

Analytical investigation of human resource's current expenses role in earnings predictability and value relevance: Evidence from Iran

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ABSTRACT

The purpose of this study is to investigate the effects of human resources current expenses, as a large and persistent component of earning, on the prediction of firm future performance. So, based on existing literature, the employee model and earning model have introduced and two dependent variables, earning predictability and value relevance, have entered into these models. In this study, 125 listed companies on TSE over a period of 7 years, between 2006 and 2013 selected as sample. Firstly, in this research by using mean comparison test (t-test), the two models have been compared and the results show that employee model, due the consideration of employee expenses (in addition to the earnings), has a better explanation of company's future performance. Then by using multiple regression and ordinary least squares method, three properties of human resource current expenses; named average salary per employee, employee expenses intensity, employee expenses persistence; and the difference in earning predictability and value relevance of two models have been investigated. This study is the first to investigate the effects of human Resource's current expenses on earnings predictability and value relevance of Iranian firms. Also, the provided empirical evidence in this paper further enhances the role of an employee by developing employee model. Results show that there is a significant relationship between the persistence of human resource current expenses and earning predictability and value relevance. The two other properties have a significant relationship with earning predictability but do not have a significant relationship with value relevance.

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1. Introduction

Earnings are one of the best factors measuring the economic activity. Shareholders as most important users of financial statements are interested in earnings information. Earnings are a guide for investing, deciding and predicting. Persistence, predictability, value relevance, timeliness and being conservative are Earnings characteristics (Francis et al., 2004).

Earnings predictability and value relevance are two characteristics that theoretically linked (Nichols and Wahlen, 2004). But these two criteria include different aspects of earnings characteristics. Value relevance measures the ability of earnings and change of earnings to explain stock returns. This factor is market-based because it considers market

reactions (stock returns) to an accounting number (reported earnings). In contrast, earnings predictability is another characteristic of earnings and is the ability of earnings to explain them. If past earnings are appropriate estimates of current earnings then predictability is said to be high. This characteristic is accounting-based, because it considers the relations between accounting numbers (past earnings to current earnings) and ignores the information from outside the accounting regime, for example, the market perception of reported earnings (Schiemann and Guenther, 2013).

As we know, earnings have a various components such as revenue, cost of goods sold, operating expenses and other operating expenses and revenue. Employee expenses is one of the most important component of income statement that allocated to major part of cost of goods sold (direct labor and overhead) and operating expenses (sales and administrative expenses).

Employees are regarded as an important resource and the main source of intellectual capital (Baruch, 2001) and companies have done major

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efforts on this resource to attract and maintain experienced and skilled employees. So, it could be concluded that companies consider the employees more important and crucial for firm performance. In spite of important role of employees in firm performance, there is not enough information about employees in financial statements (Schiemann and Guenther, 2013).

Human resource's current expenses include information about employees and are one of the most important of income statement. Human resource's current expenses have unique characteristics that make it different from other components, for example, it is persistent component of earnings (Schiemann and Guenther, 2013). Ohlson (1999) believed that most of persistent components of earnings have information related to prediction of earnings and evaluating of firms.

Components of earnings only can have information content and assist in evaluation of firms that have unique characteristics that make it different from other components (Pope and Wang, 2005). Schiemann and Guenther (2013) considered the employee expenses as an important component of earnings and believe that these items have a potential to assist in better determination of firms future performance, so, it could affect the earnings predictability and value relevance. They express that employee expenses have unique characteristics such as, employees are important intangible asset that considered as firms intellectual capital. Human resource's current expenses are one of the largest earnings components of income statement and have a great influence on earnings, as even small change in employee expenses could change earnings remarkably. In other word, employee expenses are persistent component of earnings and are necessary for firms all the time. Based on these issues, Schiemann and Guenther (2013) investigated three characteristics for employee expenses: average salary per employee, employee expenses intensity and employee expenses persistence.

As noted above, average salary per employee is one of the characteristic. Companies that concentrate on innovation, paid more salary to attract and maintain of employee. So, it could be said that average salary per employee indicate the importance of employees in company. Baruch (2001) concluded that employees are intangible source and they improve the firm's performance. Based on this theory, Schiemann and Guenther (2013) expected that average salary per employee has relationship with earnings predictability and value relevance. They introduce earnings and employee models and hypothesize the positive relationship between average salary per employee and difference in earnings predictability of two models and test this relationship for value relevance too.

Intensity of employee expenses is another characteristic. The greater the intensity of employee expenses, the greater its impact on earnings. This covers two arguments: 1) greater employee expenses intensity leads to greater investments in

employees under the assumption that the investment portion of employee expenses is relatively fixed and 2) earnings predictability and value relevance of firms with greater employee expenses intensity should benefit more from the consideration of employee expenses (Schiemann and Guenther, 2013). Persistence of employee expenses, as a third characteristic, is associated with earnings predictability and value relevance. The higher the volatility employee expenses (as a large cost component), the higher earnings volatility and this leads to decreasing the earnings predictability and value relevance (Schiemann and Guenther, 2013).

Most researches that have been done in accounting earnings context in Iran and other countries, concentrate on earnings as a general item, while the earnings components could include useful information that affect future performance of companies. The effects of employees and human resource on performance have been investigated more in management accounting literature, but in financial accounting literature, there is little research about this issue. So, in this research based on Schiemann and Guenther (2013), the human resource's current expenses role in earnings predictability and value relevance of Iranian firms has been investigated. The purpose of this research is to investigate whether employee expenses along with earnings as a general item (employee model), could increase the earnings predictability and value relevance. In this regard, three characteristics (i.e., average salary per employee, employee expenses intensity and employee expenses persistence) have been considered for employee expenses and also, earnings model and employee model have been compared too in Iran. It is expected that this paper has had an important role in developing of earnings components literature and its importance in analyzing, especially Iranian literature.

Based on noted issues above, this paper is concerned neither with the valuation of human capital nor with capitalizing employee expenses and is not emphasizing in adding the intangible asset to balance sheet of Iranian firms. But it is concerned with the presentation of expense based approach that could deliver useful information to users especially Iranian investors.

2. Literature review

There are not many researches regarding the topic of this paper. So, in the following, prior researches regard to earnings components and characteristics are stated and then, prior researches regard to intellectual capital and its relationship with performance are mentioned, because human resource is one of the considerable components of intellectual capital.

2.1. Earnings components and characteristics

Schiemann and Guenther (2013) investigated the association between employee expenses and firms

performance. They provide evidence that there are underlying determinants that influence the incremental information content of employee expenses. The results show that employee expenses as an important component of earnings has information content and its high persistence is related to earnings predictability and value relevance. Also, they found that employee expenses are a measure of a firm's resources, which are allocated to more profitable fields when earnings are negative. They interpret these findings to support the role of employees as a firm resource which can be allocated to more profitable activities in the case of loss years.

Penman (2009) argued that expenses derived from income statements that can be interpreted as investments in intangible assets can be used for firm valuation purposes even when they are not capitalized. Because a firm does not own employees, they have no legal basis to capitalize investments in employees. He argues that a capitalization of investments in intangible assets does not necessarily provide superior information compared to expenses. Employee expenses, at least partially represent investments.

Pope and Wang (2005) analytically showed that earnings components affect firm's valuation. Their results indicated that an earnings component contributes to firm valuation only when it has unique characteristics which distinguish it from other components. They show that if two earnings components have similar characteristics (e.g., similar persistence), then they can be considered in a valuation model without losing of information content. They believe that earnings components contribute to valuation in two ways: 1) by including earnings components into the valuation formula, that leads to improving value relevance, and (2) by including earnings components into the forecast formula of earnings, that indicates the role of earnings components in increasing earnings predictability.

In Chinese firms, Chen et al. (2011) by separating the earnings into core earnings and non-core earnings, show that core earnings, as a more persistent earnings component, are more value-relevant than non-core earnings.

Francis et al. (2004) showed that there is a small but significant positive relationship between earnings predictability and value relevance. Although these results indicate that there is some association between earnings predictability and value relevance, but these two measures cover different aspects of earnings characteristics and cannot be used interchangeably.

McMillan (2002) compared the predictability of accounting cumulative earnings model and accounting earnings components model in regard to stock returns and future earnings. The results show that changes in earnings components like revenue, operating income margin and expenses are not reflected in determination of stock returns and

future earnings by general item of accounting earnings.

2.2. Intellectual capital and its relationship with performance

Maditinos et al. (2011) investigated the relationship between intellectual capital components and financial performance in Greece market. They use intellectual value added coefficient for calculating the intellectual capital. The results show that there is not significant relationship between intellectual capital and financial performance, but the significant relationship between human capital and returns on equity is approved.

Tan et al. (2007) investigated the association between intellectual capital and financial returns of Singapore companies. They consider three financial factors: 1) earnings per share 2) returns on equity and 3) annual stock returns. The results indicate that there is positive and significant relationship between intellectual capital and considered financial performance factors.

Huang and Hsueh (2007) surveyed the relationship between intellectual capital and business performance in the engineering consulting industry. By using path analysis method, they find that there is positive correlation between intellectual capital components and business performance. High correlation is regard to human capital and then to customer capital. Also, results show positive correlation between three components of intellectual capital.

Tovstiga and Tulugurova (2007) investigated the relationship between intellectual capital practice and performance in Russian enterprise. The results indicate that intellectual capital, especially human and structure capital are best criteria for performance determination.

3. Hypotheses

In this paper, Regard to main question of the paper, two models (i.e., employee and earnings models) have been considered. Earnings model refer to the consideration of earnings alone, for determining earnings predictability and value relevance. But, employee model refers to the consideration of earnings and employee expenses in determining earnings predictability and value relevance. Value relevance and earnings predictability are two outstanding qualitative characteristics that have been used as dependent variables in this paper. Also, average salary per employee, employee expenses intensity and employee expenses persistence are three characteristics that have been noticed for employee expenses.

Based on these issues and literature review, eight hypotheses have been developed, as follow:

H1: Human resource's current expenses, increase earnings predictability of the employee model in relation to earnings model.

H2: Human resource's current expenses, increase value relevance of the employee model in relation to earnings model.

H3: Average salary per employee has a significant relationship with the difference in earnings predictability between the earnings and employee models.

H4: Average salary per employee has a significant relationship with the difference in value relevance between the earnings and employee models.

H5: Employee expenses intensity has a significant relationship with the difference in earnings predictability between the earnings and employee models.

H6: Employee expenses intensity has a significant relationship with the difference in value relevance between the earnings and employee models.

H7: Employee expenses persistence has a significant relationship with the difference in earnings predictability between the earnings and employee models.

H8: Employee expenses persistence has a significant relationship with the difference in value relevance between the earnings and employee models.

4. Research design

4.1. Sample

In this paper, the accepted firms on Tehran Stock Exchange have been chosen as statistical population. Due to some limitations and inconsistencies and extension of the statistical population, 125 firms are selected in a time period of 8 years (2006-2013), according to the following criteria:

1. Firm's fiscal year should be finished on 20 March (End of solar year)
2. Firms should not have changed its fiscal year between years 2007 to 2014.
3. Firms should not be a part of investment or financial institutions.
4. The data relating to research's variable should be existent and available.

The remaining firms' data were gathered through firms' financial statements and Tehran Stock Exchange software Rahavard Novin 3. The Analysis of data collection was done through Eviews 9 software).

4.2. Variables and models

Earnings predictability and value relevance are dependent variables in this paper, which each of them are calculated in earnings model and employee model as follow.

Following Schieman and Guenther (2013), Francis et al. (2004) and Lipe (1990), we apply an

autoregressive model of order one for earnings predictability in earnings model:

$$EBEI_{jt} = \beta_1 + \beta_2 EBEI_{jt-1} + \varepsilon_{jt} \quad (1)$$

where $EBEI_{j,t}$ are earnings before extraordinary items of firm j in year t and scaled by number of stock issued.

For earnings predictability in employee model, like Schieman and Guenther (2013) and Francis et al. (2004), we apply an autoregressive model of order one as follow:

$$EBEI_{jt} = \gamma_1 + \gamma_2 EBEI_{jt-1} + \gamma_3 EMPEXP_{jt-1} + \varepsilon_{jt} \quad (2)$$

where $empexp_{j,t}$ is employee expenses scaled by number of stock issued.

In earnings model, for value relevance, following Schieman and Guenther (2013) and Francis et al. (2004), we use this regression:

$$RET_{jt} = \delta_1 + \delta_2 EARN_{jt-1} + \delta_3 \Delta EARN_{jt-1} + \rho_{jt} \quad (3)$$

where $ret_{j,t}$ is annual stock returns, $earn_{j,t}$ is earnings before extraordinary items and $\Delta earn_{j,t}$ is change in earnings before extraordinary items. All variables are on per share basis and scaled by the beginning of fiscal year share price.

Based on Schieman and Guenther (2013) and Chen and Wang (2004), the employee model of value relevance is:

$$RET_{jt} = \varphi_1 + \varphi_2 EARN_{jt-1} + \varphi_3 \Delta EARN_{jt-1} + \varphi_4 EMP_{jt-1} + \varphi_5 \Delta EMP_{jt-1} + \varphi_{jt} \quad (4)$$

where $emp_{j,t}$ is human resource's current expenses on per share basis and scaled by the beginning of fiscal year share price.

Model (1) and (2) are used for testing H1 and model (3) and (4) are used for testing H2. For this purpose, we compare the adjusted R^2 of models together. For earnings predictability we use difference in adjusted R^2 between models (1) and (2), and for value relevance we use difference in adjusted R^2 between models (3) and (4). Compare means test is used for significance of this difference.

In order to testing the H3, H4, H5, H6, H7, and H8 following Schieman and Guenther (2013) and Francis et al. (2004), we use the regression model (5):

$$DEPVAR_{jt} = \alpha_0 + \alpha_1 AVSAL_{jt} + \alpha_2 EMPINT_{jt} + \alpha_3 EMPER_{jt} + \alpha_4 EARPER_{jt} + \alpha_5 SIZE_{jt} + \alpha_6 MTBR_{jt} + \alpha_7 CFVAR_{jt} + \alpha_8 SALVAR_{jt} + \alpha_9 CAPINT_{jt} + \alpha_{10} INTDUM_{jt} + \alpha_{11} OPCYC_{jt} + \varepsilon_{jt} \quad (5)$$

where:

- Dependent variables:
 - $DEPVAR$ is dependent variable and regard to hypotheses is the difference in adjusted R^2 between models (1) and (2) for earnings predictability and the difference in adjusted R^2 between models (3) and (4) for value relevance.

- Independent variables:
 - *AVSAL* is average salary per employee and measured as employee expenses divided by the number of employees.
 - *empint* is employee expenses intensity and measured as employee expenses divided by net sales.
 - *emper* is employee expenses persistence and measured as the slope coefficient of an order one autoregressive process of employee expenses ($EMPEXP_{j,t} = u_0 + u_1 EMPEXP_{j,t-1} + T_{j,t}$)
- Control variables:
 - *earper* is earnings persistence measured as the slope coefficient β_2 of the earnings model (1).
 - *size* is firm size and measured as the log of total assets
 - *mtbr* is the market to book ratio
 - *cfvar* is cash flow variability divided by total assets
 - *salvar* is sales variability divided by total assets
 - *capint* is capital intensity and measured as property, plant, and equipment at net book value divided by total assets
 - *intdum* is a dummy variable which equals 1 for observations for which research and development expenses are not reported, and 0 otherwise.
 - *opcy* is the operating cycle and measured as the sum of a firm's days accounts receivable and days inventory.

5. Results

5.1. Descriptive statistics

Descriptive statistics of variables are shown in [Table 1](#). As shown, mean value of dependent variables are 5% and 10% for earnings predictability (*DEPVAR 1*) and value relevance (*DEPVAR 2*) respectively. This indicates that a mean value of earnings predictability is less than value relevance. Mean value of earnings persistence (*EARPER*) and human resource current expenses (*EMPER*) are 65% and 92% respectively, and show that persistence of this expense component is higher than earnings. Mean value of employee expenses intensity (*EMPINT*) is 9.6% and indicates that almost 10 percent of firm's revenue is related to employee's current expenses.

5.2. First hypothesis

In hypothesis H1, we investigate the role of human resource's current expenses in earnings predictability of earnings and employee models. In order to testing H1, adjusted R^2 of models (1) and (2) is considered for each of the example firms and then, T-test is used for comparing of two models. Results of this comparing are shown in [Table 2](#).

Table 1: descriptive statistics of research's variables

	Mean	median	Max	Min	S.d	Skewness	Kurtosis
$EBEI_t$	817.74	509.33	9276.45	-2978.37	1124.78	3.001	17.409
$empexp_{t-1}$	405.57	297.65	4056	0.000	403.88	3.365	20.917
$earn_{t-1}$	0.148	0.160	2.190	-2.060	0.217	-2.470	36.138
$\Delta earn_t$	0.032	0.021	2.456	-2.162	0.254	0.239	32.284
emp_{t-1}	0.154	0.100	2.520	0.000	0.191	4.176	36.094
Δemp_t	0.021	0.011	0.535	-0.411	0.055	2.306	28.23
RET	48.066	22.740	526.51	-79.520	85.709	1.93	7.796
depvar(1)	0.051	0.010	0.930	-0.23	0.222	1.419	5.375
depvar(2)	0.10	0.04	0.95	-0.73	0.36	0.47	3.002
avsal	106.51	93.93	308.05	10.46	60.97	1.21	4.470
empint	0.096	0.08	0.610	0.010	0.073	2.399	12.898
emper	0.921	1.00	2.090	-0.72	0.416	-1.348	7.048
earper	0.650	0.55	4.46	-0.96	0.785	1.519	8.237
size	11.92	11.86	14.01	10.29	0.58	0.77	4.06
MTBR	788.84	240.11	9078.39	8.58	1696.6	3.765	17.232
CFVAR	0.016	0.010	0.86	-0.620	0.134	0.014	8.034
SALVAR	0.121	0.110	0.930	-0.950	0.242	-0.0348	6.772
CAPINT	0.252	0.210	0.870	0.020	0.180	1.070	3.805
INTDUM	0.933	1.00	1.00	0.000	0.248	-3.487	13.161
OPCYC	263.9	232.9	954.9	25.09	158.9	1.570	6.683

Table 2: T-test for earnings predictability of earnings and expenses model

	$EBEI_{jt} = \beta_1 + \beta_2 EBEI_{j,t-1} + \epsilon_{jt}$	$EBEI_{jt} = \gamma_1 + \gamma_2 EBEI_{j,t-1} + \gamma_3 empexp_{j,t-1} + \epsilon_{jt}$
	Adjusted R ² Model (1)	Adjusted R ² Model (2)
Mean	0.269	0.334
Median	0.116	0.225
Max	0.925	0.921
Min	0.024	0.001
S.d	0.284	0.332
Skewness	0.766	0.390
Kurtosis	2.159	1.552

Method: Satterthwaite – Welch t-test; df: 1951.724; value: -4.641; Probability: 0.000

As shown in [Table 2](#), a mean value of adjusted R^2 for model (1) and (2) are 0.269 and 0.334 respectively. This shows that adjusted R^2 for model (2) is higher than model (1), and P-value (0.000) of this difference indicates it's significant.

So, the hypothesis H1 is confirmed and based on this confirmation, we conclude that human resource's current expenses, increase earnings predictability of the employee model compared to earnings model.

5.3. Second hypothesis

In hypothesis H2, we investigate the role of human resource’s current expenses in value relevance of earnings and employee models. Like

hypothesis H1, for testing hypothesis H2, we consider and compare the adjusted R^2 of models (3) and (4) for each of the example firms. Table 3 shows the results.

Table 3: T-test for value relevance of earnings and expenses model

	Adjusted R^2 Model (3)	Adjusted R^2 Model (4)
Mean	0.421	0.560
median	0.447	0.590
Max	0.955	0.986
Min	0.012	0.065
S.d	0.318	0.317
Skewness	0.038	-0.331
Kurtosis	1.555	1.753

Method: Satterthwaite- Welch t-test; df: 1997.962; value: -9.748; Probability: 0.000

Table 3 reports that a mean value of adjusted R^2 for model (3) and (4) are 0.421 and 0.56 respectively. P-value of difference between these numbers is 0.000 and shows the significance of this difference. So, it can be said that hypotheses H2 is confirmed. This confirmation indicates that human resource’s current expenses, increase value relevance of the employee model compared to earnings model.

5.4. Hypothesis 3, 5 and 7

In hypotheses H3, H5 and H7, the effects of employee expenses characteristics (i.e., average,

intensity and persistence) on difference in earnings predictability between the earnings and employee models have been investigated. In order to resting these hypotheses, we estimate the model (5), which the dependent variable is earnings predictability. Before estimation, it is necessary to determine the data structure by using F-limer and Hausman test. F-limer for model (5) is 0.207 and its P-value is more than 5%. So, regression pattern for this model is Pooled data and Hausman test is not necessary. The results of estimating the model regression (5) by using Pooled data structure, for testing H3, H5 and H7 are reported in Table 4.

Table 4: Results of estimating model regression (5) in Pooled data structure (earnings predictability)

Variables	Coefficient	standard deviation	T statistics	Significance	VIF
Constant	0.168	0.051	-3.289	0.001	
avsal	0.0003	4.081	7.058	0.000	1.2728
empint	-0.149	0.033	-4.419	0.000	1.6500
emper	0.062	0.001	31.522	0.000	1.1183
earper	0.005	0.001	3.048	0.002	1.1024
size	0.017	0.004	4.083	0.000	2.3807
MTBR	-1.85	1.67	-11.070	0.000	1.9014
CFVAR	0.019	0.010	1.824	0.068	1.0312
SALVAR	-0.012	0.005	-2.499	0.012	1.2906
CAPINT	0.136	0.007	17.292	0.000	1.1741
INTDUM	-0.040	0.005	-7.105	0.000	1.0620
OPCYC	0.000	9.73	-22.197	0.000	1.4393

R^2 : 0.469; F statistics: 76.543; Durbin-Watson: 2.110; Adjusted R^2 : 0.462; Significance: 0.000

Adjusted R^2 reported in Table 4, is 0.462 and indicate that almost 46 percent of dependent variable (difference in earnings predictability between the earnings and employee models) variability is explained by independent and control variables. F statistic of model estimation is 76.543 and its P-value is less than 5%. It means that the model is significant in general.

Variance inflation factor (VIF) for all variables are less than 10. This shows that there is not collinearity between variables. Durbin-Watson statistic is 2.11 and less than 2.5. It shows that there is no autocorrelation in the residuals of regression model.

AVSAL, EMPINT and EMPEM are independent variables. T-statistics of these variables are 7.058, -4.416 and 31.522 respectively and statistically are significant. So, hypotheses H3, H5 and H7 are confirmed. Based on this confirmation and regard to coefficients of independent variables, we conclude

that average salary per employee and employee expenses persistence have positive and significant relationship with difference in earnings predictability between the earnings and employee models. But this relationship is negative and significant for employee expenses intensity variable.

Most of control variable including EARPER, SIZE, MTBR, SALVAR, CAPINT, INTPUM and OPCYC have significant relationship with dependent variable too. This significant relationship is positive for earnings persistence (EARPER) as an earnings characteristic.

5.5. Hypothesis 4, 6 and 8

In hypotheses H4, H6 and H8, the effects of average, intensity and persistence of employee expenses on difference in value relevance between the earnings and employee models have been investigated. In order to resting these hypotheses,

like hypotheses H3, H5 and H7, the model (5) is estimated, but dependent variable is value relevance. For this model, F-limer is 0.826 and its P-value is more than 5%. So, regression pattern for this model

is Pooled data and Hausman test is not necessary. The results of estimating the model regression (5) by using Pooled data structure, for testing H4, H6 and H8 are shown in Table 5.

Table 5: Results of estimating model regression (5) in Pooled data structure (value relevance)

Variables	Coefficient	standard deviation	T statistics	Significance	VIF
Constant	-0.186	0.061	-3.037	0.002	
<i>avsal</i>	-4.26	4.26	-0.998	0.318	1.2728
<i>empint</i>	-0.062	0.001	-1.492	0.135	1.6500
<i>emper</i>	-0.077	0.002	-29.842	0.000	1.1183
<i>earper</i>	-0.043	0.042	-40.323	0.000	1.1024
<i>size</i>	0.036	0.004	7.533	0.000	2.3807
<i>MTBR</i>	2.18	3.38	6.458	0.000	1.9014
<i>CFVAR</i>	0.010	0.009	1.030	0.303	1.0312
<i>SALVAR</i>	-0.038	0.009	-4.267	0.000	1.2906
<i>CAPINT</i>	-0.197	0.010	-19.426	0.000	1.1741
<i>INTDUM</i>	0.007	0.004	1.529	0.126	1.0620
<i>OPCYC</i>	-7.24	2.50	-2.893	0.003	1.4393

R²: 0.452; F statistics: 71.630; Durbin-Watson: 2.048; Adjusted R²: 0.446; Significance: 0.000

As reported in Table 5, adjusted R² for model (5), which dependent variable is value relevance, is 0.446 and indicate that almost 45 percent of dependent variable (difference in earnings predictability between the earnings and employee models) variability is explained by independent and control variables. F statistic of model estimation is 71.630 and its P-value is less than 5%. So, it shows that the model is significant in general.

Variance inflation factor (VIF) for all variables in model (5) are less than 10 so, we can conclude that there is not collinearity between variables. Durbin-Watson statistic is 2.048 and shows that there is no autocorrelation in the residuals of regression model.

The coefficients of desired variables (*AVSAL*, *EMPINT* and *EMPER*) are -4.26, -0.062 and -0.077 respectively. T-statistics of these variables are -0.998, -1.492 and -29.842 respectively, but only one of them is statistically significant. P-value regarded to persistency of employee expenses (*EMPER*) is 0.000 and for another two desired variables are more than 5%. So, hypotheses H4 and H6 are not confirmed, but hypothesis H7 is confirmed. With regard to coefficient of *EMPER*, we conclude that employee expenses persistence has negative and significant relationship with difference in value relevance between the earnings and employee models. But this relationship is not significant for average salary per employee and employee expenses intensity variables.

All control variables *CFVAR* and *INTPUM* have significant relationship with dependent variable too. This significant relationship is negative for earnings persistence (*EARPER*) as an earnings characteristic.

6. Conclusion

In this paper, the importance of employees has been investigated from a managerial point of view. By developing hypotheses H1 and H2, the earnings model and employee model introduce and then compare by compared mean test. Adjusted R² in employee model is more than earnings model for both dependent variables (i.e., earnings predictability and value relevance). So, we conclude

that employee model has a better determination of earnings predictability, future stock returns and generally future performance; because in this model in addition to earnings, the human resources current expenses are considered. This earnings component has allocated a great volume of income statement to itself and it is always persistence for firms; so, including it in decision making leads to better earnings predictability and as a result, more precise returns predictability. Penman (2009) concludes that capitalization of investments in intangible assets (employee) does not necessarily provide better information compared to expenses. Our results are consistent with Penman (2009); because these results indicate that considering the employee expenses along with earnings financially improve predicting of future performance. Also, Schiemann and Guenther (2013) believe that there is no need to capitalized employee related values but instead analyze reported earnings expenses. So, employee expenses have a potential to help in better determining of firms future performance.

Average salary per employee is one of the characteristics of employee expenses which investigate in this paper. Results of testing hypotheses H3 and H4 show that this variable has a significant relationship with difference in earnings predictability, but insignificant relationship with difference in value relevance. This indicates that average salary per employee has better determination for predicting the future earnings but has no effect on future returns. The coefficient of this variable in H3 is positive and shows that the higher of this expense the more investment in attracting skilled employee and leads to high earnings predictability. Due to Iranian economic and inflation instability in Iran economy environment, it is not possible to see a clear trend for stock returns of Iranian firms; so, predicting of future returns is not a simple act.

Like average salary per employee, intensity of employee expenses as another characteristic for employee expenses (hypotheses H5 and H6), has a significant relationship with difference in earnings predictability, but insignificant relationship with

difference in value relevance. So, this characteristic also has better determination for predicting the future earnings but has no effect on future returns. Based on this result, it could be concluded that increasing of employee expenses leads to more allocating of sales revenue and as a result, the effect of this expensive component on earnings increase. The cause of this increase may be due to attract and maintain of skilled employee.

Results of testing H3 and H4 that show significant relationship between average salary per employee, intensity of employee expenses and difference in earnings predictability, is not consistent with Schiemann and Guenther (2013). Abundant differences between countries' economic and financial situation are maybe the reason for this inconsistency. Also, due to high inflation in Iran, employee salary is increasing every year and a lot of this increase is not related to investment in attracting and maintain of skilled employee.

In hypotheses H7 and H8, the third characteristic of employee expenses is investigated and results show that this variable has a significant relationship with earnings predictability and value relevance. This result indicates that earnings predictability could lead to fewer earnings fluctuations and as a result, earnings predictability increase. As stated earlier, earnings predictability and value relevance are theoretically linked; so, the higher future earnings predictability the more precise future dividend forecasting and since the present value of dividend is a key variable in determining stock price, future stock returns are calculated more precisely. These results are consistent with Schiemann and Guenther (2013).

Human resources' current expenses have high persistence and are considered as necessary expenses for firm's survival. Based on this paper's result, which is a significant relationship between the persistence of employee expenses and earning predictability and value relevance, we advise to investors that notice to this variable in their decisions because it has an effective role in predicting the future performance of firms. Also, it is advised to auditors that in their investigations it is better to notice to change in these expenses and force the companies to disclose these expenses more precisely in financial notes. Finally, in a situation that capitalizing on employee it is not, it is suggested that

by using the cost-based approach, precious information present to the capital market.

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