient of determination: 0.890	Durbin-Watson: 1.91	Probability level F: 0.000

$$EQ_{3it} = 1/401985 - 0/001646TP_{it} + 0/0072492\log TP_{it}^2 - 0/545360ROI_{it} - 0/0211062Q_{it}$$

As it is specified in the above model, Sumanth's total productivity model to evaluate the management performance is much less impact than the other methods (Du Pont ratio & system Tobin's Q ratio) on the profit smoothing of the companies listed in the Tehran Stock Exchange. It is clear that in the above model which the impact factor of the total productivity is equal with  $\beta_1 = 0.0016$ , in other words, 0.0016 unit changes with one-change of unit in the dependent variable.

Chi-squared logarithm coefficient of the total productivity is positive and equal with  $\beta_2 = 0.0072$  that shows its regressive and positive effect on the dependent variable. Du Pont system coefficient and the Tobin's Q ratio are equal with  $\beta_3 = 0.545$  and  $\beta_4 = 0.21$ , which the change of unit in them leads to 0.545 and 0.021 of change in the dependent variable respectively.

Being larger these absolute value of coefficients than the total productive coefficient shows more impact on them and  $H_3$  is rejected.

## 5. Results of Research

### Results of $H_1$

The Sumanth's total productivity model has more impact on the management performance evaluation of the earning persistence of the firms listed in the Tehran Stock Exchange than other mentioned methods (Du Pont ratio & system Tobin's Q ratio). According to the tests and analysis, which were performed by the regression and correlation methods in the section (4), and as it is observed in the tables (4-6), we concluded that the variable coefficients of the total productivity, Du Pont ratio system, Tobin's Q ratio, are 0.558, 0.772, and 0.630 respectively and their significant numbers (Prob) are 0.008, 0.000 and 0.046 respectively. The results show that the significance is at error level of 5%, according to the t-statistics and p-Value of the variable. The results show that the Sumanth's total productivity model has less impact on the management performance evaluation of the data persistence of the firms listed in the Tehran Stock Exchange than other mentioned methods (Du Pont ratio & system Tobin's Q ratio) and the  $H_1$  is rejected. Gugler and Yurtoglu [5], expressed this issue in an article to evaluate the performance of managers; the average of some ratios is used like return on assets and Tobin's Q ratio. According to them, the average is not an inappropriate criterion for performance evaluation. Because: 1. The average of the poor data is removed in calculating, so to test the hypothesis that related to the managerial behaviors are much less ideal; 2. The use of average as a performance evaluation needs determinants, so there is not such a model. Therefore, they suggested for gaining more accurate evaluation of the managerial operations, the ratio arising from the company's return of investing should be divided by the capital costs, and this ratio was named the "Q Margin." It seems that they are consistent with the results of the current study in some aspects.

### Results of $H_2$

The Sumanth's total productivity model has more impact on the management performance evaluation of the predictability of the firms listed in the Tehran Stock Exchange than other mentioned methods (Du Pont ratio & system Tobin's Q ratio).

According to the tests and analysis, which were performed by the regression and correlation methods in the section (4), and as it is observed in the tables (4-9), we concluded that the variable coefficients of the total productivity, Du Pont ratio system, Tobin's Q ratio, are 0.003, 0.038, and 0.039 respectively and their significant numbers (Prob) are 0.022, 0.002 and 0.000 respectively. The results show that the significance is at error level of 5%, according to the t-statistics and p-Value of the variable. The results show that the Sumanth's total productivity model has more impact in the management performance evaluation of forecasting the data of the firms listed in the Tehran Stock Exchange than other mentioned methods (Du Pont ratio & system Tobin's Q ratio) and the  $H_2$  is accepted.

Bagautdinova in a study entitled "The Role of Management Efficiency Measuring in Development of Economic Crisis" concluded that since the economic crisis problem will be revealed at a particular time again (Also, it is known as Kondratieff cycle), so it cannot be counted as the main reason meaning as the stimulus of crisis. In contrast to this idea, other ideas have been proposed, which states that the main reason for the crisis is one-dimensional management that focuses on the maximizing short-term results and regardless of the outcomes, they are evaluated only in terms of financial efficiency. Several Russian firms analyze using quantitative and qualitative tools that help to verify that men-

tioned hypothesis. It seems that they are consistent with the results of the current study in some aspects.

### Results of H<sub>3</sub>

The Sumanth's total productivity model has more impact on the management performance evaluation of the profit smoothing of the firms listed in the Tehran Stock Exchange than other mentioned methods (Du Pont ratio & system Tobin's Q ratio). According to the tests and analysis, which were performed by the regression and correlation methods in the section (4), and as it is observed in the tables (4-12), we concluded that the variable coefficients of the total productivity, Du Pont ratio system, Tobin's Q ratio, are -0.021, -0.545 and -0.001 respectively and their significant numbers (Prob) are 0.000, 0.004 and 0.000 respectively. The results show that the significance is at error level of 5%, according to the t-statistics and p-Value of the variable. The results show that the Sumanth's total productivity model has much less impact on the management performance evaluation of the profit smoothing of the firms listed in the Tehran Stock Exchange than other mentioned methods (Du Pont ratio & system Tobin's Q ratio) and the H<sub>3</sub> is rejected. Demerjian et al, [4] evaluated the relationship between earnings quality and managerial abilities in a study entitled, "Managerial Ability and Earnings Quality". They used a compound evaluation criterion to measure the earnings quality, including four features: the restatements on earnings revisions, the persistence, error of the bad debts reserves and quality of accruals. Their research results indicate that earnings quality has a positive relation to the managerial abilities, in other words, more omnipotent managers have the lower restatements on earnings revisions, fewer errors of estimation in debts' reserve, more persistence in arrears and profit and better quality evaluation of the accruals. It seems that they are consistent with the results of the current study income aspects.

### References

- [1] Bushman,R., Smith,A., *Financial accounting information and corporate governance*, Journal of Accounting and Economics, 2001,32, P.237-333.
- [2] Darabi, R., Vakilifard, H., Meshkin, M., *the relationship between operating cash flow and operating profit with stock returns of firms and impact of information asymmetry on these relationships*, Journal of Management Accounting, 2013, 6(16), P.1-14.
- [3] Dechow,P., Ge,W., Schrand,C.M., *Understanding Earnings Quality: A Review of the Proxies, Their Determinants and Their Consequences*, Journal of Accounting and Economics, 2010, 50, P. 344 -401.
- [4] Demerjian,R.P., Lev,B., Lewis-Western,M.F., Mcvay,S.E., *Managerial Ability and Earnings Quality*, The Accounting Review, 2013, 88(2), P. 463- 498.
- [5] Gugler,K., Yurtoglu,B.B. *Average Q, Marginal Q and the Relation between Ownership and Performance*, Economics Letters, 2003, P.379-384.
- [6] Hejazi, R., Qeytasi, R., Karimi, M., *Profit smoothing and uncertainty information, review of accounting and auditing*, 2011, 18(63), P.63-80.

- 
- [7] Islami Bidgoli, GH., Kashani poor, M., *The comparison and Evaluation of branches efficiency measurement methods and present suitable model*, Review of accounting and auditing, 2002, 11(38), P.13-21.
- [8] Khajavi, SH., Nazemi, A., *Study of the relationship between earnings quality and stock returns with an emphasis on the role of the accruals in the Tehran Stock Exchange*, Review of accounting and auditing, 2005, 2(40), P.37-60.
- [9] Khani, A., Haghghi, M. *Increasing and relative content of the internal return rate information based on the Cash-recovery than the rate of assets return in companies listed on the Tehran Stock Exchange*, Accounting science Journal, 2012, 3(10), P.71-92.
- [10] KhodaParast, J., Talebnia, Q., Mosalanejad, T., *The relative information content and increasing profits in contrast the recycling rates of cash for evaluating the company's performance*, Journal of Financial Accounting and Auditing, 2012, 4(14), P.1-22.
- [11] Mahanty,P., *Modified TVA based performance Evaluation*, Management Review, 2006.18(3), P.264-273.
- [12] Namazi, A., Rezaei, GH., Momtazian, A., *Product market competition and the quality of accounting information*, Shiraz university Journal of accounting developments, 2014, 6(2), P.131-166.
- [13] Nikmaram, H., Alavian Ghavanini, M., *The relationship between economic value added growth and operating leverage and company value*, Journal of financial studies, 2009.2, P.65-90.
- [14] Saghafi, A., Ibrahimi, A.,*Relationship between Accounting standards and quality of Accounting*, Review of Accounting and Auditing, 2009, 16(57), P.33-50
- [15] Wolfe,J., *The Tobin'q as a Company Performance Indicator*, Developments in Business Simulation and Experimental Learning, 2013, 30, P.155-160.