DETERMINANTS OF VOLUNTARY DISCLOSURE QUALITY IN JORDAN: EVIDENCE FROM MANUFACTURING COMPANIES LISTED IN AMMAN STOCK EXCHANGE

Ahmad Abdelrahim Dahiyat, Al-Balqa' Applied University

ABSTRACT

This paper critically examines the voluntary disclosure quality, and its determinants among manufacturing companies listed on Amman Stock Exchange. The study developed a disclosure index based on prior related studies, and in the light of literature review and previous studies, the determinants of voluntary disclosure were examined. Furthermore, the study relied on information extracted from the annual reports of (40) listed manufacturing companies, for the year 2019, and used different statistics methods and techniques such as mean, standard deviation, correlation and regression to define the voluntary disclosure quality (level), and its determinants.

The results indicate that there is a positive correlation between company's size, age, and profitability on one hand, and between the quality of voluntary disclosure on the other hand. In addition, the results indicate a weak and insignificant relation between the assets in place and financial leverage, and the level of voluntary disclosure quality. Finally, this paper advocates that it has become useful for Jordan securities commission to include the items of improved index as a part of the compulsory disclosure, especially with regard to Intellectual capital and Competitive environment voluntary disclosure.

Keywords: Voluntary Disclosure, Content Analysis, Manufacturing Companies, Jordan.

INTRODUCTION

There is no doubt that full disclosure greatly enhances market transparency by providing decision makers with adequate and timely information. This is why it is highly recommended that companies should not only disclose the compulsory data required by regulations, but they should also reveal every piece of information on a voluntary basis, especially when such information might make a difference to the economic decision-making.

International Accounting and Reporting Standards (IAS & IFRS) have addressed the significance of disclosure, through the issuance of several standards dealing with the presentation and disclosure. While the IAS 1 and the conceptual framework for financial reporting have generally considered the importance of presentation and disclosure to provide useful information for decisions makers, other accounting standards required the disclosure of specific items. For example, the IAS 15 required the disclosure of information reflecting the effects of change in prices, whereas IAS 16 Required disclosure of the productive ages of the asset and methods of depreciation and assets encumbered. In addition, IAS 24 focused on disclosures of "related party", while IFRS 7 deals with financial institution disclosures.

It is thus highly desirable that each company must provide investors with accurate, comprehensive, and timely disclosure of information concerning the financial position of the company. Such disclosure includes the financial statements issued at the end of each financial

period and the explanatory and additional notes attached thereto. According to previous studies (Lan et al. 2013; Alfraih & Almutawa, 2017; Thomas & Ahmed, 2018; Bhuyan, 2018), the level of voluntary disclosure in the annual financial statements is influenced by several factors related to agency theory (leverage, assets in place, Size), and Signaling theory (profitability, age). This of course does not mean that all factors affecting voluntary disclosure in the annual financial statements are found only in agency theory or Signaling theory. There are actually other circumstances and factors, that play in some way a role in this field, such as the technological development, corporate governance, political and legal environment.

Therefore, this paper aims to investigate the quality of voluntary disclosure in manufacturing companies listed in Amman stock Exchange, and to determine the determinants of voluntary disclosure in manufacturing companies listed in Amman stock Exchange.

This study is one of the first studies in Jordan that deals with the determinants of voluntary disclosure, based on the analysis of financial statements of manufacturing companies, not on questionnaires as many other studies conducted in Jordan. Furthermore, voluntary disclosure index was developed in based on prior related studies, to define the quality of voluntary disclosure; this index may be useful for many users to adopt.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Many researchers have studied the Voluntary disclosure quality, and its determinants. For instance, the study of Cerf (1965) is one of the first studies that examined this important area. Furthermore, Al-Janadi et al., 2012; Al-Shammari, 2013; Scaltrito, 2015, identified the quality of voluntary disclosures, while Lan et al., 2013; Abdel Jaleel & Abu Nassar, 2014; Abeywardana & Panditharathna, 2016; Elfeky, 2017); identified the determinants of voluntary disclosures in several countries and in different sectors.

Disclosure quality is not straightforward to measure. It is still difficult, due to the absence of a generally agreed model for disclosure quality, to measure its extent. Previous studies conducted until today have adopted different methods to evaluate the quality of voluntary disclosure. However, we can distinguish two basic approaches that might be applied to measure the level of disclosure: the first one is the subjective approach, which depends on survey or questionnaire (Abdel Jaleel & Abu Nassar, 2014; Hassan & Marston, 2010; Byard & Shaw, 2003; while the second one is the objective approach, which depends on content analysis (textual analysis) and disclosure index (Wang et al., 2008; Anam et al., 2011; Lan et al., 2013).

This paper adopts an objective approach to measure the quality of disclosure in manufacturing listed companies, through developing disclosure index. Moreover, this paper depends on two theories to define the determinants of voluntary disclosure: Agency theory and signaling theory. According to Agency Theory, which developed by Rose (1973), the existence of information asymmetry and interest conflicts between management and investors, make management tends to voluntary disclosure. Therefore, depending on the agency theory as theoretical base, and on the previous related studies, voluntary disclosure may be influenced by leverage, assets in place and size (Lan et al., 2013; Alfraih & Almutawa, 2017; Thomas & Ahmed 2018; Bhuyan, 2018).

On the other hand, this paper depends on signaling theory, which was developed by Spence (1973) and used later by Rose (1973) to clarify voluntary disclosure, this theory indicates that companies with desirable indicators provide the market with more and better information. Hence, depending on the signaling theory as theoretical base, and previous related studies, profitability

and age have significant influence on voluntary disclosure (Lan et al., 2013; Abeywardana & Panditharathna, 2016; Elfeky, 2017; Bhuyan, 2018).

Assets in place (It is indicated in the statistical analysis IND1): Depending on agency theory, companies with large assets in place may reduce information asymmetry and agency problems between shareholders and debt holders Lan et al (2013). This suggestion is supported by the study of Lan et al (2013). Based on the above arguments, hypothesis can be developed as follows:

H1: There is a positive relationship between Assets in place and the quality of voluntary disclosure.

Company's Age (It is indicated in the statistical analysis IND2): Depending on the signaling theory as theoretical base, and in the light of some related studies, one can conclude that company age has substantial influence on corporate voluntary disclosure, and that old companies disclose more information than younger companies. (Habbash et al., 2016; Hossain & Hammami (2009); abeywardana & pandtharathna, 2016). Therefore, we set our hypothesis as follows:

H2: There is a positive relationship between company's age and the quality of voluntary disclosure.

Company's Profitability (It is indicated in the statistical analysis IND3): According to signaling theory, companies with high-profit will disclose more information to benefit from its achievement and reputation through increasing the value and price of their shares (Inchausti, 1997). This argument was supported by the studies (Bhuyan, 2018; Lan et al., 2013; Elfeky, 2017). Based on the above arguments, the hypothesis is developed as follows:

H3: There is a positive relationship between company's profitability and the quality of voluntary disclosure.

Company's Size (It is indicated in the statistical analysis IND4): According to agency theory, Agency cost has a positive relation with the size. This suggests that if the firm size is large then the agency cost also will be increased and vice versa. Therefore, to avoid this agency problem and conflict, larger companies may increase the level of voluntary disclose. In other words, companies with large size are more able to give additional voluntary disclosure than small companies. This argument is supported by many studies (Lan et al., 2013; Abeywardana & Panditharathna, 2016; Elfeky, 2017). Based on the above arguments, the hypothesis is developed as follows:

H4: There is a positive relationship between company's size and the quality of voluntary disclosure.

Financial leverage (It is indicated in the statistical analysis IND5): Companies that tends to obtain more debt disclose more information to reduce information asymmetry between creditors and company, and also to convince the creditors that managers are acting in an optimal way (Watson et al., 2002; Lan et al., 2013; Abeywardana & Panditharathna, 2016) found that leveraged companies may disclose more voluntarily information in order to reassure their creditors. Based on the above argument, the hypothesis is developed as follows:

H5: There is a positive relationship between financial leverage and the quality of voluntary disclosure.

RESEARCH METHODOLOGY

Study Population Sample and Resources of Data

The sample of the study consists of 40 listed industrial companies, while the number of all listed industrial companies is 56 companies (securities depository center report 2019).

The author depends on available reports until 20/6/2020, bearing in mind that Jordan Securities Commission has postponed the period allowed to provide financial reports until 15/6-2020 instead of 31/3/2020 in response to the Covid 19 pandemic (Decision of commissioner board 10/5/2020).

The data was specifically collected from the annual reports of 2019 for two reasons, the first one is the issuance of corporate governance instruction in 2017, the second reason is the instruction of Accounting and Auditing Standards for 2004, which were amended in 2019; many items that were considered voluntary items, became mandatory items.

This paper examines the voluntary disclosure quality and its determinants by developing hypotheses based on the related theories and results of previous literature.

Operationalization of Variables

Independent Variables

1. Assets in place: measured by total property, plant & Equipment to total Assets. (Lan et al., 2013)
2. Company's age: measured by Listing Age. (Hammami, 2009; Uyar et al., 2013, Abeywardana & Panditharathna, 2016)
3. Profitability: measured by return on assets (Charumathi & Ramesh, 2015; Abeywardana & Panditharathna, 2016)
4. Company's size: measured by listing total assets. (Allegrini & Greco, 2013; Charumathi & Ramesh, 2015; Abeywardana & Panditharathna, 2016).
5. Financial leverage: measured by Total Liabilities/Total Owners Equity. (Allegrini & Greco, 2013; Charumathi & Ramesh, 2015; Abeywardana & Panditharathna, 2016).

Dependent Variable (The Quality of Voluntary disclosure)

Based on prior related studies (Bhuyan, 2018; Ullah et al., 2013; Bruslerie & Gabteni, 2010; Abeywardana & Panditharathna, 2016), the quality of voluntary disclosure index was developed for manufacturing companies. First, the author developed an initial index, then he created a final index after using the Instructions of Issuing Companies Disclosure, Accounting and Auditing Standards for 2004 and its amendments for 2019. Accordingly, many items were excluded because they became compulsory under recent regulation.

If the information item of final index was presented in the annual report, the value 1 is given, otherwise 0 is given. The final index included 31 items, distributed among five main categories (financial, corporate social responsibility, intellectual capital, corporate environment and competitive environment).

The author excluded items not applied in any of the Jordanian manufacturing companies' despite of its importance such as (forecast EPS, innovation ideas, policy of training, work related knowledge, marketing innovation, customer loyalty, human resources accounting, Customer loyalty, employees who are students). By looking at the annual reports, the author found that all the companies' reports say nothing about the policy of financial rewards and benefits for members

of the Board of Directors and the executive management, and that some of these companies granted rewards and benefits despite the fact they had suffered losses.

STATISTICAL TESTS AND EMPIRICAL RESULTS

Descriptive Results

The mean and standard deviation were extracted to describe the study variables as shown in Tables 1 & 2.

	Variable	Minimum	Maximum	Mean	Standard Deviation
	Table 1 **DEPENDENT VARIABLES**				
1	Liquidity ratios	0.00	1.00	0.7250	0.45220
2	Debt ratios	0.00	1.00	0.6250	0.49029
3	Activity ratios (turnover ratios)	0.00	1.00	0.30	0.46410
4	Profitability ratios	0.00	1.00	0.8750	0.33493
5	Market ratios	0.00	1.00	0.2750	0.45220
	Financial voluntary Disclosure			**0.56**	**0.27624**
6	Environment protection program implemented	0.00	1.00	0.7750	0.42290
7	Sponsoring educational & conferences	0.00	1.00	0.35	0.48305
8	Sponsoring public health & sporting	0.00	1:00	0.20	0.40510
9	Statement of corporate social responsibility	0.00	1.00	0.90	0.30382
	Social responsibility voluntary disclosure			0.55630	0.24992
10	Copy rights, trademarks & Franchise	0.00	1.00	0.45	0.50383
11	Financial relations	0.00	1.00	0.7250	0.45220
12	Networking systems	0.00	1.00	0.050	0.22072
	Internal Capital			0.4083	0.27722
13	Distribution channel	0.00	1.00	0.8250	0.38481
14	Business collaboration	0.00	1.00	0.0750	0.26675
15	Research & Development	0.00	1.00	0.300	0.46410
	External capital			0.400	0.25262
16	Category of employee by gender	0.00	1.00	0.0250	0.15811
17	amount spent on training	0.00	1.00	0.5750	0.50064
18	employee recruitment policy	0.00	1.00	0.100	0.30382
19	employee health & safety	0.00	1.00	0.5250	0.50574
20	employee education	0.00	1.00	0.8250	0.38481
	Human resources			0.410	0.23072
	Intellectual capital voluntary disclosure			0.4061	0.19149
21	brief history	0.00	1.00	0.8750	0.33493
22	statement of general objectives	0.00	1.00	0.7500	0.43853
23	new products development	0.00	1.00	0.300	0.46410
24	vision & mission	0.00	1.00	0.400	0.49614
25	Age of board of directors	0.00	1.00	0.9250	0.26675
26	minutes of meeting summary	0.00	1.00	0.9250	0.26675
	Corporate environment voluntary Disclosure			0.6958	0.25004
27	estimate of market size	0.00	1.00	0.5250	0.50574
28	estimate of market growth	0.00	1.00	0.1500	0.36162
29	market share analysis	0.00	1.00	0.4750	0.50574
30	barriers to entry	0.00	1.00	0.2750	0.45220
31	competitive analysis	0.00	1.00	0.6750	0.47434

Competitive environment voluntary disclosure		0.4200	0.33832
Voluntary disclosure quality (level)		**0.4929**	**0.18525**

Table 2				
INDEPENDENT VARIABLES				
Variable	Minimum	Maximum	Mean	Standard Deviation
Assets in place IND1	0.0036	0.899	0.2784	0.21840
Company's Age IND2	11	66	30.15	17.07682
Company's Profitability IND3	-0.24	0.14	0.0062	0.10042
Company's Size IND4	5.56	9.11	7.3903	0.82556
Financial leverage IND5	0.05	28.48	1.5876	4,5005

Validity and Reliability

Kuder-Richardson (KR20) formula was used to measure reliability for a test dependent variable with binary variables (0,1), The scores scale for this test range from 0 to 1, 1 is perfect reliability whereas 0 no reliability. The closer the score is to one, the more reliable the test. The result of test indicates that KR20 value is 0.8131, the data considered reliable if it is more than 0.70 (Donald & Pamela, 2014).

Normal Distribution Test

Shapiro-Wilk test was performed, the sample size was less than (50) companies, where the distribution is normal if the value of Significance of data is greater than (0.05) (Hair et al., 2018) and the results are as follows in Table 3:

Table 3					
NORMAL DISTRIBUTION					
Variable	DEP	Ind5	Ind4	Ind3	Ind2	Ind1
SIG	0.059	0.051	0.059	0.093	0.08	0.058

Correlation Test

Pearson correlation coefficients were used between the independent variables to ensure that there was no high linear correlation between them and the results are shown in the Table 4.

Table 4					
COEFFICIENT MATRIX (PEARSON)					
Variable	Ind1	Ind2	Ind3	Ind4	Ind5
Ind1	1.00				
Ind2	0.029	1.00			
Ind3	0.310-	0.012	1.00		
Ind4	0.242-	0.400*	0.492**	1.00	
Ind5	0.088-	0.090-	0.313-*	0.081	1.00
Sig 0.05					
Sig 0.01					

Table 4 shows that the highest correlation between the variables is (0.492), and this indicates that there is no phenomenon of high multiple linear correlation between independent

variables, as all values were less than (80%), and therefore the sample is free from the problem of high multiple linear correlation (Gujarati & Sangeetha, 2017).

Multicollinearity Test

The Variance Inflation Factor (VIF), and Tolerance were presented in Table 5. The tolerance factor for the independent variables was less than (1) and greater than (0.2) as were the values of The VIF is less than (5), as this is an indication that there is no high correlation between the independent variables, the values are suitable for performing multiple linear regression analysis (Hair et al., 2018).

Table 5 MULTICOLLINEARITY TEST		
Independent variables	VIF	Tolerance
Ind 1	1.162	0.861
Ind 2	1.350	0.741
Ind 3	1.871	0.535
Ind 4	1.925	0.519
Ind 5	1.326	0.754

Hypotheses Test

The study hypotheses were tested in two stages, in the first stage, multiple linear regression was used to test the hypothesis:

"*There is a positive relationship between the following determinants together: Assets in place, Company's Age, Company's Profitability, company's size, Financial leverage in one hand, and the quality of voluntary disclosure in the second hand*".

Then the study used the Simple Regression test to confirm the results, by examine the relation between each determinant and voluntary disclosure.

The results were as shown in Tables 6 & 7.

Table 6 HYPOTHESES TEST (MULTIPLE REGRESSION)									
Coefficient					ANOVA			Model Summery	
Sig	T	Beta	Std. Error	Variable	Df	F Sig	F	R^2	R
0.881	0.151	0.018	0.104	Ind1	34/5	0.00*	9.846	0.591	0.769
0.041*	2.152	0.251	0.018	Ind2					
0.034*	2.287	0.298	0.121	Ind3					
0.00*	3.885	0.591	0.035	Ind4					
0.966	0.043	0.005	0.005	Ind5					
*Correlation is significant at the 0.05 level.									
T table value = (2.032)					**F table value = (2.43)**				

Table 6 indicates the existence of a statistically significant effect of all study determinants on the voluntary disclosure, which appears through the value of (F.Sig) which equal (0.00), which is less than (0.05) and through the calculated value of (F) of (9.846) which is greater than F table value, which equal (2,437). The value of the coefficient of correlation (R) equal (76.9%) indicates

the existence of a strong relationship between the variables, and the value of (R2) which equal (0.591) indicates that 59.1% of the variance could be explained by the factors affecting the voluntary disclosure, while (40.9%) is due to other variables that were not included in the study model.

It appears that the ind4 (company's size), had the largest effect on the voluntary disclosure, after that it came in second place in terms of effect ind3 (profitability), it came in third place ind2 (age), while ind1 (Assets in place) and ind5 (Financial leverage), did not achieve an effect contribution.

Table 7 HYPOTHESES TEST (SIMPLE REGRESSION)										
Variable	IND1		IND2		IND3		IND4		IND5	
	T	T	T	T	T	T	T	T	T	T
	Sig		Sig		Sig		Sig		Sig	
Voluntary Disclosure	0.633	-0.482	0.049*	2.033	0.002*	3.34	0.00*	7.251	0.995	0.006
Correlation coefficient R	0.078		0.313		0.476		0.762		0.001	
Coefficient of determination R^2	0.006		0.098		0.227		0.58		0	
Degrees of freedom	1		1		1		1		1	
* sifnificance (0.05≥α)										
T value of= (2.0227)										

Table 7 represents the results of simple regression that were compatible with the multiple regression results, as the following:

1. There was no effect of the Assets in place (Ind1) on voluntary disclosure, because the value of (Sig = 0.633) is greater than (0.05), and the calculated T (0.482-) is less than its tabular value. In addition, the results referred that Assets in place explained (6%) of the variance in voluntary disclosure, the correlation coefficient R (7.8%), indicates a weak negative relationship between the two variables.
2. There was a statistically significant effect of the company's age (Ind2) on voluntary disclosure, the value of (Sig = 0.049) is less than (0.05) and the calculated T value (2.033) is greater than its tabular value. the value of R2 indicates that company's age explained (9.8%) of the variance in voluntary disclosure, while the value of correlation coefficient R (31.3%), indicates a positive correlation between company's age and voluntary disclosure.
3. There was a statistically significant effect of the company's profitability (Ind4) on voluntary disclosure, this result was reached through the value of (Sig = 0.002) which is less than (0.05) and from the calculated and equal value of (3.340) which is greater than its tabular value. Profitability of the company explained (22.7%) of the variance in voluntary disclosure, the correlation coefficient R = (47.6%), which indicates an average positive relationship between the profitability and voluntary disclosure.
4. There was a statistically significant effect of the company's size (IND4) on voluntary disclosure, where the value of (Sig = 0.00) is less than (0.05) and the calculated T (7.251) is greater than its tabular value. (58%) of the variance in voluntary disclosure was explained by company's size, the correlation coefficient R = (76.2%), which indicates a strong positive relationship between the two variables.
5. There was no effect of the financial leverage (IND5) on voluntary disclosure, through the value of (Sig = 0.995) which is greater than (0.05) and also from the calculated T (0.006) which is less than the tabular value. The correlation coefficient R = (1%), which indicates a very weak relationship between the two variables.

CONCLUSIONS, IMPLICATION AND RECOMMENDATIONS

Conclusions

This article has two main goals; the first one is to determine the voluntary disclosure quality (level), while the second one is to examine the relevant factors of voluntary disclosure in listed manufacturing companies.

The results show that voluntary disclosure level is (49.3%), the voluntary disclosure items with the lowest application were those related to Intellectual capital voluntary disclosure and Competitive environment voluntary disclosure specially: networking system, Business collaboration, Category of employee by gender, employee recruitment policy, research and development, estimate of market growth, barriers to entry.

While the determinants of voluntary disclosure in descending order of positive influence and relationship strength: company's size, company's profitability, company's age, financial leverage has no statistically influence and week relationship. While there is a weak negative relationship, with no statistically influence between Assets in place and the quality of voluntary disclosure. The results ensure that big, profitable and old companies engage more in voluntary disclosure, results agree with agency theory and signaling theory.

The results of the study concerning the relation between the determinants of voluntary disclosure quality (Size, Age, profitability), are consistent with the previous related studies such as Lan et.al (2013) and Abeywardana & Panditharathna (2016); Elfeky 2017; Hossain & Hammami (2009) and Bhuyan (2018).

However, the results of this study regarding the determinants "Assets in Place and financial leverage" were different from the results of previous studies such as Lan et.al (2013), Abeywardana & Panditharathna (2016), as this study found no statistically significant relationship between these determinants and voluntary disclosure level, unlike the mentioned studies.

Implications and Recommendations

As an implication of this study, the author suggests Jordan Securities Commission to include the items of developed index within the compulsory disclosure, especially those relating to the Intellectual capital with its dimensions (internal capital, external capital, and human resources), and Competitive environment voluntary disclosure. In addition, management of listed companies should disclose in their annual reports the rewards and benefits policy for members of the Board of Directors and executive management. Stakeholders may benefit from knowing the determinants of voluntary disclosure in making their investment decisions.

Author recommends conducting studies to apply the developed index to other type of companies, and to study other factors influencing voluntary disclosure. Future studies can also address the negative effects resulting from the absence of reward policy in companies listed on Amman Stock Exchange.

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