



Effects of profitability on the Intellectual Capital Disclosure in listed Companies in Tehran Stock Exchange

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Abstract

Intellectual capital is a valuable intangible asset that can have a significant impact on the success of the company. Although these intangible assets are not recognized in the accounts and the amounts of money it cannot be easily measured; however, it should be noted that these assets exist and can affect decisions. The study of the relationship between profitability and disclosure of intellectual capital and intellectual capital components in the Companies listed on the Tehran Stock Exchange is evaluated. In this regard, four hypotheses were developed from multiple linear regression was used to test them. For the operationalization of disclosure of intellectual capital and its components, the checklist Li et al (2012) and Return on Assets ratio were used for profit. Results of 77 firms (231 firm-years) during the period 2010- 2013 indicates that at 95 percent, positive and significant relationship between profitability and disclosure of intellectual capital there. So that the, by increasing and improving profitability, companies have an incentive to voluntarily disclose information on intellectual capital. The other variables were observed, significant and positive relationship between firm size and disclosure of intellectual capital, human capital, customer capital there. Also positive and significant relationship found between growth opportunities and disclosure intellectual capital. In addition, human capital and structural capital were positively related. A positive relationship was seen between financial leverage and disclosure customer capital there. Accordingly, consistent with the theoretical bases, it could be argued that profitability of the company led to voluntarily disclosure information on intellectual capital, and firms are better profitability of the greater incentive to the disclosure of intellectual capital.

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1. Introduction

Intellectual Capital Disclosure (ICD) represents an approach that can be used to measure intangible assets and describe the results of a company's knowledge – based activities (Abdullah & Sofian, 2012). Although the term (ICD) is now widely used among regulators, professional bodies and academics, a precise and agreed definition of ICD does not yet exist (Castelo Branco, Delgado, Sousa & Sá, 2011).

In the wake of García- Meca and Martínez (2005), (ICD) is understood in this study as knowledge, intellectual property, or experience that can be put to use to create wealth. The vast majority of research on intellectual capital disclosure (ICD) has been conducted with reference to the annual reports. Several authors point out that the annual report is deemed as the most important communication device used by firms to convey information to their various stakeholders (see, for example, Guthrie & Petty, 2000; Abeysekera & Guthrie, 2005; Bozzolan, O'Regan & Ricceri, 2006; Oliveira, Lima Rodrigues & Craig, 2006; Mitchell Williams, 2001).

Intellectual Capital Disclosure is defined by Abeysekera and Guthrie (2002) as a report intended to meet the information needs common to users who are unable to command the preparation of reports about Intellectual Capital tailored so as to satisfy, specifically all of their information needs.

Based on the literature, IC consists of three components include Human capital, Customer capital, Structural capital. Human capital is the most important asset of an organization and a source of innovation and strategic renewal. Human capital is a sum of technical expertise, leadership ability, risk-taking, and problem solving ability. In addition, the main theme of customer capital is the knowledge embedded in the marketing channels and customer relationships that an organization develops through the course of conducting business which will enhance its competitive advantage (García-Meca, Parra, Larrán & Martínez, 2005).

Unlike human capital, there is not much consensus on the definition of structural capital. Generally, structural capital includes all the non-

human storehouses of knowledge in organizations that include the databases, organizational charts, process manuals, strategies, routines, and anything whose value to the company is higher than its material value. Ghosh and Mondal (2009) argue that structural capital is the infrastructure of human capital and includes buildings, hardware, software, processes, patents, and trademarks.

María Díez, Lizet Ochoa, Begona Prieto and Santidrián (2010) believe that structural capital can comprise internal factors such as infrastructure, processes, and business culture, and at the same time refers to the ability to renovate and improve.

Behind intellectual capital disclosure there is an idea that the traditional financial information concerning the past performance of the company and none of the enterprise future potential. Disclosing of intellectual capital will create a transparency that allows the manager of the enterprise to manage its intangible resource better. By creating transparency it helps management to allocate resources, to monitor development and to create strategy, in summary: it facilitates decision making for companies (Costa, 2012).

Advanced economies are shifting towards a knowledge based profitability in which companies competitiveness and profit are increasingly dependent (ICD) resources that have not previously been included in corporate financial statements (Abdul Rashid, Kamil Ibrahim, Othman & Fong See, 2012). Lack of knowledge and adequate accounting processes for measuring and reporting these resources, corporate managers have recently begun to voluntarily disclose information pertaining to them (García- Meca & Martínez, 2005).

Furthermore, in countries with high commercial aims, profitability is still the most important element used by investors to assess corporate transparency (Souissi & Khelif, 2012). The nature of ICD in annual reports by a sample of companies listed on the Tehran's Stock Exchange is analyzed. Using content analysis, Additional and stronger evidence to enlighten the debate is required.

Branco and Rodrigues (2008) suggest that factors which influence social responsibility disclosure practices in underdeveloped countries listed

companies are not significantly different from those Influencing similar practices from companies in more developed countries. They argue that the similitude in the way in which "... disclosure strategies seem to be determined, irrespective of a given country's sociocultural environment, is an illustration of the strong Sveiby first proposed a classification for intellectual capital into three broad areas of intangibles via, human capital, structural capital and customer capital a classification that was later modified and extended by replacing customer capital by relational capital (Pew Tan, Plowman & Hancock, 2007).

The type of intellectual capital disclosure is valuable information for investors, as it can help them reducing the uncertainly of the company's future prospect and facilitate in valuing the firm (Besharati, Kamali. Heydari Mazhari & Mahdavi, 2012). There are many reasons for the companies to disclose intellectual capital information in their intention for profitability. They are a) to help organizations formulate their strategies, b) to assess strategy executions, c) to assist in diversification and expansion decisions, d) to use as basis for compensations and to communicate measures to external stakeholders (Marr, 2004). According to Pourzaman, Jahanshad & Mahmoud Abadi (2013) disclosure of intellectual capital will raise some benefits for the organization. Among of the benefits are a) It will enhances transparency in term of more disclose on intangible information rather than tangible information, b) It will helps inspire a sense of faith among the workforce other major stakeholders and c) It will supports long term vision of the organization (Wagiciengo & Belal, 2012).

Furthermore Khlif and Souissi (2010) contend that a positive relationship between ICD and profitability can be justified on the basis of two theoretical arguments. First, as suggested by agency theory, higher performance makes it easier for managers to convince shareholders about their superior managerial abilities. They are likely to use voluntary disclosure to obtain higher degrees of confidence from investors, which may be reflected in higher compensation. Second, profitable firms have incentives to disclose more information in

order to screen themselves from less profitable firms. In addition, managers of profitable companies have incentives to use information in order to obtain personal advantages such as continuance of their positions and compensation arrangements. On the other hand, the adverse attention that high-profits draw may lead to political costs (Watts & Zimmerman, 1979). Profitable companies are more likely to use voluntary disclosures to reduce political costs. Another important aspect is that profitability may be the result of continuous investment in intellectual capital and companies are likely to engage in ICD to signal the significance of such investment (Li, Pike & Haniffa, 2008).

Finally according to the following theories and fading the aim of this study is to study the Effects of profitability on the Intellectual Capital Disclosure in listed Companies in Tehran Stock Exchange.

2. Method

The research method in the present study was descriptive and correlational method using parametric statistic.

2.1. Sample

This study uses a sample of listed companies, as they are more likely to disclose intellectual capital information. In order to be included in the sample for this study, companies had to have its shares listed on the Tehran's Stock Exchange by the end of 2013. The initial sample included all companies listed on Tehran's Stock Exchange at 12 November 2012 until September of 2013. From the initial 21 listed companies, a final sample of 12 companies was identified. Five companies were excluded because they are not subject to Tehran's Stock Exchange (non-resident companies). Web page was used in order to obtain the 2013 annual intellectual capital disclosure for sample companies.

The companies included in the sample meet the following conditions: companies that have been listed in the stock exchange before 2013; companies whose financial year end at the end of the Iranian calendar and have no financial year changes and also having data available for the period of interest.

2.2. Data Collection

Content analysis was employed to imply classifying the information on IC disclosed by firms into various categories of items that capture the aspects one wants to analyses. In this study, the index used is based on the one proposed by Guthrie, Petty and Ricceri (2006) which has been used successfully (in its original format or in a derived format) by various empirical studies (see, for example, Abdullah & Sofian, 2012; Azizkhani, Monroe & Shailer, 2010; Guthrie, Petty, Yongvanich & Ricceri, 2004; Guthrie, Ward & Cuganesan, 2008; Whiting & Miller, 2008; Whiting & Woodcock, 2011). The analysis of the ICD is made using an equal-weighted index, that is, a scoring system which assigns a point for each ICD theme pertaining to any of the categories considered. Disclosure scores for each company are added and not weighted because it is assumed that each item of disclosure is equally important the

following disclosure score index was constructed:

$$\sum_{i=1}^{m_j} \frac{d_i}{N}$$

This index expresses the level of disclosure for a company *j*, where *N* is the maximum number of relevant items a company may disclose and *d_i* is equal to 1 if the indicator *i* is disclosed, and Zero otherwise. When the disclosure score index is equal to Zero, it indicates that company *i* does not disclose any item. Index values equal to *i=1... m_j* mean that a level of disclosure is provided, and *m_j* is the maximum number of indicators *d_i* disclosed by a company *j*.

3. Results

Descriptive statistics and correlational coefficients displayed in table 1.

Table1. Descriptive statistics, Cronbach's Alpha and Correlation coefficients between variables

Variables	Mean	Standard Deviation	Alpha	1	2	3	4	5	6	7	8	9
1. IC Disclosure	4.44	0.31	0.89	-								
2. Human Capital	5.56	0.23	0.78	0.22	-							
3. Customer Capital	4.22	0.86	0.77	0.27	0.33	-						
4. Structure Capital	4.37	0.80	0.68	0.45	0.62	0.38	-					
5. Profitability	0.11	0.79	0.51	0.34	0.61	0.36	0.33	-				
6. Size	0.32	0.31	0.89	0.44	0.31	0.89	0.12	0.89	-			
7. Leverage	5.56	0.23	0.78	0.56	0.23	0.78	0.22	0.61	0.23	-		
8. Age	4.22	0.86	0.77	4.22	0.91	0.77	0.27	0.21	0.54	0.77	-	
9. Growth	5.56	0.23	0.78	0.29	0.23	0.44	0.22	0.89	0.23	0.78	0.22	-

Note: All Correlations are significant at 0.01 levels.

The correlation matrix in Table 1 shows that all correlations are significant at 0.01 levels. It means that there is a significant positive relationship between IC Disclosure, Human Capital, Structure Capital, Profitability, Size, Leverage, Age and Growth in 0.01 levels. In this regard the highest correlation is between age and human capital (0.91) and the lowest correlation is existed between size and Structure Capital (0.12). This finding shows that as intellectual capital disclosure in a company increase Human Capital, Structure Capital increase and accordingly Profitability of the company will be

better. In this regard the increase in size of company and age of workers led to high Profitability, IC Disclosure, Human Capital and Structure Capital.

Table2. Prediction of profitability through IC Disclosure, Human Capital, Structure Capital, Profitability, Size, Leverage, Age and Growth

Variables	R	R ²	F	ARS	t	sig
IC Disclosure	0.51	0.24	14.30	0.32	17.49	0.0005
Human Capital	0.43	0.14	11.28	0.15	13.86	0.05
Customer Capital	0.33	0.11	2.26	0.10	15.30	0.01
Structure Capital	0.51	0.28	-4.41	0.27	11.85	0.13
Size	0.26	0.13	14.30	0.12	14.26	0.0005
Leverage	0.51	0.26	11.28	0.25	10.92	0.0006
Age	0.31	0.15	0.57	0.14	4.37	0.05
Growth	0.22	0.11	-4.41	0.10	-3.67	0.01

Note: t stands for Value. R stands for regression. R S stands for regression square, A R S, stands for adjusted regression square

The result of Table 2 shows the Prediction of profitability through IC Disclosure, Human Capital, Structure Capital, Profitability, Size, Leverage, Age and Growth. *T* value, regression and adjusted regression square in table 2 shows that Sport cooperation is significantly predicted through Organizational spirituality. *R* results showed there is a meaningful correlation between Organizational spirituality and Sport cooperation. The Regression and *R* Square results also showed that Organizational spirituality explain 0.29 percent of variance in Organizational spirituality. Also the rate of Meta personal relationship, interpersonal relationship, intrapersonal relationship, extra personal relationship were (0.49), (0.53), (0.41) and (0.19) of Sport cooperation variance in turn. It means that all Organizational spirituality sub variables are meaningful predictors of Sport cooperation. The highest variance is explained by interpersonal relationship (0.53) and the lowest by extra personal relationship (0.19).

4. Discussion

The present study investigates the relationship between ICD and profitability in a sample of companies listed on the Tehran's Stock Exchange using a costs/benefits theoretical framework. According to this framework, companies have an incentive to disclose voluntary information when the benefits to be derived from additional disclosure are perceived to outweigh the associated costs. The findings of this study are in line some previous studies (Oliveira et al., 2006; Ramezan, 2011; Rashid, 2011; Richieri, Basso & Martin,

2008; Rudez & Mihali, 2007; Schiemann, Richter & Günther, 2011),

The kind of intellectual and thinking potentiality which encompasses important information that more companies disclose in their annual reports pertains to management processes, business collaborations, brands, and the profile of workers. The results reveal that size and type of auditor are significant in explaining ICD by Tehran's listed companies. Larger companies with higher followings by investors and with litigation threat have higher quality disclosures. According to (Calabrese, Costa & Menichini, 2013) concerning size, larger companies have more concern for their reputation and will incite their clients to disclose high quality information.

High levels of ownership concentration and the importance of bank finance. The findings confirm results of previous studies pertaining to the importance of size and type of auditor as factor explaining ICD. In addition, the studies suggest the existence of threshold level of disclosure, above which the benefits (such as lower agency costs, political costs, borrowing costs, and decreased information asymmetry) no longer outweigh the costs associated with disclosure (such as the cost of preparing, disseminating and auditing information, and the costs resulting from disclosure of proprietary information).

. In these situations, major shareholders are more likely to have access to all the relevant information they need to make decisions, and do not need additional disclosures. This suggestion may give

birth to new studies in other countries with similar characteristics. We interpret the findings as a result of the convergence in corporate practices which is promoted by the impact of globalized stock markets and has, as consequence, a seeming lack of importance of general contextual factors in determining disclosure practices of listed companies (Branco & Rodrigues, 2008).

Our study thus calls for a review in ICD research to include research on the relative importance of general contextual factors in influencing disclosure practices of listed companies in comparison with non-listed companies and small and medium sized companies. This study extends prior research and provides new empirical data and adds to the scarce research on ICD of Iranian companies that's why this research has several contributions to the ICD literature (Sonnier, 2008).

On the other hand Intellectual capital plays an essential role in improving corporate performance and achieving sustainable profitability. However, economic value added is another important factor that can help investors in their decision-making and can create competitive advantage for organizations (Zeghal & Maaloul, 2010). Economic value added is the value created in excess of the required return of the firm's investors and can be used for evaluating the performance of firms and developing incentive schemes.

The present research examined the relationship between six variables (value added intellectual coefficient, intellectual capital efficiency, human capital efficiency, capital employed efficiency, structural capital efficiency, and economic value added) in listed companies in Tehran Stock Exchange. The results of multivariate regression suggested that all the relationships were significant.

However, this study also presents some limitations. First, although it is constituted by all the relevant Iranian listed companies, the sample may be considered small and this may have encumbered the research. Second, there might be content analysis issues associated with the level of subjectivity involved in the coding process and to the use of a very limited content analysis method obviously has implications on the conclusions. Our

research findings have practical implications. Owing to the increasing importance of intangibles and intellectual capital, how these are reported is of interest to a large range of stakeholders (Branco & et al., 2011).

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