

# Investigating the Effectiveness of Managers Skills in Real-Profit Management

Mohammad Tahmasebi Ashtiani <sup>1\*</sup>, Mehran Aghaei <sup>2</sup>

<sup>1</sup> Faculty of Humanities, Islamic Azad University, Ashtian Branch, Ashtian, Markazi, IRAN

<sup>2</sup> Faculty Member of Accounting Department, Faculty of Humanities, Islamic Azad University, Ashtian Branch, Ashtian, IRAN

\* CORRESPONDENCE: ✉ [mohammad.tahmasebii32@gmail.com](mailto:mohammad.tahmasebii32@gmail.com)

## ABSTRACT

In recent years, several researches indicated that impact of managers' skills on profit quality. Theoretically, managers' abilities have the direct impact on profit quality, but the consequences are not same. Based on results of research, managers' skills can have a direct or indirect link to profit quality. This essay will show a connection between managers' abilities and the managing of profit quality in Companies listed on the stock exchange in Tehran. The criterion of real profit management, which is identified as three factors, unusual operational cash flow, unusual production costs and Abnormal Optional Expenses which is the ability of managers are part of the company's performance which is not affected by the substantial factors of the company. By reaching the results of research, through operating cash flows, there is no a valid connection between managers' ability and managing real profit, therefore a Significant negative relationship between managers' abilities and managing real profit through cost of abnormal production plus a significant negative relationships between managers' abilities and managing real profit through abnormal Optional Expenses have been investigated through the research. These finds can be useful for all managers, Participants in the securities market, policymakers and Regulators of the capital market.

**Keywords:** managers' abilities, managing profit company's performance, operating cash flows, production price, optional fee

## INTRODUCTION

Making Economic Decisions through users of financial statements In order to create cash required evaluate the power of the business unit. The determination of implementation is the time when this investigation through concentrating of the financial situation, financial performance and cash flows of the business unit plus using them in the prediction of expected cash flows and Measuring Financial Flexibility is being done. Moreover, financial statements will reflex the results of the duty of stewardship management or their accountability to the resource which they have. Accounting profit among others plays a significant key role in exposure information. Profit and loss account which are meaningful since for users, produce informative statements about Profitability of business units. In other words, the financial statement has plenty of information that ease the necessitated analyze for decisions in investment. Despite of all positive or negative view of this action, recent research has shown two methods of profit management which are: Profit management based on accounting data and real profit management. In the first case through optional accruals makes an arrangement of accounting figures with his ideal goal. In this method, with the help of recognition of revenues and delays in recognizing expenses, the manager will emprise the profit management, for have a

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better Functional presentation in the current period. Methods' weakness is that accelerating recognition of Revenues and delays in recognizing expenses will reduce profits in the years ahead. On the other hand, these actions in some situations will have a clear contrast with accounting standards and probably will be discovered by auditors or other financial supervisors. So, applying this management is not easy. In the second case, a manager with taking some operational decisions, in other words (manipulation of real activities such as granting discounts to increase sales or eliminating avoidable costs like research and development cost) will achieve his own intended profit. This method has hidden cost too. Since eliminating research and development cost and existing of competitors markets put next years' profits in danger and make long-term goal managers not use the methods However, this method of profit management will not be contrary of accepted accounting principles. So this advantage may be used more than. Other reasons of managing real profit which causes the reduction of power of the executives in manipulating accrual items are known as accounting standards and restricted, limited rules and managers inevitably use the methods. Management is a process of using human resource and material facilities effectively for gaining their organization's perspective.

Realization of this process will be accomplished through Main tasks of managers (planning, organizing, controlling, leading, guiding) and consider to system's rules. Effective managers have the better skills to use all source of the organization to get their own intended goals. In other words, an effective manager is a person, who with the minimum of facilities can reach the maximum of the organization. So, managers have always tried to get a suitable Financial Policies and Proper operation maximum the productivity and profitability of organization plus Relative to the amount of profitability draw Shareholders' attention. The ultimate goal of the economic units is making more profit. So managers' skill in applying organization's source for achieving more profits is important. Managers' skills are evaluated by financial statement especially profits. Accrual accounting basis Managers in choosing different accounting methods chooses the power. Since the responsibility of Business unit is providing a financial statement and the direct manager's access to information and also having the right will to choose accounting methods. The possibility of having profit management is available. In his research in the name of 'Quantify the ability to manage' for the first time a pattern was designed which by the use of accounting variables, abilities management was measured in quantify way. With the use of Multivariate linear regression and the control the inherent characteristics of the company they Separate management ability and intrinsic efficiency. If chosen strategies by managers do not live up Shareholders' expectations, the motivation for managers will arise by using a profit management lives up Shareholders' expectations.

At the end of the year manipulating accrual items will be easily discovered by regulators and auditors, whereas, real profit management will not easily be discovered by regulators and auditors. The basic economic events of a company, Limits the ability of managers to report a deferred profit (committed). In results, it's possible that managers cannot reach their ideal profit at the end of the year by Optional accruals. Managers can reduce its risk by manipulation of actual operational activities. For that reason, Can be admitted that with increasing of experience and abilities of managers, use Manipulating Accrual Items less and in contrary increase Manipulating real events while Shareholders are not satisfied with Profitability of the company.

## METHODOLOGY

After the paradigm of research, its type should be specified. The type of research is based on which angle it looks at divided into four categories.

- The purpose of the research. Why is the research carried out?
- The research process. Shows the collection and analyze information.
- Analytical logic. Shows detection methods.
- The result of the research. It looks at the role that research employs from itself.

Statistical population of this study is active companies in Tehran stock exchange which their financial statements for a specified period are accessible.

Data analysis method: In this assay firstly data used is being analyzed by using of quantitative methods which include tools in descriptive statistics, like average Standard deviation, Pearson correlation Coefficient. Then unit root test to test the reliability of the variables and also linear test to verify that there is no correlation between the variables will be done.

Finally, to test the hypotheses of this research, econometric models will be used. Then related hypotheses through Correlation analysis in a way of multiple regression methods with combined data techniques are tested. Since this assay considers to investigating the effectiveness of managers on real-Profit management, the view of the ability of managers is an independent variable and Real profit management is a dependent variable which they have been presented in Research pattern to Investigating the effectiveness of methods.

- To study the first hypothesis, we use the following multiple regression model:

$$ABCASH = \alpha_0 + \alpha_1 \text{MANAGERIAL ABILITY} + \alpha_2 \text{SIZE} + \alpha_3 \text{ROA} + \alpha_4 \text{LV} + \varepsilon_t$$

- To test the second hypothesis, multiple regression models will be used:

$$ABCOST = \alpha_0 + \alpha_1 \text{MANAGERIAL ABILITY} + \alpha_2 \text{SIZE} + \alpha_3 \text{ROA} + \alpha_4 \text{LV} + \varepsilon_t$$

- To examine the third hypothesis, multiple regression models will be used:

$$ABEXP = \alpha_0 + \alpha_1 \text{MANAGERIAL ABILITY} + \alpha_2 \text{SIZE} + \alpha_3 \text{ROA} + \alpha_4 \text{LV} + \varepsilon_t$$

In the next following paragraphs, Definition and measuring variables will be explained.

### Abnormal operating cash flows (ABCASH)

In the research which has been done by Kohen and his participants (2013), this model has been used for measuring abnormal operating cash flows. In this research, based on Accounting Standards of Iran, calculated operating cash flows is used and by Multivariate regression unusual operational cash is calculated.

$$\frac{CFO_{it}}{TA_{it-1}} = \alpha_0 \left( \frac{1}{TA_{it-1}} \right) + \alpha_1 \left( \frac{Sales_{it}}{TA_{it-1}} \right) + \alpha_2 \left( \frac{\Delta Sales_{it}}{TA_{it-1}} \right) + \varepsilon_{it}$$

CFO: Operating cash flows of the company I at the end of the year T

TA: Total assets of the company I at the end of the year T-1

Sales: company's Sale I of the T year

ΔSales: Company sales changes I at the end of the T year

ε: Remaining Model

### Abnormal Expenditure (ABEXP)

$$\frac{DISEXP_{it}}{TA_{it-1}} = \alpha_0 \left( \frac{1}{TA_{it-1}} \right) + \alpha_1 \left( \frac{Sales_{it}}{TA_{it-1}} \right) + \varepsilon_{it}$$

DISEXP: Optional company fee I at the end of the year T which is equal to Office and sales costs

Unusual operational cash flow and Abnormal Optional Expenses and The cost of abnormal production are known as distinguish between their real variable and their estimated normal levels with the use of the upper model. In other words, the remnants of each model 4-5-6 express unusual operating cash flows and the cost of abnormal production and Abnormal Optional Expenses respectfully and introduce a Real profit management

### The Ability of Managers (MARLABILITY)

Demerjian and his friends (2014) for controlling the effectiveness of company's intrinsic features presented a model which divides the efficiency of a company into two different parts, the efficiency of Company's intrinsic features and Management ability.

They did this duty by controlling of some special company's features (company's market share, Cash flow, company's age and company's Total assets of the)

Each of these variables, which is known as the intrinsic properties of the companies, can help management to make a better decision or acting in the opposite direction or limit management's ability. In order to measure the efficiency of the company, we are using the model of data envelopment analysis (DEA) which has been presented by Demerjian and his friends (2014). Data envelopment analysis is first used by Charney and Koper (1997) to compare the efficiency of Competitive companies introduced within an industry.

Generally, Data envelopment analysis measures Relative Performance of units which have the same inputs and outputs. These units are called decisive units. In fact, this method measures the performance of a decision unit in comparison with other decisive units in other organization or same industry. Because if that performance soccer will be a relative advantage. Efficiency or inefficiency of a unit depends on its performance in transmission of its input to its outputs in comparison with other units in the special organization.

This method provides a performance border for the company. The efficiency that this method generates is a number between one and zero. Companies with a number of one are active and efficiency and companies with a number of less than one are below the Efficiency Boundary and should reduce expenses or increase Revenues to reach Efficiency Boundary.

In the model used in this study, sales are known as outputs and three other variables, the cost of selling goods, Office fees and sales, Pure property, Machinery, and equipment, will be known as an input which will cover management right choice to achieve the desired income.

For measuring management's ability, the model of Demerjian et al. (2014) will be used to calculate the overall performance of the company.

$$\text{Firm Efficiency}_t = (\text{Sales}_t) / (\text{CoGS}_t + \text{SAExp}_t + \text{PPE}_t)^{-1}$$

Efficiency Firm= overall performance of the company

CoGS= the cost of sold goods

The ppe=pure property, equipment, and machinery

SAExp= Office fees and sales

Sales= companies sale.

Aiming of Calculation Company's efficiency is to measure management's abilities. Since in related calculation to efficiency the inherent features of the company are involved, the ability of management cannot be measured accurately, while affected by these features more or less will be calculated. For instance, regardless of the size of companies puissant manager perceive a better perspective of their own companies future. While managers of big companies potentially have Strong bargaining power in face of Suppliers

Demerjian et al. (2014) believe that the overall performance of the company with the help of the above relation will be calculated, which indicates the efficiency of resources for management and individual's management's abilities. For calculating companies efficiency with counting manager's ability, a formulation has been presented which we will calculate managers ability in form of Regression in our study too.

$$\text{Firm Efficiency} = \alpha_0 + \alpha_1 \text{Ln}(\text{Total Assets}) + \alpha_2 \text{Market Share} + \alpha_3 \text{Cash Flow} + \alpha_4 \text{Ln}(\text{Age}) + \varepsilon_i$$

Share Market J in year T equals Company sales ratio to Sales of entire industry

If a company has a positive Cash flow, Free Cash Flow Index equals one, otherwise, it would be zero.

Age: The value of this variable is from its establishment to the desired year.

Panel data method: Models are divided into three groups for the use of statistical information. Some of these models by using security information of time or better to say they will be done in several years ahead. Some of them will be done based on cross-sectional data. It means that variable will be investigated in a specified time period like month or week in different units. The third model is the model which has been used in this study too. Consequences are based on panel method. In this method, Sectional units in continuing years are paid attention. With the help of this method which has been used a lot recently, the number of observations ideally increased. According to integrated observations which shows some advantages such as causes changes more, the least linear relation between the explanatory variables, more degree of freedom, High performance of estimators. Generally, the model below shows a panel model.

$$Y_{it} = \alpha_{it} + \sum_{k=1}^k \beta_{kit} X_{kit} + \varepsilon_{it}$$

I=1, 2, 3...n = Sectional units

$Y_{it}$  Dependent variable for i-th unit of the section is shown in t year

$X_{kit}$  is also the k-th independent non-random variable for the i-th unit in the t year

$\varepsilon_{it}$  is disturbing which assumed that has a zero average ( $E[\varepsilon_{it}] = 0$ ) and Variance is stable ( $E[\varepsilon_{it}^2] = \sigma_\varepsilon^2$ )

$\beta_{kit}$  is model's parameters which measures an Independent variable response to K-th changes, independent variable K-th and T-th variable of time.

Estimating models based on panel data has different ways such as fixed effects and Random effects method which according to the case will be applied.

### Fixed effect methods

In this methods assumed that Factors related to variables are constant and the differences between units can be shown by the difference from the origin.

Minimum squared virtual variable model is used for reaching fixed effects method.

The last model is a classical regression model which has no new condition for its analyzing and through this method Minimum squared virtual variable will be achieved.

### Random effects method

The model of fixed effects can be generally accepted when we are sure that the difference between sections could be shown by Regression function while we are not always sure. For solving this problem a random effects method has been suggested. This method assumes that Fixed component of sections accidentally distributed among units.

### Statistical Methods and Test of Hypotheses

CHAV test or F-test: In the study of cross-sectional data and Time series, if the coefficients of the cross-sectional effect and - time effects are not meaningful, can integrated data together and through a regression estimate ordinary least squares. Since the most of integrated data are meaningful Section coefficients or Time series, this model which has been known as integrated regression is used less. For finding out whether the data panel is useful or no we are testing a hypothesis which all factors are constant and they are equal. In this hypothesis,  $H_0$  means the Equality of the width and originals and other hand  $H_1$  means Inequality of the width and originals. If  $H_0$  is accepted it means that all slopes for all sections are different and have that potential to be integrated with other data and using this method is statically valid.

But if the hypothesis  $H_0$  is rejected, panel data will be applied and can use that panel data.

**Hasman test:** For making clear which methods is more suitable, Hasman test will be used. In Random effects way, the deleted variables are disrupted but it needs that between independent variables and cross-sectional error component be no Correlation. This method investigates the existence of this Correlation. These methods based on that if Correlation exists, fixed effects method will Compatible and Random effects method is Incompatible

For investigating of meaningfulness of the regression model, F factor is used. Hypothesis zero in F test will be shown here.

$$\begin{cases} H_0: \beta_1 = \beta_2 = \dots = \beta_k = 0 \\ H_1: \beta_1 \neq \beta_2 \neq \dots \neq \beta_k \neq 0 \end{cases}$$

Which its validation will be tested by the formulation below

$$F = \frac{ESS/(K-1)}{RSS/(N-K)}$$

For deciding whether this hypothesis  $H_0$  is accepted or not, achieved F and the F from the table with Degrees of freedom  $K-1$  and  $N-K$  in calculated error levels ( $\alpha$ ) 5% will be comparison If the calculated F be more than the F from the table  $F > F_{\alpha(K-1, N-K)}$  Numerical value of the test function is in critic situation and  $H_0$  will be rejected. In this situation the model of Coefficient of confidence 95% is meaningful. If the calculated F be less than F from the table,  $H_0$  will be accepted and the meaningfulness of the model of Coefficient of confidence 95% will not accept.

Meaningfulness test of research variables: For investigating of the meaningfulness of Independent variable coefficients in each model, factor T is used.  $H_0$  hypothesis would be like this in this model.

$$\begin{cases} H_0: \beta_1 = 0 \\ H_1: \beta_1 \neq 0 \end{cases}$$

Which its validation will be tested by the formulation below

$$T = \frac{\hat{\beta}_1 - \beta_1}{SE\hat{\beta}_1} \sim t_{\alpha/2, N-K}$$

For deciding the acceptance and rejecting hypothesis zero, achieved T with T from the table which has  $K-N$  freedom degree in assurance level of 95% will be compared. If the Absolute value of calculated T be bigger

**Table 1.** The results of F-test

Description	Amount of statistics F	Degrees of freedom	P-value	Significance level
Cross-section F	2.687153	74.366	0.000	0.05

**Table 2.** The results of Hasman test

Description	Amount of statistics	Degrees of freedom	P-value	Significance level
Cross-section random	27.957643	4	0.000	0.05

than T from table  $|T| > t_{\frac{\alpha}{2}, N-K}$  the value number is in dangerous level and  $H_0$  will be rejected. In this situation assurance level 95%, will be ideal factor  $\beta_1$  which indicates a connection between two independent and dependent variables.

## RESULTS AND DISCUSSION

The first hypothesis of this study investigates a relation between managers' abilities and real profit management through unusual operational cash flows of listed companies in the stock exchange.

$H_0$ : there is no meaningful relation between manager's abilities and real profit management through unusual operational cash flows of listed companies in the stock exchange

$$H_0: \beta_3 = 0$$

$H_1$ : there is a meaningful relation between manager's abilities and real profit management through unusual operational cash flows of listed companies in the stock exchange

$$H_1: \beta_3 \neq 0$$

For testing the first hypothesis of model regression the formulation below is used.

$$ABEXP = \alpha_0 + \alpha_1 \text{MANAGERIAL ABILITY} + \alpha_2 \text{SIZE} + \alpha_3 \text{ROA} + \alpha_4 \text{LV} + \varepsilon_t$$

For choosing a method between Panel data and integrated data this test is used. In this test hypothesis  $H_0$  is equals the width of the originals and on the other hand  $H_1$  Inequality of the width of the originals. The summary of this test is shown in **Table 1**.

$H_0$  hypothesis indicates the lack of fixed effects which according to its width from the origin is constant which shows a Bound regression. F factor for testing fixed effects in critic levels means that its value is less than 0.05. So  $H_0$  will be rejected and its function in fixed effects will be accepted. The results in **Table 2** show the difference of Width of different sections and fixed effects will be accepted.

The amount of Hasman test is 27.95 and as the matter fact significant level is smaller than test level, so hypothesis  $H_0$  Based on the preference of the method of random effects on static effects is rejected and method of fixed effects will be chosen.

In the Second hypothesis, the relation between manager's skill and real profit management through abnormal production prices of listed companies in stock market will be investigated.

$H_0$ : there is no meaningful relation between managers' ability and abnormal production prices of listed companies in the stock market

$$H_0: \beta_3 = 0$$

$H_1$ : there is a meaningful relation between managers' ability and abnormal production prices of listed companies in the stock market

$$H_1: \beta_3 \neq 0$$

For testing, this hypothesis a formulation below is used.

$$ABCOST = \alpha_0 + \alpha_1 \text{MANAGERIAL ABILITY} + \alpha_2 \text{SIZE} + \alpha_3 \text{ROA} + \alpha_4 \text{LV} + \varepsilon_t$$

Analysis of heteroscedastic: The results of variance analysis using white test is presented in **Table 3**.

**Table 3.** White's test for heteroskedasticity

Description	Amount of statistics	P-value	Significance level
F-statistic	1.662298	0.0390	0.05
Obs*R-squared	22.99449	0.0404	0.05

**Table 4.** The results of F-test

Description	Amount of statistics F	Degrees of freedom	P-value	Significance level
Cross-section F	1.646781	74.366	0.000	0.05

**Table 5.** The results of Hasman test

Description	Amount of statistics	Degrees of freedom	P-value	Significance level
Cross-section random	20.415998	4	0.0004	0.05

As model statistics in the White test is in the level of 5 % of meaning fullness, so Assumption of variance equivalence is rejected and Inequality of variance is known as distributed. This issue comes from Violation of assumption of consistency. This problem in regression causes OLS results has no efficiency. For resolving the problem method of GLS will be used.

For choosing methods between Panel data and integrated data this method is being used. In this method hypothesis  $H_0$  shows the equivalent of the width of the originals and in contrast to the hypothesis,  $H_1$  shows Disparity of The width of the originals which they have been described in **Table 4**.

Hypothesis  $H_0$  indicates the lack of fixed effects existence which means its Width from the origin is constant. That shows it is a compound regression. F amount in of fixed effects test is in critic level which means its Probability values is smaller than 0.05. So hypothesis  $H_0$  is rejected and its efficiency is accepted. The results in **Table 5** are showing that the difference in width of the originals in different levels and fixed effect method will be accepted.

The amount of Hasman test is 20.415 plus significance level is smaller than Test level, so hypothesis  $H_0$  is The preferred method of random effects on static effects, so the Random Fixed Effects will be chosen.

## CONCLUSION

The first hypothesis of this study is investigating a relationship between managers' ability and Real profit management through Unusual Operating Cash Flows of Listed Companies. Finds show that there is no relation between managers' ability and Real profit management through Unusual Operating Cash Flows of Listed Companies, so  $H_0$  was confirmed. The second hypothesis of this study is investigating a relationship between managers' ability and Real profit management through unusual production costs of listed companies. Finds show that there is a relation between managers' ability and Real profit management through unusual production costs of listed companies. In other words, if managers' potential ability increases, abnormal production costs must be reduced, well  $H_0$  result is rejected.

In this study, the relationship between managers' ability and real profit management in accepted listed companies in stock change through 1395 to 1390 is investigated. Experimental Findings show that there is no relation between managers' ability and Real profit management through Unusual Operating Cash Flows of Listed Companies. Hypothesis results show that with increasing managements' ability, real profit management receive no changes through Operating cash flows, moreover, the result shows that between managers' ability and real profit management is a relation through The price of abnormal production of listed companies in the stock market. In other words, with an increase of managers' ability, Real profit management through the price of abnormal production in listed companies will reduce. However, analyzing data shows that there is a negative relation between managements' ability and real profit management through Abnormal Optional Charges of Listed Companies in the Stock Exchange. So worthy documents will be reduced.

Based on achieving results, manager's ability can have a direct or reverse relation to Earning quality. This study is investigating a relation between managers' ability and real profit management in Companies Listed in Tehran Stock Exchange. The criterion of real profit management three factors of unusual operational cash flow, unusual production costs, Abnormal Optional Expenses and also defines that the efficiency of a company

will not be affected by internal factors. The find also indicates the lack of meaningfulness relation between managers' ability and real profit management through Operating cash flows, and also the existence of Significant negative relation between managers' ability and real profit management through The cost of abnormal production plus existence of Significant negative relation between managers' ability and real profit management through Abnormal Optional Expenses in studies' period. These finds can be helpful for all managers, Participants in the securities market, Policymakers and regulators of the capital market.

### Disclosure statement

No potential conflict of interest was reported by the authors.

### Notes on contributors

**Mohammad Tahmasebi Ashtiani** – Faculty of Humanities, Islamic Azad University, Ashtian Branch, Ashtian, Markazi, Iran.

**Mehran Aghaei** – Faculty Member of Accounting Department, Faculty of Humanities, Islamic Azad University, Ashtian Branch, Ashtian, Iran.

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