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The Effect of Audit Quality on the Extent of Voluntary Disclosure: Companies Listed in the Tunisian Stock Exchange

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Abstract This study attempts to identify the effect of some audit quality characteristics on the level of voluntary disclosure in annual reports. Namely, using panel data analysis, empirical study is conducted through a sample of 29 firms from the Tunisian Stock Exchange covering the period 2009 to 2011. Therefore, a web-based search was performed locating the corporate websites of the sample firms and the official site of the Tunisian Stock Exchange. We observe that both auditor industry specialization and Big 4 listener network improve the level of voluntary disclosure. Our findings complement prior research in this area and have policy implications that the quality of audit provided by a Big 4 auditor or auditor industry specialization is evident for enhancement of voluntary disclosure.

Keywords Voluntary disclosure · Audit quality · Joint auditor · Auditor industry specialization

Introduction

Besides discussing accounting choices, we can talk about the strategy of voluntary disclosure. Thus, accounting policy is not only in line with logic of optimization of accounting choices, but also of financial and accounting communication. That means that managers have a large opportunity for discretion and decisions allowing them to make public or not the accounting and financial information. The information quality has become a key area in accounting and knowledge management literature due to the high signal-to-noise ratio of non-essential content in knowledge and information diffusion and the lack of the information quality measurement (Hu et al. 1997). Thus, the strategy of voluntary disclosure is not a fortuitous act related to the forgotten

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mandatory disclosure, but in accounting it is considered a policy instrument that aims to reach certain objectives.

Based on the idea that a good corporate governance guarantee is financial disclosure with a high level of quality, the firm should put in place a good strategic corporate governance that assures the protection of the stakeholder against managers' opportunism. In this context several studies support that the audit quality helps a firm to enhance voluntary disclosure in annual reports (Datar et al. 1991; Piot and Janin 2004; Chalmers and Godfrey 2004; Mohd Ghazali and Weetman 2006; and Martins et al. 2016).

Financial disclosure in annual reports has become the number one issue for accounting research, and, more specifically, voluntary disclosure has received a lot of attention from academicians, and much research is done both in developed in different contexts (Firth 1979; Bradbury 1992; Raffournier 1995; Smaili et al. 2009). The annual report is considered the significant element in overall disclosure practice because it is the most widely disseminated source of financial information on publicly held corporations (Arnold et al. 1984). However, voluntary disclosure in annual reports represent a resource in the nature of financial information beyond the required content in financial statements (Lakhal 2005; Kumar et al. 2008). Voluntary disclosure is to disclose more information than indicated by the law and is based on managerial incentives (Healy and Palepu 2001).

The main question of this research is how far the audit quality characteristics influence the decision to make more voluntary information in the annual reports of listed companies in Tunisia. The principal objectives of this research are firstly to evaluate the level of voluntary disclosure in the annual reports of the listed companies in the Tunisian Securities Exchange (TSE) and secondly to examine the relationship between a number of characteristics of audit quality (Big 4, joint audit, and industry specialization) and the level of voluntary disclosure of these companies.

Tunisia is a developing country, with an emerging capital market established in 1969 and has currently (as of June 2016) 83 listed firms, and whose economic environment has been subject to major changes in recent years. In this country, financial disclosure constitutes an under-regulated field that helps users evaluate management performance, lighten their perception of the firm, and evaluate the future profitability of their own investment. Several Tunisian firms do not disclose sufficient information in their annual reports. The empirical results conducted in the present context indicate that membership of the listeners to an international network audit, "Big 4", improves the voluntary disclosed information. In addition to the size of the audit network "Big 4", we found that the industry specialization of audit firms positively influences the level of voluntary disclosure published by the company.

The rest of the paper proceeds as follows: the following section will be designed to present literature review. The third section will present the theoretical framework of audit quality and voluntary disclosure and the development of our hypothesis. The research method will be exposed in the fourth section, while the fifth section presents the findings and discussion. The last section includes our conclusions.

Literature Review

Voluntary disclosure has attracted much attention of academicians and considerable attention in the accounting literature in recent years in the context of globalization of the world's financial markets. However, multiple researches to date have focused on developed countries (Depoers 2000; Labelle 2002; Petersen and Plenborg 2006; Brockman et al. 2009). Little attention has been devoted to the voluntary disclosure of companies in emerging countries, many economies that have gained increased importance in the global capital market. Other researches are interested in studying the quality of information on financial risks contained in annual reports (Lombardi et al. 2016).

The quality of voluntary disclosure included in the annual reports is considered nowadays in the heart of financial modern discussed problems. The companies are confronted to a serious crisis about the trust and they can't think about the efficiency of their financial disclosure. Thus, a high quality of disclosure transparency can make the stakeholders of the firm better informed. As stated by (Watson et al. 2002; Xiao et al. 2004; Beattie and Smith 2012) and according to the disclosure theory, the firms have incentives to provide more voluntary disclosures if their benefits offset their costs.

In the last decade, a number of studies were conducted in developing countries such as Malaysia (Mohd Ghazali and Weetman 2006), Kuwait (Al-Shammari 2008), Turkey (Uyar et al. 2013), Iran (Sadegh et al. 2013), Egypt (El Assy 2015), and Tunisia (Ali 2014). These studies have investigated the association between corporate governance attributes and voluntary disclosure level. From each the results confirmed significant relationships between voluntary disclosure strategy and corporate governance. As shown in previous research, the audit quality is related to the voluntary disclosure level. Many studies make the assumption that there is a positive and significant relationship between audit characteristics and voluntary disclosure level. The justification for positive relation is that audit firms with a high quality of services have greater experience since they are international firms and they do not just audit annual reports and accounts, but also contribute to improve them.

Voluntary disclosures can be both financial and non-financial information publically disclosed through the annual report and other corporate channels. Financial reporting not only focuses on the numerical and quantitative information, but it includes qualitative information accompanied by comments in addition to other financial information. Indeed, the financial statements are insufficient to give a fair view of a firm's situation. Voluntary disclosure can be defined as a facultative publication that is not part of the public rights for information. Sadegh et al. (2013) examined the factors influencing nonfinancial information disclosure quality of 102 firms listed in the Tehran Stock Exchange during the period 2008–2012, and they found that auditing firm size has a positive and significant effect on nonfinancial information disclosure quality.

Research Hypotheses: Perception of Audit Quality on the Voluntary Disclosure Level

In this section, we outline the hypothesis that predicts the relationship between audit characteristics and voluntary disclosure. The voluntary disclosure of financial information that is privately known only to firms' managers has a primarily informational rather than contracting role. Meanwhile, this potential matter cannot be unlocked when the managers cannot credibly commit to be truthful (Ball et al. 2012). Managers seek to provide informative disclosure of private information; therefore, they need some mechanisms for credibility. We propose that committing to high quality audits is one such mechanism. Several recent empirical studies that examined the association between the voluntary disclosure and corporate governance (Uyar et al. 2013; Barros et al. 2013) find evidence that voluntary disclosure in annual reports increases with external audit quality and other governance mechanisms.

Audit Reputation

Although the quality of information published depends on the preparation process of financial statements and the company control procedure, the task of the board must be supplemented by the procedure of audit, which falls within the task of the external auditor. As part of the agency theory, the external audit contributes to limiting the accounting manipulations of managers and reduces the agency costs (Fama 1980). A competent and independent auditor is able to detect and reveal the fraud elements without being affected by manager opportunism. Several empirical studies examine two characteristics of the audit firm that can affect the quality of audit: the size (DeAngelo 1981) and reputation (Klein and Leffler 1981). DeFond (1992) connects the listener's reputation membership in an international network. Today, there are four major international auditor networks, the "Big 4".

The size of audit firm is an easily measurable variable based on quantitative criteria such as the number of employees, the number of audit customers, and the fees charged to customers. Several studies have shown the size of the firm constitute an implied guarantee of the quality of work (Piot and Janin 2004). These studies measure the quality of the listener as belonging to one of the "Big 8" or not (is now "Big 4"). Chalmers and Godfrey (2004) show that the largest audit firms ("Big") improve the earning quality for their customers and help to reduce the problem of information asymmetry between managers and stakeholders. This idea has been justified by several empirical investigations. Indeed, Datar et al. (1991) state that the financial statements certified by the "Big" auditors strengthen investor confidence in the financial market, but overlooked the quality of information disclosed. So a listener belonging to a big network affects the extent of voluntary disclosure. We further hypothesize that:

> H 1: *The existence of an auditor Big 4 has a positive effect on the extent of voluntary disclosure.*

The Joint Audit and Voluntary Disclosure Level

To reinforce the independence of auditors, some companies refer to two or more audit firms. The listed companies in France are required by law to nominate two (joint) auditors (French Commercial Code Art. 823–20). Also, in Tunisia, the requirement to nominate two or more auditors is related to the satisfaction of the conditions set by law no. 2005–96 of 18 October 2005.

In addition, and in order to avoid the installed over-familiarity between auditor and audited, a systematic rotation of associated natural persons in charge of the audit of listed companies was introduced. Benali (2013) find that the joint audit has a positive relationship with the audit independence, and thus contributes to secure the interests of financial investors.

H 2: The joint audit has a positive effect on the extent of voluntary disclosure.

Audit Specialization

Some research shows that the specialization of audit firms in a particular sector tends to evolve; in fact, specialized audit firms realize cost savings on their audit and at the same time offer a better quality of service seen their knowledge of the industry. Also, the specialization of audit firms in a particular sector offers them a better reputation in the industry. To maintain this reputation, they should provide a better quality of service because they will have more loss in case of failure (Habib 2011; Elder Randal 2015).

Yip et al. (2015) suggest two knowledge audit cases studies to examine the knowledge audit for structured and unstructured business processes in two Hong Kong firms, the finding provide a significant differentiation between knowledge audits in structured business processes and unstructured business processes which can be captured in the former procedural knowledge, whereas that to be elicited in the latter is experienced knowledge. Also, the study clarifies and strengthens the position of the knowledge audit.

Cheung et al. (2007) employ A systematic approach to examine the knowledge auditing by testing the case of transportation sector, the finding provide that the systematic knowledge auditing approach yields a number of benefits that can give an identification of a critical knowledge and some subsequent recommendations which can be derived for better managing the knowledge in the railway firm. By auditing several companies operating in the same sector, auditors take advantage to become experts in the processes and procedures relating to this sector. Hence, our hypothesis is:

H 3: industry specialization has a positive impact on the extent of voluntary disclosure

Research Method

Sample

The sample used in this study consists of all firms listed on the Tunisia Stock Exchange (TSE). Are ignored financial refers to their specific referential of disclosure out of the companies in question, 31% belong to the consumer goods sector, followed by firms engaged in the manufacturing sector (24%), and 14% from consumer services, basic material sectors. No other general business sector yielded more than 10% of the sample (Technology and Health activities 7%, while firms pertaining to other Oil and Gas represent 3% of the sample).

Our study seeks to explore the voluntary available information drawn from the annual reports of 29 companies listed on the (TSE) covering the period 2009 to 2011 (our final sample comprises 87 firm-year observations).

Variable Measurement

Dependant variable:

Assessing the extent of voluntary disclosure of companies is a prominent theme of research in accounting. The usual methodology is based on building an un-weighted disclosure index to include a set of items selected from a review of financial disclosure literature. A voluntary disclosure of the items made by the company without any required by regulation represents a way to increase the credibility of the company through voluntary disclosure more broadly and assist investors in understanding management business strategy (La Porta et al. 2000).

Several approaches are available when developing a scoring scheme to determine the voluntary disclosure level of annual reports, and usually both a weighted and an un-weighted disclosure index have been used by researchers.

The first step is to establish a voluntary disclosure checklist. The checklist is developed with reference to several important corporate governance principles and recommendations by organizations and a literature review. An extensive disclosure has evolved over time, influenced by social culture of the country, economic development, corporate ownership, environmental and social information, and information technology, as well as regulations issued by component authorities. The voluntary disclosure provided by management should be able to help where disclosure will be tested based on conformity with the real deal.

In order to assess the voluntary index, a checklist of items was prepared, based on the structure adopted by Eng and Mak (2003). The list was further reviewed to ensure that the voluntary items were relevant to the voluntary disclosure level for a Tunisian firm and was of general applicability. To give an adequate spread of scores, there should be sufficient variability of disclosure (Eng and Mak 2003; Ali 2014) (see Appendix 1). To establish the voluntary disclosure level, a voluntary disclosure checklist of items is prepared based on information firms provide in their annual reports.

After establishing the checklist of items, a scoring sheet was developed to assess the voluntary disclosure level. After reading the annual reports of companies, a global measure of disclosure is determined by taking the total points of the index for each company according to the scale set out in the Appendix 1. The level of voluntary disclosure (VDISCL) for each company is measured as the ratio of the actual score awarded to the maximum possible score.

The method of computing the level of voluntary disclosure for each company can be expressed as follows.

$$\mathrm{VDISCL}_{\mathrm{it}} = \sum_{\mathrm{i}=0}^{\mathrm{n}} \frac{\mathrm{score}\ \ \mathrm{X}_{\mathrm{it}}}{\mathrm{score}\ \ \mathrm{max}}$$

, where

VDISCL: The level of voluntary disclosure for firm i at the year t.

Score: equal to the total of point for firm i for the list of different items.

Score max: the maximum of point. Items included in the voluntary disclosure index and an indicative list of their sources

The Variables Related to Audit Characteristics

The reputation of the external audit: Chalmers and Godfrey (2004) show that the largest audit firms ("Big") improve disclosure quality and help reduce the problem of information asymmetry between managers and the firm stakeholder. To appreciate the size of firm audit in the Tunisian context, we will take as large firms those representing the Big 4 in Tunisia. The variable reputation of the external audit will be designated BIG, which takes the value 1 if the firm is audited by Big 4 and 0 otherwise.

The joint audit: the existence of two audit firms auditing ensures quality of service whether in terms of independence and competence. The independence is strengthened because collusion between managers and the independence is strengthened by the reduction of the possibility of collusion between managers and auditors become less easy when the corruption of two audit firms rather than one. In addition, it is easier for listeners to fight two managerial pressures. The variable joint audit will be designated by "COCOM".

Industry specialization of auditor: Piot and Janin (2004) states that the industry specialization of audit listeners is a phenomenon pursued by audit firms to improve the quality of their services. Hammersley (2006) provide that the auditors who specialize in one industry have knowledge in this area and have the ability to make an audit service with high quality. The variable sector specialization will be designated by SPEC, equal to 1 if the auditor is an expert in the sector of activity of the audited company, and 0 for otherwise.

Firm size: this variable is measured by the natural log of market capitalization. Gearing debt ratio is measured by the long term debt/equity. The ratio of firm profitability = (net income/total equity); Tables 1 and 2.

Findings and Discussion

Descriptive Statistics

Panel A in Table 3 presents the descriptive statistics for the (in)dependent variables used in the empirical model. The results show a mean of the voluntary disclosure extent

Table 1 Composition of sample by industry

	Final sample		No. of firm-years
Technology	2	7%	6
Consumer services	4	14%	12
Health activities	2	7%	6
Consumer goods	9	31%	27
Manufacturing	7	24%	21
Basic Material	4	14%	12
Oil and Gas	1	3%	3
Total	29	100%	87

Table 2 variables measurement

Variables	Definition	Measurement
Dependant variable		
VDISCL	level of voluntary disclosure	Total items for this company/maximum possible items disclosed by this company.
Independent variables		
BIG	Size of auditor	Equal 1 if firm audited by a Big 4 and 0 for otherwise
COCOM	Joint audit	Equal 1 if firm audited by joint audit and 0 for otherwise
SPEC	Industry specialization	Equal 1 if the auditor is an expert in the sector of activity of the audited company, and 0 if not.
Control variables		
lnSIZE	Firm Size	Market capitalization.
GEAR	Gearing ratio	Long term debt/equity.
ROA	Profitability	Net income/total equity.

of our sample (VDISCL) of 0.42 with a minimum of 0.31 to a maximum level of disclosure 0.62. These results are consistent with those of a previous study conducted by Leventis and Weetman (2004) in Greece, which found a mean disclosure level of 0.37; Al-Shammari (2008) provide that is usually the level of disclosure. Concerning t (0.46), Al-Shammari (2008) in Kuwait and Ghazali and Weetman (2006) in Malaysia find that the level of voluntary disclosure is about an average of 0.31. Concerning the descriptive statistics of independent variables, on average 39% of the sample firms nominate their auditor from the Big listener, 48% appoint at least a joint audit and 40%

Table 3 descriptive statistics and correlation matrix

A: descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
VDISCL	87	.42471	.05602	.31	.62
BIG	87	.39080	.49075	0	1
COCOM	87	.48275	.50259	0	1
SPEC	87	.40229	.49320	0	1
LnSIZE	87	7.8113	.44907	6.1503	8.5322
GEAR	87	.26196	.24281	.00422	.92308
ROA	87	.10318	.12253	-.31111	.35382

B: correlation matrix

	VDISCL	BIG	COCOM	SPEC	LnSIZE	GEAR	ROA
VDISCL	1.00						
BIG	0.24	1.00					
COCOM	0.24	0.022	1.00				
SPEC	0.45	0.20	0.24	1.00			
LnSIZE	0.07	−0.04	0.09	0.16	1.00		
GEAR	−0.19	0.13	−0.04	0.19	−0.07	1.00	
ROA	−0.15	−0.14	−0.02	−0.17	0.37	−0.01	1.00

of auditors are qualified specialists in the audited industry. The mean of firm size (lnsize) is 7.8113.The mean of return on assets (ROA) is 4.7%. The mean leverage (GEAR) is amounts to 26.196% of total assets. The mean of return on assets (ROA) is 10.03%.

Panel B of Table 3 presents the correlation matrix of the dependent and independent variables; this table shows that the variables BIG, COCOM, SPEC, and LnSIZE are positively correlated with the level of voluntary disclosure (VDISCL). While the GEAR and ROA have a negative correlation with dependent variable, which implies that the level of information asymmetry increases with the level of leverage and performance.

Panel B of Table 3 presents the correlation matrix (conducted with the Pearson correlation coefficient) between all the variables integrated in the model provided. The results of the Pearson correlation analysis indicate that the highest correlation coefficient is 0.45 between VDISCL and SPEC. Farrar and Glauber (1967) suggest that correlation between independent variables should not be considered harmful until the correlation coefficients reach 0.8 or 0.9. In this sense, it is possible to say that there is no unacceptable coefficient of multicollinearity between the independent variables introduced in the model.

This table shows the descriptive statistics of the sample of firms studied. Panel C presents the sub-index of voluntary disclosure. Panel D shows the correlation matrix with significance levels ***, **, * rating of 1%, 5%, and 10%.

As illustrated in the Panel C of Table 4, the level of voluntary disclosure varies from a mean score of 0.32 to 0.62. Among the sub-categories of disclosure index, the items of financial information and strategic information are more likely to affect the investor decision making process exhibit the highest disclosure sub-index: respectively, 0.22379 for the financial information sub-category and 0.17908 about the strategic information.

Discussion of Regression

From Table 5, the main results are that the variables BIG and SPEC are significantly and positively effects of voluntary disclosure index of Tunisian companies. Also, the

Table 4 Descriptive statistics and correlation matrix of sub- index of voluntary disclosure.

C: descriptive statistics of disclosure index sub-categories					
Variable	Nbr obs	Mean	Std. Dev.	Min	Max
VDISCL	87	.42540	.05489	.32	.62
SDISCL	87	.17908	.01834	.13	.22
NDISCL	87	.02252	.008656	.01	.04
FDISCL	87	.22379	.04196	.17	.36
D: correlation matrix between disclosure index sub-categories					
	VDISCL	SDISCL	NDISCL	FDISCL	
VDISCL	1.00				
SDISCL	0.44	1.00			
NDISCL	0.91***	0.26	1.00		
FDISCL	0.93***	0.08	0.87***	1.00	

Table 5 Coefficients estimated by regression measuring the extent of voluntary disclosure and explanatory variables

Independent variables	Predicted sign	Coef.	Std. Err.	T	P > t
BIG	+	.019919	.01056	1.88	0.063*
COCOM	+	.012456	.01033	1.21	0.232
SPEC	+	.048307	.01135	4.25	0.000***
LnSIZE	+	.00046	.01247	0.04	0.970
GEAR	-	-.06703	.02139	−3.13	0.002***
ROA	+	-.02537	.04569	−0.56	0.580
R^2	0.3322				
Adjusted R^2	0.2821				
F(6,80)	6.63				
Prob > F	0.0000				

*** Significant on the level of 1% ** Significant on the level of 5% ** Significant on the level of 10%

variables COCOM and LnSIZE have a positive impact on the extent of voluntary disclosure of companies. Meanwhile, the gear ratio and performance ratio are negatively corelated to the voluntary disclosure of these companies. This result is also in line with the previous research and suggests that the audit quality characteristics improve the corporate voluntary disclosure.

The explanatory power of the model is significant; the fact that $R^2 = 0.3322$ allows us to say that the independent variables explain 33.22% of the variation in the dependent variable. Also, the Fisher statistic takes a value of 6.63 on a level of significance of 1% (P = 000). We can, therefore, say that the explanatory variables used in this model do well to explain the variation of voluntary disclosure.

Table 5 supports H1 and shows that the voluntary disclosure level is positively related to the audit firm's size. As predicted, the auditor from the Big 4 listener takes on initiatives to reduce the asymmetry information between managers and stakeholders and certifies the level of transparency of disclosed information. In other words the presence of a Big 4 auditor is positively associated with the level of corporate disclosure practices of listed Tunisian firms. Likewise, firms audited by Big 4 listeners contribute to improving the quality and extent of voluntary disclosure information through in the annual reports of these firms. Indeed, with statistics (T = 1.88 and P = 0.063) the findings corroborate the theoretical advanced of previous studies and give argues to support the first hypothesis. Hence, clients of the auditor from the Big 4 network are expected to disclose publically a higher level of financial and accounting information. However, some studies found significant positive association related to the auditor size and the level of voluntary disclosure (Uyar et al. 2013; Sadegh et al. 2013)

Similarly, the regression results show a positive relationship between joint audit and the voluntary disclosure index. This result is also in line with the previous research and suggests that joint audit improves the auditor independence and, therefore, the voluntary disclosure practice for the companies listed in the Tunisian Stock Exchange during the period of this study (Alfaraih and Alanezi 2012; El Assy 2015). For example, Habib and Bhuiyan (2011) use two different measurements of industry specialization, and controlling for known determinants of audit report lag the finding argues that the audit report lag is shorter for firms audited by industry specialist auditors. Also the results reveal that the adoption of International Financial Reporting Standards has enhanced the audit report lag for all auditors except for industry specialist auditors.

Concerning the variables sector specialization, awareness of industry audit specialisation requires more specific knowledge in which industries have the ability to render quality service and allows subsequently improving the level of financial disclosure, finds that the industry specialization of audit firms reduces discretionary accruals and improves the relevance of accounting data. Therefore, this suggests that listeners who specialize in a certain industry benefit from industry-specific knowledge. From the results obtained in our study, the statistics ($T = 4.25$ and $P = 0.000$) are consistent with previous studies, supporting the hypothesis previously issued (H3) that the voluntary disclosure level is positively associated with the audit industry specialization at a level of 1%.

Thus, the findings based on the price model strongly support H3 that there is a positive relationship between the sector specialization of an auditor and the level of voluntary disclosure. The results are also consistent with the findings obtained from those of Habib (2011) and Elder (2015).

In a similar study, Safari et al. 2011 Use three measures of audit quality based on a sample of 90 non-financial Iranian listed firms during the period 2004 to 2009. They show that the discretionary accruals are negatively related to auditor size and auditor industry specialization. Their results are consistent with the hypothesis of the negative relationship between auditor independence and discretionary accruals.

Regarding the control variables, the results argue a positive relationship between the extent of voluntary disclosure of the company and the size of the firm. This finding means that large firms have a greater ability to provide a high level of voluntary disclosure for stakeholders. The results of the regression analysis provide statistical support for the relation expected, relating to variable leverage. Indeed, the coefficient for leverage has a negative and significant effect, which means that voluntary disclosure decreases with leverage.

Conclusion

This study focuses on Tunisian companies, a common-law country, which is classified as an emerging market. The purpose of this study is examining of the association between the characteristics of audit quality and corporate disclosure of Tunisian listed companies and present the sub-index of voluntary disclosure. Specifically, the study explores the relationship between Big auditors, joint audit, industry specialization, and extent of voluntary disclosure. As a governance mechanism, the most important role of the audit is to reduce the information asymmetry between managers and shareholders or third-party contractors. Ensuring the fair presentation of financial statement, the audit appears to be a key for the making decision of potential investors and other users on financial information. The findings of the study reveal that most out of the relationship expected are supported with a high level of significance.

The findings drawn from this study show that voluntary disclosure index is positively associated with the size of the auditor "Big" network, industry specialization of audit firms, joint audit, and firm size. Similarly, the findings provide supporting evidence for the hypotheses 1 and 3 that there is a significant positive relationship respectively between Big auditors, industry specialization, and voluntary disclosure index. The results have some theoretical implications as well. The theoretical literature review and hypothesis predicted are partially validated. Indeed, the findings are consistent with the previous researches and provide empirical support for the argument that firms belonging in voluntary corporate disclosure. The results of our study show that companies with high debt levels suffer from a low voluntary disclosure index or even opacity of financial disclosure. Furthermore, just one variable's (ROA) sign is not in the direction of hypothesized relationship.

Implications

The main result of this study has great implications on the audit characteristics effect on the voluntary disclosure level of the Tunisian Stock Exchange. Therefore, the subject is quite important for voluntary disclosure studies. From a theoretical standpoint, our literature review reveals a positive relationship between the audit quality and voluntary disclosure. Accordingly, the practical standpoint of the study offers insights to the interaction between audit quality and voluntary disclosure strategy of Tunisian listed firms. In other words, Big auditors and auditor industry specialization contribute to the enhancement of voluntary disclosure level.

Limitations and Further Research

Since this paper was conducted solely on Tunisian non-financial listed companies, the findings should be interpreted cautiously. The findings may not be generalized for the voluntary information disclosure practices of unlisted firms and other firms such as financial and insurance firms. In the future, we aim to enlarge the sample by including those industries and renew the study. Secondly, this study used the annual reports of firms as the information disclosure source, not other sources such as web sites, press releases, and prospectuses.

Appendix 1: List of Items

(S) Strategic information	score
(S-1) General corporate information: Score	
Brief history of company	
Organizational structure/chart	
General description of business/activities	
Principal products	
Principal markets	
(S-2) Corporate strategy: Score	
Statement of corporate goals or objectives	
Current strategy	

Impact of strategy on current results
Future strategy
Impact of strategy on future results
(N) Key non-financial information
(F) Financial information
(S-3) Management discussion and analysis: Score
Review of operations
Competitive environment
Significant events of the year
Change in sales/profits
Change in cost of goods sold
Change in expenses
Change in inventory level
Change in market share
(S-4) Future prospects: Score
New developments
Forecast of sales/profit
Assumptions underlying the forecast
Order book or backlog information
(S-5) Other useful strategic information: Score

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Sub-total (A)
(N-l) Employee information: Score
Number of employees
Compensation per employee
Value-added per employee
Productivity indicator
(N-2) Other useful non-financial disclosure: Score

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Sub-total (B)
(F-1) Performance indicators (not from financial statements):Score
Historical figures for last five years or more(or as long as company's formation)
Turnover
Profit
Shareholders_ funds
Total assets
Earnings per share
(F-2) Financial ratios: Score
Return on shareholders_ funds (ROE) 1
Return on assets
Gearing ratio
Liquidity ratio
Other useful ratios :

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(F-3) Projected information: Score
Cash flow forecast
Capital expenditures and/or R&D expenditures forecast
Earnings forecast
(F-4) Foreign currency information: Score
Impact of foreign exchange fluctuations on current results
Foreign currency exposure management description
Major exchange rates used in the accounts
(F-5) Other useful financial information: Score
Sub-total (C)
Total (Company disclosure Score)

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