

WEB-BASED DISCLOSURE: EXPLANATORY STUDY IN THE MENA REGION

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ABSTRACT: *This paper aims to investigate the practices of Web based disclosure in the MENA countries and to study the extent and the nature of information disclosed on the websites. To this end, the paper studied the content of 237 companies' websites of each of the following countries: Tunisia, Morocco, Saudi Arabia, Bahrain, Egypt, the United Arab Emirates, Jordan, Kuwait, Qatar and Turkey. The study was conducted during the period from February 2018 to May 2018. Content and descriptive analyses were employed to analyze data. The results show that firms use similar forms of presentation to disclose information on their websites. However, we detect a significant dispersion in the content of information disclosed. This paper fills some of the gap in the knowledge of the online disclosure in the MENA region. The results give a further understanding of the various types of information disclosed on the Web in the MENA countries. This kind of understanding will help the various parties involved in online reporting (such stockholders, auditors, investors, regulators...) to formulate policies and to adjust their visions about this practice. This study adds to the existing literature by analyzing 10 countries in the MENA region, which allows us to have a clearer idea on the practices of information's disclosure on the websites in this region.*

KEYWORDS Web-based disclosure, presentation format, disclosure content, MENA countries.

INTRODUCTION

Nowadays, the Internet has become an important means for the communication of information. Therefore, several companies use the website to disseminate information to investors and other stakeholders around the world. The use of the Internet for the information disclosure, offers a low cost solution for both companies and information users (Debreceeny *et al.*, 2002) who can have an unlimited and fast access to various information, regardless of their geographical location.

The Internet facilitates innovation in communication practices. It offers various forms of presentation that are not available in traditional printed reports such as video files, audio files, hyperlinks, and dynamic graphics (Kelton and Yang, 2008). These new forms of information presentation improve legibility, accessibility and intelligibility of information (Homayoum *et al.*, 2011) and therefore, they allow a more transparent disclosure. Thus, web based disclosure allows providing immediate, up-to-date and relevant information to users.

The Internet reporting is not regulated and the choice of the information to be diffused through the Web return to managers. In fact, there is no guide for communicating information and this practice remains dependent on the discretion of the companies and their managers. This situation leads to differences in both the contents of the information and its form of presentation. With the growth of the use of the Web as a means of disclosure, several studies have focused on studying the practices of web-based disclosure. Many of these studies are interested in studying these practices in several developing countries such as the MENA countries (Momany and Al Shorman, 2006; Mohamed, 2010; Aly et al., 2010; Turel, 2010; Oyelere and Kuruppu, 2012; Momany and Pillai, 2013).

Despite the diversity of the studies conducted in the MENA region, they remain limited to one or two countries alone and there are no studies that have examined these practices in several countries in the MENA region which do not allow generalizing the results of these studies to other countries in the region. Furthermore, some studies have been limited to examining a single component of web-based disclosure: disclosure of financial information on the Web, without considering the presentation format. Other studies have examined two components: form of presentation and content of the disclosure, without considering in detail the different types of information presented on the website.

Through this study, we added to the existing literature by analyzing 10 countries in the MENA region, which allows us to have a clearer idea on the practices of information's disclosure on the websites in this region. Moreover, in this study, to assess the information's disclosure on the website, we used an index that takes into account both the content of the information presented on the web and the way in which this information is presented on the companies' web pages. Similarly, we are interested in this study of the various types of information presented on the websites: mandatory, voluntary, financial and non-financial information.

Given the importance of the practices of information disclosure through the web and the lack of empirical studies on these practices in the MENA region, this study provides an important contribution to filling the gap in the knowledge of the online information disclosure and it constitutes a first step in evaluating the extent to which companies in the MENA region are taking advantage of opportunities offered by the Internet to disseminate information to their stakeholders.

The aim of this study is to survey the practices of information's disclosure on the websites of listed companies in MENA countries and to analyze the extent and nature of the information disclosed on the Web. This paper seeks to answer the following research question: to what extent do the companies in the MENA region disclose information on their websites. This implies to

answer the following sub questions: what is the content of the information disclosed and how is the disclosed information presented on the companies' websites.

The remainder of the paper is structured as follows. Section 2 explains the importance of the disclosure of information on the internet and section 3 discusses the literature review, while section 4 presents the methodology employed in the study and section 5 reports the analysis and findings of the survey. Section 6 provides conclusions, implications and limitations of the study and suggests future research directions

The web-based disclosure: importance for the MENA countries

Since its emergence in 1960 in the United States, the Internet has evolved significantly and, more significantly over the past 10 years. In a few years, it has become a global network interconnecting a growing number of users and constituting a source of information and a means of communication. The following table presents the evolution of the number of users who had access to the Internet in the different regions of the World between 2000 and 2017.

[Table 1 near here]

At the end of the year 2017, there were more than 4.15 billion Internet users worldwide, that is to say 54.4 % of the population of the world. In 2017, the Internet had known an important expansion: in the last years, from 2000 to 2017, the usage of the Internet had evolved with 1052 % (from 360 million users at the end of the year 2000 to 4.15 billion in 2017). The percentages of the population using the Internet differ widely depending on the regions of the World. These percentages in developed countries are higher compared to developing countries. In contrast, the growth rate is increasing in developing countries. Thus, the most significant growth rates in the world have been recorded in Africa and the Middle East.

In the Africa region, the Internet had known a very important increase: only in the last seventeen years, from 2000 to 2017, the number of Internet users has grown up with more than 9941 % (from 4.5 million Internet users in 2000 to 453 million users in 2017). The Middle East region has also seen a sharp increase in the number of Internet users over the last seventeen years. Indeed, this region recorded a growth rate of 4893 % and the number of Internet users in the region has increased from 3.2 million users in 2000 to 164 million users in 2017.

Thus, in spite of the immense difficulties concerning infrastructure in place, economic conditions and low levels of education compared to those of developed countries, the developing countries are looking to seize this technology and to take advantage of the opportunities offered by the Internet in different areas including the communication of information. With the development of this technology, the Internet has greatly influenced the practices of information communication. Thus, with new technologies inherent in this means, the Internet has become an important channel for information dissemination and it has created a new challenge for the disclosure of information (Spanos, 2006). The communication of information through the Internet differs largely from the communication of information through the traditional means such as the annual report.

The internet provides the company with new opportunities and facilitates innovation in communication practices. It offers various forms of presentation which are not available in the traditional means of communication such as video and audio files, hyperlinks, dynamic graphics (Kelton and Yang, 2008). These new forms of presentation of information improve legibility, accessibility and the intelligibility of disclosing information (Homayoum *et al.*, 2011) and consequently, they allow the disclosure of more transparent information.

In addition, the Internet offers to the information users an unlimited access to any information on the operations of the company, its financial performance and its activity in general. It allows different users to access search and get the information they need for their particular goals, regardless of their geographical places. Thus, the use of the Internet for information disclosure allows a diffusion of information worldwide and facilitates the availability of information for different users. Therefore, The Internet is a new way to communicate more timely information in an environment where information runs out in a permanent way without obstacle (Khan, 2006).

Furthermore, the use of the Internet for the information disclosure, offers a low cost solution for both companies and information users. Indeed, by providing information through websites, the company can eliminate the costs of printing and distribution associated with the preparation and publication of printed annual reports (Debreceeny *et al.*, 2002). Thus, the use of the internet, as a means of information reporting allows a more transparent disclosure and leads to improve the firm's transparency (Homayoum *et al.*, 2011). The company's transparency is one of the priorities of companies in the Middle East region. In fact, this region is characterized by weak governance, high corruption and a lack of transparency. This lack of transparency is an obstacle to the foreign investments, in spite of the measures taken by the Middle East countries to encourage the foreign investors (IMF report, 2003). The need to raise capital is very important for MENA countries to stimulate their economic growth. As a result, companies in these countries are motivated to improve their transparency in order to attract foreign investment and facilitating access to low-cost capital. Thereby, these countries need to encourage private investment and give the necessary guarantees to investors in order to increase their confidence, to enhance their governance and to improve their transparency. In this context, the web-based disclosure may be a fundamental means for the MENA countries to reach the objective of transparency.

The web-based disclosure is a voluntary practice. In the MENA region, there is no regulation to standardize and harmonize the information disclosed on the companies' websites. Indeed, the choice of the information disseminated through the website is entirely up to the managers and the online disclosure practice remains dependent on the discretion of the companies and their managers. This situation leads to differences in the content of the information as well as in the forms of its presentation. In fact, the studies, that have examined the online disclosure in the MENA countries, found great differences between companies (Momany and Al Shorman, 2006; Aly *et al.*, 2010; Momany and Pillai, 2013). Some companies do not use the website to present information and they are limited to information disclosed in the annual report. In contrast, other companies disseminate information on the website using a low technology,

while, others companies disclose various financial and non-financial information taking advantage of the technological features of the Internet.

The statistics presented in table 1 show a huge growth in the number of users who have access to the Internet in the Africa region as well as in the Middle East region. Thus, in the MENA region, the private use of the Internet is upwards, implying that more users can have access to the company's website and to the online reporting. Thus, the company use of the Internet for the information disclosure needs to be studied. The questions are, in the first place, whether companies in the MENA region are taking advantage of opportunities offered by the Internet to disseminate information to their different stakeholders and present information on their web pages, secondly, what information they disclose on their websites. Therefore, this study tries to answer the following research question: to what extent do the companies in the MENA region disclose information on their websites. This implies to answer the following sub questions: what is the content of the information disclosed and how is the disclosed information presented on the companies' websites.

LITERATURE REVIEW

With the evolution of the Internet as a source of information and as a communication means, the number of studies focusing on the use of the Web for corporate disclosure has increased consistently. The earliest studies tried to explain the reasons that encourage companies to use the Internet. At the beginning, its use was limited to the objectives of advertising (Allam and Lymer, 2003), marketing and sales (Lymer, 1999). Subsequently, the companies have started to use the Internet as a medium for communicating financial information.

Information disclosure through the Internet drew the attention of some accounting bodies (Institute of Chartered Accountants in England and Wales: ICAEW, 1998; International Accounting Standards Committee: IASC, 1998; Financial Accounting Standards Board: FASB, 2000-2001), which have carried out several studies with the aim of standardizing and harmonizing the content and the forms of the information published through the Internet. Similarly, the Web based information disclosure has been the subject of several empirical studies (Gray and Debreceney, 1997; Debreceney *et al.*, 1999; Lymer, 1999; Ettredge *et al.*, 2002; Allam and Lymer, 2003; Oyelere *et al.*, 2003; Kelton and Yong, 2008). Some studies investigated whether companies had a website or not and if they used their websites for communicating financial information (Gray and Debreceney, 1997; Lymer, 1999; Allam and Lymer, 2003). Other research examined the information contents of the websites (Debreceney *et al.*, 1999; Ettredge *et al.*, 2002; Marston and Polei, 2004).

Most of these studies were conducted in the developed countries such as the United States of America (Ettredge *et al.*, 2002; Kelton and Yong, 2008), the United Kingdom (Lymer, 1999) and New Zealand (Oyelere *et al.*, 2003). Generally, these studies affirm that there is a significant growth in the use of the Internet for information disclosure and that the information contents of the websites vary across countries. In Jordan, Momany and Al Shorman (2006) examined the extent and the nature of financial information disclosed on the website by 60 listed companies.

To evaluate the extent of information disclosed on the Web, Momany and Al Shorman (2006) developed a disclosure index. The information was classified into three categories: financial statements, summaries of financial statements and financial summaries. The results revealed that 45% of the companies had websites and 70% of these companies disclosed financial information on their websites. Among these companies, 31.5% communicated financial statements, whereas 15.8% of companies revealed summaries of financial statements and 52.7% of companies diffused financial summaries through their websites.

Mohamed (2010) studied the practices of the Internet financial reporting among 193 listed companies across two MENA countries: Oman and Bahrain. The findings of the analysis indicated that 124 companies had websites and only 63 companies disclosed financial information through their websites. Mohamed (2010) stated that web based financial disclosure remains in an embryonic state in both countries.

Aly *et al.* (2010) examined a sample of 98 Egyptian listed companies to study the Internet financial disclosure in developing countries. They showed that 70% of companies had websites and only 50% of these companies used their websites to disclose financial information. Turel (2010) studied the extent of financial information disclosed through the Internet by Turkish companies in 2010. To analyze the practices of web disclosure, Turel (2010) developed a disclosure index of 50 items divided into financial information and non-financial information. The findings showed that all the companies had websites and 95% of these firms communicated financial information on their web pages. In addition, the annual report was the most disclosed information by Turkish companies. Oyeler and Kuruppu (2012) evaluated the extent and the nature of information disclosed on the Web. They examined a sample of 132 listed companies on the United Arab Emirates stock exchange. Their results reported that 87.1% of companies had websites. These companies used their web pages to disseminate different voluntary information. Thus, 81% of companies provided information about the company history. Moreover, 86% of firms disclosed products (services) and sales information and only 65% of companies presented financial information on their websites. In the same context, Momany and Pillai (2013) analyzed 65 companies in 2012. They founded that 89% of companies had websites and 60% of these companies used their own web pages to disseminate financial information. Among these firms, 92% presented financial statements and 9% presented summaries of financial statements

Despite the diversity of the studies that examined the practices of the information's disclosure through the Web, they remain limited to a single country and few studies investigated these practices in the MENA region as a whole. Furthermore, these studies were limited to consider either a single component (disclosure of financial information on the Web) or two components (disclosure content and presentation format) without studying in detail the different information presented on the websites. The aim of this study is to investigate the practices of information's disclosure through the website in the MENA region as a whole. We presented the different types of information presented on the websites and we are interested as well in disclosure content as in its form of presentation.

RESEARCH METHOD

Sample Selection

The study was conducted in the MENA region. We chose 10 countries: Tunisia, Morocco, Saud Arabia, Bahrain, Egypt, The United Arab Emirates, Jordan, Kuwait, Qatar and Turkey. By choosing these countries, we tried to take into account greater economic diversity that characterizes the MENA region. Thus, this region includes at the same time rich economies such as the Gulf countries and resource-poor countries such as Tunisia, Egypt and Morocco. Based on the market capitalization, the 25 largest companies, except of financial firms, were selected for each country. To study information's disclosure on the Internet, the website of each company was examined in detail between February 2018 and May 2018. The initial sample was composed of 250 listed companies. Among these firms, 241 had websites (96.4%). Four companies were excluded from the analysis because their websites were not active. Thus, our final sample was composed of 237 companies that had an active website. In order to examine the extent and the nature of information disclosed through the website, we used content analysis.

The construction of the web based disclosure index

To evaluate the website content and to study the nature and the extent of information disclosed on the Web, a disclosure index was developed.

Determining the disclosure items

The first step in constructing the disclosure index is determining the disclosed items, which are the basis to evaluate information's disclosure on the websites. To evaluate the company website, a preliminary checklist of items was developed based on the literature review on the Internet information disclosure. We analyzed several previous studies that examine the disclosure of information on the websites. These studies were conducted in different developing and emerging countries such as Turkey, Bangladesh, Malaysia, Indonesia; Jordan, Egypt, Oman and Bahrain (Celik *et al.*, 2006; Aly *et al.*, 2010; Turel, 2010; Oyelere and Kuruppu, 2012; Momany and Pillai, 2013). To include an item in this list, it must be used by at least a published previous study. This method was used by several researchers in various contexts (Hossain *et al.*, 1994; Baracko *et al.*, 2006; Aly *et al.*, 2010; Hossain *et al.*, 2012).

After determining the items that compose the preliminary checklist, the next step was the checking of the applicability of the chosen item in the MENA region context. To this end, we visited the websites of an initial sample of 50 companies and we studied the content of information disclosed on these web pages. At this stage, we eliminated from the preliminary checklist the items, which are not applicable in the MENA countries, namely the items which had never been disclosed by our sample. This step helps in ensuring the applicability of the items disclosed in the context of the study. At this level, an item would be included in the final list if only it was disclosed by at least one company in our sample. The final checklist included 71 items divided into two components: disclosure content and presentation format.

Index structure

To assess the corporate information disclosure through the websites, we have used two components: disclosure content and presentation format.

Disclosure content. In terms of **content**, this category includes 53 items divided into compulsory information and voluntary information.

Compulsory financial information. The mandatory information is the financial information required by the accounting rules and imposed by the regulatory bodies and accounting legislation. The index included 10 items whose disclosure are required by the laws in the countries of our sample. These items included mainly the financial statements, the audit report and the annual report of current year.

Voluntary information. The voluntary information refers to any information apart from the information required by the laws and accounting standards (Celik *et al.*, 2006). This category included 43 items divided into financial information and non-financial information.

Financial information. The index includes 25 attributes, which cover some financial data relating to previous years (financial statements, audit reports and annual reports) and other general financial information.

Non-financial information. The index includes 18 attributes, which represent non-financial information disclosed on the Web such as information according to corporate activities, information relating to social responsibility and information relating to corporate governance.

Presentation format. In terms of presentation format, this category includes information relating to the manner in which information is presented on the websites. This category includes 18 items divided into two parts: technological features and usability of the website.

Technological features. The index includes 10 items relating to technological features such as the forms in which financial information is presented on websites (PDF, HTML, word, Excel format), links to related sites, which help users to access an external site from the company web page (links to the stock exchange websites, links to parent or subsidiaries).

Usability of website. This component includes 8 items relating to the navigation tools used by companies to facilitate accessing the web pages for all users irrespective of their computer skills. This category includes the items: site map, internal search engines, frequently asked questions, help information. To calculate the disclosure index, we followed a dichotomous procedure by using “1” and “0”. If a company discloses an item, which is included in our final checklist, it will receive a score of one and if the company does not disclose the item, it will receive a score of zero. Thus, the disclosure index for a company is calculated as follows:

$$I_j = \sum_{i=1}^n X_{ij}$$

Where, I_j : web based disclosure index for the company j.

N: number of items incorporated in each component.

X_{ij} : 1 if the item i is disclosed by the company j and 0 otherwise.

Reliability and validity of the disclosure index

The current study developed a disclosure index, which will be used as a proxy for web based disclosure. To make sure that this index was effective, we studied its validity and its reliability.

The disclosure index will be considered valid if it measures what the researcher intended (Marston and shrives, 1991). Thus, to make sure of the index validity, we must examine if this index uses the necessary items to measure the extent of information disclosure on the website. To assess measurement validity, previous studies inspected the correlation between the disclosure index and its components (Hail, 2002).

The results of correlation tests between our built index and its components show the existence of a significant correlation between the disclosure index and most of its items.

Reliability is defined as “whether an instrument can be interpreted consistently across different situations” (Marston and Shrives, 1991). The index reliability is studied through the Cronbach’s coefficient alpha, which is a measure of inter- items correlations. Cronbach’s alpha ranges from 0 to 1. The higher the Cronbach’s alpha, the more reliable the constructed index is. In the literature, an alpha of 0.7 is considered acceptable to achieve the index reliability (Hair *et al.*, 2007).

In this study, to assess the reliability of the web based disclosure index, we used the Cronbach’s alpha. We tested the internal consistency for each of the components of our disclosure index by calculation Cronbach’s alpha for each component.

[Table 2 near here]

As indicated from table 2, the two components of our index (disclosure content and presentation format) have a high Cronbach’s alpha. Therefore, it can be stated that our two components used to measure the information disclosure on the Web are reliable.

DATA ANALYSIS AND RESULTS

Descriptive statistics of index components

To measure the extent of information disclosure through the website, we used two components: presentation format and disclosure content. The results of descriptive statistics of these components are presented in the following sections.

Descriptive statistics of presentation format

Table 3 provides descriptive statistics of the presentation format component.

[Table 3 near here]

As shown in table 3, the presentation format score ranges from a low of 2 to the highest score of 13, with an average score of 7.41 and a low standard deviation (2.335). These statistics allow us to conclude that there is no significant difference in the forms of presentation of information disclosed on the company website.

Table 4 (Appendix 1) presents the number and the percentage of sample companies that disclose each item included in the index.

[Figure1 near here]

The results presented in table 4 and figure 1 show that PDF and HTML format are the most popular formats for the purpose of presenting information on the websites in MENA countries. Thus, 84.4% of the sample companies use PDF format to present financial information on their websites, whereas, 67.9% of companies use HTML format for information disclosure on the web pages.

Furthermore, the results show that 30% of sample companies use graphs and diagrams to better explain their financial information and 34.6% of the firms use audio and video files to present financial information on their websites. Based on these findings, we can conclude that companies in MENA countries try to benefit from the unique features of the Internet and they use advanced presentation forms to disclose information on their web pages.

In addition, the companies in MENA region try to facilitate the user's access to their websites. Some tools are used to ease the use of the web pages for obtaining any type of information such as English or French version of the website (which is disclosed by 90.3% of sample companies), internal search engines (presented by 69.2% of companies) and site map (which is disclosed by 65.8% of companies). These tools help the users to surf the company website easily and to quickly get the required information.

Descriptive statistics of disclosure content

Table 5 provides the descriptive statistics of disclosure content score and its two components (compulsory and voluntary disclosure).

[Table 5 near here]

These statistics show that content score ranges from 3 (lowest score) to 40 (highest score), with an average score of 20.26 indicating a wide variation in the disclosure content on the company website (a high standard deviation of 8.593).

This variation in disclosure content can be explained by the large variation in the content of voluntary information disclosure, which ranges from a low of 3 to the highest score of 30 and a high standard deviation of 5.711, while the score of mandatory information ranges from a low of 0 to the highest value of 11 with a lower standard deviation (3.866). Thus, we can conclude

that this variation in the content of information disclosed on websites in MENA countries comes mainly from the variation in the content of voluntary information presented on the Web.

Table 6 refers to the category of information presented on company websites.

[Table 6 near here]

The statistics show that all sample companies disclose voluntary information on their web pages, whereas, only 83.5% of these companies present mandatory financial information on their websites.

These results allow us to conclude that in MENA countries, the companies use their websites mainly to disseminate voluntary information to their stakeholders.

Table 4 (Appendix1) and figure 2 show that the balance sheet of the current year is the most common mandatory information, so 99.6% of the sample companies disclose this item on their websites. In addition, 55.3% of companies disclose Income statements and 54% of these companies present the cash flow statement of current year on their websites.

Moreover, interim financial statements and quarterly financial indicators are available at more than 60% of companies' websites.

[Figure 2 near here]

Voluntary information is classified into two groups, namely financial information and non-financial information. Table 7 and figure 3 reflect the availability of these data on the company's website.

[Table 7 near here]

The results indicate that all companies present non-financial information on their websites, which represents the willingness of companies in the MENA region to disseminate this type of information to their stakeholders because of its usefulness in the decision making process.

[Figure 3 near here]

Although, the percentage of financial information disclosed on websites in the MENA region is slightly low, in fact, 87.8% of sample companies disseminate financial information on their websites.

Figure 4 shows that the most commonly disclosed voluntary financial data are past years' annual reports, which are available at 56.1% of websites and the past years' financial statements and audit reports, which are available at websites of more than half of our sample.

[Figure 4 near here]

The balance sheet is the most disclosed financial statements on companies websites in MENA countries (it is disclosed by 56.1% of companies), whereas, the cash flow statements of previous years are, the less disclosed financial statements (which are presented on 54.4% of sample websites).

Moreover, as shown in table 4 (Appendix 1), the least disclosed financial information is some financial ratios (solvency ratio, debt ratio, repayment capacity ratio and gearing ratio), which are disclosed by less than 1% of companies in the MENA region.

Regarding voluntary non-financial information, as shown in figure 5, the most common items are information on the products and services of the company, which is disclosed by 97% of companies, some information on corporate governance and corporate social responsibility, which are disclosed by about the half of companies on their web pages.

[Figure 5 near here]

As shown in table 4, the least disclosure non-financial information are information about the main concurrent (which is disclosed by 0.8% of companies), information on research and development (9.7%) and information on innovation policy (12.2%).

Comparative analysis of disclosure practices

The MENA region is characterized by a greater economic diversity because it includes at the same time rich economies such as the United Arabs Emirates, Arabia Saudi and resource- poor countries such as Tunisia, Egypt and Morocco.

Thus, the MENA countries can be divided into two regions: the North Africa and the Middle East. Our initial sample is divided into 74 companies located in the North Africa region and 163 companies located in the Middle East region.

To study the disclosure practices on websites in these two regions, we conducted comparative analysis by using comparison of means test: Student's t- test. Table 8 presents the results of the student's test.

[Table 8 near here]

Relating to the presentation component, the statistics show that the two regions have very close means. Thus, the Middle East region presents an average presentation score of 7.47, whereas, the North Africa region has an average score slightly low of 7.31.

Moreover, the results of student's test allow accepting the null hypothesis of equality of means of the two regions (p value: 0.6082). These findings allow us to affirm that there is no significant difference in the presentation format used by the companies in the MENA region to disseminate information on their web pages.

Relating to the content component, the Middle East region presents an average score of 20.98. This score is slightly higher than the average score of the North Africa region, which presents a value of 18.78. Thus, companies in the Middle East region tend to reveal more information on their websites than companies in the North Africa region. This difference in the disclosure content between the two regions is not very important, indeed, the student's test presents a p value slightly significant (p value: 0.0673).

To better understand this variability in the content of disclosure, we studied the nature of information disclosed in each region. Table 9 presents comparative analysis of disclosing information on websites.

[Table 9 near here]

The results show that, for the two regions, the levels of voluntary information disclosure (which present, a value of 15.06 for the Middle East region and a value of 14.27 for the North Africa region) largely exceed the levels of mandatory financial disclosure (which present a value of 5.92 for the Middle East region and a value of 4.51 for the North Africa region). Thus, we can conclude that companies in both regions use their websites mainly for the dissemination of voluntary information.

[Figure 6 near here]

Furthermore, the results of student's test show the existence of a significant difference in the level of mandatory information disclosed through the Web between the two regions (p value: 0.0090). Thus, as shown in figure 6, companies in the Middle East region tend to disclose more mandatory information on their web pages, than those in the North Africa region.

Relating to the voluntary disclosure, the results of student's test allow accepting the null hypothesis of equality of means of the two regions (p value: 0.3185). Thus, there is no great variation in the level of voluntary disclosure on the websites of the two regions.

To deepen analysis, we studied the types of voluntary information disclosed through the Web for both regions. Table 10 presents comparative analysis of types of voluntary information.

[Table 10 near here]

The results show that, in both regions, the levels of non-financial information are higher than the levels of financial information. Thus, companies in both regions, use their websites mainly for the diffusion of voluntary non-financial information.

In addition, the results of the comparison mean tests show that there is no significant difference between the two regions for both voluntary financial information and non-financial information.

Study of Web based disclosure practices for each country

Our sample includes 10 MENA countries. We study in the following part, the disclosure practices on websites for each country.

Table 11 refers to the analysis of the presentation score for each country.

[Table 11 near here]

The results show that Qatar has the highest presentation score with a value of 8.52, followed by Turkey with a score of 8.44. Thus, companies in these two countries get the best of the technological features of the Internet, to present information to their stakeholders.

In contrast, Jordan has the lowest presentation score with a value of 6.16. This result implies that Jordanian companies do not take advantage of the technological features of the Internet to better present their information

Regarding other countries, they have very close presentation scores. These statistics confirm our results that companies in the MENA countries use similar forms of presentation to disclose information on their websites.

Table 12 presents the analysis of the disclosure content score for each country.

[Table 12 near here]

It shows the existence of a wide variation in the disclosure content score between MENA countries. Thus, this score ranges from a low value of 10.96, which corresponds to the content score in Jordan, to a high score of 30, which corresponds to the content score in Turkey. Regarding other countries, the results show that the values of their scores content are quite far apart. Some countries have low scores as the case of Tunisia (13.29) and Bahrain (17.88) and other countries have high scores such as Qatar (24.7), Saudi Arabia (24.68) and Egypt (24.08). These results allow us to conclude that there is a great difference in the content of information disclosed by companies in the MENA countries on their websites. To better understand this variability in content disclosure, we studied the types of information disclosed on the Web by each MENA country. Table 13 presents the types of information disclosed by each country.

[Table 13 near here]

Regarding mandatory information, it is disclosed on the websites of all companies in Saudi Arabia and Turkey. In addition, this type of information is disclosed by more than 90% of companies in some countries such as Egypt, Kuwait and Qatar, whereas, mandatory information is presented on the websites of only 40% of Jordanian companies and 62.5% of Tunisian companies.

We studied in figure 7 mandatory information disclosed by each country in detail. As shown in this graph, the balance sheet of the current year is the most disclosed financial statement on the company's website in Turkey (92%), Qatar (91.3%), Egypt (76%), United Arab Emirates (69.9%) and Saudi Arabia (68%). In contrast, this financial statement is weakly disclosed on websites in Jordan (8%) and Tunisia (21.7%).

The Income statement and cash flow statement are disclosed by the same percentage as balance sheet in some countries such as Turkey, Qatar, Saudi Arabia and the United Arab Emirates. In contrast, these statements are less important in other countries such as Tunisia and Jordan; indeed, they are disclosed by a lower percentage of companies than percentage of companies disclosing balance sheet in these two countries.

[Figure 7 near here]

The audit report is the less disclosed mandatory information on the websites of companies in Turkey, Kuwait, the United Arab Emirates, Bahrain, Jordan and Morocco. In contrast, the annual report is the less disclosed mandatory information in Tunisia, Egypt, Saudi Arabia and Qatar. Relating to voluntary information, the results presented in table 13 show that all companies in Saudi Arabia and Turkey present voluntary financial information on their websites. In addition, this type of information is disclosed on the websites of more than 90% of companies in Egypt, Kuwait and Bahrain, whereas, it is presented on the websites of a low percentage of companies in Tunisia (79.2%), the United Arab Emirates (66.7%) and Jordan (64%). Moreover, voluntary non-financial information is disclosed on the web pages of all companies in all MENA countries.

CONCLUSIONS, IMPLICATIONS, LIMITATIONS AND FUTURE RESEARCH

The purpose of this paper is to investigate the practices of Web based disclosure in MENA countries and to study the extent and the nature of information disclosed on the websites.

The study was conducted in the MENA region. We examined a sample of 237 listed companies in 10 MENA countries: Tunisia, Morocco, Saudi Arabia, Bahrain, Egypt, The United Arab Emirates, Jordan, Kuwait, Qatar and Turkey. Web sites were analyzed during the period from February 2018 to May 2018.

In order to examine the extent and the nature of information disclosed through the Web, we constructed an index that measures the content and presentation of web based disclosure. It is composed of 53 items related to disclosure content and 18 items related to the presentation format. The content items show what the companies disclose on their websites. These items were developed in a manner that covers all information disseminated on the Web in the MENA region. Thus, they include 10 items of compulsory financial information and 43 items of voluntary information. The voluntary information was further sub-classified into 25 items of financial information and 18 items of non-financial information. Relating to presentation format items, they examine the disclosure advanced presentation forms and the unique features of the Web that are not available in the traditional communication means. These items include 10 items of technological features and 8 items referring to the websites usability.

The results show that firms use similar forms of presentation to disclose information on their websites. However, we detect a significant dispersion in the content of information disclosure. Moreover, the results show that 83.5% of sample companies disclose on their web pages mandatory information, whereas, 87.5% of companies present voluntary financial information through the Web.

The Balance sheet of the current year is the most common mandatory information, so 99.6% of the sample companies disclose this item on their websites. In addition, results show that the most commonly disclosed voluntary financial data are past years' annual reports, which are available at 56.1% of websites. Then, the past years' financial statements and audit reports are available at the websites of more than half of our sample.

Relating to the presentation component, there is no significant difference in the forms of presentation of information disclosed on the company website. Most companies use PDF format and HTML format in order to present financial information on their web pages. In addition, companies in the MENA region try to get the best of the technological features of the Internet, to present information to their stakeholders. They try to facilitate the user's access to their websites. Some tools are used to help the use of the web pages for obtaining any type of information such as English or French version of website, internal search engines and site map. These tools help users to surf the company website easily and to quickly get required information.

In the MENA region, there is little empirical evidence of the internet reporting practices. This paper attempts to fill some of the gap in the knowledge of these practices in this region. The results of the paper give a further understanding of the various types of information disclosed on the Web in the MENA countries. Thus, they assist stakeholders to have an idea about this practice and to cognize the different information presented in the companies websites in this region as a whole, which has not been examined before. This kind of understanding will help the various parties involved in online reporting (such auditors, investors, regulators...) to formulate policies and to adjust their visions about this practice.

The findings of the study should be of interest to regulators in the MENA region as they offer insights into the different types of information presented on the companies' websites. Therefore, regulators can take into account these different information presented on the web when formulating policies and standards about the web-based disclosure practices in this region. This study has some limitations, it uses an un-weighted index, which does not take into account the importance of the items disclosed for the different information users. Thus, future studies can deepen the analysis by examining the importance of each item in the index for the various users of the web. They can also use both un-weighted index and weighted index in order to better explain the practices of information disclosure on the websites in the Middle East region. Similarly, the study has limited to examining the web-based disclosure practices by identifying the information disclosed on the web through only a descriptive study. Future studies can investigate the online disclosure by examining the factors that might influence these practices in the MENA region such as firm's characteristics or governance variables, to better understand the web-based disclosure in this region.

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Appendix 1

Table 1: World Internet Users and 2017 Population Stats

World Regions	Population (2017 Est.)	Internet Users Dec. 31, 2000	Internet Users Latest Data Dec. 31, 2017	Penetration (%Population)	Growth 2000- 2017
<u>Africa</u>	1,287,914,329	4,514,400	453,329,534	35.2 %	9,941 %
<u>Asia</u>	4,207,588,157	114,304,000	2,023,630,194	48.1 %	1,670 %
<u>Europe</u>	827,650,849	105,096,093	704,833,752	85.2 %	570 %
<u>Latin America / Caribbean</u>	652,047,996	18,068,919	437,001,277	67.0 %	2,318 %
<u>Middle East</u>	254,438,981	3,284,800	164,037,259	64.5 %	4,893 %
<u>North America</u>	363,844,662	108,096,800	345,660,847	95.0 %	219 %
<u>Oceania / Australia</u>	41,273,454	7,620,480	28,439,277	68.9 %	273 %
<u>WORLD TOTAL</u>	7,634,758,428	360,985,492	4,156,932,140	54.4 %	1,052 %

Source: Internet World Stats: www.internetworldstats.com/stats.htm

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Table 2. Reliability tests

	Number of items	Cronbach's alpha
Content	53	0.899
Presentation	18	0.775
Disclosure Index	71	0.902

Table 3. Descriptive statistics of presentation format

1	2	N	3	Minim	4	Maxim	5	Me	6	Stand	
			um		um		an			ard deviation	
7	Presentati	8	2	9	2	10	13	11	7.4	12	2.335
	on score	37						1			
13	Technolo	14	2	15	0	16	8	17	3.8	18	1.742
	gical features	37						0			
19	Usability	20	2	21	1	22	7	23	3.6	24	1.143
	of website	37						1			

Table 4. Percentage of companies disclosing each item included in the index

Items	Number of companies that disclose item	% of companies that disclose item	% of companies that do not disclose item
I. Presentation format			
1. Technological features			
Financial data in PDF format	200	84.4%	15.6%
Financial data in HTML format	161	67.9%	32.1%
Financial data in Word format	111	4.6%	95.4%
Financial data in Excel format	11	4.6%	95.4%
English / French version of annual report	132	55.7%	44.3%
Link to The Stock Exchange Websites	69	29.1%	70.9%
Link to Parent or Subsidiary Websites	97	40.9%	59.1%
Links to other useful Websites	76	32.1%	67.9%
Graphics or Diagrams	71	30%	70%
Video or audio files	82	34.6%	65.4%
2. Usability of website			
Table of Content/Site map	156	65.8%	34.2%
English / French website	214	90.3%	9.7%
Internal Search Engines	149	69.2%	37.1%
Frequently Asked Questions	72	30.4%	69.6%
Help Information	14	5.9%	94.1%
Contact details information	236	99.6%	0.4%
Information on the date of latest website update	14	5.9%	94.1%
Websites update in the last 24 hours	5	2.1%	97.9%
II. Disclosure content			
1. Compulsory information			
Current Year Balance Sheet	236	99.6%	0.4%
Current Year Income Statement	131	55.3%	44.7%
Current Year Statement of Cash Flow	128	54%	46%

Notes to Financial Statements of Current Year	123	51.9%	48.1%
Auditor's Report of Current Year	122	51.5%	48.5%
Current year Interim financial statement	143	60.3%	39.7%
Auditor's Report of Interim financial statement	132	55.7%	44.3%
Current Year Annual Reports	128	54%	46%
Quarterly report of current year	144	60.8%	39.2%
Statement of Changes in Stockholders' Equity	56	23.6%	75.9%
2. Voluntary information			
a. Financial information			
Balance Sheet of Past Years	133	56.1%	43.9%
Income Statement of Past Years	132	55.7%	44.3%
Past Years' Statements of Cash Flow	129	54.4%	45.6%
Notes to Financial Statements of Past Years	126	53.2%	46.8%
Auditor's Report of Past Years	123	51.9%	48.1%
Interim financial statement of Past Years	122	51.5%	48.5%
Annual Reports of Past Years	133	56.1%	43.9%
Current ratio	3	1.3%	98.7%
Quick Ratio	1	0.4%	99.6%
Solvency ratio	1	0.4%	99.6%
Repayment Capacity ratio	1	0.4%	99.6%
ROE	13	5.5%	94.5%
ROA	15	6.3%	93.7%
Financial structure ratio	2	0.8%	99.2%
Fixed to worth ratio	2	0.8%	99.2%
Debt to equity ratio	5	2.1%	97.9%
Debt to total assets ratio	3	1.3%	98.7%
Number of banks with whom the company is in debt	9	3.8%	96.2%
Cash flows Coverage Ratio	2	0.8%	99.2%
Business growth: Revenue growth	38	16%	84%
Current Share Prices	96	40.5%	59.5%

Historical Share Prices	64	27%	73%
Dividend Per Share	60	25.3%	74.7%
Forward Looking Financial Statements	3	1.3%	98.7%
Forward Looking Indicators	5	2.1%	97.9%

b. Non financial information

Product & Services Information	230	97%	3%
Firm Age	197	83.1%	16.9%
Corporate Structure	46	19.4%	80.6%
Information on Corporate Strategy	117	49.4%	50.6%
Corporate Culture	105	44.3%	55.7%
Company History and Background	148	62.4%	37.6%
Information industry	24	10.1%	89.9%
Main Competitors	2	0.8%	99.2%
Environmental Policy	105	44.3%	55.7%
Human Resources	142	59.9%	40.1%
Information			
Research and Development Policy	23	9.7%	90.3%
Ownership Structure	86	36.3%	63.7%
Board of Directors' s Composition	181	76.4%	23.6%
Audit Committee's Composition	41	17.3%	82.7%
Auditor Name	29	12.2%	87.8%
Information regarding director and management	123	51.9%	48.1%
Technical resources of the company	91	38.4%	61.6%
International Activities	66	27.8%	72.2%

Table 5. Descriptive statistics of disclosure content

25		26	N	27	Minim	28	Maxim	29	Me	30	Stand
				um		um		an		ard	deviation
31	Content	32	2	33	3	34	40	35	20.	36	8.593
score		37						26			
37	Mandat	38	2	39	0	40	11	41	5.4	42	3.866
ory	financial	37						8			
information											
43	Volunta	44	2	45	3	46	30	47	14.	48	5.711
ry information		37						78			

Table 6. Category of information disclosed on websites

Category of information	Number of companies	% of sample companies
Mandatory financial information	198	83.5%
Voluntary information	237	100%

Table 7. Types of voluntary information disclosed on websites

Type of voluntary information	Number of companies	% of sample companies
Financial information	208	87.8%
Non- financial information	237	100%

Table 8. Comparative analysis of disclosure on websites

Component	Region	Number of companies	Mean	
Presentation	Middle East	163	7.4785	Student's t : -0.5134 p value : 0.6082
	North Africa	74	7.3108	
Content	Middle East	163	20.9877	Student's t : -1.8381 p value : 0.0673
	North Africa	74	18.7837	

Table 9. Comparative analysis of information disclosed on the Web

Category of information	Region	Number of companies	Mean	
Mandatory financial information	Middle East	163	5.9263	Student's t : 2.6331 p value : 0.0090
	North Africa	74	4.5135	
Voluntary information	Middle East	163	15.0674	Student's t : -0.9996

North Africa	74	14.2702	p value :	0.3185
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Tables 10. Comparative analysis of types of voluntary information disclosed on the Web

Voluntary information	Region	Number of companies	Mean	
Financial information	Middle East	163	5.8036	Student's t : -0.9671
	North Africa	74	5.2702	p value : 0.3345
Non-financial information	Middle East	163	9.2699	Student's t : -0.6212
	North Africa	74	9	p value : 0.5350

Table 11. Presentation score for each country

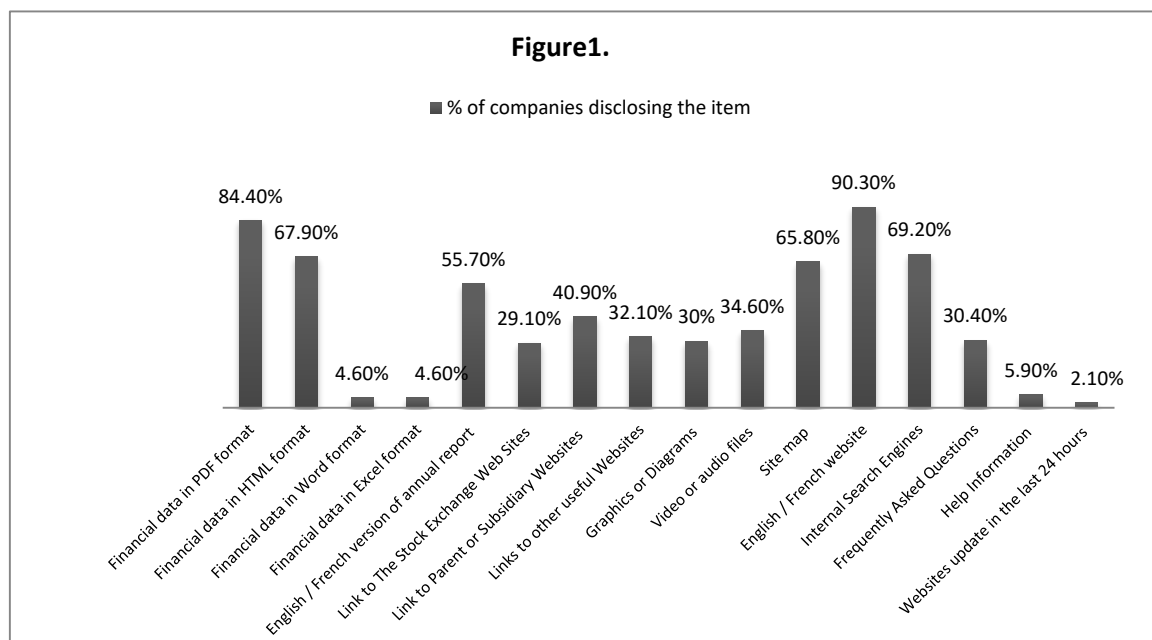
Country	Average score
Qatar	8.52
Turkey	8.44
Morocco	7.87
Kuwait	7.70
Saudi Arabia	7.68
Egypt	7.32
United Arab Emirates	7.17
Tunisia	6.92
Bahrain	6.47
Jordan	6.16

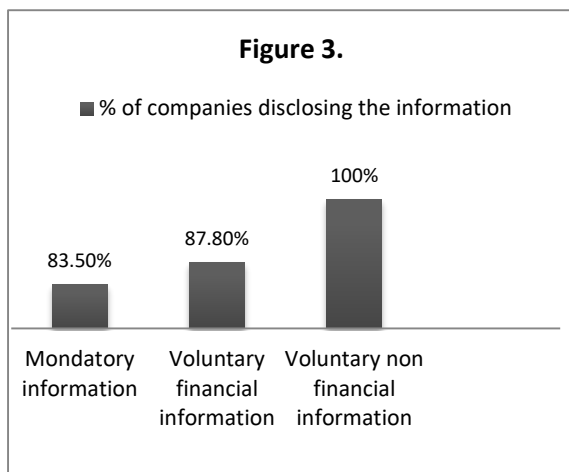
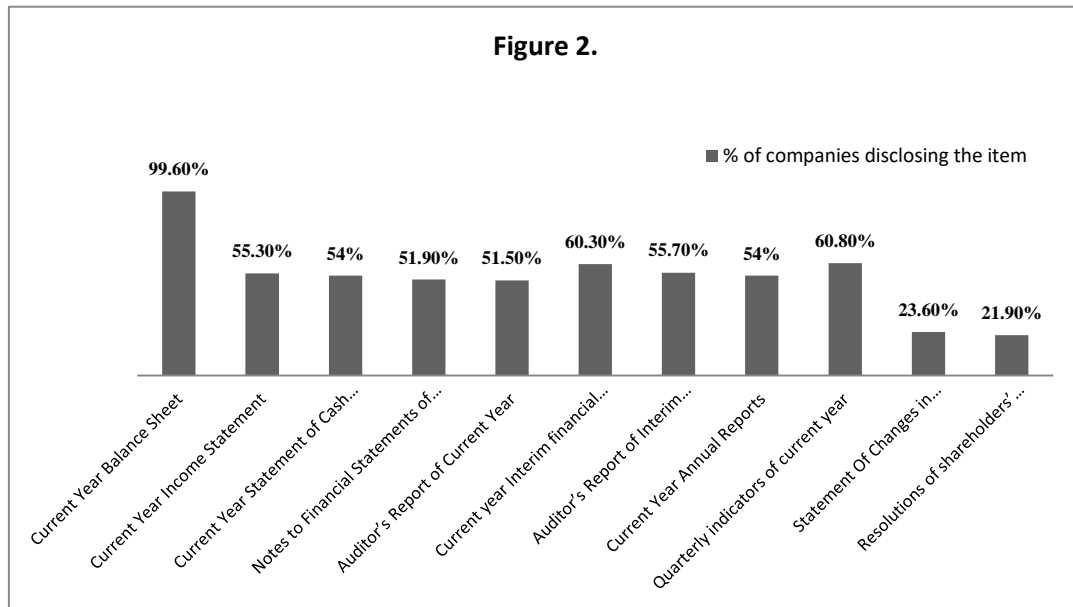
Table 12. Content score for each country

Country	Average score
Turkey	30.00
Qatar	24.70
Saudi Arabia	24.68
Egypt	24.08
Morocco	19.26
Kuwait	19.13
United Arab Emirates	18.29
Bahrain	17.88
Tunisia	13.29
Jordan	10.96

Table 13. Types of information disclosed by each country

Countries	% of companies disclosing information		
	Mandatory financial information	Voluntary financial information	Voluntary non-financial information
Tunisia	62.5%	79.2%	100%
Morocco	76%	84%	100%
Egypt	96%	96%	100%
Jordan	40%	64%	100%
Saudi Arabia	100%	100%	100%
Bahrain	88.2%	94.1%	100%
United Arab Emirates	75%	66.7%	100%
Kuwait	95.8%	95.8%	100%
Qatar	95.7%	95.7%	100%
Turkey	100%	100%	100%





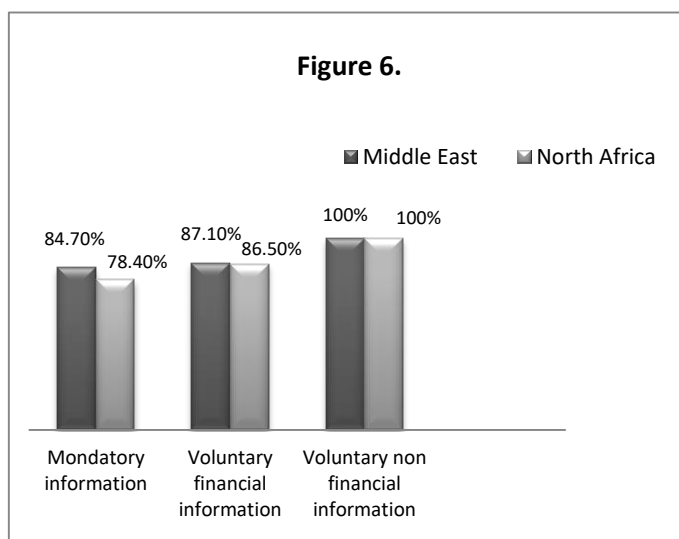
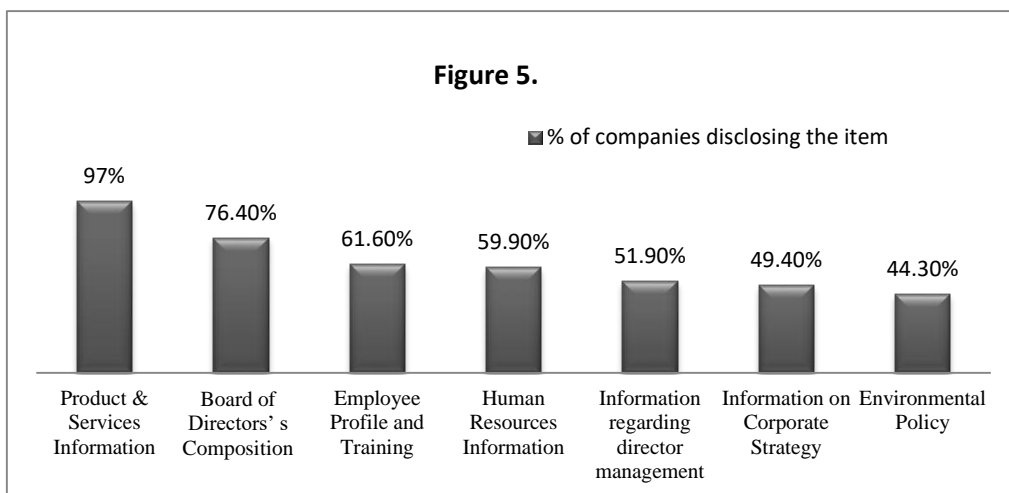
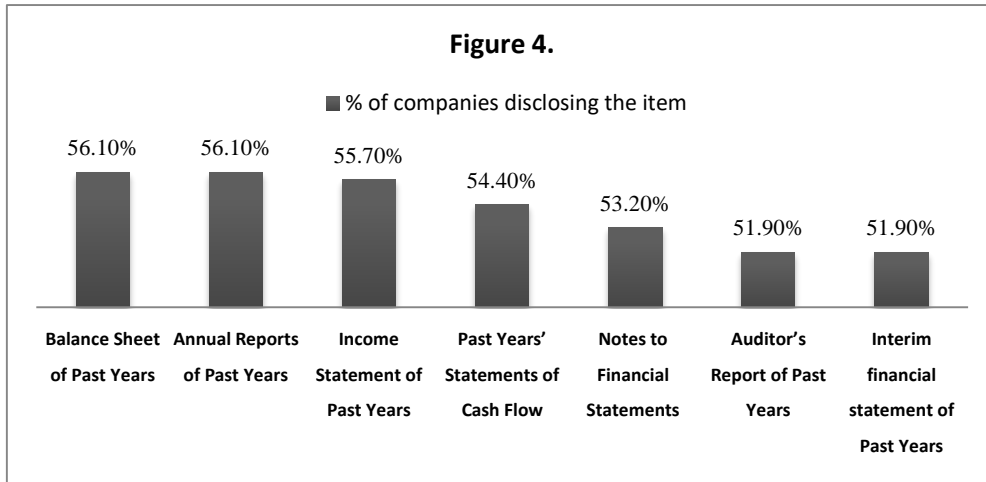


Figure 7.

