The survey of the effect of intellectual capital on the financial statement reporting acceleration in the companies accepted in Tehran’s securities exchange market

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Abstract

One of the main objectives chased by the financial reporting and filing the financial statements is to prepare useful information for the shareholders, creditors, customers, state organizations and the general public for the purpose of making decisions. For the same purpose, the objective of the current study is the survey of the intellectual capital effect on speeding the presentation of the companies’ financial reports and that which components of the intellectual capital exert greater influence on the acceleration of the companies’ annual financial reports. The study population in the current study includes the companies accepted in Tehran’s securities exchange market. Thus, the financial information belonging to 120 companies during the years from 2010 to 2014 were evaluated. The study variables were firstly assessed by means of Excel spreadsheet and then there was made use of regression models and Panel Data within the EVIEWs ver.9 software to test the study hypotheses. The study findings indicate that generally it cannot be decisively claimed that the intellectual capital has a positive and significant effect on the acceleration of the financial reporting presentations. The results of the study regarding the examination of the intellectual capital elements including human, structural and physical components are indicative of the idea that among the constituents of the intellectual capital only human resources has a positive and significant relationship with the acceleration of the presentation of the financial reporting.

Keywords: financial reporting acceleration, human resources, structural capital, physical capital.
Introduction:
One of the qualitative features of the financial information is their timeliness nature. Being on-time refers to the availability of the information on the right time. In case that the information cannot be made available to the users in a timely manner, they will be stripped of their usefulness for adopting decisions and making judgments by the users of such information. The key variable in timeliness is “delay in reporting”. Since the financial information are very sensitive to the lapse of time and they will lose their value and usefulness in making decisions in the course of time, thus the shorter the temporal distance between the fiscal year ending date and the date for the publication of the financial statements (delay in the financial reporting) the value of the published information would be higher.

The quality of the financial reporting is a term used for the constraints and criteria that segregate the useful and fruitful information from the rest and elevate the information usefulness. The timeliness of the financial reports is one of the most significant pillars of the quality of presenting the financial information for the companies since it is the information being on-time that can lead to a better and more useful application of the information by the users of such information and this is what the accounting systems are seeking to produce. Therefore, the speed of reporting as the temporal delay in companies’ reporting of the financial statements should be focused upon in a specific manner by the financial reports providers. Increasing in the speed with which the financial reports are prepared and offered due to the on-time application of the information in decision-making processes by the investors can contribute to a greater straightforwardness of the companies’ financial reports and this can per se result in a higher transparency in the capital markets and this in itself can consequently can exert a considerable effect on the capital and financial markets’ attractiveness.

The study theoretical principles and backgrounds:
According to the statement of the financial accounting concepts (statement no.2) those information are deemed as relevant which are provided on time. If the information fails to be presented on the right time they will be deprived of their usefulness for the purpose of adopting decisions and making judgments by the users. Definitely, the individuals and the users who have an earlier access to the accounting information would come up with a better decision making competency; so, the capital markets emphasize on the publication of the information on an appropriate temporal framework and in a uniform and even manner in order for the entire array of the users to be able to have access to identical and simultaneous information made available by such information issuers and therefore the transactions could be accomplished based on real information and it could be avoided to release information based on rumors. The objective of the current study is the survey of the effect of the intellectual capital on the acceleration of the annual financial reporting presentation in the companies accepted in Tehran’s securities exchange market.

Deep and Narvall (2013) in their study dealt with the analysis of the relationship between the intellectual capital and the Indian textile companies’ financial performance during the years from 2002 to 2012 within ten years and by making use of the residual sum of the squares regression model and they came to this conclusion that the textile companies intellectual capital value-added is in a positive relationship with the companies’ productivities.
Boujelbene and Affes (2013) in their own study used the data obtained from analyzing the companies accepted in the France stock exchange market and they reported that there is a negative and significant relationship between the intellectual capital disclosure (two components of the intellectual capital including human resources and structural aspects) and the equities finished price.

Trisnevati and Feda (2014) surveyed 21 public banks accepted in the Indonesian stock exchange market during the years from 2009 to 2011 and they evaluated the intellectual capital and its components regarding the companies’ market value and their financial performance. The deployed investment value added exerts a significant influence on the equities’ stock return.

Talebnya et al (2012) in their study used Polick model and with the survey of the Cement Industry companies during the years from 2005 to 2009 through investigating 12 companies came to this conclusion that there is a significant relationship between the intellectual capital and the market value and the financial performance.

Dianati Deylami and Ramezani (2012) in a study dealt with the survey of the effect of the intellectual capital on the quality of the financial information quality of the companies accepted in Tehran’s securities exchange market. In this study the data related to the intellectual capital and the quality of the financial information were collected of 94 companies during the years from 2001 to 2010 and the extracted data were analyzed by taking advantage of the structural equation method and the results found therein indicated that among the intellectual capital components the structural capital shows the highest association and human resources and the physical capitals come next in the hierarchy of their values and effects. Soleymani Amiri and Rahimi Tamrin (2012) in a study dealt with the survey of the relationship between the financial reporting timeliness and the financial performance of the companies accepted in Tehran’s securities exchange market. The study sample volume included 142 companies during the years from 2006 to 2011. The results of the study indicated that financial reporting timeliness significantly and positively associates with the return on assets and the return on the equities.

Namazi and Ghadiriani Arani (2014) in their study dealt with the empirical survey of the relationship between intellectual capital and its components with the companies bankruptcy risk by taking advantage of the information obtained from 51 companies accepted in Tehran’s securities exchange market in a time span from 2004 to 2011. And through measuring the insolvency risk by taking advantage of Altman’s model and measuring the intellectual capital and its components by making use of Polick model in their study they also indicated that there is a negative and significant relationship between the intellectual capital and the companies’ bankruptcy risk.

**Study hypotheses:**

1. The human resources component has a significant effect on the acceleration of annual financial reporting of the companies accepted in Tehran’s securities exchange market.
2. The structural capital component has a significant effect on the acceleration of annual financial reporting of the companies accepted in Tehran’s securities exchange market.
3. The physical capital component has a significant effect on the acceleration of annual financial reporting of the companies accepted in Tehran’s securities exchange market.
Study methodology:
The current study is a descriptive research which is seeking to specify the inter-variable relationships by making use of the statistical tests and it has to be classified among the applied research from the perspective of the study objectives. Also, from the methodological premises classification the current study has to be enumerated among the correlation type studies. The data measurement scale is a relative one. The study methodology is based on a deductive-inductive in which the study theoretical principles and the study background have been extracted through library, articles and internet searches and they tend to be used in the comparative inferences to prove or reject the study hypotheses through making use of the appropriate statistical methods and also the deductive reasoning method has been used in generalizing the results. Because the study objective is to recognize the correlation between intellectual capital and the acceleration of the annual financial reporting in the stock exchange market companies the correlation researches include the entire researches in which it has been tries to discover and determine the relationships between the various variables by taking advantage of correlation coefficient. The current study is of the post-incident and retrospective type that means that it is based on the analysis of the prior information (companies’ financial statements).

The study hypotheses test model:
To test the study hypotheses we make use of the model no.1:

\[ \text{TIME}_{it} = \beta_0 + \beta_1 \text{VIAC}_{it} + \beta_2 \text{HCE}_{it} + \beta_3 \text{SCE}_{it} + \beta_4 \text{CEE}_{it} + \beta_5 \text{LEV}_{it} + \beta_6 \text{SIZE}_{it} + \epsilon \quad \text{Model (1)} \]

where,
\( \text{VIAC} \) = the value-added intellectual capital coefficient (independent variable)
\( \text{HCE} \) = human resources efficiency (independent variable)
\( \text{SCE} \) = structural capital efficiency (independent variable)
\( \text{CEE} \) = physical capital efficiency (independent variable)
\( \text{LEV} \) = financial leverage (control variable)
\( \text{Size} \) = company size (control variable)
\( \text{Time} \) = accelerating the annual financial reporting (dependent variable)

Study population, sampling method and sample volume:
In the present study, the study population includes all of the companies accepted in Tehran’s securities exchange market and the study temporal framework starts from early 2010 to late 2014. Finally, 120 companies were selected out of the study population based on the systematic elimination as the study sample volume from the companies accepted in Tehran’s securities exchange market.

The study hypotheses test results:
Table (4-6) indicates the results obtained from the study model parameters estimation. For the model, Durbin-Watson statistic was equal to 2.07 and it was rejected in 5% error level of the autocorrelation error term. The likelihood rate pertaining to F-value for the correction purposes was equal to 0.00 which is smaller than 5%. Therefore, the null hypotheses indicating the model error specification is rejected. Accordingly, the model can be said to be accepted as being statistically significant in 95% confidence level. The amount of the specified coefficient of the model also was found to be 0.24. This statistic indicates that about 0.24% of the dependent
variable variations can be accounted for by the independent variables. According to the models’ statistics not being rejected the study hypotheses can be carried on to the test stage. To test the first hypothesis the relationship between the human capital efficiency and the acceleration of the financial reporting has been evaluated. Through the use of t-statistic which has been given in table (4-6) the coefficients significance were analyzed and the results are indicative of the hypothesis being confirmed in a 5% error level and thus it can be stated that a positive and significant relationship is existing between the human capital efficiency and the financial reporting speeding. The hypothesis not being rejected means that increasing this index causes the financial reporting presentation pace to increase.

The second hypothesis is to evaluate the likelihood pertaining to the existence of a relationship between the structural capital efficiency independent variable and the acceleration of the financial reporting. The error level of the likelihood related to the existence of such a relationship is equal to 0.12 which is larger than 0.05. Therefore, it can be stated that there is no relationship between this variable and the acceleration of the financial reporting process in 5% error level.

The third hypothesis also deals with the relationship between the physical capital efficiency and the acceleration of the financial reporting. According to the fact that the error level of this likelihood is equal to 0.41 and it has been found to be larger than 0.05 thus the hypothesis cannot be confirmed.

Table 4-6: the results of the study model estimation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-value</th>
<th>Error level</th>
</tr>
</thead>
<tbody>
<tr>
<td>x-intercept</td>
<td>37.91</td>
<td>-2.39</td>
<td>0.00</td>
</tr>
<tr>
<td>Physical capital efficiency</td>
<td>1.272</td>
<td>0.824</td>
<td>0.41</td>
</tr>
<tr>
<td>Human capital efficiency</td>
<td>1.804</td>
<td>2.046</td>
<td>0.04</td>
</tr>
<tr>
<td>Structural capital efficiency</td>
<td>9.88</td>
<td>-1.534</td>
<td>0.12</td>
</tr>
<tr>
<td>Financial leverage</td>
<td>-6.98</td>
<td>-0.40</td>
<td>0.68</td>
</tr>
<tr>
<td>Company size</td>
<td>-1.95</td>
<td>-1.25</td>
<td>0.21</td>
</tr>
<tr>
<td>Determination coefficient</td>
<td></td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>Adjusted determination coefficient</td>
<td></td>
<td>0.24</td>
<td></td>
</tr>
<tr>
<td>Durbin-Watson statistic</td>
<td></td>
<td>2.07</td>
<td></td>
</tr>
<tr>
<td>F-value</td>
<td></td>
<td>26.8</td>
<td></td>
</tr>
<tr>
<td>F-value probability</td>
<td></td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>

The results obtained from the hypotheses tests:
First hypothesis results:
The results of the first hypothesis which dealt with the survey of the relationship between the human capital and acceleration of the financial reporting are indicative of the significance and the positive relationship cited in this hypothesis. Therefore, the first study hypothesis is confirmed. The results of the study indicate that the financial reporting speed is subject to the effect exerted by the staff experience and knowledge. This hypothesis is based on the “learning curve theory”. Based on this theory, repetition provides the staff with a learning opportunity and learning results in the reduction in accomplishing the activity. So, with an increase in the number of the number of the prepared financial reports the reporting production time is reduced. With the continuation of the company activity the company accountants gain more experience. Consequently, the company enjoying staff with longer historical records act more sophisti}

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regarding the collecting, processing and releasing the information, and accordingly this will lead to an acceleration of the financial reports.

**Second hypothesis results:**
The second hypothesis test indicates that there is no significant relationship between the structural capital and the acceleration of the financial reporting. This finding brings about the grounding for the rejection of the second hypothesis.
Structural capital has been defined as the hardware, software, database, organizational structure, organization’s exclusive rights and patents, business brands and the entire competencies of the organization which support the staff productivity.
It was predicted that the larger companies would have more resources, more advanced accounting systems and therefore this results in their on-time reporting. The use of such means would result in the faster and more rapid accounts preparation and timely reporting. But the results of the current study in this regard indicated that the structural capital does not bring about the acceleration in the financial reporting and the reason behind such a finding pertains to the failing in the use of the company’s structural capacity in the direction of reducing the financial reporting delays.

**Third hypothesis results:**
The final hypothesis test results indicated that there is no significant relationship between the physical capital and the acceleration of the financial reporting. The finding results in the rejection of the third study hypothesis.
One of the factors effective on the publication of the annual financial statements in the companies is the inventory size of the reporter company. Regarding the relationship between the company assets size and the timely and on-time reporting there are two contradicting perspectives. Based on the first perspective, the large companies show a lesser speed in respect to the smaller companies in reporting their annual financial statements; that is because the larger companies’ accounts are more complicated in comparison to the smaller companies. Also, the amount of the information that should be collected by such companies is more expanded and extensive and it may be transferred from various sections, branches and subsidiary companies. Based on the second perspective (more prevalent) the larger companies in contrast to the smaller ones exhibit a higher pace in offering their annual financial reports. According to the results of the study the first perspective should be accepted.

**Table 5-1:** the summary of the results obtained from the first study hypothesis

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Description</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 1</td>
<td>The human resources component has a significant effect on the acceleration of annual financial reporting of the companies accepted in Tehran’s securities exchange market.</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Hypothesis 2</td>
<td>The structural capital component has a significant effect on the acceleration of annual financial reporting of the companies accepted in Tehran’s securities exchange market.</td>
<td>Rejected</td>
</tr>
<tr>
<td>Hypothesis 3</td>
<td>The physical capital component has a significant effect on the acceleration of annual financial reporting of the companies accepted in Tehran’s securities exchange market.</td>
<td>Rejected</td>
</tr>
</tbody>
</table>
References


3. Darabi, R., 2012, “the effect of the disclosing the intellectual capital components on the quality of the financial reporting”, the seasonal scientific and research journal of the investment knowledge, no.4, pp.105-131

4. Dianati Deylami, Z.; Ramezani, M., 2013, “the effect of the intellectual capital on the quality of the financial information of the companies accepted in Tehran’s securities exchange market”, the seasonal scientific and research journal of the financial knowledge of the securities analysis, 6(18): 31-47


