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FIRM-SPECIFIC CHARACTERISTICS AND INTELLECTUAL CAPITAL DISCLOSURE: EVIDENCE FROM BAHRAIN

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ABSTRACT

The main purpose of this study is to examine the relationship between firm-specific characteristics and the extent of Intellectual Capital Disclosure (ICD) in the annual reports of listed companies in Bahrain Bourse for the year 2020 (a total of 45 companies). Content analysis of the companies' annual reports supported by word count was used to collect the data and a disclosure index consisting of forty five items was developed to assess the level of (ICD). Descriptive statistics, correlation analysis and multiple regression were used to analyze the data. The results of the three measures of intellectual capital disclosure show that almost all companies disclose some intellectual capital items but the overall presence of (ICD) index is low. Total (ICD) index is 38.27% with 30.2% for human capital; 45.9% for relational capital and 38.7% for structural capital. This was expected because the study uses a mix of industry type. There were no significant relationships between firm characteristics namely, company size, profitability, leverage, industry type, and age and the level of intellectual capital disclosure. There is a significant relationship between the level of ICD and the size of audit firm. The study recommends that accounting regulatory bodies should develop mandatory guidelines on ICD to ensure proper and consistent disclosure of intellectual capital.

Keywords: Intellectual Capital, Disclosure Index, Firm Characteristics, Content Analysis, Bahrain

INTRODUCTION

Voluntary disclosure of relevant, reliable and comparable information to stakeholders is important to help them assess the stewardship function of management and make sound and wise decisions. The benefit of disclosure is that it enhances transparency, gives a more complete view of a firm, reduces information asymmetry and overall information gathering costs. It also increases share prices, motivates for improved performance, advances investment decisions because it sustains investors' confidence in the financial statements, reduces cost of capital, and decreases stockholders uncertainty. However, there are costs associated with voluntary disclosure such as, production of information and audit and dissemination costs (Bruggen et al., 2009; Gracia-Meca et al., 2005). Given that there are benefits and costs of voluntary disclosure, there have been developments in the research on Intellectual Capital Disclosure (ICD). Research investigated firm characteristics that could explain why companies disclose intellectual capital elements in their annual reports. Intellectual capital is intangible capital associated with human knowledge and experience that can be used to create future value to the firm (Bukh et al., 2005; Ordonez & Pablos, 2005; Hunter & Sangkala 2006; Stewart, 1997; Roos et al., 1997, Bontis, 2001; Whiting & Woodcock, 2011). According to Sawarjuwono (2003), intellectual capital consists of three main elements:

1) Human capital refers to the skills, competencies, training and education of an organization's workforce (Petty & Cuganesan, 2005).

2) Internal capital is the organization's ability and structures that support employees' efforts to produce overall business performance.
3) Relational/external capital or customer capital is the element that provides real value. It is the relationship a firm has with stakeholders such as loyal customers, reliable suppliers, quality, brands, and business collaborations. Although it is difficult to measure (IC) but it is the source of innovation and improvement that forms the basis for the company to create value and enhance its competitiveness.

Researchers are acknowledging that (IC) rather than physical capital is becoming the major pivotal factor underlying value in enabling investors and other relevant stakeholders to assess better the firm's future value creating capabilities (Boston, 1997; Bontis, 2001; William, 2001). According to Canibano, et al., (2000), the quality of financial reporting can be improved by increasing intellectual capital disclosure. Firms nowadays are influenced by globalization and technological innovation. Therefore, disclosure of adequate and reliable information about intellectual capital is necessary. Ulum (2011) states that intellectual capital disclosure has become of interest because of its role in creating and increasing firm's value. Moreover, international accounting standards regulators are now encouraging companies to enhance their business reporting by making extensive disclosure of intellectual capital.

Previous research showed mixed results about the association between firm characteristics such as size, age, nature of business operations and (ICD). For example, Bukh, et al., (2005); Artinah (2013) did not find a relationship between firm size and age and (ICD). On the other hand, Guthrie, et al., (2006); White, et al., (2005); Bruggen, et al., (2009); Wijana (2013); Abdolmohammadi (2005) found that firm size and type of industry have positive effect on (ICD). Moreover, Susanto, et al., (2019) found a significant relationship between the level of (ICD) and both firm size and profitability. Luthan, et al., (2018) found that firm size and financial performance had a significant effect on ICD but leverage has a negative significant effect. Uyar & Kilic (2013) examined the association between firm characteristics and human capital disclosure. They found a positive and significant association between human capital disclosure and industry type, firm size, age and audit firm size. However, profitability and leverage had insignificant association with the extent of human capital disclosure. Finally, Oliveira, et al., (2006) found that companies with big four audit firms disclose more information on intellectual capital than other audit firms. This inconsistency in results is suspected and it triggers varying degrees of (ICD). The study seeks to provide answers to the following two questions.

1. Which IC items do companies in Bahrain disclose in their annual reports?
2. Is there a relationship between the level of ICD and firm characteristics? in Bahrain?

The main purpose is to find out which IC items are disclosed and whether the items disclosed are associated with some firm-specific characteristics.

Importance of the Study

There is for more disclosure among the users of financial accounting information. Reporting and disclosure of intellectual capital has received little attention in Bahrain and the Gulf region. Moreover, the FASB did not issue standards on (ICD). This study is the first Bahraini study to test the relationship between firm-specific characteristics and (ICD) for a diverse group of companies in Bahrain. The study highlights (ICD) practices in listed companies by analyzing the contents of their annual reports and comparing the results with those of previous studies. Thus, the findings have valuable implications for managing (IC) at firm level and add to the few research studies on ICD in Bahrain in particular and the Gulf region in general. The results also can help the rules setters who want to enhance the country's financial voluntary disclosure in the firms.

The remainder of this paper is organized as follows: Section 2 reviews previous studies specifically those related to ICD followed by the methodology in Section 3. Results and analysis are presented in Section 4, and the concluding remarks are summarized in Section 5.

Literature Review and Hypotheses Development

Many researchers suggested that voluntary disclosure is affected by the company's characteristics. According to Brugen, et al., (2009), voluntary disclosure is important in the because substantial amount of money is invested in intangible assets which are not shown on the balance sheet. Artinah (2013) found that firm size have a positive influence on the disclosure of intellectual capital whereas leverage and firm age have no significant effect. Bukh, et al., (2005) did not find a significant relationship between firm size and age and ICD. Dewi, et al., (2014) found that firm size, firm age and listing status significantly affect (ICD), while the type of industry has no effect on the extent of disclosure. Damayanti & Budiyanawati (2009) found significant relationships with all variables except size. Similarly, Rahman, et al., (2019) found a significant relationship between firm size, leverage and performance and the level of ICD. This section reviews previous research on the association between firm-specific characteristics and ICD in companies' annual reports.

Company Size and ICD

Many previous studies show a relationship between company size and the extent of ICD. Ousama, et al., (2012) state that large companies are supposed to have more resources, better internal management information system and greater intellectual capital than small firms. A large company may recruit highly skilled individuals and sophisticated management reporting systems that can provide an array of corporate information (Depoers, 2000). So, it is easy for such companies to disclose information relating to intellectual capital. In addition, large companies are exposed to political attacks in the form of pressure to exercise social responsibility, or greater regulation in the form of price controls or higher corporate taxes (Gracia-Meca et al., 2005). Companies are willing to pay extra costs for intellectual capital disclosure in order to reduce the pressure of stakeholders (White et al., 2007). Larger size firms have a broader ownership structure and as such, there is greater demand from shareholders for more information to be disclosed. On the other hand, smaller companies are generally under fierce competition with other companies and disclosing more information about their intellectual capital could endanger the competitive position of such companies (Ulum, 2009).

Profitability (ROA)

Agency theory suggests that higher profits encourage managers to convince shareholders that they posses superior managerial skills and, as a result, obtain higher compensation and continuance of their positions. Khlif & Souissi (2010) argue that profitable firms have incentives to disclose more information in order to distinguish themselves from less profitable firms. In addition, profitable companies are more likely to use voluntary disclosure to reduce political costs. Moreover, firms with higher profits, which may result from continuous investment in intellectual capital, are likely to engage in ICD to signal the importance of such investment (Watts & Zimmerman, 1978). In this regard, Meek, et al., (2005); Ousama, et al., (2012) found a positive and significant relationship between firm's profitability and ICD.

Leverage

High leverage ratio may improve disclosure policy for managers and encourage them to disclose more information to meet investors' interests. On the other hand, a low ratio could encourage managers to direct their disclosure toward shareholders more than creditors. As a

result, managers are motivated to disclose more data to lower their costs and to avoid creditors' claims. According to Jensen & Meckling (1976), firms with higher leverage levels incur more agency costs because of the conflict between equity and debt investors. The agency costs result in a reduction in the value of the firm and increased monitoring costs of agents owing to the fact that the manager will transfer wealth of the debt-holder to the firm. The greater the debt, the greater is the difference in interests between the principal and the agent and the higher the monitoring costs. As such, firms with higher leverage levels incur more agency costs.

Haniffa & Cooke (2002) state that disclosing more information can reduce these costs and information asymmetries between owners and managers and satisfies the needs of creditors for information. Thus, firms with high degree of leverage levels have an incentive to make voluntary disclosures in order to reduce agency costs. Therefore, from an agency theory perspective, it is assumed that a positive relationship exists between leverage and the extent of intellectual capital disclosure. In this regard, Rahman, et al., (2019) found a significant relationship between leverage and ICD, but Whiting & Woodcock (2011); Ousama, et al., (2011); Artinah (2013) did not find a relationship.

Size of Audit Firm

Raffournier (1995); Watts & Zimmerman (1979) state that companies facing high agency costs are likely to hire high quality audit firms because auditing is a way of reducing such costs and enhancing the credibility of information disclosed. Chow & Wong-Boren (1987); Hossain, et al., (1995) argue that maintenance of firm’s reputation is a key factor. They argued that big audit firms could be more independent from the demands of their clients for limited disclosure than smaller audit firms as they need to maintain their reputation to preserve. Whiting & Woodcock (2011) suggest that international accounting standards regulators encourage companies to improve their disclosure practices. The result of this will be a demand for expertise in this area. As such, large audit firms may encourage their clients to disclose more information on IC to preserve their reputation and ensure that they retain their clients (Barako, 2006). In this regard, Oliveira, et al., (2006) found that companies with big four audit firms disclose more information on intellectual capital than firms audited by small audit firms.

Industry Type

The signaling theory explains why a company in a certain type of industry may disclose more information. Providing more information is a signal that the company has conducted the best possible practices in an industry. Ousama, et al., (2012); Insalita (2018) argue that when a company in a particular industry did not disclose information as similar companies do, it could be regarded as a signal that it intentionally concealed bad news.

Stakeholders' theory also states that stakeholders are entitled to obtain information about the activities of the company which could affect their interests (Guthrie et al., 2004; Whiting & Woodcock, 2011). Some other researchers suggested that technology or knowledge-based industries have the tendency to reveal more intellectual capital disclosure (Bozzolan et al., 2003; Petty & Cuganesan, 2005; Oliveira, 2006). Dewi, et al., (2014) found that the type of industry has no effect on the extent of ICD.

Firm Age

Firm age refers to the company's ability, supported by a high intellectual capital, to compete in the business environment. Companies with a long age make knowledge as their capital. Dewi, et al., (2014) state that firm age is expected to have a positive relationship with ICD. The reason is that older firms have more experience to run the business. Taliyang, et al., (2011); Dewi, et al., (2014) found a significant relationship. In contrast, Bokh, et al., (2005);

White, et al., (2007) found that there is no significant relationship between firm age and ICD and Hossain (2008) concluded that there was a negative relationship.

Hypotheses Development

Based on the aforementioned review of the literature, the following hypotheses can be developed.

H1: Larger firms are more likely to disclose IC information than smaller firms.
H2: Firms with higher profitability are more likely to disclose IC information than firms With lower profitability.
H3: Firms audited by large audit firms are more likely to disclose IC information than firms audited by small audit firms.
H_4: There is a relationship between leverage and the extent of ICD.
H5: There is a relationship between the type of industry and the extent of ICD.
H6: There is a relationship between the age of the firm and the extent of ICD.

RESEARCH METHOD

Sample

The sample of the study consists of all companies listed in Bahrain Stock Exchange during the year 2020, a total of 45 companies. Publicly listed companies only are used because it is expected that they disclose more information on intellectual capital than unlisted companies. In addition, it is difficult to obtain information about intellectual capital from unlisted companies. Table 1 shows the types of companies as per Bahrain Bourse reports.

Table 1
TYPES OF COMPANIES INCLUDED IN THE STUDY

No.	Company type	N	%
1.	Commercial banks	10	22.2
2.	Investment companies	11	24.5
3.	Insurance companies	5	11.1
4.	Services companies	10	22.2
5.	Hotels and tourism companies	5	11.1
6.	Industrial companies	4	8.9
	Totals	**45**	**100.0**

The majority of companies in Bahrain are banks and insurance companies. Content analysis of companies' annual reports supported by word count that represents the volume of ICD was used to collect the data on items disclosed (Gray et al., 1995; Campbell, 2000; Oliveeira et al., 2006; Damayanti & Budiyanawati, 2009; Brugen et al., 2009). The annual reports, chairman's report and the managing director's report of the (45) listed companies in Bahrain Bourse. The companies which did not file their annual reports on the website were obtained through direct contacts with them.

Study Variables

The Dependent Variable

Forty five disclosure items, derived from previous studies, have been identified as proxies for the three IC elements, human, relational and structural. Based on Beatie & Thomson (2007), fifteen items were used for each category. In order to avoid repetition and to make the number manageable, we combined some similar items together to reduce the number to 45 and constructed an ICD index.

Based on previous research (Cooke, 1989), the items of disclosure are numerically scored on a dichotomous basis. According to an un-weighted disclosure approach, a score of 1 is given if the item is disclosed and 0 if not. The scores were classified into three categories: low if 15 or less number of items disclosed; medium if 16 to 30 items disclosed and high if over 30 items were disclosed. The same weight was given for disclosed items quantitative or qualitative. The disclosure index for each company is computed as a percentage of the total disclosure score to the maximum possible disclosure by the firm and then an overall percentage for all firms in the sample is computed.

The Independent Variables-Measurement

1. Size of the firms (Size). Total assets are used to measure firm's size.
2. Profitability of the firm. Return on assets (ROA)-net income/total assets.
3. Leverage -Total debt/total equity.
4. Size of audit firm (AUDIT). Dummy variable- a company will get 1 if audited by one of the big four audit firms, otherwise they get zero.
5. Industry type (Indus). Six types of industry were identified in Table 1.
6. Company age (Age). This was computed since the firm's date of establishment. Three age categories were identified as measures of firm age.

The Regression Model

One regression model was used for all intellectual capital elements rather than using one for each elements because the items disclosed under each element are small.

$$ICD=\beta_0+\beta_1\ SIZE+\beta_2\ ROA+\beta_3\ LEV+\beta_4\ AUD+\beta 5Indus+\beta_6 Age+\varepsilon$$

Descriptive statistics, correlation analysis and linear regression were used to analyze the data.

RESULTS AND DISCUSSION

Summary Statistics on Independent Variables

Table 2 below shows that firm size varies between $1Billion to more than $10 billion. Profitability ranges between 1% to over 10% of total assets. Most of the companies are audited by big 4 audit firms and have high leverage ratio it ranged between 2 times to more than 4 times of owners' equity. Table 1 shows that the majority of firms are old (age more than 20 years).

Table 2
DESCRIPTIVE STATISTICS-INDEPENDENT VARIABLES (N=45)

1. Firm size	**N**	**%**
a. Less than $1billion	33	73.3
b. 1-10 billion	7	15.6
c. More than $10 billion	5	11.1
Total	45	100.0
2. Profitability		
a. Less than 5%	20	44.4
b. 5%-10%	14	31.1
c. More than 10%	11	24.4
Totals	**45**	**100.0**
3. Audit firm		
a. 4 Big audit firms	30	66.7
b. Other audit firms	15	33.3
Totals	**45**	**100**
4. Leverage		

a. Less than 200%	32	71.1
b. 200%-400%	5	11.1
c. Over 400%	8	17.8
Totals	45	100.0
5. Firm age		
Less than 20 years	5	11.1
20-40 years	23	51.1
Over 40 years	17	37.8
Totals	**45**	**100.0**

Intellectual Capital Disclosed Items

Intellectual capital consists of three categories; human capital (information about company' employees and their characteristics); relational capital (information about the relationship with interested parties) and structural capital (information about the procedures and techniques used by the companies to carry out their operations). Table 3 shows the ICD items as per each category. The most widely quoted items were "relations with stakeholders" (28) and "quality management and improvement" (27). The least quoted items were "flexibility, productivity, intellectual property, and customer involvement". These items were quoted by 1-3 companies only. Total items under human capital are 15. If we multiply this by number of firms (45), then the total is 675. The total score on the disclosed items is (204). Thus, the disclosure index of all items as a percentage of total is 204/675=30.2%. Total items disclosed under relational capital are 310. Total disclosure index on this category is 310/675=45.9%. The third category is structural capital and the items disclosed for all responding companies in this category are 261 giving an index of 38.7% (261/675). The total number of intellectual capital items disclosed by all companies is 775 and assuming that each of the (45) companies disclose the (45) items, this will give an overall number of items to be disclosed (45x45=2025). So, the disclosure index as a percentage of total is 38.27% (775/2025) and the average items disclosed by each company is 17. All companies, excluding one, disclosed at least one of the elements of IC. Of the 45 disclosure items examined, "training and development relationships with stakeholders**,** quality management improvement and accreditation and distribution networking" were disclosed the most (n=28) and "intellectual property and flexibility" the least. Results are somewhat similar to those of Isnalita (2018) who found that the overall level of ICD was 46.9%, with relational capital of 34.74%, structural capital of 32.54% and human capital of 32.71%. Table 3 shows the frequencies and percentage disclosure of each item.

Table 3
DISCLOSURE ITEMS OF INTELLECTUAL CAPITAL (N=45)

No.	1. Human capital Item	F	2. Relational capital Item	F	3. Structural capital Item	F
1.	Employees' diversity	**10**	Market presence and leadership	**43**	Information systems	**14**
2.	Employees' equality	**9**	Company image/reputation	**26**	Management philosophy	**20**
3.	Involvement with community	**23**	Customer acquisition and retention	**41**	Corporate culture	**17**
4.	Education	**18**	Reliable suppliers	**20**	Organization flexibility	**33**
5.	Expertise/skills	**21**	Customer training and education	**16**	Organizational structure	**21**
6.	Employee work related competences	**5**	Relationships with stakeholders	**28**	Organizational learning	**13**
7.	Employee work related knowledge	**10**	Public relations	**21**	Research and development	**7**
8.	Attitude/behavior	**13**	Company awards	**20**	Innovation	**21**
9.	Commitment	**12**	Quality	**5**	Technology	**22**
10.	Motivation	**19**	Diffusion and networking	**14**	Infrastructure/capabilities	**9**
11.	Capabilities and Productivity	**12**	Brands	**13**	Knowledge-based functions	**12**

12.	Training and development	**38**	Distribution channels	**13**	Quality management improvement and accreditation	**33**
13.	Team work	**9**	Business agreements	**37**	Distribution networking	**37**
14.	Entrepreneurial spirit	**5**	Business collaboration	**13**	Financial dealings and favorite contracts	**2**
	Total	**204**	**Total**	**310**	**Total**	**261**

Total items disclosed=775

Descriptive Statistics

Table 4 shows that the level of ICD is between 0 to 45 items, and the average number of items disclosed is 17 with a low standard deviation of 0.626. The range of firm size is between $7072506 and $11,839,898,952 and average size is $172,982,359 with a low standard deviation of 0.684. Profitability measured by the ROA ranges between 0.001 and 0.20, and the average is .05 with standard deviation of 0.815. An audit firm size variable, big 4 audit firm is given 1 and small audit firms are given zero. The average existence of big 4 audit firms is about 67% with a standard deviation of 0.29. Range of Bahrain listed firms leverage is between 0.0008 and 11.6, and the mean leverage is 2.27 with standard deviation of 0.786. Range of Bahrain listed firms age is between 14 and 65 years (average 30 years and standard deviation 0.654).

Table 4
Descriptive Statistics of variables (N=45)

Variable	Minimum	Maximum	Mean	SD
FIRM SIZE	$7,072,506	$11,839,898,952	$172,982,359	0.684
PFORIT/ROA	0.0096	0.20	0.05	0.815
AUDIT FIRM	0	1.00	0.67	0.477
INDUSTRY	1.00	7.00	2.76	1.41
LEV	0.0008	11.60	2.27	0.786
AGE	14	65	30	0.654
ICD items	0	45	17.2	0.626

Correlations

Table 5 shows the correlations between the variables (dependent and independent). Also, there is a positive correlation between profitability and audit firm; a negative correlation between audit firm and both leverage and ICD and a negative correlation between industry type, leverage, and firm age. Finally, there is a positive and significant relationship between leverage and profitability and ICD (0.01 for profitability).

Table 5
PEARSON CORRELATIONS BETWEEN VARIABLES OF THE STUDY-TWO-TAILED SIGNIFICANCE (N=45)

Variables		Size	Profitability	Audit firm	Industry type	Leverage	Firm age
Profitability	Pearson Correlation	-0.106					
	Sig. (2-tailed)	0.488					
Audit firm	Correlation	-0.395**	0.351*				
	Sig. (2-tailed)	0.007	0.018				
6Industry type	Correlation	-0.334*	0.155	0.167			
	Sig. (2-tailed)	0.025	0.31	0.273			

Leverage	Correlation	0.510**	-0.17	-0.424**	-0.590**		
	Sig. (2-tailed)	0	0.263	0.004	0		
Firm age	Correlation	-0.078	0.145	-0.146	0.264	-0.027	
	Sig. (2-tailed)	0.611	0.342	0.339	0.08	0.863	
ICD	Correlation	0.355*	-0.116	-0.558**	-0.137	0.357*	0.118
	Sig. (2-tailed)	0.017	0.448	0	0.369	0.016	0.438

Hypotheses Test

The hypotheses of the study were tested using the following multiple regression model.

$ICD=\beta_0+\beta_1\ SIZE+\beta_2\ ROA+\beta_3\ LEV+\beta_4\ AUD+\beta 5Indus+\beta_6 Age+\varepsilon$

The regression results vary between 0.004 and 0.876 (Table 6 below).

Table 6
IMPACT OF INDEPENDENT VARIABLES ON OVERALL ICD

Model		Un-standardized Coefficient		Standardized Coefficients	t-value	Sig.
		B	Std. Error	Beta		
1	Variable	0.419	0.478		0.877	0.386
	Size	0.113	0.144	0.123	0.784	0.438
	ROA	0.063	0.110	0.082	0.577	0.568
	Audit	0.665	0.216	0.506	3.077	0.004
	Industry	0.040	0.068	0.105	0.588	0.560
	Leverage	0.127	0.148	0.160	0.860	0.395
	Age	0.022	0.137	0.023	0.157	0.876
R=0.595 R Square=0.355						

Hypothesis 1 Test

The null hypothesis tested was "There is no significant relationship between company size and the extent of intellectual capital disclosure". As shown in Table 6, there is no relationship between firm size and intellectual capital disclosure level (p=0.438). Therefore, the research hypothesis that there is a relationship is rejected and the null hypothesis is accepted. This means that larger size firms are not likely to disclose more information about intellectual capital in their annual reports than smaller companies, suggesting that firm size is not affecting intellectual capital disclosure level. This result is inconsistent with previous studies which show that ICD by large firms is higher than that of small firms (Bozzolan et al., 2003; Meca et al., 2005; White et al., 2007; Oliver et al., 2008; Artinah, 2013; Scaltrito, 2014; Yi et al., 2015; Seng et al., 2017). However, it is consistent with that of Mangena & Pike (2005); Bukh et al., (2005); Damayanti & Budiyanawati (2009) who did not find a relationship.

Hypothesis 2 Test

It is predicted that managers disclose extensive information to convince shareholders about their good performance and show them that they are acting in the best interests of the firm. They also do this to please owners and obtain their confidence which results in higher salaries and bonuses. Nevertheless, Table 6 shows that there is no relationship between firm's profitability and ICD (p= 0.568). This suggests that profitability, measured by ROA, does not make more ICD by firms. Therefore, the null hypothesis that there is no significant relationship between firm's profitability and the level of intellectual capital disclosure cannot be rejected. This result is consistent with those of Mangena & Pike (2005); Bukh, et al., (2005); Taliyang, et al., (2011);

Glaum & Street (2003); Ferreira & Moreira (2012) who did not find any evidence of a relationship between company profitability and ICD. However, it is inconsistent with those of Hussain & Hammami (2009); Kolsi (2012); Bhayani (2012) who found a significant positive relationship.

Hypothesis 3 Test

Large audit firms have more concern for their reputation and will incite their clients to disclose high quality information. The null hypothesis tested was "There is no significant relationship between audit firm size and the extent of intellectual capital disclosure". Table 6 shows that there is a significant relationship (p=0.004). This means that firms whose accounts are audited by big audit firms made significantly greater intellectual capital disclosure. Therefore, the null hypothesis that there is no relationship is rejected and the alternative hypothesis is accepted. This result gives support to those of Bozzolan, et al., (2006); Oliveira, et al., (2006); Petty & Cuganesan (2005); Scaltrito (2014); Whiting & Woodcock (2011) who found that companies with large Big Four audit firms show more extensive ICD than those with small audit firms. Moreover Agyei-Mensah (2019) examined the effect of corporate governance mechanisms on intangible assets disclosure. He found that auditor type is a factor influencing company's compliance with IAS-38 disclosure requirements.

Hypothesis 4 Test

The null hypothesis tested was "there is no significant relationship between leverage and the extent of intellectual capital disclosure". The result of the test indicates that leverage is insignificantly associated with intellectual capital disclosure and leverage is not affecting intellectual capital disclosure level (Table 6). So, the null hypothesis cannot be rejected. An explanation to this result may be because major shareholders are more likely to have access to all the relevant information they need, and as such do not need additional disclosures to other small shareholders.

It should be pointed out that previous studies did not find any relationship between leverage and ICD level (Aksu & Kosedag, 2006; Taliyang et al., 2012; White et al., 2007; Bukh et al., 2005). However, Damayanti & Budiyanawati (2009); Scaltrito (2014); Agyei-Mensah (2019) found a significant relationship. On the other hand, Allegrini & Greco (2011); Nandi & Ghosh (2012); Bhayani (2012); Mangena & Pike (2005) found a negative relationship. They state that leverage affects the agency problem because the disclosure is in line with the increased level of debt. Debt holders will force the management of the firm to disclose more voluntary information.

Hypothesis 5 Test

The null hypothesis tested was "There is no significant relationship between the type of industry and the extent of intellectual capital disclosure". Table 6 shows that there is no such relationship (p= 0.560), so the null hypothesis cannot be rejected. This means that industry type is not affecting intellectual capital disclosure level. An interpretation of this result is that most of the companies are non-manufacturing sector. Researchers suggested that technology, have the tendency to reveal more intellectual capital disclosure (Bozzolan et al., 2003; Petty & Cuganesan; 2005; Oliveira, 2006). This result is consistent with the results obtained by Yi An, et al., (2011); Dewi, et al., (2014); Isnalita (2018) who found that the type of industry has no effect on the extent of ICD. However, Agyei-Mensah (2019) found that industry type influences companies' decision in Ghana to disclose intangible assets in their annual reports.

Hypothesis 6 test

The companies that live longer are those that make knowledge as their capital. So, it is

expected that there is a relationship between the age and ICD. The null hypothesis tested was "There is no significant relationship between a firm's age and the extent of intellectual capital disclosure". Table 6 shows that there is no relationship (p=0.876). This means that firm age is not affecting intellectual capital disclosure level. Therefore, the null hypothesis cannot be rejected. This result is inconsistent with Damayanti & Budiyanawati (2009) who found a positive relationship. Table 6 also shows adjusted R square of 0.355 indicating that 35.5% only of the variation in intellectual capital disclosure may be explained by the independent variables. In summary, the above results of hypotheses test are inconsistent with most of previous studies.

Finally, to support the results of the regression model, the relationship between company characteristics and intellectual capital was tested using linear regression. The results were insignificant with each of the independent variables. This was expected because overall sample size is small and the number of items reported under each intellectual capital category was small. The average number of items disclosed under human capital is 4.5, relational capital 6.9 and structural capital 5.8. Therefore, the regression results on IC categories are not reported in the study. The result on relational capital is inconsistent with that of Abhayawansa & Guthrie (2016) who stated that relational capital disclosure varied with profitability and firm size.

CONCLUSIONS

This study examines the relationship between company characteristics and ICD. The results show that listed companies in Bahrain provide little information on IC items in their annual reports. The overall disclosure index is 38.27 with 30.2% for human capital, 45.9% for relational capital and 38.7% for structural capital. The average number of items disclosed is low enough (17 items) suggesting that there is no awareness of the significance of ICD. This may be because users of accounting information are not yet familiar with (IC) and not fully recognized its importance to create value for the firm (William, 2001).

The study also tested the relationship between firm-specific characteristics and intellectual capital disclosure. There were no significant relationships between firm size, profitability, leverage, industry type, and age, and the level of ICD. The results show that firm size is the only independent variable that is associated with ICD. This low level of disclosure may be because there is no international standard on intellectual capital disclosure. Moreover, firms may lack the expertise required to assess and disclose intellectual capital. Additionally, (ICD) may not receive a high priority by top management (Sujan & Abeysekera, 2007). The results also show that relational capital was disclosed most often and the relationships with stakeholders are one of relational capital items that received a high score. This might be because of fierce competition in the market with other organizations and firms might want to emphasize relations with their customers, by promoting their brands which are attributes of external capital. This result is consistent with Bozzolan, et al., (2006) who state that there is an increasing attention by stakeholders on how intellectual capital is measured and reported. As such, the results may help investors and other interested parties in assessing the level of ICD when valuing companies.

LIMITATIONS

The sample number of companies listed in Bahrain Bourse (45) is one of the limitations of the study. Moreover, the information was obtained by investigating the annual reports for one single period (2020) and giving a score by the researcher on each item disclosed. This weight could have been influenced by the researcher. In addition, bias in interpretation may occur when identifying intellectual capital items disclosed as per the phrase or sentence in the annual report while carrying out the content analysis (Damayanti & Budiyanawati, 2009).

FURTHER RESEARCH

Further research could include larger research sample to provide better results. Sample size can be expanded by including GCC countries which almost have same economy characteristics as they depend on oil revenue as a main source of funds. Future research could extend the study to cover longer financial period like three or four years, and examine more variables which might be associated with ICD, such as board composition, audit committees and external auditor. Moreover, some in-depth interviews with finance directors in Bahrain Bourse listed companies could bring more insight into the study. Finally, further research could use all forms of disclosure, narratives and numbers to identify the quantity and quality of ICD in annual reports (Norhayati et al., 2012).

RECOMMENDATIONS

Firms in Bahrain have to adjust their disclosure policy on intellectual capital in order to maintain the stakeholder's confidence in the annual reports. Besides, there is a need for standard setting bodies and regulatory agencies to issue standards on ICD to ensure proper and consistent reporting of intellectual capital. In this regard, companies should disclose information on the measurement and reporting of IC in a separate section of their annual report.

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