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The impact of human capital on the level of social responsibility disclosure for companies listed in Tehran Stock Exchange

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Abstract: *The study aimed to investigate the impact of human capital on the level of social responsibility disclosure for companies listed in Tehran Stock Exchange. Special and temporal domains of this research consist of all companies listed in Tehran Stock Exchange and a period between 2010 and 2013, respectively. In this study, the human capital and the social responsibility disclosure level within companies are considered as independent and dependent variables, respectively. In this study, the social responsibility disclosure (Barzegar, 2013) and given final checklist compiled according to the items of social responsibility disclosure, each corporate social responsibility disclosure score was obtained in binary method. The results indicated the significant impact of human capital on the level of social responsibility disclosure of companies listed in Tehran Stock Exchange.*
Key words: *human capital, corporate social responsibility, Tehran Stock Exchange*

INTRODUCTION

According to knowledge-based economy, the intellectual capital was considered as a very important measure for the competitiveness between industrial companies. Johnson and Kaplan (1987) reported that physical capital is one of the most important issues related to the performance of companies. On the other hand, in two or three past decades, many researchers discussed the intellectual capital as the main source of competitive advantage arisen from intangible resources of an organization, and there is much work in the field of management and capital markets to examine the relationship between intellectual capital and performance and financial returns by different countries and considerable efforts were done to identifying, measuring and reporting of it. A review on the literature suggests considerably paying attention to the intellectual capital measuring, evaluating and reporting (Bush and Thomas, 2007). The social responsibility of companies is one of the strategic programs conducted by the companies in connection with social sustainable profits and benefits. In fact, the corporate social responsibility includes initiatives in which the companies interfere in social activities, and which reduce the damaging effects of business on the society and the natural environment (Steve Van drama, 2011). Allocated sources to the corporate social responsibility have created a competition between shareholders and other stakeholders (Vadok and Grieve, 1997). The availability of resources is of utmost importance in determining the corporate social responsibility. Because the return on investment is considered as the company's largest source so the investment performance directly affects the availability of resources (Williams and Ganapathy, 2007). Evidence suggests that spending in corporate social responsibility will be resulted in the future profitability (Lees et al., 2013). Over the past two decades in many countries, the number of companies has increased that have achieved corporate social responsibility. Several studies showed a correlation between corporate social responsibility and company's performance. According to Anderson (2014), the corporate social responsibility has a positive impact on the company's performance which has a negative impact on it. Business strategy for any competitive company within the market is that makes non-physical assets important essentially. There is a close relationship between the corporate social responsibility and intellectual capital and made this relationship important enhances the competitive advantage in the market (Longo et al., 2013). Past et al (2009) found a positive increasing relationship between the intellectual capital and the social responsibility disclosure. Masiba et al (2014) examined the relationship

between the intellectual capital and corporate social responsibility. They found a negative impact of intellectual capital on Islamic banks' social responsibility. As well there is a positive relationship between the social responsibility and investment performance, but a negative with human capital, and neither with structural capital. So what has been the main issue is to examine the impact of human capital on the corporate social responsibility listed in Tehran Stock Exchange.

2. Background

Abolhasani Ranjbar and Shariat Jafari (2012) examined the relationship between the intellectual capital and corporate social responsibility of Tehran Province's Economic and Financial Affairs. The results showed a positive and significant relationship between the intellectual capital, its dimensions and social responsibility among employees of Tehran Province's Economic and Financial Affairs Tehran.
Hosseinpur and Azar (2013) examined the relationship between the intellectual and social capital and organizational performance in the managers' and employees' opinion. The results of this study using Friedman and Wilcoxon tests indicate that communication-human aspects (IC) and communication-cognition (social capital) had the greatest effect on performance, respectively. Taleghani and Safdar (2015) examined the relationship between the intellectual capital and performance of companies listed in the Tehran Stock Exchange. The results showed a significant relationship between the intellectual capital and performance indicators under study on all companies, on those indicators which the intellectual capital influences. Aras et al (2013) examined the relationship between the corporate social responsibility and intellectual capital for companies listed in Turkey Stock Exchange. According to analysis performed, the results suggested that there is no significant relationship between the corporate social responsibility and intellectual capital. Longo et al (2013) examined the relationship between intellectual capital and corporate social responsibility. The results indicated a close relationship between the corporate social responsibility and the intellectual capital and considered this important relationship enhances the competitive advantage in the market. Kaminkioly et al (2014) examined the relationship between the corporate social responsibility and corporate performance. The results indicated that numerously amazing differences in some economic indicators between the socially responsible companies and not socially responsible ones and between United States of America and Europe and between different sectors of industry, too.
Masiba et al (2015) examined the relationship between the intellectual capital and corporate social responsibility. The results indicate a negative impact of the intellectual capital on Islamic banks' social responsibility. As well as there is a positive relationship between the social responsibility and return on investment, but a negative one between it and the human capital, and neither with structural capital relationship.

3- Methodology

3-1- Hypothesis

- Human capital has a significant impact on the level of social responsibility disclosure of companies listed in Tehran Stock Exchange.

3-2- Methodology

The research is of quasi-experimental and using post-event approach (via the past data). On the other hand, the study is a correlative-descriptive research. In terms of the nature of the data, this is a quantitative research. According to objectives, it is an applied one.

3-3- Statistical population and sample

The statistical population consists of companies listed in Tehran Stock Exchange during 2010 till 2013. The sample will be selected by systematic removal method:

1. The financial period ends up to March 19.
1. Before 2010, listed in Tehran Stock Exchange.
2. Not taken into consideration of intermediaries, investment, leasing and insurance companies.
3. Financial information is available.
4. Not belonging in IPO firms.

According to preliminary studies, the subjects were sampled from 37 member companies in exchange, over 384 companies. Using the formula Cocheran, 82 companies were sampled.

3-4- Research regression model

$$CSR_{it} = a_0 + a_1 HCE_{it} + a_2 Size_{it} + a_3 Lev_{it} + \varepsilon_{it}$$

CSR_{it}: Corporate Social Responsibility (how to measure: CSR model and the check list of Dr. G. Barzegar (2013) are used).
HCE_{it}: Human capital (how to measure: the model of Polik (1998) is used).
$Size_{it}$: Firm size (how to measure: the natural logarithm of the book value of total assets)
Lev_{it}: Financial leverage (how to measure: the ratio of total debt to total assets).

3-5- Data analysis

In this study, the modified Wald statistics is used to investigate the group variance heterogeneity among residuals of fixed effects regression model. The two F and Hausman tests are used to determine one of two ways effect fixed method or random effects. To illustrate the explanatory power of the explanatory variables, to investigate the significance of variables and to evaluate the overall adequacy of model, the adjusted coefficient of determination (Adjusted R2), t-statistic and F-Fisher statistics will be used. Also, statistical analysis will be carried out by EXCEL software and EVIEWS 7.

4- Results

4-1- Evaluation of heterogeneity of variance

In this section, we use the modified Wald test to investigate the heterogeneity of variance between residuals of our fixed effects regression model. The results variance heterogeneity test of ARCH LM is as follows:

Table 1-1- Results of ARCH LM heterogeneity test of research model

Description	Statistics value	Probability
F-statistics	0.584712	0.063*
Obs*R-squared	2.491513	0.063*

* 5% error level

According to Table 1-1, F-statistic is not significant at 5% level, so the hypothesis on homogeneity of variance is approved and heterogeneity of disturbing terms is rejected.

4-2- Significance test of fixed effects approach

The model estimation method is based on panel data. This is a combination of "time series data" and "cross-sectional data". In each model of time series and cross-sectional data, there are some failures such that can be reduced within the panel model. In the panel method, first two F and Hausman tests are used to determine one of two methods of fixed effects or random effects, the results are shown in below:

Table 1-2- F Limer test

Description	Statistics value	Freedom degree	Probability
Cross-section F	3.152117	71	0.043*
Cross-section chi-square	206.315474	71	0.026*

* 5% error level

Table 1-3- Huasman test

Description	Statistics value	Degree freedom	Probability
Cross-section F	7.041279	36	0.007*

* 5% error level

According to tables 1-2 and 1-3, the results of two tests (F and Hausman), in both, are less than 5% and therefore it should be used in the fixed effects method in the related regression model.

4-3- Lin-Levin Method

Lin and Levin indicated that within the panel data, using unit root test of these data has more power than the conventional unit root tests such as tests of Diky- Fuller, advanced Diky-Fuller and Phillips-Perron. In this study Lin and Levine test is used. The null hypothesis indicates the unit root variables.

Table 1-4- Collective unit root tests on the variables and methods Lin-Levine method

Variables	Statistics	Probability
CSR	5.147	0.0026*
Human capital	6.302	0.0011*
Firm size	-3.487	0.0037*
Financial leverage	7.015	0.0009*

* 5% error level

According to Table 1-4, calculated statistics and probability of acceptance show that the null hypothesis on all non-stationary variables can be rejected and all under study are stationed.

4-4- Hypothesis testing

Table 1-5- Regression testing of the hypothesis

Variable	Estimated coefficient	Estimated deviation	t-statistic	Significance level
Fixed	0.662	0.169	3.917	0.036*
Human capital	0.418	0.087	4.804	0.008*
Firm size	1.923	0.429	4.482	0.012*
Financial leverage	0.581	0.527	1.102	0.068

* 5% error level

Table 1-6- explanation capability and overall significance of model

R^2		Durbin-Watson	ANOVA	
Determination coefficient	Adjusted determination coefficient		F-statistics	Significance level
0.695	0.684	2.015	48.002	0.000**

* 1% error level

According to Table 1-5, as the Durbin-Watson test statistic is in the interval of 1.5 to 2.5, the hypothesis on the correlation between the errors is rejected and the regression can be used. The adjusted coefficient of determination is equal to 0.684, indicating that 68.4% of changes happened on total corporate social responsibility disclosure level depends on independent and control variables in this equation. On the other hand, given the significance of the F test (48.002) less than 0.01 error level, it can be concluded that the research regression model consisting of independent, control and dependent variables is a good model and a set of independent variables are capable of explaining the changes in the corporate social responsibility level. The coefficient of estimated impact for variable human capital on the disclosure level of corporate social responsibility (0.418) shows a direct and positive impact on the variable human capital on the CSR disclosure level. On the other hand, due to the significance level of t-statistic for the variable human capital on the corporate social responsibility disclosure level equal to (0.008), because of less than 5% error level, H_0 can be rejected at 95% and it can be expressed a significant impact of the human capital on the CSR disclosure level of companies listed in Tehran Stock Exchange. The empirical model is as follows:

$$CSR_{it} = 0.662 + 0.418HCE_{it} + 1.923Size_{it} + 0.581Lev_{it} + \varepsilon_{it}$$

5- Conclusion and Recommendations

The results showed a significant impact of the human capital on the CSR disclosure level of companies listed in Tehran Stock Exchange. In this regard, Kaminkioly et al (2013) showed that there are numerously amazing differences in some economic indicators between the socially responsible companies and not socially responsible ones and between United States of America and Europe and between different sectors of industry, too. Longo et al indicated a close relationship between the corporate social responsibility and intellectual capital and made this relationship important enhances the competitive advantage in the market. Aras et al (2013) showed that there is no significant relationship between the corporate social responsibility and intellectual capital. Mac Williams and Segal (2008) showed that the corporate social responsibility has a neutralizing effect on the company's financial performance. According to the results of the disclosure model proposed and its indicators, it is recommended the stock companies to make better transparency and accountability to stakeholders reflect on the economic, social and environmental activities sufficiently, when developing corporate social responsibility strategies and programs.

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