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Evaluating the impact of institutional logic on the corporate Internet reporting by Egyptian listed companies

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EVALUATING THE IMPACT OF INSTITUTIONAL LOGIC ON The CORPORATE INTERNET REPORTING BY EGYPTIAN LISTED COMPANIES:

AN INTEGRATED APPROACH

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Evaluating the Impact of Institutional Logic on The Corporate Internet Reporting by Egyptian listed Companies: An Integrated Approach

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Abstract

This study explores the institutional logic(s) governing the Corporate Internet Reporting (CIR) by Egyptian listed companies. In doing so, a mixed methods approach was followed. The qualitative part seeks to understand the perceptions, believes, values, norms, that are commonly shared by Egyptian companies which engaged in these practices. Consequently, seven cases of large listed Egyptian companies operating in different industries have been examined. Other stakeholders and stockholders have been interviewed in conjunction with these cases. The quantitative part consists of two studies. The first one is descriptive aiming to specify whether the induced logic(s) from the seven cases are commonly embraced by other Egyptian companies. The second study is explanatory aiming to investigate the impact of several institutional and economic factors on the extent of CIR, types of the online information, quality of the websites as well as the Internet facilities.

Drawing on prior CIR literature, four potential types of logics could be inferred: efficiency, legitimacy, technical and marketing based logics. In Egypt, legitimacy logic was initially embraced in the earlier years after the Internet inception. latter, companies confronted radical challenges in their internal and external environments which impelled them to raise their websites potentialities to defend their competitive position; either domestically or internationally. Thus, two new logics emphasizing marketing and technical perspectives have emerged, in response. Strikingly, efficiency based logic is not the most prevalent logic driving CIR practices in Egypt as in the developed countries. The empirical results support this observation and show that almost half of Egyptian listed companies 115 as on December 2010 possessed an active website, half of them 62 disclosed part of their financial and accounting information, during December 2010 to February 2011. Less than half of the websites 52 offered latest annual financial statements. Fewer 33(29%) websites provided shareholders and stock information or included a separate section for corporate governance 25 (22%) compared to 50 (44%) possessing a section for news or press releases. Additionally, the variations in CIR practices, as well as timeliness and credibility were also evident even at industrial level. After controlling for firm size, profitability, leverage, liquidity, competition and growth, it was realized that industrial companies and those facing little competition tend to disclose less. In contrast, management size, foreign investors, foreign listing, dispersion of shareholders and firm size provided significant and positive impact individually or collectively. In contrast, neither audit firm, nor most of performance indicators (i.e. profitability, leverage, and liquidity) did exert an influence on the CIR practices. Thus, it is suggested that CIR practices are loosely institutionalised in Egypt, which necessitates issuing several regulative and processional rules to raise the quality attributes of Egyptian websites, especially, timeliness and credibility. Beside, this study highlights the potency of assessing the impact of institutional logic on CIR practices and suggests paying equal attention to the institutional and economic factors when comparing the CIR practices over time or across different institutional environments in the future.

Keywords: Neo-institutional theory, Corporate Internet Reporting, Institutional logic, Agency theory, Institutional logic.

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Chapter 1: Introduction

1.1 Research background

The revolution of Information and Communication Technology (ICT) and World Wide Web (www) have overtly contributed in expanding and advancing business and social communications (Blatchford, 1997). Specifically, at earlier stages of the Internet inception, public relations and social communication have gained much attention (White and Raman, 2000). Over the time, the Internet was promoted as the most popular and efficient social network used in both commercial and non-commercial communications (Craven and Marston,1999; Oyelere et al., 2000; Debreceny et al., 2002; Jones and Xiao, 2004). Thus, communications have becom easier, faster and broader through different portals such as electronic mails (e-mail), online conference calls or informal chats using Internet telephony or broadband telephonoy services which known as (VoIP)[1]. These synergies made the Internet the prime platform for many business transactions, particularly in the developed countries (Abell and Lim, 1996; Deller et al., 1999; Craven and Marston, 1999; Hedlin, 1999; Ashbaugh et al., 1999; Hurtt et al., 2001; Beattie and Pratt, 2003; Oyelere et al., 2003; Lymer and Debreceny, 2003; Abdelsalam et al., 2007) where the Internet is used intensively.

Hence, current study is looking at one of the many activities that the Internet is used to perform which is the online corporate disclosure or what is commonly known as Corporate Internet Reporting (CIR) practices. These practices incorporate different disclosure, presentation and communication techniques that are used to display corporate information online. A large number of studied, since nineties of last century, has sought to measure extent of these practices worldwide. Some scholars studied these practices in a single country such as USA (Ashbaugh et al., 1999; Ettredge et al., 2001) or for some European countries like Ireland (Brennan and Hourigan, 2000; Abdelsalam and El Masry, 2008), UK (Marston,1996; Lymer, 1998; Craven and Marston, 1999; Abdelsalam et al., 2007), Germany (Marston and Polei, 2004), Spain (Gowthrope and Amat, 1999; Gandı'a, 2008), New Zealand (Oyelere et al., 2003; Abell and Lim, 1996), Austria (Pirchegger, 1999) and Netherland (Lybaert, 2002).

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[1] Voice over IP (VoIP) commonly refers to the communication protocols, technologies, methodologies, and transmission techniques involved in the delivery of voice communications and multimedia sessions over Internet Protocol (IP) networks, such as the Internet. Skype calling services is an example of such service (Wikipedia: http://en.wikipedia.org/wiki/Voice_over_IP).

Others focused on Asian countries such as Malysia (Hamid 2005), Bangladesh (Bhuiyan et al., 2007), China (Xiao et al., 2004), Indonesia (Budisusetyo and Almilia, 2008, Almilia, 2009), Japan (Marston, 2003). More scholars examined these practices in a number of Arabian countries, such as Gulf Cooperation Council (GCC) countries (Ismail, 2002), Bahrain (Mohamed and Oyelere, 2008) and Egypt (Ezt and El-Masry, 2008; Desoky, 2009; Aly et al., 2010; Elsayed et al, 2010).

Another group of scholars measured and compared the level of CIR practices across various countries such as European countries (Geerings et al., 2003; Bonsón and Escobar, 2006), UK and Finland (Lymer and Tallberg, 1997), Malaysia and Singapore (Khadaroo, 2005), or across USA, UK and Germany (Deller et al., 1999).

These studies, at large, describes what was disclosed on the corporate website and how this disclosed information appear on the Internet. Another scholars extended this line of research by examining the significant factors that motivate publicly listed companies to disclose their financial and non-financial information online. Yet, these studies did not explicate how the CIR process itself was implemented. Very few of them are exposed to the participants who usually take part in this process. Ettredge et al. (2002) investigated the attitudes of investor relations (hereafter IR) managers in six large US companies in respect of being involved in IFR. Likewise, Gowthrope (2004) investigated the role of senior officers in small size UK companies. The current study attempts to extend the CIR research, particularly in developing countries by looking at these practices from the institutional end economic perspectives. This requires understanding the institutional logic that dominates the CIR practices and which dictates what, when and how the corporate information are disclosed on the Internet. Essentially, this study pursues to identify the nature of this unknown logic at different institutional levels

First of all, this logic will be examined at organizational level by examining multiple cases. Further examinations will be undertaken to determine whether the induced logic(s) is/are pervasive at higher institutional levels such as industrial sectors level and Egyptian stock exchange level. Identifying the nature of institutional logic underpinning the CIR practices deems essential in determining whether publicly listed Egyptian companies are using the Internet in the same sense of the developed countries. Accordingly, both economic and social theories (i.e. neo-institutional theory) will be incorporated. Incorporating social perspective extends CIR research by investigating the institutional pressures and social actors impact on these practices. The complexity of the institutional environments as well as the limited resources devoted for this study make incorporating other countries in the same study impractical option. However, this study could be replicated in the future in other analogous countries.

Essentially, the controversial dispute between institutional theory and economic theories in interpreting organization behaviour will be redressed in this study by integrating these theories together. Basically, neo-institutional theory, posits that organizations in the same institutional environment are normally exposed to three types of institutional pressures and they are cognition, norms and coercive regulations (DiMaggio and Powell, 1983). Organizations need to conform with these institutional pressures to be viewed as legitimate and to assure sustainability and to secure resources. This would propel these organizations to embrace analogous (i.e. isomorphic) patterns of behaviour resembling those undertaken by their peers and rivals operating in the same institutional environment. This theory was highly supported in the eighties of last century. However, number of scholars had contested this view lately. These scholars accepted the notion of the institutional pressures but they contested the postulations of stability and isomorphism (Royston and Hinings, 1996; Kondra and Hinings, 1998; Royston et al., 2002; Lounsbury, 2008).

The controversial debate between institutionalists and economists is basically rest on their perception of rationality. Early institutionalists, who are mostly sociologists, challenged the classic economic rationality which is grounded in the ultimate utility maximization proposition. Alternatively, they suggest that individuals are not necessarily rational while pursuing their interests. Nevertheless, another group of institutionalists relatively opposed this view and suggest that organizations may act according to different levels of rationality. Their proposed spectrum of rationality starts with irrationality (supported by sociologists), then bounded rationality (supported by institutional economists) and ends with ultimate rationality (Kondra and Hinings, 1998; Dacin et al., 2002; Lounsbury, 2007). For instance, Martinez and Dacin (1999) compared two theories that represent the economics' view and socialogests' view of rationality by explaining that Transaction Cost Economies (TCE) approach focuses explicitly on action as purposive and rational. Meanwhile, institutional theory focuses more on the social part of organizational behaviour and recognizes the limits imposed by social constraints on a purely economic rationale. Hence, the researchers argued that TCE approach ignores some factors that might influence firm success such as government involvement, tax laws, competitive dynamics, socio-cultural norms and belief systems. Importantly, over emphasizing rationality, or even bounded rationality from a TCE view, neglects the complexities of markets or hierarchies (Martinez and Dacin, 1999). Unlike economic theories, neo-institutionalism does not count for efficiency, instead it counts more for the institutions that may restrict the ability to operate efficiently. In their own words, Tuttle and Dillard (2007:388) states that:

> " the institutional theory allows us to look beyond economic forces to understand more completely the evolution of systems and their enabling and constraining influences on actors within these systems".

The latest strand of neo-institutionalism trusts that organizations interact with their external environment not only by creating isomorphic structure but also by creating even new brand institutions or by modifying the present institutions (Oliver,1991,1992,1997; Sundabby, 2010; Yang and Konrad, 2011). They called for understanding the sensibility underpinning the organization's behaviour which justifies the attitude of its behaviour (e,g. economic wise versus social wise). Friedland and Alford (1991) used the notion of institutional logic to express this sensibility. Townley (1997) argues that institutional logic allows for issues of legitimacy in the diffusion of institutional practices by taking into consideration different models of organizational functioning and accountability. Recently, more researchers discussed the role of "Human agency" and "Interests" as fundamental constructs of the institutional logic and sources of variations in organizational performance. These two constructs were taken for granted in the early writings on the institutional theory (Colomy, 1998; Beckert, 1999; Seo and Creed, 2002; Battilana, 2006). Unlike early institutionalists, it is argued that emergence of different logics might result in conflicting organizational behaviour instead of isomorphic behaviour (Seo and Creed, 2002, Reay and Hinings, 2009). This line of thinking may help in interpreting the noticeable variations in the accounting and financial information provision presented on the websites of the Egyptian listed companies.

Accordingly, to understand the nature of the institutional logic governing CIR practices in the Egyptian companies, a framework has been proposed in Chapter Four. It incorporates different economic, governance, technical and institutional theories representing alternative logics that might be embraced by companies exercising CIR practices. Hence, it is suggested that to assess the usefulness of a corporate website, it is vital to understand the logic dominating this website. To do so, the researcher investigates the logic which is embraced by 115 listed Egyptian companies during the period December 2010- February 2011. Afterwards, the researcher proceeds by indentifying the factors that significantly contribute to the changes in the total CIR level, the investor information level, the Internet usage level as well as the quality attributes of the websites. These factors are based on economic, governance and institutional theories and are expected to participate in formulating the dominant logic.

1.2 Why Egypt?

Egypt is selected as a core setting of this study for three main reasons. The expansion in the usage of the Internet and other ICT has commenced globally as early as 1990s. Thus, many developing countries including Egypt (El-Nawawy, 2000)[1] took advantage of the Internet technology in order to improve and facilitate their productivity and economic conditions

[1] http://www.isoc.org/inet2000/cdproceedings/8d/8d_3.htm

(Wallsten, 2003). The Egyptian government represented by the Egyptian Cabinet Information and Decision Support Centre (IDSC) was the one that introduced this advent to the Egyptian community. The aim was to attain more liberalization in the telecommunication sector. Consequently, the government of Egypt has established a new ministry to support the information and communication industry Latter, It was known as the Ministry of Communication and Information Technology (MCIT). This ministry succeeded in expanding the Internet infrastructure to cover most of the Egyptian governorates. Despite the weak penetration rate of the Internet related to the population size, Egypt is the has the largest absolute number of Internet users compared to other neighbour countries. This number is constantly increasing annually, yet is largely directed towards social activities rather than to business. For instance, the number of Internet users rose from only 0.58 per cent in 1999 to more than quarter of the Egyptian population 32.96 per cent as in 2011[1]. Besides, the proportion of household using the Internet has increased from 23.96 per cent in 2008 to 30.15 per cent in 2010. In the business field, 83 per cent of business firms used the Internet for sending and receiving e-mails, 70 per cent for displaying product or service information online, and 47.31 per cent for customer service as in 2009. In respect of the government sector, the numbers of organizations using computer in office considerably rose from only 4.4% in 2007 to almost 67% in 2009. This indicates that around one third of the governmental organizations are still not using computers in the business operations. This is also proved by MCIT indicators which revealed that the Internet usage is made by households aged 25 to 65 years for downloading songs and videos, communication and looking for information related to health[2]. Despite the intensive usage by the Egyptian citizens, It is still unclear why most of Egyptian companies are apprehensive to use the Internet to improve their disclosure practices.

Secondly, companies in Egypt confronts many financial and non-financial deterrents (i.e. social, culture, political) that may contribute in hindering the progress in the business usage of the Internet such as lack of trust, lack of legal clarity, lack in computer and Internet literacy as well as lack in English literacy (Abdulla, 2009). These deterrents can also be found in other developing countries. Thus, the findings of this study could also be applicable to these countries.

The third motive to chose Egypt is the lack of academic and professional research that were conducted on Egypt case. Prior relater research on Egypt has entirely focused on measuring

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[1] These indicators are available on http://www.new.egyptictindicators.gov.eg/ara/_layouts/Viewer_ar.aspx?id=429,accessed at 18th March,2012.

[2] These indicators and more have been provided in Chapter Three.

the information provision provided by the Egyptian companies on the Internet (i.e. ; Ezat and El-Masry, 2008; Desoky 2009; Elsayed et al. 2010; Aly et al. 2010). Part of this research attempted to examine the impact of economic factors or corporate governance (Elsayed et al. 2010) on the online disclose level for some Egyptian companies(Desoky 2009; Aly et al. 2010). Yet, there is a lack in studies investigating the impact of institutional pressures such as social, culture, regulative, professionalism on either CIR practices or the embedness of advanced Internet features. As a result, there is a great need for more research in this regard. The outcomes may also be extendable to other countries in the neighbourhood which are subject to similar institutional pressures .

1.3 Research importance and motivations

As discussed earlier, the current study pursues to identify the logic embraced by Egyptian companies which opt to disclose their financial and non-financial information on the Internet. Also it attempts to find out whether this logic has been popularly adopted by other companies listed on the Egyptian stock exchange. To reach this understanding, the current study would explore the whole system underpinning the CIR practices including its constructs i.e. the participating individuals, the implemented procedures, and information content of the website. Identifying the procedures that are performed to transfer the corporate information from inside the organization up to the website, in addition to the individuals who directly or indirectly involved in this process are crucial issues that have not been investigated before, especially in Egypt. Therefore, to our knowledge, this study is the first to address the CIR practices through applying the system approach.

Hitherto, there no regulations, guidelines, or agreed upon principles have been released in Egypt to discipline the current CIR practices. More importantly, the logic embraced by the Egyptian companies while developing and maintaining their websites, in that unregulated environment is still blurred. Understanding this logic is useful for several reasons. First, to interpret the manifest diversity in the corporate CIR practices in both the quality and quantity terms. Secondly, to set pertinent regulations that match or instruct the embraced logic and assure higher compliance and less resistance to these prospective regulations. Finally, to decide upon more appropriate disclosure and presentation mechanisms in order to advance the CIR practices and to guarantee higher level of harmonization across the Egyptian corporate websites.

Though some researchers emphasized the importance of the institutional environment (e.g. legal system and culture) to the extent and quality of CIR practices (Ashbaugh et al., 1999; Beatty et al., 2001; Kent et al., 2003; Gowthorpe, 2004; Xiao, et al., 2004). Research in the developing countries, specifically in Egypt, did not count for the role of institutional environment in respect of the CIR context and this has motivated the researcher to extend the CIR research in of the developing countries by exploring the impact of the institutional environment on the usage of the Internet in advancing the corporate business reporting practices.

1.4 Purposes and objectives of the study

The general purpose of this study is to identify the institutional logic/logics that is widely embraced by the Egyptian listed companies and to determine how this logic affects the extent and quality of CIR practices. Consequently, this study is designed to be conducted at sequential stages; case studies and interviews followed by descriptive and explanatory studies. Hence, the research objectives, questions and methods have been developed to serve match each stage individually. Each stage is designed to fulfil certain group of objectives.

A first stage, the researcher explores the nature of the institutional logic that dominates the CIR practices at organizational level. This stage commenced in February 2009 and ended in December 2009. There are three sub-objectives to attain at this stage. First, to explore the institutional logic that was embraced by seven large listed Egyptian companies, to understand the factors that constituted this logic and whether this logic has changed over the years. In conjunction, the researcher sought to know how changes in the embraced logic have influenced the corporate website and CIR practices.

The second sub-objective is to understand the main procedures related to the CIR process. This will enable to determine who is dominating the website development and maintenance processes inside or even outside the organization firm. The researcher will also try to understand the attitudes, perceptions, role of the dominator party in this respect.

The third sub-objective is to understand the role and perceptions of the corporate stockholders such as potential and current individual investors and other stakeholders such as financial analysts, auditors, website developers, and IT experts, along with the Egyptian stock exchange. The researcher would try to understand whether these parties have involved in the CIR process at first place. Then, whether they exert any powerful impact over the companies to disclose their information in a certain way.

The subsequent stage incorporates the quantitative study. This primly aims to assess how the identified logic(s), as induced from the previous stage, is/are reflected in the website information content. The sub-objectives that will be pursued at this stage are as follows. The first and second objectives are attained by measuring and describing the extent of CIR practices and other quality attributes in addition to the usage of Internet facilities for 115 Egyptian corporate websites. This number represents the entire population of accessible websites owned by publicly listed Egyptian companies during the period under investigation.. Particularly, at this stage the investigation will address the following aspects.

- The extent of CIR practices and the other sub-indices representing the quality attributes of the websites namely; timeliness, usability, credibility and general content .
- The comprehensiveness of the investor relations information by investigating the amount of information provided related to six sets of investor relations (IRs) information which are annual financial statements/reports, interim reports, auditor's report, corporate governance and corporate social responsibility, shareholders and stock price information in addition to news and press releases.
- The Internet usage. This also incorporates treating the Internet facilities and multimedia independently. This influence will be tested at the level of the entire sample and at the level of industry sectors.

The final sub-objective necessitate determining whether the implemented CIR practices are isomorphic at the EGX and industrial sectors levels, in respect of the above mentioned aspects. This stage would indicate whether the institutional logic embraced by companies under examination has also been reflected in the websites of the entire 115 websites. This will be investigated by comparing the results of the descriptive study with driven expectations from the case studies.

The explanatory study constitute the remaining part of the quantitative study. The main objective for this stage is to identify the significant variables that affect extent of the CIR disclosures on the Egyptian corporate websites and the quality attributes of these websites. In conjunction, the researcher will try to identify the significant factors affecting the comprehensiveness of the investor relations information or those related the Internet facilities and multimedia. Thus, the following sub-objectives need to be attained:

First, examining the association between the independent variables and dependent variables that consist of the total score of the CIR practices and the sub-indices of the quality attributes, the investor relations information and the Internet usage.

Secondly, determining the most significant variables that exert an impact on the quality, and quantity aspects of the corporate website in addition to the investor relations information and the usage of the Internet and determining whether these variables can explain the changes in these aspects after controlling for several firm characteristics.

Thirdly, determining whether the significant factors are more related to the conventional economic theories such as agency and corporate governance theories or related to the institutional and marketing theories as suggested in the theoretical framework. The outcome of this stage would enable to determine which of the proposed theories are more prevalent to predict changes either in the level of the CIR disclosure or in the disclosure level of each information type whether this disclosure is related to financial/accounting information or to technical features.

1.5 Research questions

This study is accomplished through conducting three studies organized in three sequential stages. These studies are highly interrelated and aim, in total, to accumulate sufficient and triangulated evidence. However, each stage of this study has been designed to cover separate questions. These questions will be presented and elaborated as follows.

The first stage contains an exploratory study which primarily seeks to identify the nature of the institutional logic adopted by large listed Egyptian companies. This stage incorporates the qualitative study an seeks to address the following research questions:

Q1. What is the institutional logic(s) that shape and govern the CIR practices as carried out by Egyptian listed companies?

In order to answer this question, other sub-questions need to be answered as well:

- Q1.a How large listed Egyptian companies perceive the Internet and the current CIR practices?
- Q1.b What are the procedures followed by Egyptian companies to disclose and present their business information on the Internet (i.e. corporate website)?
- Q1.c Who participated in the CIR process and in the development of the corporate website, in general? In other words, who dominates the CIR process inside the organization?

During the course of the interviews, the researcher realized that some companies tend to incorporate other external parties in developing or maintaining their websites. Indeed these participants constitute a key part of the external institutional environment and who may represent one form of the institutional pressures. Consequently, another group of questions have been developed at this stage.

Q1.d Which external participant(s) are involved in CIR practices and in the development of the corporate website?

Q1.e To what extent these participants are involved in developing and maintaining the CIR practices?

Q1.f How do the external participants perceive the legitimate CIR practices?

At a second stage, a descriptive study will be conducted to measure the extent of CIR practices in total and to assess the level of four specific qualitative attributes of the CIR practices, namely: timeliness, usability, credibility and general content. In addition, the comprehensiveness of six main types of investor relations information will be examined and they are annual financial statements, interim reports, auditor's report, corporate governance, shareholders /stock price information and finally news / press releases.

Unlike most of prior CIR research, the statistical tests of the Internet facilities and multimedia will be separated from those related to the accounting and financial information. Furthermore, the researcher will try to assess whether Egyptian listed companies are following a legitimate disclosure pattern that distinguish CIR practices. In other words, it is essential to find out whether the implemented CIR practices are isomorphic at industrial sectors level or at the Egyptian stock exchange level at large. Accordingly, the following research questions will be investigated at this stage:

Q1: To what extent the CIR practices are adopted by Egyptian listed companies?

Q2: Which aspects of the adopted CIR practices are more advanced?

Q3: To what extent the CIR practices are isomorphic at Egyptian stock market level and industrial sectors level?

In aggregation with the previous two studies, an explanatory study will be conducted to supplement previously collected evidence and to identify the most significant factors influencing the CIR practices. At this stage, the researcher attempts to identify the dominant factors that have the most predictive power on the CIR practices in total on one side and the information content and Internet facilities on the other. Besides, the factors that has a significant impact on the timeliness, usability, credibility and general content of the Egyptian corporate websites will be investigated. Therefore, the following research questions need to be addressed:

Q1: Which pressures, economic or institutional, impose more impact on the quantitative and qualitative attributes of the CIR practices of Egyptian listed companies?

This question can be further broken down into the following sub-questions:

Q1.1 Which factors impose substantial impact on the total CIR disclosure level and the website's qualitative attributes?

Q1.2 Which factors impose substantial impact on the general characteristics of the website, including the IR/financial section and on the usage of the Internet facilities and multimedia?

Q1.3 Which factors impost substantial impact on the disclosure of the investor relations information?

A Spearman correlation coefficients and multiple regression analysis are used to get robust answers on the above questions. The developed hypotheses are grounded in economic theories represented by the ownership and governance related variables and institutional theory represented by industry type, international exposure and audit firm impact. These hypotheses examine the proposed impact that each group of these independent variables may exert on three main disclosure indices which are the total CIR disclosure index, the comprehensiveness of IR information index and the Internet usage index. The CIR index has been further divided into four quality attributes indices which are Timeliness index, Usability index, Credibility index and General contents index. These attributes have been tested in other developed countries (e.g. UK), therefore assessing these attributes for Egyptian companies will enable to assess to what extent the CIR and the website features in over all are advanced in the Egyptian companies. In addition, two more indices representing the general features of the entire website and the IR/financial section have been formed as well. These features describe main features that are related neither to the type of disclosed information nor to the embedded Internet facilities. The structure of these disclosure indices has been thoroughly elaborated in Chapter Seven.

1.6 Research methods

In an effort to fulfil the research purpose and objectives and to get an adequate answers to the various research questions, the researcher embraced the mixed methods approach. This approach entails combining the techniques of both qualitative and quantitative approaches in a purposeful order (Mason, 2006; Moran-Ellis et al., 2006; Abowitz and Toole, 2010). In part, the qualitative approach assists in developing better and in-depth understanding about the underlying phenomenon (Mary and Meyer, 1995; Strauss and Corbin, 1998; Creswell and Miller, 2000). Thus, this approach entails employing several methods to collect sufficient data related to the cases under investigation. Accordingly, the researcher used multiple case study method to understand the implicit logic presumed to influence the companies' decision. Therefore, the researcher collected various evidence such as semi-structured interviews, notes and observations obtained from recent and old website versions and documents in hard or softcopy format (e-mails). Furthermore, the researcher interviewed several groups of internal and external participants in the CIR process. Consequently, several questions have been developed and directed to different groups of external participants to understand their experience, role, perception about the Internet usage in Egypt, in general, and in the underlying context in particular. The collected qualitative data has been analysed using NVivo8 software to increase the reliability and consistency of both coding and themes developing processes. The collected qualitative data has been triangulated by referring to multiple resources of documents such as past versions of the corporate website, asking same questions to several participants in addition to examining other hard copy documents, if available.

Regarding the quantitative approach, the researcher statistically measured the contents of 115 websites represent the population of accessible websites of publicly listed Egyptian companies between December 2010 and February 2011. Indeed, this approach is based on quantifying the CIR practices content and assessing its quality in terms of timeliness, credibility, usability, and general content. In addition, extra analysis was conducted by analyzing the website information content according to the type of information. Therefore, the researcher divided the information content to general characteristics of the website and investor relations (IR) section, the investor relations information and the Internet usage (multimedia and communication facilities). The explanatory study is designed to verify and complement the previously collected evidence by identifying which factors are significantly contribute to the changes in the CIR main and sub-indices. Thus, this study will be accomplished through conducting through undertaking several statistical tests suck as bivariate and multiple regression tests.

1.7 Proposed contribution

The pursued contribution of this study is three fold. First, the majority of prior CIR research exclusively focuses on the corporate website information content. As result this research ended up with inconclusive or inconsistent justifications. Indeed, this content only represents a part of a whole unknown information system that implicitly exists to generate that content. Therefore, this study has employed an integrated approach which is used in the field of information systems and known as“systems approach”. According to this approach, the CIR would be perceived as a sort of information system rather than pieces of information. A system, whether it is natural or artificial, is usually composed of related elements collaborating together to attain specific goals and it is surrounded by an environment which it interacts with (Bocij et al, 2008). This approach will be further discussed in Chapter Six. Primarily, the systems approach spots more lights on the constructs that operate together to shape the corporate website in the way it appears on the Internet. It also helps in obtaining more competent interpretations regarding the manifest disparity in the CIR practices across the Egyptian corporate websites. This approach deems relevant to the nature of qualitative-interpretive research as it depends on collecting more evidence to support a generated theory, especially when the complexity of phenomena requires data from a large number of perspectives (Sale et al., 2002). This comprehensive approach will also enable the researcher to identify the institutional logic that is generated inside the company and which is expected to govern and shape CIR practices.

The second contribution of this study is based on applying neo-institutional theory strands to the CIR context. Prior CIR research constantly counted on conventional corporate disclosure theories such as agency, signalling and cost benefit analysis (Bonsón and Escobar, 2002) emphasize the economic indicators most (Ashbaugh et al., 1999; Craven and Marston, 1999; Hedlin, 1999; Geerings et al., 2003; Marston and Polei, 2004; Khadaroo, 2005; Momany and Al-Shorman, 2006; Abdelsalam et al., 2007) and hence did not pay enough attention to many social and culture factors. Therefore, the current study will investigate the most triggering institutional pressures that confront the Egyptian listed companies by counting for both economic and social based theories. In conjunction, the researcher would try to identify which group of stakeholders (i.e. participants) impose more pressure on the companies to improve their CIR practices.

The third contribution will be attained through conducting more detailed analysis on the website information content. This analysis distinguishes between qualitative and quantitative aspects from one side and segregates data and information related to the financial and accounting issues and those related to the usage of the Internet technology, on the other side. This distinction would help in illustrating which of these aspects can be attributed to the managers' decisions and which could be attributed to other participants. Additionally, the explanatory study contributes to the corporate voluntary theories by probing some variables that were induced by the case studies which have never been covered in the research on the Egyptian companies before namely; management size and international exposure impact. Essentially, part of these new variables has been generated from the findings of the qualitative study. Other variables such as audit impact, industry type, ownership and governance mechanisms have been examined but from different angles.

1.8 Thesis structure

Chapter 1 This is an introductory chapter and thus it provides a broad view about the underlying research context. Besides, it discusses how the researcher will interpret the manifest disparity in the CIR practices by incorporating different theoretical perspectives that put both the economic and institutional theories at two frontiers. It also illustrates why the researcher opts to investigate the CIR practices in Egypt, in particular. The main research purpose, questions and adopted methods have also been clearly demonstrated. Furthermore, the proposed contribution of the current study in respect of the CIR literature or the employed methodology have been explicated. This chapter has also provided a brief description for each single chapter included in this thesis.

Chapter 2 This chapter provides a general knowledge about the CIR as the main context of this study. Basically, it defines the CIR practices and demonstrates how they have been adopted globally by an enormous number of companies. In conjunction, it presents the various research approaches which have been consistently used in prior research. This chapter also elucidates the role of many accounting and financial institutions which played an influential role in some developed countries such as USA. UK , Germany and others in an attempt to set well a establish institutional environment for these practices. At the end, the researcher highlights some gaps in the literature that the current study will try to address.

Chapter 3 This chapter is designed to demonstrates the institutional environment that accommodates the current CIR practices in Egypt by looking at social, political and economic factors that were pervasive since the appearance of the Internet technology in the nineties of last century. It also elucidates the historical development in the Information and Communication Technology (ICT) in general and the Internet in particular during the period 1995-2010. Some statistics of the Internet usage in Egypt was provided. These statistics measure the current Internet usage for the Egyptian community, business units as well as for governmental units. It also elaborates how this usage was allocated on daily activities. In addition, challenges and obstacles that may confront the diffusion and exploitation of the Internet in the business domain are also discussed.

Chapter 4 This chapter illustrates the proposed theoretical framework which is used to direct the research process. This chapter provided more emphasis on the institutional theory and the different strands related to this domain as it represents the background of this study. In conjunction with this theory, researcher introduced the notion of institutional logic. The researcher also explicates how different theoretical perspectives, provided in prior literature, have been incorporated in the proposed framework to represent alternative types of institutional logics that may have some potential effect on the CIR practices.

Chapter 5 This chapter illustrates all details of the employed methodology. Given that the researcher embraced a mixed methods approach, the main purpose of this study and the related objectives for each research stage have been sequentially presented. Moreover, research paradigms, approaches, methods, and collected evidence have been thoroughly elucidated. The hardships that faced the researcher especially while conducting the qualitative study have been illustrated. This chapter also explains how reliability and validity of the research methods have been taken into considerations throughout all of the research studies.

Chapter 6 This chapter contains the qualitative study which is composed of seven case studies and semi-structured interviews with some potential and external participants. As this study seeks to identify the nature of the institutional logic that is embraced at organizational level, it is organized according to the main themes that were induced. By the end, the researcher proposed some expectations that the CIR practices are expected to conform with in case the other listed companies have also embraced the logics induced in this study. These expectations will be compared with the outputs of the descriptive study in Chapter seven. Matching these two outcomes would indicate whether the induced logics are also embraced by most of Egyptian listed companies.

Chapter 7 This chapter contains the descriptive study which assesses the level of the online disclosure as well as the quality attributes of 115 accessible websites possessed by large listed Egyptian companies. A comprehensive analysis of the CIR practices was conducted by using un-weighted disclosure index of 145 items to measure the total CIR in addition to the Timeliness, Usability, Credibility and General content levels. It also illustrates the various types of business information appeared on these websites. Eventually, this chapter provides a comparison between prior expectations and findings of this study.

Chapter 8 This chapter integrates the previous two studies and contains the explanatory part which tests the predictive power of five groups of independent variables representing both economic and institutional perspectives. Thus, this chapter demonstrates the hypotheses that will be tested and elaborates the statistical tests such as data diagnostics tests, correlation test, and multiple regression test. All of these tests have been performed using SPSS. Thence, the outcomes of this chapter would determine which perspective is more viable to explain the changes in the CIR practices in total and in each sub-index. In other words, this study will indicate whether the logic embraced by most of large listed Egyptian companies are tend to be more affected by the institutional pressures or by the economic factors. This would also provide some implications about institutional actors that exert more pressures on the CIR practices in Egypt case.

Chapter 9 This chapter summarizes the research purposes and questions and presents the key findings that the researcher obtained throughout this study. Furthermore, this chapter demonstrates the contributed work at both the theoretical and empirical levels. It also highlights the main research limitations which confine the pertinence of this study and which instigates the need for further research on CIR in the future.

Chapter 2: Corporate Internet Reporting (CIR): The research context

2.1 Introduction

The usage of Internet technology has spread worldwide since the nineties of the last century. Therefore, many individuals and organizations have become more able to carry out multiple tasks, most of them socially grounded, more effectively and efficiently. This has largely enhanced the social communications within some communities by using advanced means such as electronic mails or conference calls. The issue that made the Internet largely appreciated in the business domain. Thus, the Internet has been extensively employed to advance many of organizational functions to be more interactive and dynamic. A number of business tasks has become electronically performed and directly presented online, such as e-commerce, e-business, e-marketing, and online public relations in addition to the Corporate Internet Reporting (hereafter, CIR). These practices are the cornerstone of this study, which the researcher will mainly focus on. As explained in Chapter One, this chapter offers a broader view about the CIR practices by looking at the key characteristics distinguishing these practices, the perceived benefits, and various motives underpinning their vast adoption and implementation.

Consequently, this chapter is organized as follows. Section 2.2 elaborates the nature of the CIR practices by scrutinizing various definitions provided in the literature and suggesting more comprehensive definition. 2.3 illustrates three potential drivers behind the rapid observed spreading of the CIR practices. Section 2.4 introduces three key characteristics of CIR practices that privilege them over traditional business reporting. Section 2.4 illustrates the global diffusion of CIR practices in a number of developed and developing countries. Section 2.5 presents some research approaches that persistently followed when studying CIR practices. Section 2.6 highlights the role of regulative and professional bodies in this domain and discusses whether they act passively or proactively in the developed countries. Finally, section 2.7 presents a summary for the chapter in hand.

2.2 The nature of Corporate Internet Reporting(CIR) practices

A growing number of companies, notably in the developed countries are using the Internet extensively in business. Yet, in the earlier years, the Internet was mainly used to enhance the communication with company's suppliers and customers as for publicity (Isenmann and Lenz, 2001). According to Sullivan (1999) earlier corporate home pages were mainly designed for one or more of the following activities; electronic commerce; supporting corporate image or strategies, disclosing corporate information in conformance with regulatory requirements, and finally, reducing the communication expenses. Perhaps this confined usage of the Internet was a response to the limited technical capabilities of the Internet at that time.

However, Information and communications technologies including Internet gained an increasing attention and became more intricate topic in the recent years in academia and practice (Debreceny et al., 2001; Cormier et al., 2009; Cormier et al., 2010). In some countries the Internet usage was directed to address the investors and stock markets needs of information (Trites, 2008). Nevertheless, the website users' information needs are still identified intuitively in many companies (Gowthorpe, 2004). Moreover, the credibility of Internet reporting is highly contested as the auditors still have little control over the website contents and are reluctant to expose themselves to higher risk by reviewing the online information content (Beattie, 2003; Lymer, 2003). Especially that the online information is vulnerable to change without a trace (Khadaroo, 2005). Despite of these drawbacks, the sustainable development in the Internet technology enables many companies to provide more advanced technical features like e-mails, webcasts, navigation and interactive tools (Robbins and Stylianou, 2003) has obviously augmented the usage of websites in business and enhanced the company's market value in return (Cormier et al., 2010). Furthermore, prior literature clearly demonstrates that most companies, nowadays, used to disseminate part or full provision of its financial and non-financial information on the Internet. These practices were consistently carried out through websites either owned by the company itself, or through other third parties' websites. These practices are the anchor point of the current study.

2.2.1 Definition of CIR practices

In recent years, many companies have paid considerable attention to the usage of the Internet by considering the online business reporting as a significant part of their investor relations activities (Lymer and Tallberg, 1997; Deller et al., 1999; Protogeros, 2002). Nevertheless, there are no unified guidelines or generally accepted principles have been issued yet to govern or to homogenize the CIR practices at any level (Ashbaugh et al., 1999; Craven and Marston, 1999; Debreceny et al., 2001). There is also no unified definition or concept commonly used to refer to these practices. Some researchers focus solely on accounting and financial information provided on the corporate website. This trend was followed by many researchers and thus known as the Internet Financial Reporting (IFR). Another scholars focused on describing more contents such as corporate governance along with the financial information (Abdelsalam and Street, 2007; Kelton and Yang, 2008). Those who merged between these two types of information termed the online business disclosure practices as Corporate Internet Reporting. The researcher suggest that using this comprehensive term of Corporate Internet Reporting (CIR) Practices will take into consideration all types of business information or reports which are normally disclosed on the Internet. Moreover, the researcher suggests expressing CIR practices as a process that includes many activities and seeks to attain many benefits such as improving corporate image/reputation, improving accountability and decision making to the investors and enabling investors to accurately assess their investment risks (Craven and Marston, 1999). Hence, to define CIR as a process, the researcher needs to illustrate the nature; objective and main components constitute this process. First of all, in respect of the nature of CIR, the online business reporting practices are globally heterogamous (Robbins and Stylianou, 2003) especially in respect to the contents (Ashbaugh et al., 1999; Geerings et al., 2003; Bonsón and Escobar, 2006; Mohamed and Oyelere, 2008; Trabelsi et al., 2008; Cormier et al., 2009). Besides, in most cases, senior management is the dominant party committed to these practices (Doherty et al., 2003); even if the design and update of the CIR have been outsourced.

Furthermore, it is recognized that stakeholders and auditors are still playing a passive role in this process, notably in developing countries. For instance, Gowthorpe (2004) denotes that companies still follow traditional communication patterns while using the Internet and this has not dramatically changed the bureaucratic nature of the dialogue between company and its stakeholder, which remains asymmetrical.

Generally, the CIR process incorporates three main types of practices; disclosure, presentation and communication practices. Traditional business reporting processes are used to concentrate exclusively on the disclosure and presentation of the business information. As the Internet technology is based on the communication technology, the business reporting process has been advanced further by this new synergy. Therefore, communication has become a pivotal part in the online business reporting process. Accordingly, disclosure practice can be defined as the process of displaying certain data or information on the corporate website to the public, in multiple formats. Hence, it mainly counts for the content of the website.

Thus, the researcher suggests identifying the presentation practices over the Internet as the process of portraying the disclosed data or information in an understandable and usable format. Presentation practices also encompass designing of the entire website. In classic financial reporting practices, presentation denotes how the information item will be presented in the financial statements. However, in the Internet reporting, presentation denotes how the available technical features and communications facilities will be used in converting the traditional textual and tabulated information into more dynamic, interactive and customizable format.

It is also suggested that the communication practice could be defined as the process of transferring required data or information to the website users. This process may help deliver business information orally or visually without the need to have them written or printed in a hard copy format. For instance, Oyeler et al. (2000) argued that Internet reporting improves users' access to information by providing information that meets their needs, allowing non-sequential access to information through using hyperlinks, interactive and search facilities. Apparently, these three practices are relatively separate from each other. However, they need to be considered in aggregation to designing a meaningful and useful website. There are a number of objectives for disclosing corporate information online. Ettredge et al. (2001) elucidate that corporate websites are designed to supply individual investors with timely information previously available only to select parties, such as institutional investors and analysts. They pointed out that websites were established to include press releases, company publications and Securities and Exchange Commission (SEC) filings, and to equip retail investors with items not previously available to them, such as transcripts or audio versions of analyst conference calls. Deller et al (1999) described the Internet as a comprehensive instrument for investor relations' activities.

In conclusion, the CIR process could be defined as the process that enables companies to disclose all or proportion of its financial and non-financial information on the Internet and present them in multiple formats and languages by equipping the website users' with most advanced and interactive electronic features to facilitate the communication and usage of the website and to decrease the information gap between the company and its potential and current stakeholders.

2.2.2 Types of the corporate reports provided on the Internet

CIR practices incorporate a whole range of business reports. Esrock and Leichty (1998) analyzed a sample of Fortune 500 companies and revealed that 90 per cent had web pages and 82 per cent of the sites addressed at least one corporate social responsibility issue. Park and Reber (2008) studied the information content of the corporate websites of 100 companies of Fortune 500 and reported that corporate websites are updated frequently to provide useful information to investors more than to customers. Thus, 99 per cent of companies reported essential information for investors such as earnings statements and annual reports and 96 per cent companies disclosed information about investments.

Though Internet Financial Reporting (IFR) is the most common online reports that have been frequently investigated in academia, other forms of online business report, such as ethical, social and environmental reporting, have gained an increasing attention in the last years (Adams and Frost, 2004). These two types of Internet business reports will be elaborated further in the following sections.

2.2.2.1 Internet based - financial accounting reports

During the last two decades, companies have typically disclosed most of their financial statements, such as balance sheets, incomes statements, changes in owners' equity, cash flow statements, and sometimes auditor's reports on specific sections of their websites. This section, at present, has been commonly known as Investor Relations (Hedlin, 1999; Pirchegger and Wagenhofer, 1999; Geerings et al., 2003). The activities of disclosing, presenting and communicating business information over the Internet have been expressed in different ways; for example, it was dubbed 'Internet Financial Reporting' (IFR) (Lymer, 1999; Debreceny et al., 2001; Debreceny et al., 2002; Bonsón and Escobar, 2002; Laswad et al., 2004; Khan, 2007), or 'Corporate Internet Reporting' (CIR) as in (Abdelsalam and Street, 2007, Abdelsalam et al., 2007), 'Digital Reporting' (Bonsón and Escobar, 2006) or 'web-based business reporting' (Beattie and Pratt, 2003).

Many companies have counted on the Internet synergies to provide incremental information related to stock prices (historical and current), corporate governance issues such as management, and board of directors' information, major shareholders, suppliers and main clients. Others may add a calendar to their websites showing the most important upcoming events. This disclosure is voluntary and still subject to the general company's strategy and conventional disclosure regulations. Nevertheless, some developed countries as USA, UK, France and Canada for instance, took the initiative and attempted to provide some instructive guidelines for their listed companies, as will be explained latter. Still, in most countries there is no obligation imposed on companies to disclose their financial and non-financial information on the Internet or to present them is a certain format.

2.2.2.2 Internet based- other discretionary reports

The Internet, and specifically corporate websites, have been used to disclose extra types of business reports such as environmental, social and sustainability reports (Shepherd et al., 2001; Jackson and Quotes, 2002; Adams and Frost, 2004; Cho and Roberts, 2010). Those reports are commonly disclosed on the corporate websites in developed countries more than in developing countries. Due to the time and effort limitation of this study, this type of reports will not be addressed through this research. In addition, this study is designed to address the financial information and other governance information that are related to the investment and financial decisions taken by institutional and individual investors and so the above reports are beyond the scope of this research.

2.3 Drivers underpinning adoption of CIR practices

The drivers underpinning practicing CIR are multiple and vary from one company to another and from one country to another. Those drivers themselves also differ in nature. The researcher uses the term 'driver' to refer to the factors that implicitly or explicitly motivate companies to disseminate their business reports over the Internet. Some studies attempted to address various variables related to those drivers. They sought to study the relationship between these variables and the extent of the financial disclosures on the corporate website. Drawing on this literature, these drivers could be classified as follows:

2.3.1 Environmental drivers

Environmental drivers refer to the legal system, culture, and other political, and social factors that construct and discriminate the disclosure environment. These factors impose a considerable influence on the organizations practices including business-reporting practices.

For instance, Xiao et al (1996) argue that the impact of information technology (IT) on the Corporate Financial Reporting (CFR) is constrained by social and political factors as much as it is affected by technology limitations. They also mentioned that this impact is also subject to human judgement and intentions. Hence, it may be argued that the impact of such drivers on the usage of the Internet in business reporting is contextual and varies from country to another. The legal system and culture impact will be discussed in the following sections,.

The legal system is commonly classified into: common law and code law countries. Ball et al (2003) clearly elaborates these two distinctive legal systems. The common-law countries as described as capital market-orientated. Thus, in these countries, shareholders are the focal point of corporate governance rights. Consequently, the number of shareholder is normally large and consisting of scattered shareholders and bondholders. In such market based systems encourage equity finance through active capital markets, whereby shareholders invest primarily to pursue financial interests (Aguilera and Jackson, 2003). Consequently, the information asymmetry is large and normally resolved through enhancing public disclosure and external monitoring. In this case, more demand on quality disclosure will be required, including more timely incorporation of economic income and accounting earnings.

Ball et al. (2003) argue external shareholders and analysts are considered as the key common-law monitoring players, even more than the supervisory board or board of directors. This legal system appears more in the developed countries such as USA and UK. Therefore, companies in these countries find the Internet valuable in supporting public disclosure and attaining higher level of governance. Regulator bodies in their turn (e.g. Accounting standards settlers and Stock exchanges) would encourage companies operating in such countries to make use of the Internet to enhance their business reporting practices. Thus, they will try to set some organizational rules to govern the online disclosure practices, in its turn.

In contrast, in code-law countries or as described Ball et al (2003) planning-orientated countries, stakeholders such as banks, labour, major customers or suppliers, and governments, are represented in both writing the accounting code for firms generally and in the governance of individual corporations. The researchers argue, in such countries, debt is mostly private and shareholding tends to be concentrated in institutions such as banks (Jaggi and Low, 2000; Archambault and Archambault, 2003 ; Ball et al., 2003). Indeed, banks-based systems tend to have small and underdeveloped capital markets that reinforce higher firm dependence on debt. High dependency on bank loans entails close capital monitoring through accepting long-term engagement with these banks (Aguilera and Jackson, 2003).

Consequently, individual shareholders own comparatively smaller amount of shares. Information asymmetry tends to decrease by 'insider' communication (i.e. internal networks) with stakeholder representatives. Hence, there is a lower demand on high quality public financial reporting and disclosure. In such countries, companies' conformance with the predefined disclosure standards or codes is the only way to enhance the public disclosure. Importantly, violating these disclosure codes or standards would be considered as a criminal act in such countries, Ball et all (2003). This legal system counts more on the monitoring of the regulatory bodies and internal monitoring. Therefore, the role of board of directors will overweigh the external monitoring by shareholders. Therefore, the disclosure on the Internet in these countries may not give high priority of the financial disclosure as the information asymmetry is low and the internal monitoring is high. Egypt's legal system resembles the later one in many aspects.

Along with the legal system, culture has another essential impact on corporate reporting practices and governance systems in general. Understanding culture factors when studying the corporate disclosure practices is essential because the traditions of a nation are instilled in its people and hence may explain the way they act (Hannifa and Cooke, 2002). Culture is a broad term that can be identified at national setting or organizational setting (see; Soeters and Schreuder, 1988; Pratt and Beaulieu, 1992; Pratt et al., 1993). Hofstede (1984) describes that culture consistes of "patterns of thinking" or as a state of practice. He encapsulated 32 culture values into four main elements: individualism vs. collectivisim, strong vs. weak uncertainity avoidance, masculinity vs. Femininity and high vs. Low power distance. For example, Jaggi and Low (2000) reveal that cultural values insignificantly influence financial disclosures by firms in common law countries. The results of firms in code law countries provided inconclusive signals. Likewise, Archambault and Archambault (2003) study finds that disclosure is influenced by factors from a broad range of social systems: cultural, political, and economic, in addition to corporate factors.

In respect of the corporate disclosure over the Internet, Protogeros (2002) notified that orientation of the websites obviously varies across nations. For instance, the European countries' corporate websites have been characterized as being more business driven; meanwhile the American websites have been characterized as being more consumer driven. Also, Debreceney et al (2002) pronounce that the disclosure environment of a country constitutes an important environmental driver for IFR presentation, but less influential for IFR content. In the same way, Robbins and Stylianou (2003) argue that developing an effective multinational Internet presence requires designing websites that operate in a diverse, multi-cultural environment. The findings showed that website content differs significantly across national cultures and slightly across various industries. Especially in respect of employment issues, language translation and privacy. On the other hand, the differences were quite lower in respect of the web design features. Puck et al. (2006) argue that culture and Internet usage have mutual relationship. The researchers emphasize that the deregulation of economic activity and the widespread of communication technology, as the Internet, contributed a lot in decreasing the cultural differences in organization practices. Thus, they suggest that companies developing website recruiting software need to take into consideration the culture identity . In the same vein, Bonson and Escobar (2002) recognize that companies from Northern and Central Europe are more inclined to have higher scores of CIR than companies from Southern Europe.

According to the above argument, the researcher will try to explore whether Egyptian legal system and culture dimensions such as language have influenced the benefits generated from the CIR practices from the management and website users' perspectives.

2.3.2 Efficiency drivers

Efficiency drivers refer to the economic factors that encourage companies to utilize the Internet in fulfilling various business tasks. Attaining higher level of efficiency entails could be attained via using the Internet to decrease the cost of information process or to reduce the cost of other business transactions. Alternatively, efficiency could be achieved by increasing the perceived benefits from using such technology. For example, Vadapalli and Ramaurthy (1997) investigated the underlying motivations of business adoption of the Internet through studying large US-based communications companies. They found that organizational boundaries, transaction costs, economics, and organizational cognition were the main determinants of business adoption of the Internet. In addition, they suggested that the implicit self-fulfilling characteristics of the Internet affect levels of use; the greater the perceived benefits, the more intensive the Internet usage will be.

The efficiency drivers can also induce companies in all sizes to disclose their information online. Beatty et al. (1997) surveyed 286 medium to large size US companies that adopted corporate websites before 1998 and found significant differences in the reasons behind the adoption of web technologies by early adopters. For these adopters, perceived benefits, compatibility of the web with the existing technology and organizational norms were the most important motives underpinning their usage of the Internet. Also, Bonsón and Escobar (2006) suggest that the lower cost of maintaining the information on the Internet encourages large companies to decrease their online provision of information. In respect of small size companies, O'Keefe et al. (1998) examined the drivers behind using the Internet by small business retailers. They revealed that the opportunity to expand markets could be affected by matching the product and Internet demographics by taking into consideration the cost of doing business online as well as security and credit risks. Similarly, Cormier et al. (2010) suggest that costs incurred by capital markets' participants or those incurred because of monitoring corporate performance by board of directors or media, are used to drive the disclosure on the corporate website. In addition, they announced that a firm's disclosure is actually a part of its governance structure and the board decisions. In this study, the researcher will try to assess to what extent the efficiency drivers have a significant effect on the corporate institutional logic and how this influences the CIR practices in Egyptian listed companies.

2.3.3 Competition and marketing drivers

Market competition is another potential driver behind the adoption of CIR practices. Companies may disseminate their information to enhance, strengthen, or preserve their competitive position. Competition was the key driving force that encouraged many companies to establish a website of their own from the very beginning (White and Raman, 1999). Thus, one can anticipate that competition in the commodity markets may not only motivate companies to provide detailed information related to their products or services (Doherty et al., 2003), but may also influence their financial disclosure practices, as well. Few researchers addressed this issue, as the majority of CIR research put more emphasis on the efficiency drivers. A recent study by Dedman and Lennox (2009) surveyed the impact of the managers' perceptions of product market competition on the UK private companies' disclosure practices. The survey illustrated that in the private companies, managers are more inclined to withhold information about sales and cost of sales from the public domain when profits are higher and when managers perceive that their markets are more competitive. The current study will extend this line of research by investigating whether the perceived competition has any impact on the managers' decision in public listed companies, in respect of the disclosure over the Internet.

Given the flexibility and customizability of the Internet, it is expected that competition may induce companies to make their websites equivalent or even distinctive from their rivals. This diversity has been empirically noticed in the timeliness of information uploading (Ashbaugh et al., 1999), in the presentation format rather than content (Debreceny et al., 2002) and in the frequency and quantity of online dessiminated information (Ettredge et al., 2002). Also, the diversity has extented to the progress in the Internet utilisation in developing the companies' websites, in general (Lybaert, 2002). In support of this view, Bollen et al. (2006) arguded that market competition and international trading activities or increasing reliance on the international financial resources will compel companies to use the Internet to widespread information related to the company and its products or services. In this sense, it is expected that companies, with more international investments or trading relations are more likely to possess more informative and professional websites to strengthen these relations with their stakeholders. To the best of our knowledge, no study has investigated the impact of domestic or international competition on the CIR practices in Egypt before. Thus, the researcher will cover this aspect in the empirical study.

2.4 Idiosyncratic characteristics of the CIR practices

The CIR process requires continuous updating of business reports and information disclosed on the Internet. As a result, this process has some distinctive features that privilege it over other traditional paper based disclosure and presentation media (e.g. daily newspapers, TV, radio). Such characteristics are various and interrelated. Thus, the most evident features will be elaborated in the following sections.

2.4.1 Dynamic and interactive features

The CIR practices are dynamic and hence count on the advancement of the embedded technology. Most of the websites' contents have become dynamically changeable by the owner of the website or the intermediate party who is responsible for managing and updating the corporate website. The dynamic and interactive features bring several privileges to companies to improve their reporting practices. At the same time, they instigate several challenges. For instance, documentation and authentication of online business reports have become more sophisticated and even more difficult than it is for the hard copy reports. Debreceny and Gray (1999) pointed the challenges that the auditors may confront because the look and feel of the auditor's report in printed reports will differ from those appeared on the Web depending on the level of technology used by the company. Unless the company keeps their online reports organized and sequentially archived on their websites, the users may not be able to find an old document easily. In addition, expanding the connectivity of the corporate website by adding hyperlinks to the website and to the financial statements on these websites should be count for the difference in the cognition ability of the decision maker. More importantly, the dynamic changes in the content of the corporate website may eliminate useful parts without notifying the users that the content has changed (Lymer and Debreceny, 2003; Khadaroo, 2005). Besides, the lack of auditing that is associated with changes in the corporate websites of a number of companies may lead to undetected errors in the formation presented to public users. This may affect the credibility and integrity of such website. Hence, the website users would consider the corporate websites as unreliable source of information.

2.4.2 Embeddings of multimedia features

Advanced multimedia features have become a complementary part of business reporting. Lymer (1999) argues that web pages are normally designed to provide a consistent visual experience for the information consumer. Under these circumstances, the Web-based annual report may not have a discrete visual identity. There may not be clear indications outlining the boundaries of the annual report (Lymer, 1999: 29). He referred to this report as "an electronic paper". Another possible usage of the Internet is to improve company's image in the users' eyes and to look more attractive and enjoyable by adding some video and/or audio clips to the websites (Hedlin, 1999). This innovative technologies would probably change the nature of traditional business reports in the future. For instance, more advanced websites might broadcast business meetings immediately online or record and provide these meetings on a downloadable video/audio format for future uses.

Jacob (2001) tested the impact of multimedia on investors' responses. They concluded that multimedia presented in attachment with financial data can cause users to reconstruct memories to match the affective responses to the multimedia, thus, multimedia induced affective responses influencing investment decisions. Other companies provide videos showing their operating activities or production lines. Now, because of the Internet, they can attend these meetings online or they can download them later. This new technology may increase investors' participation as it equips them with convenient communication tools.

2.4.3 Customizability feature

Online business reports and information are obtainable in various formats and languages, unlike traditional hard copy reports, which are prepared only in one unique tabulated format and which are frequently presented as an Excel document. Companies have become capable of producing the same financial and accounting reports, but in multiple formats such as PDF, HTML, XLS, XBRL, depending on the users' preferences (Beattie and Pratt, 2003). Hodge and Pronk (2006) suggest that presentation format of the online financial statements has an impact on the investor decisions depending on the level of experience. Less sophisticated investors are interested in HTML formats; meanwhile, financial analysts and other sophisticated investors are more interested in other formats such as PDF, which enable them to extract specific pieces of information for further analysis.

Dull et al. (2003) conducted an exploratory study to examine the effect of different presentation formats on users' judgments by studying the effect of hypertext links on users' decisions and predictions, the amount of information accessed, and the time used to make decisions. The results show that presentation format may have an impact on online disclosure for some companies, especially small ones. Because of the lack of unified guidance or professional standards that organize these practices into specific structure, in addition to the dynamic nature of Internet facilities, many practices are open to companies and a variety of business report formats could be created. This diversity might negatively affect the comparability of business reports. On the other hand, these advanced presentation techniques could fulfil users' needs more efficiently.

2.5 Expansion of the CIR practices: A global phenomenon

In 1990s, the Internet technology was introduced to the public users in USA after many years in military services. Thus, American companies were the world leaders in using the Internet in business domain. They were followed latter by their counterparts in the UK and then the rest of the world. Lymer and Tallberg (1997) found that UK companies preceded Finish companies in the quality of their websites. Yet, both countries are lagging behind US. Similarly, Deller et al. (1999) studied the extent of Internet based investor relations activities in 300 listed companies in the US, UK and Germany. They found out that in the US companies, Internet investor relations, activities are more common and more advanced in their features than in the other two countries.

Generally, large listed companies worldwide are keen to establish well presented and dynamic websites. Nonetheless, the usage of Internet capabilities manifestly differs across countries. Hence, a gap can be spotted between developed and developing countries in this regard (Brown, 2007). This may be due in part to the ideologies and the role of political leaders (Milner, 2003), or to other general institutional factors. Indeed, in the last two decades, some researchers provided an evidence that corporate website has become a legitimate source of information in some developed countries (Oyelere et al., 2003; Marston and Polei, 2004; Bonsón and Escobar, 2006). However, these researchers also realized some variations in the content and quality of the websites owned by a number of listed companies worldwide.

Tables [2-1],[2-2] and [2-3] presents some descriptive studies that measure the increase in the numbers of websites and extent of CIR practices for a range of companies listed on different stock exchanges in the developed and developing countries. Table [2-1] demonstrates the extent of the CIR practices in USA, Europe and Australia. Meanwhile, Table [2-2] demonstrates the extent of the CIR practices across some Asian countries. Finally, Table [2-3] demonstrates the extent of the CIR practices across several Arabic countries including Egypt, which this study is anchored around.

Table 2-1 Diffusion of the CIR practices across US, Europe and Australia

Study	Timing of data collection	Investigated companies	Sample Size	Companies with websites		Companies with financial websites		Financial websites with auditor's report	
USA:			**N**	**N**	**%**	**N**	**%**	**N**	**%**
Gray & Debreceny (1997)	1996	large US industrial companies	50	49	98%	34	69%	18	53%
Ashbaugh et. al. (1999)	Nov.1997-Jan.1998	large American companies	290	253	87%	177	70%	NA*	NA
Esrock & Leichty (2000)		Fortune 500	100	90	90%	31	31%		
Ettredge et. al. (2001)	Feb-May 1998	American companies in 17 industries	490	402	82%	249	62%	6	2%
Ettredge et. al. (2002)	late 1997, and early 1998	Companies contained in AIMR database(1997)	220	193	88%	149	77%	102	68%
Hindi & Rich (2010)	April-June 2009	Fortune 100	100	100	100%	100	100%	93	93%
UK & Ireland									
Lymer & Tollberg (1997)	Jan-Feb 1997	Top UK firms	50	46	92%	26	57%	NA	NA
Brennan & Hourigan (2000)	Jul-98	companies listed on Irish stock exchange	109	50	46%	32	64%	NA	NA
Debreceny and Gray (1999)		Large listed	45	45		17	82%	10	59%
Craven & Marstoon (1999)	Jul-98	listed on London stock exchange	206	153	74%	109	71%	NA	NA
German									
Marston & Polie (2003)	2000 & 2003	DAX 100 listed on Frankfurt Stock Exchange	50 (Y2000) 44 (Y2003)	50 44	100%	50 43	100% 49%	47 43	0.94 0.98

Study	Timing of data collection	Investigated companies	Sample size	Companies with websites		Companies with financial websites		Financial websites with auditor's report	
Spain			N	**N**	**%**	**N**	**%**	**N**	**%**
Grandia (2001)	April 2004	IBEX 35	35	34	97%	19	56%	8	42%
Larran & Giner (2002)	October-November 2000	Companies listed on Continuous Market of the Madrid stock exchange	144	107	74%	62	58%	52	84%
Amsterdam									
Lybaert (2002)	Jul-00	companies listed on Amsterdam stock exchange	188	162	86%	152	94%	121	80%
East European countries									
Bonson and Escobar (2006)	Feb.- March 2005	13 East European countries	266	266	100%	148	56%	18	12%
Australia									
Oyeler et al(2003)	1998	Companies listed on New Zealand Stock Exchange	229	124	54%	91	73%	NA*	NA
Lodhia et al. (2004)	September - November. 2001	Largest Australian companies	50	50	100%	50	100%	49	98%

Note : NA* indicates that the study did not quantify the audit report disclosure on the Internet or the statistics related to this item is not clearly stated.

Table 2-2 Diffusion of the CIR practices across Asian countries

Study	Timing of data collection	Investigated companies	Sample size	Companies with websites		Websites containing financial information		Website with auditor's report	
Asian countries			**N**	**N**	**%**	**N**	**%**	**N**	**%**
Marston (2003)	1998	Top Japanese companies	99	78	78%	68	87%	57	73%
Xiao et al. (2004)	August 2002	large companies listed on Shanghai or Shenzhen stock exchange	300	203	83%	147	72%	127	63%
Khan et al (2006)	July 2004-June 2005	Top Bangladeshi companies	60	24	40%	NA	NA	NA	NA
Kadaroo(2005)	February 2003	Malaysia and Singapore listed companies	100 45	75 39	75 % 87%	63 37	84% 94%	48 31	64% 79%

Table 2-3 Diffusion of CIR practices across Arabic countries

Study	Timing of data collection	Investigated companies	Sample size	Companies with websites		Companies with financial websites		website with auditor's report	
Arabic region			**N**	**N**	**%**	**N**	**%**	**N**	**%**
GCC countries									
Isamiel (2002)	Oct.2001- Feb.2002	Companies from Qatar, Bahrain and Saudi Arabia	128	50	39%	50	39%	NA	NA
Mohamed (2010)	June 2006	Companies listed on Bahraini stock Exchange and Muscat Securities Markets	142 (Omani companies) 51 (Bahraini and non-Bahraini companies)	70 40	0.059 0.78	31 32	0.28 0.7	NA	NA
Bahrain									
Mohamed & Oyeler (2008)	August 2006	Companies listed on Bahrain stock Exchange	49	39	79%	31	84%	27	87%

Study	Timing of data collection	Investigated companies	Sample size	Companies with websites		Companies with financial websites		website with auditor's report	
Oman			N	N	%	N	%	N	%
Mohamed et al. (2009)	June 2006	Companies listed on Muscat Stock Market (MSM)	142	84	59%	31	37%	24	29%
Kuwait									
Al- Shummari (2007)	2005	companies listed on Kuwait Stock Exchange	143	110	77%	77	70%	NA*	NA
Jordan									
Momany & Shorman (2006)	Oct.2003- Sep. 2005	Companies listed on Amman stock Exchange	60	27	45%	19	70%	6	22%
Egypt									
Ezat (2008)	Dec.2007	Actively traded companies on EGX	423	225	52%	80	36%	33	41%
Desoky (2009)	Feb. 2008	Companies listed on Egyptian Stock Exchange (EGX)	88	57	64%	45	79%	24	42%
Aly et al. (2010)	Oct. 2005-Jan. 2006	Actively traded companies on EGX	100	62	62%	35	56%	NA	NA

Note: N/A* denotes the studies that did not measure the audit report disclosure or the statistics of the audit report provided by these studies were not clearly or separately stated.

The prvious tables imply that a large proportion of companies in developed countries are keen to possess a website and they devote most of the Internet potentialities to dissiminate a full set of financial information online. Most of companies used to present their financials in multiple formats (e.g. PDF, HTML and XBRL) to enhance their ustility. This is not realized in many of developing coutries with emerging stock markets as in Arabic or Asian countries. The tables illustrate that the numbers of listed companies on these emerging stock markets are limited.

Reviewing the recent studies conducted in Jordan such as Al-Htaybat (2011), AbuGhazaleh et al (2012) or in Egypt such as Elsayed et al (2010), Aly et al (2010), Samaha and Dahawy (2011) shows that these practices are limited in terms of contents and quality . For instance, Samaha and Dahawy (2011) report that the average CIR disclosure for 100 large listed Egyptian companies is 13.43%. They also notice that these websites provide inadequate information for the investors. Moreover, the understand-ability of voluntary disclosure by Egyptian companies is less than the acceptable level. Thus it seems that the current CIR practices do not satisfy the needs of the Egyptian investors who depend more on annual report information than on advice from stockbrokers and friends or on tips and rumours as denoted by Dahawy and Samaha (2010). In another study, Samaha and Dahawy (2010) examine the extent of voluntary disclosure by Egyptian companies and find out that this disclosure is low as 19.38%. The researcher suggests that this is affected by the highly secretive Egyptian culture. As a result, the issuance of new corporate governance code did not really improve information symmetry further in the Egyptian companies. Al-Hatybat et al (2011) revealed that website users in Jordan find that IFR as useable, accessible and available all the time. Nevertheless, the cost associated with using the Internet is a main issue that make them prefer using the traditional forms of the annual reports. Moreover, most of this research did not investigate the quality attributes of implemented CIR practices in such countries, except for Ezat and El Masry (2008) who studied timeliness of the disclosed information on websites owned by a sample of Egyptian listed companies. According, it could be noticed that the corporate disclosure has a unique nature in some Arabic and developing countries. The issue that make us expect that the CIR practices in such countries will not follow the same pattern followed in developed countries.

2.6 Previous studies

The mainstream of CIR empirical research falls in two main categories: descriptive and explanatory studies. The majority of these studies followed the content analysis approach to quantify the information items provided online. Yet, some researchers used questionnaires or interviews to complement their findings. Appendix [A2-1] provides more extra studies conducted during the period 1997-2011. As shown in this table, these studies are classified according to the research methodology into descriptive and explanatory. Few of them combined these two approaches as elaborated in the next sections.

2.6.1 Descriptive studies

Descriptive studies constitute the main stream of CIR research and they mainly rely on analysing and classifying the contents of corporate website(s) according to a specific disclosure index (Xiao et al., 2004; Marston and Polei, 2004; Bonsón and Escobar, 2006; Bollen et al., 2006; Abdelsalam and Street, 2007; Abdelsalam et al., 2007; Kelton and Yang, 2008; Aly et al., 2010), whereas other studies examined what was contained in the websites and prepared a list of these items (Laymer and Tallberg, 1997; Craven and Marston, 1999; Deller et al., 1999). Others benchmarked the corporate website contents against specific requirements or recommended practices (Sariram and Indrarini, 2006; Hindi and Rich, 2010). Irrespective of the diversity of the utilised disclosure index, the key purpose of such studies is to measure the extent of business information across a number of corporate websites. Normally this type of research describes what is provided and how information provided appears on websites. This line of research enables to explore any trend in the online disclosure of the surveyed companies during a specific period of time. The researcher provided more descriptive studies in Appendix [A2-1]. These studies primarily measure the extent of CIR practices and the magnitude of information appeared on the corporate websites in the same country or across a range of countries. However, they generated limited knowledge about the CIR process and who or how these website information items were disclosed.

2.6.2 Explanatory studies

Another group of studies sought to examine the relationship between the extent of the CIR content, presentation or both as dependent variables and a group of independent variables which are related to firm characteristics, country characteristics, and industry characteristics (Abdelsalam, et al., 2007), in addition to corporate governance characteristics. As shown in [A2-1], most of these studies provided consistent results in respect of firm size measured in different values; market capitalization, total asset value, or number of employees. It was also shown that this variable has a significant positive impact, in almost all of prior studies on both the decisions of establishing a website and disclosing business information on that website. For instance, Ashbaugh et al. (1999) measured the size of the firm using the value of total assets and found out that it is the only significant explanatory variable that has an impact on the IFR. Akin to this study, Craven and Marston (1999) measured size in four values; turnover, total assets, total sales, and number of employees. All of them were positively significant in respect of the existence of the website and the extent of financial information on the Internet. Oyelere et al. (2003) also measured firm size by market capitalization and total assets and both measures provided significant and positive impact.

However, industry impact and profitability are among the variables that had no consistent result. For instance, in 1996, Liu et al. (1997) studied the relationship between levels of earned revenue and industry type on the financial content of the Fortune 500 companies' websites. It was found that companies with higher revenues tend to provide more financial information on their websites as compared to those generating lower levels of revenues. However, there was no significant impact of industry type on the content of the financial information disclosed over the Internet. Craven and Marston (1999) also found that there was no significant impact of industry type on the extent of the financial information on the websites. On the contrary, they reported that larger listed UK companies are more likely to provide financial information than the smaller ones.

Conversely, García-Borbolla et al. (2005) observed a significant impact of industry type on disclosure of large comapnies, but not for small and medium sized enterprises. In addition, variables related to management such as eductaion, technical training skills, managers' ability to adapt to technology, and degree of competition have been studied. The researchers reported that not only firm characteristics such as size, and industry were significant variables, but management charateristics such as education and training skills were also important especially for small and medium size companies.On the contrary, Bollen et al. (2006) examined 270 websites for companies operating in six countries; Australia, Blegium, France, Netherlands, South Africa and the UK. They noted that industy type presented by technology and service sectors provided negative impact on the extent of financial information and presentation.

2.6.3 Qualitative studies

The previous two groups of studies embraced the quantitative approach which focuses primarily on testing the relationship between a given set of independent variables and the extent of CIR as a dependent variable. A small number of studies have attempted to conduct field studies or surveys to investigate these practices in their setting and in more depth.

Ashbaugh et al. (1999) surveyed the motivations beyond the engagement in IFR practices in 253 companies. The results of this survey provided robust evidence on the impact of incurred costs and the perceived benefits on the adoption of IFR. This survey also examined the departments participating in this process. Although the incentives behind maintaining a presence on the Internet were diverse, the researchers concluded two key reasons behind adopting IFR: to communicate with investors and customers; and to keep pace with their competitors. They also found that a number of departments were involved in this process: public relations, investor relations, marketing, management information systems, engineering, and strategic planning. Another survey by Beattie and Pratt (2003) investigated the views of interested parties about the information on the company's performance that they frequently demand and their preferences around the presentation of this information. The key finding of this study is that there was a manifest difference in the preferences of the financial directors, auditors and average website users with respect to the score, structure and frequency of using the websites.

2.6.4 Further studies: Corporate governance and CIR practices

Given the importance of corporate governance in decreasing information asymmetry between management and investors and minimizing the cost of capital (Conover et al., 2008; Henry, 2010), some studies attempted to capture the impact of corporate governance mechanisms on the extent and quality attributes of CIR practices (Abdelsalam and Street, 2007; Ezzat and El-Masry, 2008; Kelton and Yang, 2008;Gandı´a, 2008).

Abdelsalam and Street (2007) investigated the timeliness of CIR as practiced by UK companies listed on the London Stock Exchange (LSE) during the period 2004-2006. They measured the association between the timeliness of business information presented on the companies' websites and both firm characteristics and corporate governance variables. They revealed that there was a recognizable delay in disclosing interim results, earnings announcements and financial statements prepared under International Financial Reporting Standards (IFRS) in year 2005. In addition, the researchers examined the impact of ownership dispersion, CEO duality, board independence and experience on the timeliness of CIR in UK companies listed on the LSE. There was no supporting evidence for the impact of CEO duality and ownership dispersion on the timeliness of the CIR. But there was a significant positive impact of director experience measured by number of years in the current post. Control variables, such as audit fees and number of analysts, were significant to the timeliness of the CIR.

In the same vein, Kelton and Yang (2008) examined the association between corporate governance mechanisms, namely: shareholder rights, ownership structure, board composition, audit committee and disclosure transparency measured by the level of IFR. It was noticed that firms with weak shareholder rights are more likely to exercise the IFR including corporate governance disclosures, than firms with strong shareholder rights. The researcher explained this result by stating that managers provide additional disclosures to shareholders in response to increased agency costs. Furthermore, block ownership was found to be negatively associated with Internet disclosures, which indicates that block ownership decreases the need for additional monitoring by external shareholders. More elaboration will be provided in the next chapter while discussing the different theories pertinent to the CIR context and the proposed conceptual framework.

In Ireland, Abdelsalam and El- Masry (2008) reported that companies listed on Ireland stock exchange disclosed less than half of the timeliness criteria assessed by the timeliness index. After controlling for size, audit fees, and firm performance, they found out that Timeliness of CIR on the Irish websites was positively associated with board of director's independence and chief executive officer (CEO) ownership. Furthermore, it was found that large companies are faster in posting their annual reports and that ownership and board structure have significant impact on the Timeliness of CIR. The researchers attributed the timeliness of CIR by large companies to the information asymmetry between management and investors and the resulting agency costs

2.7 The gap in CIR literature and research contribution

As elaborated earlier, prior literature related to CIR or IFR aims to attain two key objectives: Firstly, to measure and describe the extent of usage of the Internet in business reporting domain; and secondly, to determine the factors affecting the extent of CIR. To attain the later objective, the researchers tend to conduct content analysis approach to measure and classify the information provision on the corporate website. Such information varies and includes accounting and financial reports, management or board of directors information, environment and social responsibility information, and employees as well as products or/and services information (Deller et al., 1999; Ettredge et al., 2002; Debreceny et al., 2002; Geerings et al., 2003). Still, there is a limited number of CIR studies investigated the impact of corporate governance on CIR practices such as Abdelsalam and Street, 2007; Kelton and Yang, 2008 and Ezzat and El-Masry, 2008.

Besides, prior studies on CIR, indeed, provided a comprehensive view about the usage of the Internet in various countries and industrial sectors, still there are inconsistent results in respect of the impact of some variables such as industry type on the extent of CIR practices. Therefore, this study will scrutinize the impact of industry type and the extent of CIR practices and quality attributes by using both quantitative and qualitative methods.

Empirical research on CIR practices conducted in Western countries, in particular, implies that companies are obviously dedicated towards using Internet facilities to support their investor relations activities (IR) (Deller et al., 1999; Debreceny et al., 2002; Ettredge et al., 2002; Geerings et al., 2003; Oyelere et al., 2003; Bonsón and Escobar, 2006; Bollen et al., 2006). Besides, these studies showed that the individual investor plays a fundamental role in determining strategies of corporate disclosure over the Internet (Deller et al., 1999; Ettredge et al., 2001; Debreceny et al., 2002). These results may not be applicable to less developed countries. As a result, this study will attempt to assess whether IR activities and individual investors play a substantial role in respect of the CIR process in Egyptian companies, as Egypt an example of a country in transition.

The empirical studies of CIR practices including IFR limit themselves to the website's information content. The issue that makes CIR as a black box. For instance, it is not clear at this moment, who participates in this process or if it is subject to any auditing or reviewing process. Also, no one knows how companies identify their website users' information needs. More importantly, some qualitative aspects such as norms, logics and attitudes of the corporate management and the other involved bodies have not been investigated yet. In addition, none of these studies have viewed the CIR as a process. Consequently, the procedures that constitute this process are not identified. All of these aspects will be addressed by the current study which will investigate the potential factors affecting the progress of CIR practices in Egypt.

2.8 Instructive role of the regulatory and professional bodies

To the present time, CIR practices are exercised voluntarily worldwide (Marston and Polei, 2004). Therefore, there are lack of standards and rules related to the content and design of corporate websites (Robbins and Stylianou, 2003). As a result, companies are not obliged to disclose their business information on the Internet by any regulatory body. Nevertheless, some developed countries have taken the initiative and attempted to set some rules to harmonize and control these practices for listed companies in particular. On one hand, these rules help companies in attaining more benefits. On the other hand, they help in decreasing potential risks associated with security issues. It can be argued that this risk might be mitigated, if the CIR practices were considered as auxiliary source of information. In other words, the information can be obtained from more reliable sources such as stock markets or brokerage firms.

Trabelsi et al. (2004) studied a random sample of Canadian companies to compare traditional reporting practices with those published through the Internet. This survey provided significant evidence that there is a difference between traditional financial reporting systems and the Internet-based business reporting system. In addition, there was an evident variation among the IFR content, format, and technology across the investigated companies. The researchers attributed these differences to "disclosure management". They argue that firms may adopt a relative stable disclosure process which tends to be more in favour of one of these modes: ritualistic or opportunistic (Trabelsi et al., 2004). Bollen et al. (2008) thoroughly studied the managerial aspects of Internet-based investor relations activities and suggested that the quality of investor relations websites is highly affected by six managerial aspects, presenting their seven-S Model (Structure, Strategy, Systems, Staff, Style, Skills and finally Shared values).

Exploiting the Internet as a vehicle for disseminating business reports and information to potential or current investors involves a number of critical issues that standard setters and regulators need to consider while preparing future rules, guidelines, principles or regulations. One of the dominant issues is the role and responsibility of the auditors (Lymer and Debreceny, 2003; Fisher et al., 2004; Khadaroo, 2005). Many researchers noticed that companies tend to deviate partially or entirely from traditional business reporting practices by adding more or less data and information on their websites. It seems that the information that is contained in the corporate websites is not usually scrutinized by an independent body. Lymer and Debreceny (2003) announced that the extent of the auditor's report was also considerably variant across the websites. Fisher et al (2004: 432) pinpointed some factors related to the CIR which have a fundamental impact on auditors such as unregulated nature of CIR, risks of conversion or transposition errors, risks of unauthorized access or modifications, fluidity of online information, and the ease of linking a website with external information through hyper links. Consequently, websites could be viewed as less reliable source of information from the investor's perspective. Additional, auditors may refuse reviewing the online financial statements as this would increase their liability and potential litigation risk (Lymer and Debreceny,2003).

However, the UK listing authority encourages companies to employ the Internet to publish mandatory disclosures as well as other important items of information (Abdelsalam et al., 2007). Large number of researchers pointed to the role of the professional bodies and the expectations of the future use of the Internet in business reporting (Jones and Xiao, 2003; Khadaroo, 2005; Lymer and Debreceny, 2003). Lymer and Debreceny (2003) pointed the role of some institutions such as the International Accounting Standards Committee (IASC), which issued a report on this respect in 1999, reviewing IFR and other non-financial information.

The report required setting up codes of conduct in the short term and amending the current reporting standards to take into consideration the matters such as the auditing process and other elements. This report also recommended the involvement of auditors to monitor the IFR process. Additionally, Lymer and Debreceny (2003) discussed the role of the Institute of Chartered Secretaries and Administration (ICSA). Their consultative document pointed to the importance of internal auditing with less reliance on the external audit. This document draws attention to the irrelevance of some technical features of the Internet that may cause confusion to the websites' users such as using the page numbering system, using hyper-links within the annual reports, and methods of differentiation between audited and non-audited data. Also, the researcher addressed the discussion paper issued by the UK Accounting Standards Board. This paper clearly explained the need for generating new regulation to require companies to disclose their preliminary data online and to decrease the potential inconsistency and misunderstanding in respect of un-audited Internet disclosures.

Similarly, Elliott (1994) anticipated that the currently accepted model of financial reporting might be replaced by electronic information systems providing financial and other forms of information about companies, not necessarily in the form of audited financial statements, which would be widely available via the Internet. In Germany, it has been illustrated that the issue of standards for the Internet business reporting is still under discussion, and that these practices are subject to the same disclosure regulations. However, an initiative has been provided to German companies by the European Commission, which requires the attainment of a set of harmonization methods to ensure transparency. This proposal, again, perceived the Internet as a communication medium for financial reporting. Essentially, this document declared in its Article No.17 that it intended to adopt implementing measures that specified minimum standards for the dissemination of regulated information via the Internet (Marston and Polei, 2004).

In short, the above argument illustrates that the developed countries are constantly pursuing to construct highly institutionalized environment to legitimise the CIR practices and to raise its importance to enhance the capital market efficiency and retain the investor trusts in the corporate business reporting system. These efforts are consistent with the nature of the legal system of these companies that devise the individual investors with appropriate tools to enhance their external monitory on the management performance. Conversely, the developing countries are still lagging behind in this respect as their institutional environment is not structured enough to legalise the online corporate reporting practices. Therefore, these practices are still discretionally to a great extent and controlled mainly by companies.

2.9 Summary

This chapter provided a comprehensive background about previous research on CIR. It also illustrated the different definitions of CIR and identified the concepts that will be used throughout this study. The researcher elaborated the CIR concept and all various types of business reports that have been disclosed and presented on the Internet. Different types of online business information have been distinguished, namely Internet financial reports and Internet non-financial reports (e.g. environmental and social reports) and discussed the scope of the current research study in not incorporating non-financial reports.

In the next section, the prominent drivers underpinning the adoption of CIR practices were discussed. In general, these drivers can be classified into environmental drivers, efficiency or financial drivers, and competition or market drivers. Then, some distinctive features of CIR practices that explicitly distinguish them from traditional financial reporting practices were demonstrated. Then the experience of different countries worldwide was examined in this respect. Screening the studies on Arabic and non-Arabic developing countries (discussed separately to bring out issues relating to similar cultural values) reveals that CIR and especially IFR are very limited in the developing countries in relation to the developed ones. This could be regarded in part as owing to the limited size of the emerging markets in these countries, difficulty in reading foreign languages, weak vote rights of shareholders and poor IT infrastructure. Finally, two more important issues have been presented which are the limited scope of the IFR related literature and the marginal role of the professional bodies and institutions worldwide.

Chapter 3: Institutional environment and Internet technology in Egypt

3.1 Introduction

In the last two decades, Egypt witnessed a discernible improvement in the Information and Communication technology (ICT) including the Internet services. This improvement has taken place after many endeavours of reclamation and attempts to revitalize the economic conditions. Accordingly, the Egyptian government took the initiation and demonstrated a substantial concern with the importance of implanting the Internet awareness equally among the Egyptian citizens as well as local organizations in both public and private sectors. Additionally, the government presented by the Ministry of Communication and Information Technology (MCIT), which was established in the nineties of last century to enhance and liberate the communication services, was also keen to establish a powerful infrastructure to support and expand the utilization of the Internet across the Egypt governorates. It also strived hard to encourage the Egyptian citizens and organizations to benefit from this advanced technology through reducing the cost rate of the Internet connection.

This chapter would cast the light on the Egyptian community as the external institutional environment that surrounds the CIR practices, which carried out by the Egyptian companies. Indeed, this environment can be categorized into several sub-institutional environments, each of which exerts a substantial impact on the Internet use for business reporting. Thus, the main purpose of the current chapter is to highlight the potential impact of such sub-environments, namely political, economic, and social/cultural environments. Accordingly, this chapter is organized as follows. Section 3.2 discusses the impact of the political, economic and social environments on the diffusion and penetration of the Internet technology. Section 3.3 demonstrates the historical development in the ICT and the Internet, in Egypt. Section 3.4 discusses the role of the Internet technology on conventional business reporting practices. Besides, this section demonstrates the potential challenges at macro level that may obstruct the progress of the CIR practices in Egypt. Finally, section 3.5 summarizes some aspects of importance to the subsequent chapters.

3.2 Institutional environment accommodating the Internet in Egypt

Institutional environment that surrounds the organizations exerts a profound influence on the establishment and diffusion of certain actions as CIR practices that carried out by these organizations. This environment consists of external institutional pressures or carriers as explained by Scott (2005). There are three main institutional pressures that organizations are potentially subject to, which are coercive (e.g. regulative) pressures, normative (e.g. professional) pressures, and cognitive pressures (e.g. social and culture). These pressures emerge primary from the political and constitutional environment, the economic environment, and finally the social and culture environment. Consequently, the following sections would highlight these environments that are supposed to influence the CIR practices in the Egyptian companies

3.2.1 Political environment

In Egypt, political conditions confronted continuous challenges until to date. Though Egypt succeeded in attaining its independence in 1922, the British system continued to dominate Egypt's political life and fostered fiscal, administrative, and governmental reforms[1]. Prior to the 1952 revolution period, three political forces competed with one another: the Wafd, the president of Egypt, King Fuad, and the British Army. Other political forces were also involved in this period, including the Communist Party (founded 1925) and the Muslim Brotherhood (1928), which eventually became a potent political and religious force. Nasser was appointed as Prime Minister in 1954-1956. Straight after the revolution of July 1956, he was elected as President of Egypt and continued leading the country and Arabic region until his death in 1970. Abdel El Nasser was a controversial leader of the Arab world, creating the short-lived United Arab Republic 1958-1961[2].

After Nasser's death, Vice President Anwar el-Sadat, was elected as the successor Egyptian President. Sadat introduced greater political freedom and new economic policies, the most important aspect of which was the "open door" policy. Sadat exercised more flexible policies, focusing more on improving the economy and encouraging private and foreign investment. Sadat’s liberalization movement included the reinstitution of due process and the legal banning of torture (Dahawy, 2009). Sadat tried to expand participation in the political process in the mid-1970s but later abandoned this effort. In the last years of his life, Egypt was racked

1 http://www.state.gov/r/pa/ei/bgn/5309.htm
2 http://www.britannica.com/EBchecked/topic/404045/Gamal-Abdel-Nasser

by violence arising from discontent with Sadat's rule and sectarian tensions, and it experienced a renewed measure of repression.

On October,1981, Hosni Mubarak was elected as a President of Egypt after Sadat's assassination by the Islamic group Muslim Brotherhood. Mubarak had been an Air Force commander during the October 1973 war and was Sadat's vice president. Later in the month of Sadat's assassination, Mubarak was appointed as Egypt's president. In subsequent years, Mubarak was continually confirmed by popular referendum for four more 6-year terms, most recently in September 2005.

Since 1991, Mubarak has supervised a domestic economic reform programme to reduce the size of the public sector in favour of the private sector. Nevertheless, little progress in political reform had been achieved. On November 2000, People's Assembly elections had witnessed the winning of 34 members of the opposition against 388 winners from the ruling National Democratic Party (NDP). Opposition parties continue to face various difficulties in mounting credible electoral challenges to the NDP. The Muslim Brotherhood, who had appeared in Egypt since 1928, remained an illegal organization in Mubarak's era and hence was not recognized as a political party as the Egyptian law prohibits the formation of political parties based on religion. In 2000, the elections were generally considered more transparent and better executed than it was in the past. On the other hand, the opponent parties continued to lodge credible complaints about electoral manipulation by the government.

In September 2005, presidential elections witnessed progress as parties were allowed to vote for candidates against President Mubarak and his National Democratic Party. In early 2005, President Mubarak proposed amending the constitution to allow, for the first time in Egypt's history, competitive, multi-candidate elections.

In March 2007, Mubarak introduced several constitutional amendments that resulted in increasing presidential powers and, more significantly, confined the participation of political parties based on religion, race, or ethnicity in the presidential elections. Egypt's judicial system is originally based on European (primarily French) legal concepts and methods. Under the Mubarak government, the courts have demonstrated increasing independence, and the principles of due process and judicial review have gained greater respect. The legal code is derived largely from the Napoleonic Code. In the recent years, economic and political conditions were constantly getting worse because of the management and financial corruption in the public and private sectors and the injustice and inequality that were felt by many of Egyptian citizens. This unstable political situation fuelled the revolution that took place on the 25th of January in Tahrir Square and which was led by group of Egyptian youths. The revolution lasted for 18 days in January and February and changed the Middle East profoundly[1].

The effective usage and development in ICT and the Internet hinges on the legal and legislative systems which regulate and discipline the usage of the information technology technique. They also protect the rights and specify the obligations and liabilities of members of society. An absence of laws and regulations may result in a proliferation of cyber crimes, the conduct of unregulated and diversified practices or even a loss of credibility for online disseminated information.

the Egyptian government has been always working hard to raise the standards of Internet services by using different institutional mechanisms, such as offering incentives by providing better opportunities for recruitment in the public sector for people holding the ICDL (International Computer Driving Licence) certificate. Thus, the MCIS provided a number of subsidised ICDL courses to young Egyptian, and recently the government sought to shift few of its services to the Internet so as to use the Internet to solve a problem or perform a service through e-government. Other mechanisms have been imposed, restructuring the education system at the elementary and primary stages to include courses in computer literacy, and requiring undergraduate and postgraduate students to get the ICDL certificate before graduation. Such institutional mechanisms have helped in improving ICT literacy, and have improved social cognition about the importance and usability of IT techniques and Internet facilities. For instance, in 2006, MCIT signed protocol agreements with the Ministries of education and higher education to launch a number of initiatives: “PC for Every School Teacher and Student”, “PC for Every University Professor and Student”, and “PC for Every Journalist”. The “PC for Every Top Student” initiative offers advanced computers to top primary school students across the country. “Egypt PC 2010 – Nation Online” has spread awareness of new technology, strengthened and expanded domestic computer manufacturing and is helping provide a firm base for building a strong information technology sector. For those who do not have a computer, Internet access, hardware and software is provided by IT Clubs, of which there are now about 1900 nationwide, located mostly in disadvantaged areas.

[1] BBC, news,12 May,2011, http://www.bbc.co.uk/news/world-middle-east-13371974

3.2.2 Social and cultural environment

Hofstede (1980:25) defines culture as the collective mental programming of the people in an environment. Thus, he perceives culture not only as a characteristic of individuals but rather it encompasses a number of people who are conditioned by the same education and life experience. Also, it is defined as “a loyalty to an ethnic group in which the group is a collection of people who share patterns of normative behaviour and embrace notions of kinship and common origin, however mythical” (Haniffa and Cooke, 2005).

Accordingly, cultural and social environments, especially in a community that that fosters and extensively utilizes ICT, are perceived as salient institutions that shape the structure and scope of ICT adoption and exploitation. Besides this, culture and social cognition have a considerable impact on a country’s economic progress. Specifically, a study by Loch et al. (2003) suggests that in the Arabic region, culture can be harnessed to encourage the adoption of IT. The researchers explained that Arab culture has strong “patriarchal, tribal, collectivist” strand. Consequently, high level supporters are even more critical than they would be in the Western, industrialized culture. Regarding the Internet context, Cook and Finlason (2005) explained that the cultural effect should be accounted for when designing websites. Thus, the design teams should include a cultural analysis subgroup, entrusted with assessing requirements in the target community and establishing standards that conform to the community's prevailing tastes and expectations (Cook and Finlayson, 2005).

Cultural and social attributes do not only influence the usage of ICT across countries but also they may predicate the quality of the implemented disclosure and presentation practices (Alford et al., 1993, ; Salter and Niswander, 1995; Waddock and Graves, 1997; Ali and Hwang, 2000; Hung, 2000; Baginski et al., 2002; Haniffa and Cooke, 2005; Kwok and Solomon, 2006). For instance, Haniffa and Cooke (2005) studied the influence of the environment on company accounting practices. Another study by Leidner et al. (1995) examined the cultural differences that influence the use and impact of Executive Information Systems (EIS) in Sweden and the United States. The findings suggested that US executives use EIS primarily for monitoring and achieving benefits of problem identification speed and decision making speed whereas Swedish executives use EIS primarily for analysis and evaluation and achieving benefits of a more thorough, analytical decision process. Therefore, it has been concluded that culture does play a role in the interpretation of one’s environment, that culture has a considerable impact on the types of use of advanced executive information systems, and that cultural differences are related to perceived differences in outcomes which will eventually impact EIS use for decision making behaviour. In Egypt, the ex-Minister of

Information and Communication pointed to the societal challenges that confront Internet usage in Egypt, saying that:

> “Societal challenge is seen as lack of awareness of the Internet and its benefits, and additional importance the growing need for means of self regulation. Egypt has launched in May of this year [2008] a national dialogue on Internet safety issues. This dialogue identifies responsibilities of all concerned stakeholders from government bodies to private sector to beneficiaries ....” [1]

Cultural and social institutions have an influential impact on the business domain; Egypt is no exception. Wheeler (2003) argued that if the government is to achieve its aim of making the information revolution more inclusive, it needs to overcome a number of the constraints, which are social in nature, including the government's narrow interpretation of desirable information flow, as well as the problems of poverty, illiteracy and un- or under-employment for the majority of Egyptians (Wheeler, 2003: 628).

Egypt, as an Arabic and Islamic country, uses Arabic as the dominant language for the main transactions among the households and companies operating in the Egyptian markets. However, other languages are commonly used beside the Arabic language such as English, French and German.

Some cultural aspects may hinder or defer positive ICT achievements in the developing countries as a whole and in Egypt in particular. These peculiar cultural specifications are usually related to religion, language, literacy and traditions. This may lead to the development of a gap between nations in respect of the magnitude of the information technology employed and the level the countries achieve. This gap is acknowledged as the ‘digital divide’ (Wheeler, 2003; Wallsten, 2003). It is suggested that there are four key resources that organizations or the hosting counties need to combine in order to close the digital divide at the national level. Firstly, physical resources encompass access to computers and telecommunication connections; secondly, digital resources refer to digital material that is made available online; thirdly, human resources revolve around issues such as literacy and education; and finally, social resources refer to the community, institutional, and societal structures that support access to ICT (Warschauer, 2003). The number of Internet users is the most prominent indicator and the most frequently used measure in assessing the digital divide. It has been stated that less than 10 percent of the world's population uses the Internet.

[1] This is part of an interview disseminated on the MICT website. The article containing this dialogue is entitled: Reaching the next Billion Internet Users, 2008, in the following publication: e-Strategies Africa Country: Egypt

In Egypt, Wheeler (2003) contends that Internet usage is indirectly pushed by the employees at MCIT, the Regional Information Technology Institute, and the Cabinet Information Decision and Support Centre, and believes that Egypt's transition to the information age will remain slow until the small and medium-sized enterprise base in Egypt adopts the information society vision of the government. He suggests that there is a feeling that the majority of entrepreneurs would not be interested in such services; that the utility of becoming part of the information society was viewed as low; and that the desire to keep 'business as usual' was high. Wheeler (2003) attributes this reluctance to some social and cultural factors as poverty, high illiteracy rates, and unfamiliarity with English language which is the dominant language of the Internet; therefore participation in the information society will remain a luxury for the few. Originally. IT has been used in Egypt since 1980s to facilitate the transition from socialist to market based economy. This attitude was built on the perception that computers promote rational decisions, as elaborated by Nidumolu et al. (1996).

Consequently, the recently released ICT usage statistics show that social cognition has been escalating in the last decade. For instance, one major indicator refers to an increase in the percentage of families using the internet in Egypt to reach 14.7per cent during 2008, which accounts for 44per cent of the total population using computers in that year. This is the outcome of a number of initiatives adopted by MCIT in the previous years, most popularly the "Free Internet" and the "PC for Every Home" initiatives. The increasing number of internet service providers (ISPs) providing a free internet service contributed to the boost in the percentage of families using computers and the internet. The results also showed that 55per cent of Egyptian families use the internet for educational purposes (Information Center - MCIT, 2008).

In 2008, Egyptian ICT indicators portal shows that the percentage of private sector companies connected to the internet is 31per cent of the total companies and institutions in the economic sector that are fast growing like manufacturing, tourism and financial and banking services. This percentage stands for 60per cent of the total institutions utilized computers. The internet contributed in reducing the cost of transactions in 22per cent of companies. The results also reflected an increase in the percentage of private sector companies using electronic banking and financial services, which rose to 26per cent of the total firms that utilize the internet (Information Center - MCIT, 2008).

Despite these achievements, still, the challenges confronting Internet usage in Egypt are various and complicated. These challenges can be synthesized as follows (Hashem, 1999):

- Preserving the culture and traditions of local communities, while empowering them to interact effectively with other communities around the world

- Increasing public Internet accessibility at an affordable price
- Securing sufficient financial resources from the government and the private sector to sustain the ongoing developments
- Legislative issues are also considered as one of the most important challenges, as Internet services have been commercially deployed while the legal framework and model for the government/private sector partnership have not yet been completely worked out
- Arabization and providing adequate Arabic information content on the Internet in key sectors including education, business, and trade services. This will increase the societal Internet penetration drastically
- Internet security and protecting the individual's privacy
- Providing adequate training and technical assistance to enable users, especially professionals, to make best use of information and Internet technologies in their line of work.

3.2.3 Economic environment

Egypt is the most populous country in the Arab region and the second-most popular on the African continent. Nearly all of the country's 80 million people live in Cairo and Alexandria; and the GDP (FY, 2009) is $188 billion. The annual growth rate is 4.7per cent per capita (FY 2009). Economic conditions in Egypt have passed through several different stages since the 1990s as follows. In 1991, Egypt confronted several economic problems such as low productivity, economic stagnation, high population growth and high inflation rates. Consequently, several international monetary fund were been provided in an effort to support the structural reform measures. These remedial procedures contributed relatively to improving the economic conditions at that time. The inflation rate reduced from 21per cent in 1992 to only 4per cent in 1999, and the GDP growth per annum increased from 1.9per cent in 1992 to 5.5 per cent in 1999[1]. The government was also showing an interest in liberalizing the private sector to resolve the it weaknesses and problems. For instance, by 1996 most of public listed companies suffered from debts, poor quality services and crowded offices.

The privatization programme started with two industry sectors: cement and banking. With the establishment of the Egyptian cabinet in 2004 and the presidential election in 2005, the Government of Egypt began a new reform movement, following a stalled economic reform

[1] Internet on the Nile: A case of Egypt, ITU,2001

program, which begun in 1991. Since 2004, the cabinet economic team has simplified and reduced tariffs and taxes, improved the transparency of the national budget, revived stalled privatizations of public enterprises and implemented economic legislation designed to foster private sector-driven economic growth and improve Egypt's competitiveness. The Egyptian economy experienced steady GDP growth rates around 7 per cent between 2005 and 2008, before dropping below 5per cent during the global economic crisis. Despite noticeable growth, the economy is still burdened by government intervention, substantial subsidies for food, housing, and energy, and overstuffed public sector payrolls. The agriculture industry is mainly managed by the private sector, and has been largely deregulated, with the exception of cotton, sugar, and rice production. Yet, construction, non-financial services, and domestic marketing are also largely private[1]. The following table demonstrates some World bank indicators related to Gross National Income (GNI) and Gross Domestic Products (GDP) [2].

Table 3-1: Egypt World Bank Economic indicators (2005-2010)

World Bank Indicator	2005	2006	2007	2008	2009	2010
GDP/ capita (current US$)	1162	1367	1630	1997	2277	2591
GDP/capita growth (annual per cent)	3	5	5	5	5	3
GDP (current US$)	89.68	107.48	130.47	162.83	188.98	218.91
GNI per capita PPP (Current US$)	3570	3720	5490	5790	..	..

Source: These statistics are extracted from the World Bank database

The annual growth rate in the Gross Domestic Products(GDP) is low and decreased further in the last two years so it reached 3 per cent. Gross National Income(GNI) per person had gradually increased from 2005 to 2008. There was no data provided by the World Bank database for the last two years. These figures show that the economic conditions in Egypt are unstable.

The Information and Communication Technology (ICT) has played a pivotal role in business and socio-economic development in the last few decades. However, the information technology revolution has only proceeded after considerable years of economic reclamation. In 1991, the government began an economic reform programme aiming at transforming the Egyptian economy from being centrally planned, to become more market based and internationally orientated (Kamel and M. Hussein, 2001). This reform programme basically centred around increasing privatization of the public sector, which refers to the sale or transfer of public assets to the private sector. This is also described as any policy or action which increases the role of the private sector in the economy (Gray, 1998). The new economic policy aimed at fixing price distortions and resolving investment and trade

[1] http://www.state.gov/r/pa/ei/bgn/5309.htm
[2] This table has been prepared by the researcher by extracting the relevant indicators from World Bank database available on its website: http://data.albankaldawli.org/indicator/

obstacles, as well as introducing smooth and effective processes for financial sector reform (Kamel, 2002). Amongst the most important aspects of this programme are the implementation of a privatization programme and the introduction of new capital market law. These economic transformation strategies had led the Egyptian economy to more advanced stage which capitalizes on the benefits of the ICT. By the end of last century, the Internet was introduced to many countries including Egypt. Consequently, the Internet usage has grown despite the deficiency in the economic condition. The ex-Minster of MICT commented that:

> "The information society represents both a challenge and an opportunity for the developing world. It has the potential to be socially beneficial in issues related to economic growth, education and business development. It can also help in alleviating poverty, improving access, improving access to health care, fairly distributing resources and strengthening participation in decision-making process. Therefore, the impact of the Internet should be measured less in terms of sheer numbers of connected individuals and more in terms of contribution to social progress." (Kamel, 2002)

The above quotation highlights some potential economic and societal utilities of the Internet. Hence, it could be argued that the Internet could be considered as gifted antidote for many economic problems in the developing regions (Montealeger, 1999). Hence, the Egyptian government spent great efforts to revamp economic conditions and to keep economy's growth ongoing, to minimize risk, and to raise living standards to the masses. The Commercial International Bank (CIB) reports described the Egypt's economy as a consumer-led environment which is mostly stimulated by investments and gradually lowering interest rates (CIB research group, 2008).

Until 1991, Egypt was struggling with several economic problems such as low productivity, economic stagnation, high population growth and high inflation rates by adopting several structural and economic reforms (International Telecommunication Union 2001). A report issued by the Arab Economic Union Council specified the key factors behind the digital divide in the Arab world such as the lack of human and economic IT resources, illiteracy and computer illiteracy, the lack of funds for IT research and development, the lack of robust telecommunications infrastructures and the cost of Internet connectivity. Other cited factors were the lack of an e-business and e-banking culture, and the lack of secured e-commerce websites and electronic signature validation techniques (Abdulla, 2005). However, like many other emerging markets, banks in Egypt are the dominant financial institutions, as they control most of the financial flows and possess most of the financial assets. However, economic reform has directed more of the bank ownership and activity towards the private sector, and has activated a long-dormant securities market. In an attempt to reduce market concentration and enhance competition, the government has also embarked on an active bank privatization programme (Bolbol et al., 2005).

The securities market in Egypt dates back to the 19th Century, in 1888 when Alexandria Exchange was established first, followed by the Cairo Exchange in 1903. In 2009, the Cairo and Alexandria Exchanges were merged together and the name was changed to 'Egyptian Exchange (EGX)'[1]. The number of listed companies in 1907 was only 228 with a market capital of about L.E 91 million, and the Egyptian Exchange was considered the fifth most active exchange by the mid of last century. Due to the nationalization of a number of Egyptian companies during the 1960s, it entered a slowdown phase until the government started to apply a comprehensive programme for economic reforms and privatization.

In 1992, Capital Market Law was issued with the subsequent regulations and decisions encouraged the revitalization of the Egyptian Exchange. Consequently, new activities and several institutions working in different fields in the capital market had been introduced until the Egyptian capital market became one of the strongest and deepest market activities in the region. A number of activities and mechanisms were organized by different legislations on the capital market. By the end of 2010, there were more than 618 securities companies. The Capital Market Authority (CMA) is the market regulatory agency which is in charge of the development of a transparent and efficient stock market in Egypt. It monitors market activity and facilitates capital growth by encouraging listed companies to comply with disclosure requirements, guaranteeing more secured institutions for trading securities and promoting the introduction of markets for new investment instruments. The CMA fundamentally maintains investors' confidence by promoting investment in Egyptian companies. It also reviews and analyzes accounting, auditing and disclosure malpractices, as noted by (HassabElnaby et al., 2003). The Egyptian Financial Supervisory Authority is a public Authority, having a legal status, established in accordance to law 10 of the year 2009. This Authority was held responsible for supervising and regulating non-banking financial markets and instruments, including the Capital Market, the stock Exchange, all activities related to Insurance Services, Mortgage Finance, Financial Leasing, Factoring and Securitization. EFSA's role is to regulate the market and ensure its stability and competitiveness to attract more local and foreign investments rules.

The Egyptian Financial Supervisory Authority replaced the Egyptian Insurance Supervisory Authority, the Capital Market Authority, and the Mortgage Finance Authority in application of the provisions of the supervision and regulation of Insurance Law no. 10 of 1981, the Capital Market Law no. 95 of 1992, the Depository and Central Registry Law no. 93 of 2000, the Mortgage Finance Law no. 148 of 2001, and other related laws and decrees that are part of

[1] http://www.efsa.gov.eg/content/efsa2_en/efsa2_merge_page_en/cma_merge_page_en.htm

the mandates of the above authorities. The following table shows the development in the listed stock market values and the stock traded volume during the last five years. The table shows that the market cap flourished in 2007 when it approached around 139 million Dollars. However, it has been gradually deteriorating since then until reached 82.5 million Dollars in 2010. This reduction in market cap could be attributed to the delisting procedures that the EGX has witnessed in the last years. The table also shows that financing through investing in international markets has also greatly declined from 7 per cent in 2005 to only 1per cent in 2009.

Table 3-2: World Bank indicators of the Egyptian Stock exchange

World Bank Indicator	2005	2006	2007	2008	2009	2010
Market capitalization of listed companies (current US$) in millions	79.67	93.47	139.29	85.88	89.95	82.49
Stocks traded, total value (percent of GDP)	28	44	41	43	28	17
Stocks traded, total value (current US$)	253.92	474.61	530.81	696.39	528.13	371.11
Financing via international capital markets (percent of GDP)	7	1	2	3	1	..

Source: Developed by the researcher: statistics were extracted from the World Bank database

3.3 Historical evolution of the ICT and Internet technology in Egypt

The telecommunications industry appeared in Egypt for the first time in 1854, when telegraph services commenced its operation in Alexandria. In 1982, telecommunications services were independent from the government department at that time. In 1998, a new company was established and owned by Egyptian government which is Telecom Egypt to handle the fixed phone lines problems and to thrust the communication industry forward. In the mean time, the Telecommunication Regulatory Authority was issued as an independent regulator. Thus, the telecommunications sector was further innovated in 1999, when the responsibility of telecommunications was transferred to a newly created Ministry of Communications and Information Technology (ITU, 2001).

3.3.1 The period From 1990-1995

Though progress in the ICT and Internet domain during this period was relatively slow, the appearance of Internet technology in Egypt was the breakthrough. Afterwards, Internet usage has been sustainably increasing. Indeed, the Internet was introduced to the Egyptian community in 1993. Yet, it was exclusively available to the Egyptian Universities Network (EUN) of the Supreme Council of Universities and the Cabinet Information and Decision

Support Centre (EUN, 2001).Thus, the user community was quite limited at that time, around 3000 users among a population of 63 million (Kamel and M. Hussein, 2001).

In 1994, Egyptian Internet traffic was divided into three main sectors: academic, science and government. At that time the Internet was not available for commercial purposes and there was only one Internet Service Provider (ISP); In-Touch. This service provider could only provide email services for L.E. 300 (about $100 given the exchange rate at that time). Moreover, the Internet connection was considerably slow, which made Internet usage less attractive.

In 1995, IDSC and RITSEC launched the Egypt Information Highway Project to motivate and support the development of a national information highway to empower Egypt's socio-economic growth. Consequently an ambitious plan was put in action to provide digital data access to the end user through digital multiplexers (Internet Society of Egypt, 2001; Hassanin, 2003).

3.3.2 The period from 1995-2000

By 1996, gateway speeds had increased nearly 20 times from the inception rate in 1993. The service was expanded and covered a wider range of users that approached 20,000 in number. By this time there were three main sources of Internet connectivity in Egypt :The Egyptian Universities Network; free services provided to government agencies and Non-governmental organizations (NGOs); and 12 Internet Service Providers (ISPs) providing Internet connections to the Egyptian people, the cost of obtaining Internet services at that time ranging between $300 to $1000 per year (Abdulla, 2005).

As mentioned earlier, the creation of Egypt-Telecom (ET) as a state owned company had moved the telecommunications and information communications industry to an advanced stage which was accompanied by the presence of competition in the telecoms industry for the first time in Egypt. Since 1999, building an information society for economic and social development in Egypt has been a central goal of government, demonstrated by the establishment of a new Ministry of Information and Communication Technology. Partially, the assigned task of the new ministry was/is to articulate the government's ICT strategy for Egyptian society. Therefore, the ministry's projects have incorporated various projects such as computer clubs for low income youth; training for small and medium-size business managers; linking professional communities like physicians; and enhancing knowledge flows in Egypt to off-shore software development and training schemes (Wheeler, 2003).

3.3.3 The period from 2000-2005

A rapid growth in Internet usage by Egyptian people has been noticed during this period. This might be regarded to the government project started in January 2002, which called for expanding “free Internet services” all over Egyptian governors. This initiation made the Internet services accessible by large number of Egyptians who were connected to the Internet through the 68 Internet service providers (EIU, 2007). Hence, Telecom Egypt, the main Internet service providers, collected 70percent of its revenues from Internet use (Abdulla, 2005). At that time the country had fewer than 750,000 Internet users but by the end of 2005 this number had substantially grown to 4 million users. However the ADSL lines were still not commonly diffused by that time.

In 2004 a broadband initiative was announced which introduced low rate subscriptions for ADSL which started at less than £150 per month (EIU, 2007). MICT played a distinguished role in establishing policies and supporting partnerships between the public and private sectors. This step, taken by the government, paved the way to increased Internet diffusion and hence to reducing the digital divides (Loch et al., 2003). Nidumolu et al. (1996) elaborated that the slow diffusion of IT for socio-economic development in the developing countries in general, and in Egypt in particular, can be related to three key reasons. Firstly, less developed countries typically have a poor computing infrastructure (hardware, software, and data communications) in comparison with developed countries. The total number of personal computers in Egypt, for instance, is estimated to be only around 200,000 for a population of approximately 60 million people; similarly the Egyptian communications infrastructure is poor, with a telephone density of one telephone per 20 people. Such inadequate computing and telecommunications infrastructure in turn has resulted in a poor information infrastructure, where many organizations lack the "information awareness" which is frequently taken for granted in the developed countries.

Secondly, abandonment of the private sector has traditionally been marked in Egypt where the government and its public sector agencies have typically been the primary users of information technology, whereby the government dominates the IT development; also control over the computing infrastructure has frequently been associated with the political control of information, particularly to reinforce the power of the government. In these instances, IT can become a powerful tool for controlling the collection and dissemination of information to the public, whereby non-governmental sources of information on the economy are frequently missing or are unreliable.

Thirdly, the socio-cultural context in which IT operates is conceived as a fundamental obstacle in the less developed countries. Consequently, the IT in these countries needs to pay particular attention to the social group that influences the attitudes and behaviours of the target users. For instance, IT implementers in the local administrations of Egypt had to take into account the strong local customs and ties between employees and their relatives and other socially influential individuals. These social influences ensured that employees were strongly bound to the local community and were typically unwilling to be assigned elsewhere for employment (Nidumolu et al., 1996).

3.3.4 The period from 2005-2010

The last five years have witnessed constant development in Information and communication technology such as mobile and Internet across Egyptian society. In addition, social awareness and beliefs have been gradually improving in parallel. Following the successful conclusion in 2006 of the Egyptian Information Society Initiative, which resulted in the steady growth of the Egyptian ICT sector, MCIT initiated a new strategy covering the period from 2007 to 2010 with objectives as follows:

- Continue development of state-of-the-art ICT infrastructure that provides an enabling environment for government and businesses throughout Egypt and links it globally
- Create a vibrant and export-oriented ICT industry
- Leverage public-private partnerships as an implementation mechanism whenever possible
- Enable society to absorb and benefit from expanding sources of information
- Create a learning community whose members have access to all the resources and information they require regardless of gender and location, thereby allowing all to achieve their full potential and play a part in the country's socioeconomic development

3.4 Internet penetration and exploitation in the Egyptian community

Despite the diffusion of the Internet technology in both the developed and developing countries, still the extent of the Internet technology in the developing countries lagging behind. The following diagram is developed by the International Telecommunication Union (ITU) and clearly shows how developing countries are still lagging behind the world and developed countries in respect of the number of Internet users.

Figure 3-1: Internet users per 100 inhabitants (2000-2010)

Aston University

Illustration removed for copyright restrictions

Source: ITU- ICT database

At continental level, the following diagram demonstrates that the continent of Africa has the lowest Internet access rate by household right after Arab states.

Figure 3-2: Proportion of households with Internet access arranged by region

Aston University

Illustration removed for copyright restrictions

Source: ITU- ICT database

At national level, the following table compares Egypt to other similar Arabic countries in penetration rate of the Internet. It clearly reveals that the Internet penetration rate is considerably low in Egypt compared to the rest of Arabic countries. It also shows that some Arabic countries such as UAE, Kingdom of Saudi Arabia, Kuwait, Oman, Jordan and Morocco possess higher Internet penetration rate making Egypt in a moderate position.

Table 3-3: Internet penetration rate for a number of Arabic countries

Aston University

Illustration removed for copyright restrictions

Source: ITU World Telecommunication / ICT Indicators Database

Despite the fact that the Internet penetration rate is low in Egypt, the absolute number of Internet users is the highest in Egypt compared to these countries. The only interpretation for the difference between the Internet penetration and number of Internet users is the large size of Egypt population. According to MCIT statistics, the number of Internet users has increased almost by 6 million users to become 25.30 million in April 2011 as illustrated in the table below. It also shows that the percentage of households using the Internet has slightly increased 32.21per cent in April 2011 indicating that the Internet has gained more popularity in the recent years.

Table 3-4: Internet usage Statistics for Egypt (April 2010- April2011)

Indicator	April 2010	April 2011	Monthly growth rate (per cent)	Annual growth rate (%)
Internet Users (Million Users)	19.23	25.3	4.76	31.57
Internet Penetration (%)	24.91	32.19	1.46	7.28
Proportion of households using the Internet at Home (%)	26.65	32.21	0.53	6.56

Source: Adapted from Information and communication technology indicators bulletin provided by MCIT for 2011

Nevertheless, the Internet usage indicators provided by Egyptian government in the last two years and which presented in Appendices [A3-1],[A3-2] and [A3-3] demonstrates that the usage of the Internet by households (male and female), business and even governmental units is not directed to business purposes. Instead, most of households use of the Internet is directed towards entertainment, sending messages and VOIP (i.e. Internet telephony). Appendix [A3-2] illustrates that more than 80 per cent of government usage of the Internet is devoted for sending and receiving messages, more than 70 per cent for research and development, and more than 40 per cent or publishing media about the organization. Likewise Appendix [A3-3] reveals that almost 80 per cent the Internet usage in the private business units in year 2010 and 2011is directed towards sending and receiving e-mail, more than 60 per cent for disclosing information of their products and services, and more than 40 per cent for customer services. These statistics indicate that the Internet usage in the last two years in Egypt has been largely invested in social communication and entertainment. Trading, banking and investment activities are rarely performed throughout the Internet.

3.4.1 The Internet and CIR practices in Egypt

As explained earlier, the Egyptian community consciousness about the Internet has been steadily increasing during the last decade, and organizations' use and operationalization of the Internet in the business arena has been progressing in its turn. The exploitation of the Internet has been gradually expanding across the time horizon and consequently the community's awareness, driven by both companies and individuals, has been improving. Therefore, great efforts have been expended in seeking to deepen knowledge and skills about this new technology. This awareness was initially instigated and supported by governmental efforts. This attitude did not only support the communication and information technology realm in Egypt, but also leveraged some economic and social life aspects. The MICT (2009) announced that its 2010 (ICT) strategy consolidates and builds on the progress made to date and will continue to achieve the main ministry priorities, which are: continue development of state-of-the-art ICT infrastructure that provides an enabling environment for government and businesses throughout Egypt and links it globally; create a vibrant and export-orientated ICT industry; leverage public-private partnerships as an implementation mechanism whenever possible; enable society to absorb and benefit from expanding sources of information; create a learning community whose members have access to all the resources and information they require regardless of gender and location, thereby allowing all to achieve their full potential and play a part in the country's socioeconomic development; support the development of the skills required by the ICT industry; and support research and innovation in ICT (Ministry of Communications and Information Technology, 2009). Despite the fact that the Internet initially penetrated the Egyptian community in 1993, the real exploitation and use of the Internet has taken place only at the beginning of this century. Therefore, the utilizing of the Internet technology and basically the notion of creating a corporate website for business purposes has only gained great attention in the last ten years. MCIT statistics show that the total number of IT companies has substantially increased from 266 in 1999 to 3288 in 2009; also the number of internet users has increased from 300,000 in 2009 to 13.9 million in 2009 (MCIT, 2009).

3.4.2 Traditional Egyptian Corporate reporting practices

The turning point of the Egyptian economic status took place in the period 1991-1992 after the era of central planning. During the central planning phase, accounting was characterized by conservatism, secrecy, a relatively weak profession, and a tendency to respect law more than profession announcements or standards (Abdelsalam and Weetman, 2007). Hence, Egyptian standards were not as powerful as formal regulations. Later, the Egyptian accounting system was developed further after the establishment of the Capital Market Authority (CMA).

In Egypt, financial disclosure practices are a conglomeration of International Accounting Standards (IAS) and Egyptian Accounting Standards (EAS), where the key constituent of the financial reporting is the annual report. However, the annual report does not necessarily contain all the items that are required by accounting systems in the developed countries. Principally, all companies listed on the Egyptian Stock Exchange must comply with the disclosure rules required by Capital Market Law (CML) No.95 of 1992. They are also required to provide copies of their annual and semi-annual financial statements to both the CMA and to the Egyptian stock exchange (EGX), and to publish a summary in two daily newspapers, at least one of which must be in Arabic. Egyptian companies are required to comply with the EAS which are in conformity with the IAS with some minor exceptions. Thus, where there is no specific EAS statement, the IAS must be applied. Therefore, before disseminating companies' financial reports, the CMA must review those reports with the attached external audit report to ensure timely and full compliance with Egyptian accounting and auditing Standards. However, in case of noncompliance, the uncommitted company needs to publish the missing information. Besides, the CMA may opt to publish details of the noncompliance, and suspend or entirely de-list the securities of the noncompliant companies. Non-financial disclosures are partially regulated. For example, share class voting rights, board remuneration, details of board members and senior management. Yet, the company may opt to disclose further ethical and environmental details, which are already limited or do not even exist in many Egyptian annual reports. Additionally, Egyptian companies are not allowed to publish the sort of information that is conceived as material in a sense that it may influence the stock price. This prohibition is stated by Articles 13 and 14 of the "Listing or de-listing rules that are stated by the decree No. 30 for year 2002 (CMA, 2002).

Article 13 states that:

> "The company is prohibited from making exaggerated disclosure or publishing any data or information that does not coincide with the company's conditions. In all cases, any information published by the company should be supported with documents and provided to the Stock Exchange upon request".

Meanwhile, Article 14 emphasizes that

> "The company is prohibited from disclosing any information or data that affects its conditions or financial position especially to financial analysts or financial institutions or any other parties before disclosing them to the public, according to the disclosure provisions included in these rules"

Hassan et al. (2009:83) argue that corporate disclosure is a useful means of communication between management and outside investors for the following reasons. Firstly, enhancing corporate disclosure helps in decreasing the information asymmetry problem which rises because of the agency-principal relationship. Secondly, extensive disclosure can reduce the uncertainty surrounding future corporate performance and facilitate trading in shares. Thirdly, more public information is expected to increase stock liquidity by reducing transaction costs and increasing the demand on shares. However, prior literature on the disclosure of the Egyptian listed companies has shown that the disclosure pattern is still immature and lacks too many basic features to increase the efficiency of the Egyptian stock market (Dahawy, 2009; Hassan et al., 2009).

Despite the great leap made by the government to convert the Egyptian economy from being socialist to capitalist by supporting the privatization movement, the Egyptian accounting system is still lagging behind and not meeting many expectations. It is suggested that faulty Egyptian accounting practices have emerged from the absence of unified sources of standards with which companies should comply. Many countries used to apply home county standards along with the International Accounting Standards IAS (Taylor and Jones, 1999), and Egypt is no exception. As a result, there is always a potential conflict that rises between IAS and Egyptian Accounting Standards EAS.

However, such a conflict has not only been realized in the Egyptian community, but also in other different spots of the world. For instance, Street and Cray (2002) studied the financial statements and footnotes of worldwide companies. The key finding of this research is that there is a significant extent of non-compliance, especially in respect of IAS disclosures. Also, the researchers noted that compliance with IAS measurement and presentation standards can be attributed to the exclusive reference to the use of IAS, being audited by a Big 5 plus another 2 firms, and being domiciled in China. Similarly, Ho and Wong (2001) argue that mere adoption of additional International Accounting Standards (IAS) did not help in resolving the transparency problem, especially in regions such as Asia. They claimed that what really matters is whether the quality of the “actual corporate disclosures” satisfies investors’ information needs.

Hofstede (1984) and Gray’s (1988) sought to justify the observed incompliance behaviour of some companies by referring to “national culture impact”. They recognized that Egypt’s distinctive culture had interfered and affected the quality of the Egyptian accounting system. Drawing on this, Fawzy (2004) reported that listed companies on EGX have four important characteristics. Companies are closely held. Second, there is considerable state ownership in privatised companies. Third, there is weak board independence. Fourth, disclosure is not a common practice. Dahawy (2009), examined the disclosure pattern by most actively traded 41 companies listed on Cairo and Alexandria Stock Exchange (CASE) for the year ending 2002. The researcher used a disclosure checklist issued by the CMA. It was found the degree of disclosure by Egyptian companies is still affected by the highly secretive Egyptian culture. Also, the degree of affiliation of the auditor with an international firm is the most significant variable affecting the level of disclosure by Egyptian companies. The legacy of the previous era of central planning, secrecy, and conservatism is reflected in the reluctance of Egyptian companies to disclose the market value of investments and land in spite of the significant differences between the market and book value. This can be regarded as a conservative policy which is deeply rooted in Egyptian culture. Noncompliance with related party disclosure also reflects continued secrecy. In addition, noncompliance costs were lower than those for compliance due to the time needed by the CMA to adapt to the new regulations (Abdelsalam and Weetman, 2007). These disclosure and presentation patterns are expected to be associated with online business reporting as well.

3.4.3 Challenges confronting Egyptian companies

Great hope has been based on exploiting Internet technology in the business domain (Beattie and Pratt, 2003; Bollen et al., 2006; Bonsón and Escobar, 2006; Bonsón et al., 2009). Especially that the Internet technology permits transferring massive quantities of real-time and raw data and provides managers with new technical ways to disclose further information about the organizations' activities (e.g. webcasts, conference calls). As a result, it has been argued that the advent of the World Wide Web has led firms to reconsider their disclosure strategies, since this technology offers more flexibility than the traditional disclosure means. For example, many firms' websites start to insert interactive facilities or provide access to video presentations in an effort to improve the presentation of their business reports. Moreover, it allows for disclosing more information than in the traditional means (Cormier et al., 2009) and at a reasonable cost.

However, the Internet was also perceived as a new source of problems for organizations because of some non-technical factors such as commercial confidentiality, unreliability, information overload, unauditability and un-regulatability, which may inhibit more revolutionary change (Conover et al., 2008). Irrespective of these two viewpoints, it is expected that Internet technology will more likely exert a substantial impact on the preparation, presentation and inspection of business reports in the near future. Therefore, current study is centred on studying the status of the corporate business reporting on the Internet as exercised by Egyptian listed companies. Specifically, researcher will attempt to deliver a comprehensive view in respect of four main aspects: First, the amount of the information disclosed on the Internet, second, the quality attributes of the information disclosed and the corporate website as a whole such as timeliness, credibility, usability, and general content, third, the comprehensiveness of the accounting and financial information (e.g. investor relations information) on the corporate website, finally, the usage of advanced technical features in improving the corporate reporting practice via the Internet. The researcher would assess how far the companies have improved their CIR practices in the last two years and the factors that either obstruct or facilitate the progress in this domain.

Regulating and monitoring the disclosure and presentation practices on the Internet is vital to reflect legitimacy on these practices, as occurred in some developed countries. This also may enhance and reduce the traditional business reporting problems that organizations used to confront. Consequently, value and relevance of accounting and financial information will be retained after it has been constantly criticized. CIR practices have gained more attention as many countries commenced supporting their corporate governance plans, and called for more accountability and transparency (Bushman and Smith, 2001; Ho and Shun Wong, 2001). However, so far it is not clear how the accounting and financial institutions in Egypt has dealt with these new practices and which have been steadily increasing and diffusing among the Egyptian companies. Accordingly, the researcher will investigate how the Egyptian stock exchange, financial analysts, auditors and individual investors in Egypt handled this issue and which of these parties played a considerable role in advancing and institutionalizing the CIR practices in the Egyptian community.

3.5 Summary

This chapter is designed to provide an overview about the political, economic, social and cultural environments that characterize Egypt. Primarily, this chapter discussed that theses idiosyncratic characteristics may potentially affect the Internet usage in Egypt in general. Indeed, these political, economic, social and cultural factors constitute, in aggregation, the institutional environment that accommodates CIR practices. Thus, section 4.3 discussed the historical development in the ICT and Internet during the past fifteen years. This chapter also demonstrates the various constructs of the institutional environment accommodating the CIR practices which may help in promoting these practices or, conversely may confine its progress. Actually, political, social, economic environments and stock market as well involve produce various factors that may exert a significant influence on the CIR process at large. Some of these variables have been investigated in Chapter Eight such as the audit firm impact, industry field, ownership structure, in addition to the international exposure including possibility of being listed on other foreign stock exchanges. The impact of these variables will be tested on the extent and the quality attributes of the online business information as well as on the comprehensiveness of the investor relations information on the websites. Additionally, the researcher will extend the investigation to know whether these variables could also influence the usage of the Internet including multimedia and communication facilities. The arguments provoked in the current chapter could provide some insights about how the companies would exploit the Internet in their online reporting practices.

Chapter 4: Institutional logics and CIR practices: A proposed model

4.1 Introduction

Though, the Internet usage is warranted by potential economic consequences, other social and cultural concerns are also indispensable. Prior research on CIR overemphasized the economic perspective while examining the impact of independent variables such as firm characteristics on the corporate voluntary and mandatory disclosure on the Internet. This perception assumes that companies tend to disclose business information online for efficiency purposes. In practice, decision making process is far more complicated and usually exposed to various institutional pressures that make this perception pretty unrealistic. As a result the researcher developed a theoretical framework which incorporates four potential perceptions representing different theoretical strands. This framework is based on the notion of institutional logic. This logic is tacit in nature, hence cannot be directly measured. Alternatively, it could be identified by understanding the implicit drivers that held some companies to persistently follow specific practices. Actually, this logic stipulates the appropriateness of some practices which are imposed by a dominant party. Thus, understanding this logic deems critical in identifying the appropriate, reasonable or acceptable CIR practices from the companies' perception as well as their community. Thus, identifying the prevailing logic, at any institutional level (e.g. at industry field, stock market, State, or country) , and its attributes (e.g. economic wise, social wise) are important to provide an appropriate interpretation in respect of the realized diversity in the extent and quality of the current CIR practices across Egyptian companies' websites.

Therefore, this chapter is organized as follows. Section 4.2 exhibits examples for the most importunate motivations instigating the usage of the Internet in business reporting. Section 4.3 discusses the two main strands of institutional theory and its rationality. Then, section 4.4 presents the notion of isomorphism and clarifies the three types of institutional pressures. Section 4.5 contains and elaborates the proposed theoretical model on which this study is based. Meanwhile, section 4.6 illustrates several relevant theories which support the proposed logics. These theories represent potential forms of institutional logics may drive CIR practices. Finally, section 4.7 summarizes the key points provoked throughout this chapter.

4.2 Multiplicity of the motivations behind the adoption of CIR

Hitherto, CIR practices are discretionary implemented by an increasing number of companies worldwide, albeit at different levels of complexity and professiency (Debreceny et al., 2002; Marston, 2003; Barton and Waymire, 2004; Marston and Polei, 2004; Xiao et al., 2004). There are various potential motivations that promote these practices. The multiplicity of these motivations or incentives are contingent upon various economic, social, cultural, technical, and political factors prevailing in a specific community as discussed in the previous two chapters. Empirical research on CIR discusses how such motivations have substantially encouraged large number of companies, notably in the developed countries, to be engaged in the CIR practices. For instance, Hedlin (1999) classified the development of corporate websites into three successive stages. The first stage represents the earliest generation of websites. They exclusively contained general company information. At this stage, companies were mainly prioritising customers over investors. As a result, the initial versions of these websites were less professional and had no clear purpose, vision or targeted users. At the second stage, the companies put more emphasis on investor relations and started investigating their website users' information needs with more attentiveness. This advanced vision led to the creation of electronic versions of the company's financial statements (i.e. annual report, interim reports and press releases) and linked them directly to the corporate home page. Obviously, at this advanced stage, the companies' focal users have enlarged to contain the current and potential investors along with customers. Thus, at this stage, the websites have been perceived as an efficient distribution channel for business information. Nevertheless, the usage of the Internet was still restricted and neglecting the innovative synergies of the Internet.

At the third stage, corporate websites are no longer conceived as alternative means for distributing traditional paper-based information, but rather a highly technical and innovative medium to disseminate various types of information to the end users. The companies' perception has changed dramatically, so a growing awareness has been raised about the Internet's technical and economic feasibly. Hence, the companies' expectation of the prospective website users has been gradually changing to include all types of potential stakeholders instead of focusing merely on customers.

Likewise, Ashbaugh et al. (1999) conducted a survey investigating the firms' perceived benefits of being presented on the Internet. The results prove that there are various incentives underpinning the intention to appear on the Internet. It was also noticed that companies engaged in IFR were highly concerned with the communication with their potential and current shareholders. On the contrary, companies that were not engaged in IFR were more concerned with the communication with the existing customers and competitors. Hence, the researchers concluded that the quality of a firm's financial disclosures on the Internet is a reflection of the perceived importance of using the Internet as a dynamic financial reporting instrument which is available to the investigated companies.

Majority of CIR literature reveal that the adoption of CIR practices in developed countries are mostly driven by efficiency and to support the communication between the company and its investors (Ashbaugh et al., 1999; Craven and Marston, 1999; Ettredge et al., 2001; Ettredge et al., 2002; Debreceny et al., 2002; Geerings et al., 2003; Beattie and Pratt, 2003; Bonsón and Escobar, 2006) as explained earlier. However, this trend has not been reported by the research conducted on many of Arabic and developing countries. Accordingly, the researcher suggests that there is an implicit logic that directs and dominates the CIR practices at country and/or company level. In other words, it is proposed that each company perceives the Internet importance and role in the corporate disclosure process differently. This logic might be economically driven or technically driven, marketing driven or institutionally driven or may exist because of other unknown reasons. Investigating this sort of logic is essential to interpret disparity in the online disclosure practise. Especially in the deregulated environments as it mirrors the internal views of the individuals performance.

4.3 Theoretical background

Institutional theory has been originally introduced by a group of sociologists even prior to organizational studies, around the period 1937- 1947 (Jepperson, 1991; Scott, 2008). Hence, it gained the majority of its essentialities and prospects from studies in social science. By the time, institutional theory has been applied to various disciplinary fields such as technology, accounting (Carruthers, 1995; Tuttle and Dillard, 2007), Internet bankning (Shi et al., 2008), management accounting (Burns and Scapens, 2000), political science, and economics (North, 1990).

Institutional theory has been conceived as contextual theory because it presumes that organizations are exposed to different types of institutions and their responses to these institutions might be different from one case to another and from time to time (Oliver, 1991). For instance, Greenwood and Hinings (1996) argue that some institutionalists might regard the institutional theory as an explanation of similarity and stability of organization arrangements in a given population or field of organizations. Therefore, its relevancy is highly contingent upon specific institutional conditions that may not be extended to larger cases.

Yet, other institutionalists may contradict this view and believe that the institutional theory can also interpret changes in organizations' practices. Oliver (1991) argues that stability may not last longer, if the legitimacy of the organization practices is contested (Towely, 1997). Generally, the institutional theory addresses different themes and concepts that are usually susceptible to modifications to match specific context. However, there are two well established strands of institutional theory that were constructed over the past years. These distinctive strands will be explained in some details in the following sections.

4.3.1 Old institutional theory

Old institutional theory paid a great attention to the impact of institutions on organizations behaviour at the micro institutional environment level (e.g. organizational level). Thus, it primarily concentrates on the construction and formulation process of institutions which is known as "institutionalization" process. Thus, most the advocators of this strand usually relay on Gidden's Structuration theory (Macintosh and Scapens, 1990) to investigate the historical formulation in a given set of actions or practices. According to Burns and Scapens (2000: 8), institutions represent as the structural properties which define the relations between, and the activities of, the members of particular social groups or communities. Thus, this theory is anchored around explaining the institutionalization process and describing the relationship between actions and institutions, by explaining how habitual behaviour could be turned into routine, rule and finally to institutionalized structure, over time. For instance, Scapens (1994) explained that accounting as institutionalized routine creates understandings of activities according to a particular set of accounting rules and procedures allowing decisions to be made and activities to be undertaken in a complex and uncertain world. Burns and Scapens (2000) used old institutional theory to understand the changes in management accounting practices, and argued that change in management accounting could be conceptualized as change in rules and routines. This strand is endogenous as it looks at the mechanisms for creating any form of social structure at organizational level (Burns and Scapens, 2000).

4.3.2 Neo-institutional theory

Unlike, old institutionalists, proponents of neo-institutional theory study the changes in organization's behaviour at macro level (Tolbert and Zucker, 1983; Haveman, 1993; Deephouse, 1996; Dacin, 1997; Brookes et al., 2005). Neo-institutional theory gained more attention in describing organizations' behaviour in a given setting (e.g. hospitals, military units, universities or accounting firms) as it embeds the institutional environment in organizations practices (DiMaggio and Powell, 1983; Baum and Oliver, 1992; Oliver, 1993; Slack and Hinings, 1994; Baum and Oliver, 1996; Oliver, 1997; Mizruchi and Fein, 1999).

Neo-institutional theory in economics, supported by the economic historian Douglass North (1990), suggests that an organization's behaviour is not ultimately rational (Lounsbury, 2007). Alternatively, they advocated the notion of bounded rationality which takes into consideration the impact of cognitive limitation, incomplete information and lack of powerful schemes deposited for mentoring and enforcing agreements (Hoque, 2006). Similarly, neo-institutional theory in sociology, suggests that internal structures and procedures reflect the rules, procedures and norms that are commonly exist in the organizational field (Aerts and Cormier, 2009). This paradigm, supported by sociologiests such as Mayer and Rowan (1977, 1991), DiMaggio and Powell (1983) who rejects the rational-actor model, and shows an interest in institutions as independent variables. Hence, they raise the importance of culture, particularly for how the social world is constituted and cognized by social actors and may even compromise efficiency impacts (Martinez and Dacin, 1999; Chi-Nien and Xiaowei, 2008). Neo-institutionalists believe that organizational structure is shaped by the social environment to the extent that some organizations may tend to emulate each other to gain legitimacy, especially under uncertainty, and this will end up with isomorphic structures (DiMaggio and Powell, 1983; Haveman, 1993; Slack and Hinings, 1994; Deephouse, 1996; Mizruchi and Fein, 1999; Scott, 2003).

Neo-institutionalists claim that the congruence between the inside and the outside of organizations, especially those operating in the same organizational field, is not dictated by technical criteria as much as it dictated by other cultural and political factors that are concerned with legitimacy and power much more than efficiency alone (Carruthers, 1995). In institutional theory, organizational field defines the sphere which contains a group of stakeholders that operate within the organization's institutional environment such as suppliers, resource and product consumers, regulatory agencies and other organizations that produce similar product or service (DiMaggio and Powell, 1983).

4.3.3 Rationality under Neo-institutional theory

Rationality premise of social actors is questioned by many institutional theorists as explained before. Thus, Townley (2002) and Scott (1995:152) questioned the early work in the institutional theory by DiMaggio and Powell (1983), Meyer and Rowan (1977), and Tolbert and Zucker (1983) as they suggested that institutional structures and forms were, if not irrational, are non-rational, in nature. Meyer and Rowan (1977) and Zucker (1977) for instance, emphasized the role of modernization as a taken-for-granted rationality and therefore criticized the classic economic rationality of utility maximization. Alternatively, they supported the notions of legitimacy and bounded rationality more. Likewise, Zucker (1977) stressed the taken-for-granted nature of institutions and the role of cultural persistence as a gauge of institutionalization at a micro perspective. Likewise, neo-institutionalism in economics argues that organizations or individuals cannot maximize their utility function without taking into consideration societal interests. Thus, North (1990:17) contested the rationality in classic economics by stating that individuals make choices based on subjectivity derived models that diverge among individuals and the information that the actors receive is also incomplete. Consequently, it is evident that institutionalists accept behaviours or actions that might lead to less optimum solutions or yield less efficient results, as long as these practices are legitimate from macro perspective, or the results concur with actors' cognition systems (North, 1990). Therefore, Selznick (1996:274) pointed out that this form of behaviour does not necessarily conform to the rational-actor models, but it very often does include attention to short-term opportunities, constraints, and incentives. North (1990) referred to Simon's (1986: 210-11) statement as he distinguishes between rationality from an economist's point of view and rationality from a psychologist's point of view.

> "The rational person in neo-classical economics always reaches the decision that is, objectively or substantively, best in terms of the given utility function. The rational person of cognitive psychology goes about making his or her decisions in a way that is procedurally reasonable in the light of the available knowledge and means of computation."

Another group of neo-institutional scholars suggests that organizations behaviour may be divergent due to complexity of the institutional environment (Kostova and Zaheer, 1999), or because of the impact of human agency and existence of conflicting logics (Friedland and Alford, 1991; Townley, 1997; Reay and Hinings, 2009).

Based on the above argument, the current research will follow this research line to explore the logic underpinning the adoption of CIR practices and possessing a website at first place. In doing so, the researcher would investigate the impact of the external institutional pressures (i.e. cognition, normative and coercive) on the website development decision and CIR practices in the Egyptian listed companies. Besides, the researcher will attempt to understand how the internal managers response react to these pressures and eventually how the interaction between management and the external institutional pressures affect the CIR process.

4.4 Isomorphism and types of institutional pressures

Neo-institutional theory postulates that organizations which operate in highly structured or institutionalized environments are more inclined to implement or construct congruent practices or structures merely to be conceived as legitimate (DiMaggio and Powell, 1983). The ultimate conformance with the pervasive institutional pressures is suggested to produce more isomorphic structures within the same organizational field. DiMaggio and Powell (1983) distinguished between two types of isomorphism: competitive isomorphism and institutional isomorphism. Yet, they clearly stated that they are only concentrating on the institutional isomorphism. According to their argument, isomorphism is necessary to maintain legitimacy, to survive and to secure the required resources for the organization. The isomorphic structures are more likely to be found in highly institutionalized and bureaucratic contexts as in the state and professional firms. They elaborated that institutional pressures might be exerted by cognitive, normative or regulative, pressers. Scott (2003) defined institutions as systems composed of these three pressures that act to produce meaning, stability and order. He argues that institutional elements transport from place to place or time to time with the help of four main carriers which are symbolic systems, relational systems, routines, and artifacts.

4.4.1 Coercive pressures

Coercive pressures present the regulative and legal constraints that are compulsorily or voluntarily imposed on organizations. They are usually imposed by regulatory bodies at societal or at sector levels. This form of institutional pressure is the most powerful and usually constrains individual and organizational behaviours, since nonconformity with these coercive rules would drain the organization or an individual into a legal liability. Financial reporting standards, for example, are used to serve as instructions among group of agents who operate in specific firm, especially between investors and top management. Shareholders and managers can negotiate a contract that best suits their mutual interests. Most financial reporting jurisdictions across the world allow a local monopoly in financial reporting standards for publicly held corporations. According to Sunder (2002) in the United States, the statutory authority of these standards is vested in the Securities and Exchange Commission (SEC), which delegates the task of writing standards to the Financial Accounting Standards Board (FASB), retaining an oversight function for itself. This type of institutional pressures may also be imposed by other powerful organizations that the company account on in securing its economic resources such as creditors, suppliers or institutional investors. So far there are no such regulative pressures that face most companies notably in Egypt, while developing their websites and carrying out the CIR practices over the Internet. Nevertheless, developed countries as USA, Canada, Australia and to some extent UK have already commenced to set some rules or guidelines to direct this process at the level of the stock exchanges as explained in chapter two.

4.4.2 Social and culture pressures

Social and culture pressures are less formal and are imposed by the community where the company operates. Such pressures indirectly impose some companies to emulate their market leaders to be viewed as legitimate (DiMaggio and Powell, 1983) in their environments. Aerts and Cormier (2009) argue that firms may utilize public media to reserve their legitimacy which is defined as "the perceptions held by the public and society". Environmental legitimacy is important for the survival of any social system and the persistence of any behaviour. However, attaining such legitimacy cannot be achieved in isolation of 'social cognition'. Social cognition is defined as "the cognitive processes used to decode and encode the social world" (Beer and Ochsner, 2006). The researchers added that social cognition processes are likely to occur at the automatic and controlled levels of processing and are influenced by a number of motivational biases. Related to this, Scott (2008:57) introduced another form of cognition which is 'cultural cognition', by elaborating that a new cultural perspective focuses on the semiotic facets of culture, treating them not only as subjective beliefs, but also as symbolic and objective systems.

Thus, cultural and social factors could also exert a substantial impact on conventional financial reporting process. For instance, Kury (2007) explained that maximizing shareholder value becomes the popular logic in USA that institutional actors usually rely on to organize and set strategies. Accordingly, shareholder value is principally attained through the examination of accounts. Hence, financial numbers are the logical measure that are persistently used in such community. Xiao et al.(1996) tried to merge the technical and social perspectives while discussing the corporate financial reporting. Thus, they defined the Information Technology (IT) impact on the Corporate Financial Reporting (CFR) process "as a process of communicating information, mainly financial, about the resources and performances of a business entity. They also added that this system can be viewed from two perspectives; technical and non-technical. From the technical perspective, CFR can be viewed as a set of methods and procedures, data processing and communication devices. On the other hand, looking at the CFR from a non-technical perspective entails considering other issues as the role of users with conflicting interests, sets of regulations, reporting strategies, accounting policies and auditors. They also pronounced that the impact of IT on different aspects of CFR varies, and the degree and pattern rely on environmental, organizational, and managerial characteristics. This argument necessitates counting for the social and culture impacts while studying corporate reporting using either IT applications or the Internet technology. Empirical research on CIR provided supporting results to this argument, as manifest variations in the extent and presentation of corporate websites have been captured and regarded to different cultural, social, and constitutional settings, as explained in Chapter Two. In addition, innovation such as the Internet follows a complex pattern shaped not only by the technical merits of the innovation per se, but also by the economic, political and social context where it occurs (Guillén and Suárez, 2005). For instance, it was realized that the diffusion of Internet access and the power of disclosure regimes in the home country have more significant impact on the presentation than the content of the corporate website (Debreceny et al., 2002).

4.4.3 Normative pressures

Organizations used to confront external normative pressures. These normative pressures are various and emerge from different fields such as accounting, auditing, management accounting, as well as ICT. Normative criteria are partially tacit and hence stem from the values and expectations of the outside professional society such as accounting and auditing professional associations. For instance, Holthausen (2003) suggests that to raise the level of quality in the financial reporting system in a given country, institutional consideration need to complement the accounting standards. Similarly, these professional parties may exercise similar role in respect of the online business disclosure. Hence, the norms that may affect the extent and quality of CIR practices that are considered as external pressures might be imposed by nongovernmental organizations or shareholders (Sharfman et al., 2004).

Normative and professional pressures constitute a sort of professional rules or standards that are imposed by a certain profession or a group of professional people (DiMaggio, 1983). The professional and normative pressure is relatively more obligatory compared to cultural and social ones which are earned form the organization environment. Thus, most organizations will automatically adhere to this pressure because nonconformity with rules or standards may threaten their stability and sustainability within their professional groups (i.e. industries, profession or market). More importantly, inconformity with the professional standards may not only jeopardize the organization’s presence, but also may impose some legal penalties and/or incremental expenses.

Professional associations play an important role in this regard by theorizing change, endorsing local innovations and shaping their diffusion as explained by Royston et al. (2002). Normative institutions exerted by some professional associations such as trade associations, professional associations, accreditation agencies, or professions themselves can use social obligation requirements to induce and generate patterns (Grewal and Dharwadkar, 2002). To assure higher conformance with normative institutions, self-motivation or persistent supervision by external supervisory body such as the audit firms are the two possible mechanisms that might be used as explained by Greenwood et al. (2002). They also explained that the existence of professional associations is crucial for three main reasons. First, there are arenas through which organizations interact and collectively represent themselves to themselves. This implies that the interaction between the organization and its community generates shared understanding about appropriate conduct and the "behavioural dues of membership". The second reason, shared "typifications" develop not only because of interaction within a community, but also as a product of interactions with other communities. In this sense, professional associations act as negotiating or representing agencies that are responsible for shaping and redefining the appropriate practices of interaction for their respective memberships. Finally, professional associations can play an important role in monitoring compliance with normatively and coercively sanctioned expectations.

Some professional bodies such as FASB and SEC in the USA took the initiation and suggested some guidelines for companies to be followed as the best practices to govern the CIR practices. Despite the fact that companies are not mandatory obliged to possess a website or to disclose their information over the Internet, they are still required to follow the existing disclosure regulations that are normally imposed by many stock exchanges. For instance, a company would not be allowed to release material or price-sensitive information on the Internet without announcing that they followed the Regulatory News Service of the London Stock Exchange first (Craven and Marston, 1999).

4.5 Institutional logic governing the CIR practices: A proposed model

Reviewing the CIR literature and screening some national or international corporate websites illustrate that the amount and presentation of the business information are remarkably unlike each other in most aspects. This diversity is more likely to appear in less developed countries as elaborated in Chapter Two. Accordingly, this indicates that these websites are established according to different mentality, perceptions, and prospects about the usefulness of the Internet and the importance of conveying conventional business information via the Internet. Such receptivity and perspectives formulate the logic that companies rely on while establishing their websites. Hitherto, the nature of this logic has been vague and the factors and actors participating in configuring this logic remain indefinable in the Egyptian community, at least. Understanding the pervasiveness of this logic at macro level would lead us to the institutional logic. Institutional logic is a tacit construct of the institutional environment and it could possible change over time and geographically. Fewer number of institutional researchers started raising this concept to interpret unexpected differences in organization's practices which share the same institutional environment (Royston and Hinings, 1996; Kondra and Hinings, 1998; Dacin et al., 2002; Kogut et al., 2002). To better understand this implicit logic and how it contributes to constraining or promoting developments in CIR practices in a country like Egypt, the researcher developed a theoretical model that is primarily drawn from the notion of the 'institutional logic' which is borrowed from organizational studies and relatively relies on strands of neo-institutional theory. The nature of this logic and the proposed types will be elaborated in detail in the following sections.

4.5.1 Emergence of the institutional logic

The sustainable evolvement of the neo-institutional theory originally suggested by Powell and DiMaggio (1983) led to the emergence of the notion of Institutional Logic. It could be argued that the use of institutional theory in accounting research has dominantly emphasized isomorphic pressures and irrationality instead of focusing on the heterogeneity of organisations and organisational practice. Lounsbury (2007) attribute this to the fact that analyses have not sufficiently revealed the logic of what appears to be irrational actions nor have they seen the importance of dynamics of power. Lounsbury and Crumley (2007) suggested two ways of addressing organisational heterogeneity. The first one is to study how the instrumental rationality or bounded rationality of actors leads to diversity in motives and actions. The second way of addressing heterogeneity is to examine how institutional or collective logic can provide the foundation for understanding the variation in organisational practices (Friedland and Alford, 1991).

Institutional logic enables to incorporate and explains the diversity of actions and changes in the institutional environment rather than solely supporting the existence of isomorphic structures and stability conditions (Colomy, 1998). Therefore, it is based on the same strands as neo-institutional theory with more flexibility that allows for explaining the instances whereby corporate behaviours tend to be heterogeneous, or when innovative practices are still under development, or have not become ultimately institutionalised. In fact, institutional logic resembles tacit knowledge, in the way that tacit knowledge contains an important cognitive dimension, residing in people's minds and consisting of mental models, beliefs, perceptions and schemata that in turn are embedded in the individual's cultural context (Cordeiro-Nilsson and Hawamdeh, 2011).

Kogut et al (2002) rejected the passive role of the social actor that is implicitly presumed by early institutionalists. As a result, they support the idea that the technical and institutional environment are decoupled and decoupling. Besides, earlier institutionalists ignored the agency behind managerial decisions and provided false indication that managers have "no choice" but to choose between the technically and institutionally favoured alternative. This viewpoint suggests that when determining the causes beyond the diversity in companies' behaviour, it is useful to understand the sense behind such a behaviour (i.e. institutional logic) and to understand the available opportunities to take this decision. Thus, the institutional effects are visible even in technical environments (Carruthers, 1995).

4.5.2 Intricate nature of the institutional logic

Lounsbury (2007:289) gave a broader definition to logic as a concept by stating that it "refers to broader cultural beliefs and rules that structure cognition and guide decision making in a field". Logic is also described from the institutional perspective by several scholars such as Jackall, (1988) who defined the institutional logic a "the rules of the game by which executive power is gained, maintained, and lost in organizations". Similarly, Thornton and Ocasio (1999) argued that institutional logic is a preliminary factor explaining the distinctive behaviour or practices undertaken by the organization operating within specific institutional environment. Also, Scott (2001:139) stated that an institutional logics "refer to the belief systems and related practices that predominate in an organizational field". Thornton (2002:82) defined institutional logic as "the norms, values, and beliefs that structure the cognition of actors in organizations and provide a collective understanding of how strategic interests and decisions are formulated" discussed that though economic forces influence organizations, it is important to understand how actors interpret the meaning and the consequences of these economic forces.

Hining (2012) suggested three reasons foe examining institutional logics which ate it has gained a great attention by academia since the nineties of last century, some of its elements are highly related to culture, finally it operates and can be identified at multiple institutional levels. These institutional levels could be markets, industries, inter-organizational networks, geographical communities in addition to organizational fields. At organization's level, institutional logic can be described as the 'guidelines' for that organization's practical actions (Dacin et al., 2002). For instance, Suddaby and Greenwood (2005) argued that institutional logic encodes the criteria of legitimacy by which roles, identities, strategic behaviours, organizational forms, and relationships between organizations are constructed and sustained. In this sense, they make actors more aware of their ambiguous world by prescribing and proscribing actions. In return, actions refine institutional logic and make them more durable (Suddaby and Royston, 2005).

At organizational field level, conflicting or multiple institutional logics might co-exist, causing various practices to clash (Reay and Hinings, 2009). Zucker (1987: 450) defined this field as "those organizations that, in the aggregate, constitute a recognized area of institutional life . . ." This definition considers the increased density of interaction, information flows, and membership identification. Hoffman (1999) explained that the field constituents which determine the pertinent logic that competes over the definition of issues and the form of institutions that guide the organizational behaviour. Only recently, some institutionalists acknowledge that it is possible to find several logics co-existing in the same organization field (Thornton and Ocasio, 1999; Hinings, 2012). Such logics might be characterized by indeterminacy, ambiguities or contradictions (Seo and Creed, 2002). Some researchers argued that institutional stability may not last long, especially in dynamic environments (Oliver, 1993; Slack and Hinings, 1994; Oliver, 1997). Therefore, the notion of institutional logic was used to explain the contradictions that might arise at societal level, whereby two or more competing societal groups struggle to enforce their own logic. This usually occurs when new innovation takes place or when existing institutions become weak and useless. In such instances, a new institutional logic will rise to replace an old one. Similarly, Friedland and Alford (1991) and Scott (2001, 2008) departed slightly from neo-institutional theory and suggested a new approach that considers the embedded institutional logic within a given context. These researchers perceive that there is more than one shared logics that may appear in the organizational field. Besides, they found out that when the behaviours of a group of individuals (social actors) operating in the same field diverge from each other, it indicates that they possess different perceptions, beliefs, or meanings.

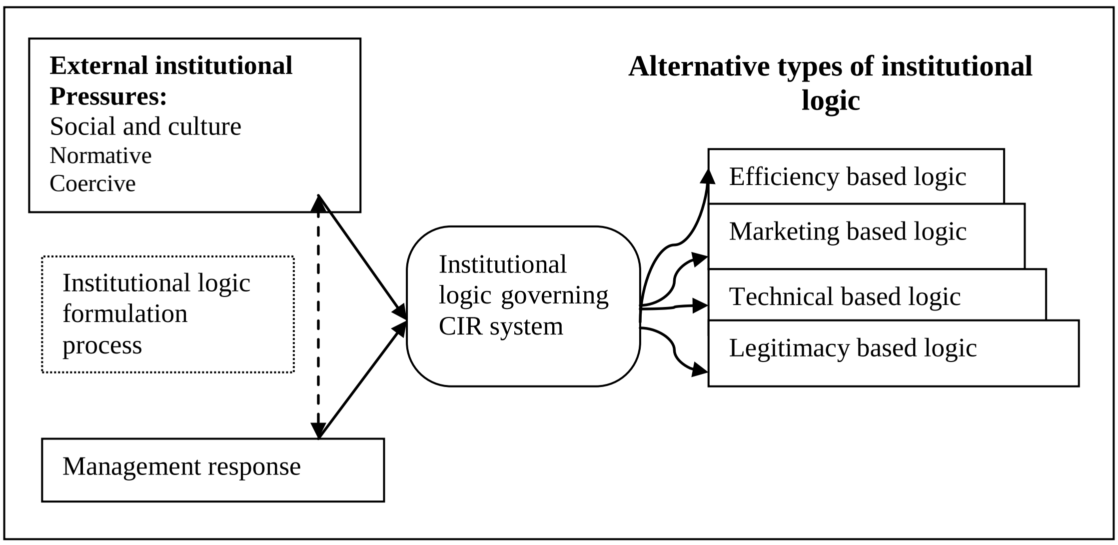
In the light of the above argument, one can envisage that companies possessing a website have different logics, and this makes some of them utilize the Internet's capabilities to its full potentiality meanwhile others stick with the basic features. Moreover, understanding these logics can interpret the observations that some companies devote their websites mainly to their products, while others use them to disseminate their financial reports as well.

4.5.3 The purpose of the suggested model

Sullivan (1999) suggests three models representing three different perspectives for using the Internet. The first model is dubbed "universalism" which assumes that organizations in the static equilibrium stage used to be driven by efficiency. Hence, the managers are motivated to mimic the best practices, regardless of their social context. The researcher elucidates that the universalism model much resembles the economic perspective, in a sense that firms maximize profits through increasing their revenue or decreasing their cost, regardless of cultural values, historical processes, or institutional structures. Accordingly, marketing and cost reduction functions, are given more priority than image creation or stakeholder service functions on the corporate web pages. The second suggested model is the 'technological imperative', which also prioritizes cost control, in addition to speed of information process. it also concentrates on inputs rather than outputs, growth, and human development. In this sense, the corporate home page would be expected to emphasize cost and speed of communication more than the type of information. The third model focuses on 'image creation'. This model ignores the content specifics and highlights the company's image amongst its rivals. Drawing on the Sullivan (1999) model, one can anticipate that there is a variety of logics that potentially direct and govern the progress of CIR practices. Such logics are developed within certain institutional conditions.

Thus, our proposed model presents four alternative types of institutional logics derived from pervious CIR and IFR literature. This model is developed with the aim of attaining three main purposes that suit our exploratory study. First, to provide more unbiased view that reflects different theoretical perspectives. Secondly, to understand how the embraced logic is formulated by the interaction between the external institutional pressures and the internal participating actors (i.e. managers and directors) who are engaged in the CIR process. The third purpose is to understand how the adopted institutional logic is reflected in the progress of the CIR practices. The following diagram illustrates the key constructs of the proposed model. This model is based on a postulation that CIR practices are developed and implemented according to a certain logic(s) emerging from four possible sources: economic, marketing, technical and social and culture. It also presumed that these potential logics co-exist and compete with each other until they reach as an equilibrium state. Therefore, one logic may dominate the others in a point of time. This dominant logic is the one that shapes and controls the CIR practices at organizational level. If that dominant logic was pervasively embraced by most companies operating in the same organizational field (or institutional environment) this would determine the dispersed logic at a macro level (e.g. the State) or the ultimate institutional logic.

Figure 4-1: Proposed types of the institutional logics affecting CIR practices



According to the model above, institutional pressures may emerge from inside or outside the organization firm. The interactivity between the company and the external institutions should identify the proper response. Old institutionalists propose that organizations are acting passively against the external institutional pressures (Scott, 1987; Scott and Meyer, 1983). If the organization is operating in private sector, the decision makers are more likely to respond proactively against the imposed institutions as explained by Oliver (1991). However, in state or publicly owned organizations, the decision makers are more likely to respond passively to the imposed institutions (DiMaggio and Powell,1983). Hence, it is suggested that the interactivity between the internal actors and external institutions would share the type of the logic that the company would embrace and on which the decision maker response is based on. Though this logic would emerge individually it is formulated by the efforts of various social actors (i.e. managers, stockholders and stakeholders) who may be engaged in the CIR process. Therefore, those social actors as well as the data and information that need to be displayed on the corporate website constitute the inputs of the proposed CIR system. Each group of the social factors including the decision maker may impose his/her own logic that is grounded in their perceptions, needs, social background, norms, traditions, accumulated experience, and personalities. In addition, these social actors would strive directly or indirectly to impose their own institutional logic on the company, rule of the game as expressed by Douglass North (1990). This interactivity between the external and internal social actors will take place during the implementation process of the CIR practices. This constitutes the second construct of the CIR proposed system. During this process, it is possible to find one or more groups of social actors dominating the underlying process. This dominating party would automatically impose its own logic. Hence, one can anticipate that CIR practice configurations such as presentation and disclosure patterns will implicitly reflect the type of dominant logic that the company would comply with. Therefore, the corporate website information content, which is the third construct of the CIR proposed system, would reflect the embraced logic that is dominantly influence the managerial decisions related to the corporate website. Reviewing the abundant literature on CIR and IFR, it can be realized that there are four key types of logics that may dominate the CIR process in any country. These proposed logics are supported by different theoretical perspectives as will be elaborated latter. Applicability of these theories will be examined in Chapters Seven and Eight.

4.5.4 Efficiency based logic

This logic aims at maximizing the benefits generated from possessing a website and carrying out CIR practices and controlling the costs that may be incurred with the information processing and dissemination processes. For instance, Bollen et al (2006) point out that the costs related to development and maintenance of the websites are mostly fixed costs. Thus, large companies find it less expensive to maintain an IR website of a certain quality, than for a smaller ones. Large companies will also find it easier to acquire the necessary technological skills to develop a high quality website.

Likewise, Oyelere et al (2003) companies disseminating their information on the Internet tend to attain higher cost savings from the reduction of production and distribution costs that normally associated with print-based annual reports and incidental requests from non-shareholder financial statement users. This is perceived as one of the main benefits from providing financial reports on the Internet. Recently, Lai et al (2010) provided an empirical evidence that stock prices of IFR firms change more quickly than those of the non-IFR firms and that the cumulative abnormal returns of the firms with IFR are significantly higher than those of the non-IFR.

In this respect, cost and benefits are the most important concepts that this logic emphasizes. Increasing the expected benefits might be attained by enabling the companies to approach new stock markets. This perception is largely consistent with positive accounting theory, agency theory and signalling theory. It might be argued that efficiency logic is primarily supported by accounting and corporate voluntary disclosure research, whereby managers perceive that it is sensible to utilize the Internet to raise the efficiency of their information processing and dissemination process while maintaining a mutual dialogue with their stakeholders over the Internet (Unerman and Bennett, 2004) or to secure low cost capital by increasing their access to foreign stock exchanges (Ettredge et al., 2001; Hurtt et al., 2001; Bonsón and Escobar, 2002; Debreceny et al., 2002; Marston, 2003; Xiao et al., 2004; Bonsón and Escobar, 2006).

4.5.5 Technical based logic

Technical logic is based on the functions and features of the technology in use by the business, as explained by (Sullivan, 1999). This perception decouples the technical features from the content of the websites. In other words, the website designers or developers are merely responsible for developing and maintaining the website and making sure that it is running smoothly and with fewer malfunctions. Such IT professionals consider the information content presented on the websites as beyond their technical responsibilities and knowledge. Hence, the technical logic is much consistent with technology adoption theories that explain why an individual or organization use a technology irrespective of the context in which this technology is used for. It was found out that firm size is a significant factor to possessing a website. Yet, it is not necessarily associated with the disclosure of the financial information on Japanese companies' websites (Marston, 2003). This indicates that some large companies may not seek the Internet specifically for investor relations' purposes; it could be for public relations purposes, for instance.

The technical logic is more likely to be imposed by public relation managers, marketing managers or IT experts. The researcher envisages that the legitimate criteria of successful website from the IT, website developers, marketing, and public relation perceptions could be different from what would be suggested by the accountants or financial experts. This postulation needs to be tested in the future. Thus, it is expected for IT experts and website developers, for instance, to appreciate creating interactive and attractive websites rather than those rich in financial information content. Debreceny et al. (2001) showed that website users may prefer some technical features, more than the others. For example, they preferred few email links on the Website, meanwhile they preferred more navigation using hyperlinks and other navigation aids such as tables of content, search facility and query functions. The researcher suggests that financial reporting Websites should primarily present information in text and graphical format and declared that the use of multimedia such as audio and video clips are of secondary importance to the website users. Kim et al. (2010) spotted an expectation gap between the stakholders and website based public relations efforts. Simialrly, Beattie and Pratt (2003) spotted another expectaion gap between preparers of the websites and the users (i.e. financial experts or non-expert users). Kirk (2001) pointed out that website usability reserach are more useful for public relations. Thus, this logic will be throughly investigated in Chapters Six and Seven.

4.5.6 Marketing based logic

Marketing based logic is the logic that prioritizes using the Internet to provide positive image about the organization (Jeremiah, 1999 Craven and Marston,1999; Pomering, 2009; Erickson, 2011), or to enhance the companies' communication with their customers (Liu et al., 1997; Hedlin, 1999; Bollen et al.2006). For instance, Liao et al., (2006) reported that, in Taiwan, companies with lower revenues and those in traditional industries are the lowest website adopters. Marketing logic or the sense of just to have a place on the Internet was embraced by early website adopters. Afterwards, some companies started to set a strategy that directs their information content to serve either their customers or investor or both. Oyelere et al. (2003) and Bollene et al. (2006) recognised that companies with greater degree of internalization are more engaged in Internet Financial reporting than their counterparts. Such logic entails being distinctive and competitive in terms of content, design and features of the corporate website and to satisfy the needs of different website users (Beattie and Pratt, 2003). One study suggests that in order to achieve competitiveness at the company level, companies need to deviate from some institutionally legitimate practices at the functional level (Laurila and Lilja, 2002). It might be argued that marketing perception may prioritizes maintaining better competitive advantage rather than attaining higher level of efficiency. This implies that a company is expected to implement CIR practices only to provide a better image, to market its own products or services, or even to penetrate new markets. This logic is consistent with competition drivers that have been discussed in Chapter Two. It will also be empirically investigated in Chapters Six, Seven and Eight to see to what extent the marketing based logic instruct the CIR practices in the Egyptian companies.

4.5.7 Legitimacy based logic

Legitimacy based logic entails that companies will take the CIR practices for granted and thus, will carry out these practices to just emulate other leading companies in their industry field, regardless of their efficiency. Therefore, legitimacy theory would support this proposition. Sociologists disapprove the economist perception about rationality and allege that an individual is not necessary rational when seeking his/her interests, as discussed earlier. For instance, Friedland and Alford (1991) refused to treat actors as objective, sharing common interests. They argue that both interest and power are institutionally shaped. Similarly, Powell (1991) and Seo and Creed (2002) suggested that individual/organizational preferences and choices cannot be understood in isolation from the larger cultural setting and historical period in which they are embedded. In this case, a company may imitate other successful or role model corporate websites just to appear as one irrespective of efficiency (Lybaert, 2002). Suchman (1995) suggests that legitimacy can be described in various ways; some consider organization legitimacy as a state of mind (cognitive aspect), which is also advocated by Meyer and Scott (1983). According to this perception, a company will gain legitimacy if it is understandable rather than desirable. Another group of institutionalists considers that legitimacy that depends on external evaluation and this perception was advocated by earlier institutionalists such as Dowling and Pfeffer (1975), Pfeffer and Salancik (1978) and Suchman (1995). However, Suchman (1995: 574) suggested a broader definition for organizational legitimacy that incorporates these two perspectives by stating that:

> "Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions."

García-Borbolla et al. (2005) announced that some companies may develop their websites just to provide general publicity information. Such companies usually do not target specific audience and they even disclose their website in a promotional way. The researcher dubbed such type of websites as "Ornamintal websites". They also suggest that there are three main reasons that dirve some companies to present their website in this appearence. First, they be inspired by the Internet technology and thus want to imitate other companies that used this innovation. Second, it could be an attempt from these companies to incorporate modernity into their organizational structure. Thirdly, it could be a dersire to provide sort of credibility impression by establishing their presence over the Internet.

However, this may not necessarily be applicable to CIR context, whereby the underscored convection of the institutional theory does not incorporate the potentialities of competition and dynamism in the organizational field. Meanwhile, these factors are the main attributes that discriminate the environment in which CIR practices usually take place.

4.6 Theories supporting proposed institutional logics

The current study seeks to identify the nature of the Institutional logic which is embraced by Egyptian listed companies and determine how such logic has affected the quality and quantity attributes of CIR practices of these companies. In pursuing of this object, an interpretive study will be conducted complemented by two more empirical studies.

4.6.1 Economic and governance related theories

This group of theories focuses on identifying critical economic factors or determinants that explain organizations' attitudes towards disclosing more business information. Since CIR practices are voluntary till to date, it relies mostly on various idiosyncratic factors that differ from one company to another and from country to another. Economics based theories are used to explain the effect of some of the economic factors that are related to corporate efficiency decisions. For instance, the majority of voluntary disclosure literature and studies of CIR are grounded in economic theories, as will be discussed in Chapter Eight. Essentially, these theories clearly posit that the decision maker is rational and seeks to maximize his/her utility function. Many of these economics based theories are also used to explain governance issues such as managers' incentives planning, investors' rights, transparency of business information and management accountability. In this section, such theories that are pertinent to the CIR context will be introduced.

4.6.1.1 Agency theory

Agency theory highlights several aspects related to the agency problem and governance mechanisms. The agency problem originally emerged because of the separation between corporate ownership and leadership which is known as the 'principal-agent' problem. Most importantly, this problem mainly arises when the interests of the principal and agent conflict with each other. According to this assumption, attaining the interests of one party will be at the expense of the others (Eisenhardt 1989) ; therefore, the larger the firm, the more manifest the problem will be. In large corporations, the capital providers (owners or principals) do not necessarily participate in running the corporate business because of lack of time, experience, or continual presence. Agency theory suggests that corporate leaders such as the CEO, board of Directors, and executive and general managers may attempt to increase their interests while ignoring the interests of the shareholders and other stakeholders (Bushman and Smith, 2001). Importantly, an agency relationship gives rise to 'agency costs', because the agent is expected to act in his own interest, which may not be in harmony with the interests of the principals (Leftwich et al., 1981). The fundamental role of corporate governance is to minimize this likely conflict as much as possible by following at least one of two mechanisms: either increasing principal control or by stimulating the agent to work for the benefit of the principal's interest (. To make the first mechanism effective, the principal (i.e. shareholders) needs to monitor the management's performance in a close and timely manner (Reichelstein, 1992;Wallace et al., 1998; Denis et al., 1999; Schulze et al., 2001;Singh and Davidson Iii, 2003).

Some ways are suggested to strengthen the shareholders' control over the management such as being provided with a sufficient amount of information about the business, being in constant contact with the key corporate leaders, being provided with timely information about corporate performance in both the short and long term, and being involved in the planning and strategy construction process which is usually undertaken through the board of directors. Given the nature of Internet technology, most of these tools can be effectively used by establishing informative corporate websites. As explained in the previous chapter, some countries have been keen to exploit the Internet's potential and voluntarily raised the information flow to external parties, especially the shareholders. However, others are still lagging behind. To activate the second mechanism, corporate governance proponents suggest setting incentive plans to link the managers' remuneration and reward schemes to the overall corporate performance. Again, shareholders need to be supplied with up to date information about the corporate performance measures or indicators along with the management incentive plans.

When the ownership structure becomes more diversified, agency cost tend to rise in its turn (Ho and Shun Wong, 2001; Chen et al., 2009). For instance, in large companies in the UK for example, quoted firms are expected to 'comply or explain' their internal governance board structures against a Combined Code of best practice benchmark. In terms of ownership impact on agency costs, McKnight and Weir (2009) find that large numbers of shareholdings are associated with lower agency costs. In the same vein, (Hossain et al., 1995) and Oyelere et al. (2003) reported a positive association between size and disclosure and explain that the potential benefits of disclosure increase with agency costs. Another study found that board ownership is associated with lower levels of voluntary disclosure. The negative relationship between board ownership and corporate voluntary disclosure was found to be weaker for companies with a higher proportion of independent directors (Akhtaruddin and Haron, 2010).

In respect of small and medium companies, Fleming et al (2005) examined the relationship between agency cost and asset utilisation ratio, and the ownership structure in small and medium size companies in Australia during 1996-1997. The researchers reported that agency costs are lower in firms managed by equity holders. Also, they pointed to the impact of nation-specific factors on the sensitivity of the separation of ownership and control. Therefore, they announced that the effect of managerial and employee ownership on the agency costs is positively significant and hence implied that agency costs decrease as managerial and employee equity holdings increase. On the opposite side, they found out that the agency costs of a firm decrease as family ownership increases (Fleming et al., 2005). Another study on small companies argues that agency costs: are significantly higher when an outsider rather than an insider manages the firm; are inversely related to the manager's ownership share; increase with the number of non-manager shareholders; and eventually, to a lesser extent, are lower with greater monitoring by banks (Ang et al., 2000). Hence, companies would disclose more information in an effort to decrease this cost and to finance their new projects with cheaper funds from domestic or international stock markets instead of counting on debts.

4.6.1.2 Stakeholder theory

Unlike agency theory, Freeman’s (1984) stakeholder theory stated that corporations must consider the needs and demands not only of their shareholders but also those of a wide range of other external constituencies, or ‘stakeholders’. Examples of stakeholders include customers, employees, suppliers, and communities (Clement, 2005). Thus, this theory expands corporate responsibility to include other external related parties rather than entirely focusing on shareholders, as concerned by agency theory. Thus it requires companies to be more attentive about the interests of other parties who are not part of the corporate ownership but share mutual interests with the company. The power of stakeholders in controlling and managing the company’s performance is slightly less than the power exercised by shareholders and considerably differs across countries. Rowley (1997) argued that the density of the stakeholder network surrounding an organization and the organization's centrality in the network influence its degree of resistance to stakeholders demands (p: 888). The researcher explained that stakeholder theory entails understanding the different types of stakeholder influences, along with how companies respond to these influences.

In respect of CIR practices, it has been noticed that in Eastern countries such as China (Xiao et al., 2004) and Japan (Marston, 2003b), institutional factors and infrastructures are not yet sufficiently developed to permit individual domestic investors to play a dominant role in the capital markets (Suk-yee Lee et al., 2005). Therefore, stock exchanges in these countries are inclined to incorporate the overall interests of the community members, whilst Western countries, such as the US and UK prioritize the shareholders' interests (Ettredge et al., 2001; Debreceny et al., 2002; Barton and Waymire, 2004; Marston and Polei, 2004; Bollen et al., 2006; Abdelsalam and Street, 2007). As corporate governance regimes are affected by the transparency of corporate disclosures and differ from one country to another, stakeholders' rights and information needs, which are highly embedded in the cultural and institutional environment of one country, are expected to differ as well. Hence, it is suggested that using the Internet as an interactive device connecting stakeholders to the company can provoke a democratic debate which provides fairness in the determination of corporate social, environmental, economic and ethical responsibilities (Unerman and Bennett, 2004). A recent study conducted by Beyer et al. (2010) reviewed the literature on the decisions that constitute the corporate information environment and pointed out that there are three main decisions in this respect: managers' voluntary disclosure decisions; disclosures mandated by regulators; and reporting decisions by analysts. These bodies constitute an important part of the stakeholder group. Hence, they may exert similar impact on disclosure over the Internet. For instance, it has been argued that the Internet technology allows for interactive dialogue between a company and its stakeholders and offers real-time updates of information, in addition to retrieving specific information depending on the needs of users (Gowthorpe and Amat, 1999; Shepherd et al., 2001).

4.6.1.3 Stewardship theory

Agency theory postulates that there is a conflict of interests between the agent (management) and the principal (i.e. shareholders) of a company. As a result, to protect shareholders' rights or interests in the organization, agency theory entails decreasing the duality of the board. Yet, stewardship theory denies this conflict and postulates that management will operate in favour of the owner's interests. On the contrary, proponents of stewardship theory perceive that the duality of the board will enhance the company's ability to maximize the shareholders' utilities (Donaldson and Davis, 1991). Davis and Donaldson (1997) discriminate between two types of management models: the 'rational man' model underlying agency theory and described it as individualistic and based a proposition that there is a conflict of interests between the agents and principles.

The other model is the 'steward' model that is originated in organizational psychology. Unlike the rational man model, the latter model proposes that there is no conflict of interests between the agents and principles and that managers are motivated by the need to achieve, to succeed in their tasks, and to gain recognition from their peers and bosses. In their study, Davis and Donaldson (1997) found that companies with CEO duality have achieved superior shareholders returns measured by return on equity (ROE). Other researchers found a positive relationship between the proportion of insider directors and market-based measures of firm performance (Kiel and Nicholson, 2003).

4.6.1.4 Signalling theory

Signalling theory suggests that a company may try to distinguish itself from others by displaying its qualities to investors (Oyelere et al., 2003). Bollen et al. (2006) pointed out that signalling is part of the notion of information asymmetry between management and ownership and it can also be realized in the management-ownership relationship. They classified the signals into direct disclosures and indirect signals. They described how direct disclosures are credible signals showing that managers are motivated to report truthfully. Meanwhile, indirect signals are described as the choice of capital structure, dividend policy and publication of forecasts. Similarly, Oyelere et al. (2003) argued that disclosure is used by managers of profitable companies to signal the company's profitability to investors. They pointed out that industry differences in respect of corporate disclosure may imply bad or good signals to the stakeholders. Likewise, Craven and Marston (1999) explained that if a company within an industry fails to follow the disclosure practices, including Internet disclosures, of others in the same industry, this might be remarked as bad news.

4.6.1.5 Capital need theory

Ashbaugh et al. (1999), Craven and Marston (1999) and Oyelere et al. (2003) explicate that a company will have an incentive to lower capital costs through the voluntary release of information. They explained that the degree of internationalisation of a firm is likely to be associated with voluntary disclosure. As a company expands its foreign operations, its need to raise capital internationally will increase in return. Companies tend to search for low cost capital by listing themselves on the domestic portion of international stock exchanges. It has been recognized that to gain the trust of their current and potential investors companies, need to disclose incremental information on their websites. For instance, being listed on the US stock exchanges significantly increased the implementation of the Internet financial reporting practices across 22 countries (Debreceny et al., 2002). In conclusion, it can be assumed that companies orientated by efficiency logic will compromise between costs and benefits while developing and maintaining their websites. Therefore, it is expected that companies will manage their website information content and functions according to the utility function.

4.6.2 Technology usage theories

Technology use theories are those theories which explain the behaviour and attitudes of the users towards the emerging innovative technologies. These theories also explain the motivations that drive companies to utilise the Internet, specifically, in the business domain. Earlier theories exclusively studied the attitudes and behaviour of the users towards using computers and software packages in their working fields. These theories can also be used to assess the acceptance of the Internet technology in the business reporting domain. The Internet usage is also applicable to the technology related theories that explain users' attitudes and behaviour towards specific type of applications of the Information and Communication Technology (ICT). Studying the attitudes and perceptions of the Internet users, whether companies or individuals is pivotal, to assess whether the Internet is easily used by these parties. The majority of CIR literature is grounded in theories driven by economic perceptions such as agency theory (Debreceny et al., 2002; Oyelere et al., 2003a; Xiao et al., 2004; Marston and Polei, 2004; Trabelsi et al., 2008;) and governance related theories (Baker and Wallage, 2000; Abdelsalam et al., 2007; Kelton and Yang, 2008). None of them referred to technology based theories to investigate any potential obstacles that may hinder some organization from using the Internet to disseminate its financial information. These theories can also explain how such innovative technology takes part in advancing conventional business reporting practices.

4.6.2.1 Theory of Reasoned Action (TRA)

Fishbein and Azjen (1975) developed a general theory of behaviour based on the idea that human beings process information and use it systematically. This theory was called "Theory of Reasoned Action", and it succeeded in predicting and explaining the behaviours of computer users in various domains. Though this theory is related to the usage of the Internet in business reporting, it neglects the relationships between different actors who cooperate to attain a specific goal while using computers sets or the Internet technology.

4.6.2.2 Technology Adaptation Model (TAM)

In a subsequent stage, Davis adapted this theory in 1986 and comes up with a brand new theory of his own known as Technology Adaptation Model or Theory (TAM) (Legris et al. 2003). TAM is grounded in the previous theory albeit more specific. This theory validates the use of computers or other relevant technologies (e.g. Internet). The adaption model is based on two main premises: perceived usefulness and perceived ease of use. Perceived usefulness implies that the potential technology user will never use this technology unless he/she anticipates some benefits generated from using that technology, such as improving the performance of his/her work, reducing costs of on formation processing or saving time of searching for specific information. Davis (1993) found out that perceived usefulness is 50 per cent more influential than ease of use in determining usage of a new system. Meanwhile, perceived ease of use implies that the technology user will never use this technology unless it is easy to use. This theory is applicable to the CIR context since it indicates that companies exercising CIR practices are driven by implicit motivations such as the anticipated benefits and the ability to use this innovation.

4.6.2 Marketing and competition related theories

Simmion et al. (2008) argued that the marketing function has been identified as a key driver of website adoption. Therefore, websites might be viewed as an essential marketing tool. As a result, the degree to which a business successfully adopts complex innovations such as websites will depend on the extent and nature of its marketing orientation. Pointing to Hoffman and Novak (1997), the researchers suggest that there is an association between a company's behaviour based on its marketing orientation and the development of web-based competitive advantage. This competitive advantage emerges from the website potentialities that communicate the company's message with its customers and technology intelligence. According to the CIR literature, some companies tend to be influenced by their product and financial markets. Yet, the degree of influence on the quality of CIR practices and advancements has not yet been empirically tested.

Another study by Murphy et al. (2003) showed that three Internet practices enhancing company image, improving advertising support, and building customer loyalty- do not show significant differences with any of the five organizational characteristics: firm size, industry type, business age, length of Internet adoption, percentage of corporate revenues attained through the Internet trading. The researcher suggested that three informational practices: tracing customer orders, expediting customer service, and assisting in supply chain management, have statistically significant differences with three of the five organizational characteristics. This suggests that perceptions of these practices appear to vary depending on organizational characteristics and, therefore, the findings tend to be less robust or generalisable than for previous practices. The results of Murphy's study (2003) demonstrate that companies that generate 5 per cent or more of their revenues from the Internet consistently assign higher importance to informational practices than do other companies.

4.6.3.1 Competition and industry complexity

Bollen et al (2006) argue that the international expansion of companies can take the form of increased international trading activities or an increase in their international financial resources. Other researchers suggest that the decision to provide additional voluntary financial disclosure through corporate websites is mostly influenced by share turnover, the future profitability of the firm and the level of competition in the industry (Trabelsi et al., 2008).

Therefore, according to the marketing based logic, it can be assumed that companies will exercise CIR practices as a part of their marketing strategy. This perception entails that the marketing department will dominate the website activities to ensure they fit in with the overall corporate marketing strategy. It can be claimed that there are few incidences where a company will develop their websites based on marketing perception alone without considering the sufficiency or quality of the presentation of the business financial reports. This may be due to the fact that individuals who are involved in this process may have no or little appropriate financial or accounting competences.

4.6.4 Social conformance related theories

Social conformance is indirectly imposed by company's institutional environment. In other words, companies may carry out some activities merely because they have to do, to secure resources and to survive at the long run. Higher conformance with community expectations should guarantee more opportunities to survive and to access more resources. Deephouse (1996) explained that isomorphic strategies of commercial banks are generated by the legitimacy conferred by both bank regulators and the media, even in the presence of organizational age, size, and performance. Therefore, if a company acted against the pervasive social norms, traditions or morals then the community would not allow such a company to survive. As a result, companies need to be vigilant and anticipate how the community will accept its activities. As the Internet technology has gained vast receptivity; internationally and nationally, companies are expected to use the Internet to disseminate their business information. Companies that will not follow this trend will be misjudged by it communities specially in developed countries.

4.6.4.1 Legitimacy theory

Legitimacy theory is the most pertinent theory that could explain the organization's behaviour that is affected more by the surrounding institutional environment. Genuinely, legitimacy theory is grounded in social science which in its turn is related to social reality as explained by Dequech (2001). Social reality is complex, and creativity and unpredicted structural change are possible. Dequech (2001) pointed to Simon's theory which conceives social reality is not just complex but as habitat for people with limited mental and computational abilities. With is perspective in mind, the rationality of the decision maker is bounded to the individual limited competences, especially when the uncertainty is high and the surrounding environment is complex.

Researchers defined legitimacy in different ways. For instance, Suchman (1995) suggests that legitimacy can be described in various ways; some consider organization legitimacy as a state of mind (cognitive aspect), which is also advocated by Meyer and Scott (1983). According to this perception, a company will gain legitimacy if they are understandable rather than desirable. Other institutionalists envisage that legitimacy counts on external evaluation and this perception was advocated by earlier institutionalists such as Dowling and Pfeffer (1975), Pfeffer and Salancik (1978) and Suchman (1995). However, Suchman (1995: 574) suggested a broader definition for organizational legitimacy that incorporates these two perspectives by stating that:

> "Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions."

Legitimacy theory posits that business organizations must consider the rights of the community at large, not merely those of investors. Hence, if organizations do not manage to operate according to the appropriate behaviour perceived by their communities, then the community will reversely act against them. As a result, existence of actual and potential disparity between the business and social value systems, this will lead to threats to organizational legitimacy in the form of legal, economic, and other sanctions. Institutional theory suggests that organizational action should be understood as attempts to attain societal legitimacy and maintain credibility with external constituents (Timothy, 1992). Legitimacy used to have a substantial impact on corporate conventional voluntary and mandatory disclosure practices. For instance, a study on 120 Chinese listed companies investigated six areas of voluntary disclosure which are board structure and functioning, employees related issues, director remuneration, audit committee, related party transactions, and stakeholder interest (Qu and Leung, 2006). The results showed that changes in China's cultural and social norms compelled Chinese listed companies to provide voluntary information in addition to the disclosure requirements . Information relating to stakeholder interest and employees issues has been more disclosed by listed companies than those which were regarded as sensitive. Another study by Haniffa and Cook (2005) discusses the impact of culture and corporate governance on social disclosures. The results indicate a significant relationship between corporate social disclosure and boards dominated by Malaysian directors, boards dominated by executive directors, chair with multiple directorships and foreign share ownership and the disclosure in annual reports of Malaysian corporations. Institutional pressures may not only affect the disclosure preferences of the organizations but also they may exert a similar impact on the corporate governance mechanisms. For example, Aguilera and Jackson (2003) argue that both UK and US are characterized by dispersed ownership where markets for corporate control, legal regulation, and contractual incentives are key governance mechanisms. The researcher found also that in continental Europe and Japan, block holders such as banks and families retain greater capacity to exercise direct control and, thus, operate in a context with fewer market-oriented rules for disclosure, weaker managerial incentives, and greater supply of debt. They also explicate that institutions per se are the result of strategic interactions in different domains, generating shared beliefs that, in turn, impact those interactions in a self-sustaining manner.

In respect of the CIR context, it could be anticipated that listed companies are disclosing their business information on the Internet to appear legitimate in the eyes of specific stakeholders and stockholders and this may lie behind the dissimilarity in the CIR practices across countries and even across countries operating in the same country. However, few studies pointed indirectly to those influential actors whom the companies persistently having in mine while they develop their website in reality and whether all the companies targeting the same actors. Therefore, the current study will attempt to understand which of the prospective social actors are influencing the contemporary CIR practices and how companies attempt to conform to their requirements. The researcher will investigate which of these theories much pertinent to interpret the logic embraced by Egyptian companies while developing these websites. Given the tacit nature of the institutional logic, the researcher will embrace the qualitative approach to collect more evidence from the involved companies as well as those collaborating with them in preparing their websites or those only using them for investments and financial purposes.

4.7 Summary

This chapter is designed mainly to illustrate the theoretical background that this study would rely on. It also presents the proposed theoretical framework that the researcher would use to explore the logic underpinning the adoption and implementation of the CIR practices by the Egyptian listed companies in the following chapter. This framework is grounded in the new scholar of the institutional theory and posits that the companies operating in specific institutional environment may confront several types of institutional pressures, regulative normative in addition to cultural and social. The interaction between the companies' internal social actors, who are responsible for the corporate websites and those who are responsible for implementing and maintaining the CIR practices, and the external social actors formulates and dictates the type of the institutional logic that the companies will embrace when any decision related to their websites and CIR practices. Based on prior pertinent literature on CIR and IFR, the researcher recognizes that there are four main types of institutional logic that possibly exist, which are; efficiency oriented logic, marketing oriented logic, technical oriented logic and finally, legitimacy oriented logic. This model is developed under the following postulations. In this study, it was proposed that there are four alternative logics might arise in the company's institutional environment (i.e. organizational field) as examples. These logics could define and dictate the characteristics of the undertaken practices. Secondly, it is proposed that these logics might co-exist at the same time so they are not mutually exclusive. Moreover, it is expected that the impact of these logics on the CIR practices may also differ at macro and micro levels. Thirdly, it is proposed that any embraced logic may not last long, especially in the private sector or in dynamic environments that intensively rely on technology and which are projected to be exposed to constant changes.

The researcher will apply this model as a basis to the forthcoming studies to investigate the logic embraced by Egyptian listed companies which possessing a website and using it in disseminating their information online.

Chapter 5: Research methodology

5.1 Introduction

The current study aims to attain three main purposes: Firstly, to explore the nature of institutional logic embraced by Egyptian listed companies while carrying out their CIR practices; secondly, to assess how this logic or logics has/have been reflected on the quantitative and qualitative attributes of the corporate websites of Egyptian companies; and thirdly, to identify which factors contribute most in constructing this/these logic(s). Therefore, this chapter is designed to provide comprehensive knowledge about the research studies implemented and their approaches, purposes, objectives, methods and evidence collected. This chapter also highlights the obstacles confronted during the progress of the study.

Accordingly, this chapter is organized as follows. Section 5.2 elaborates the main purposes this study pursues. Section 5.3 illustrates the two commonly known research paradigms and explains how the researcher will combine them to serve the needs of this study. Section 5.4 generally discusses the research approaches that are commonly pursued by researchers in the business domain. Then, Section 5.5 demonstrates the two studies that the researcher will undertake to address the provoked questions and attain the research purposes. Hence, this section is divided into two main sections. Section 5.5.1 covers the qualitative study. Meanwhile, section 5.5.2 covers the quantitative study. Finally, section 5.6 contains the summary of the current chapter.

5.2 Purposes and objectives

In recent years, the numbers of Egyptian corporate websites have extensively increased. However, the development in these websites in terms of design, content and technical facilities is still limited and only slowly improving. Therefore, one need to understand the implicit institutional logic that is widely embraced by Egyptian listed companies while developing their websites and carrying out CIR practices. The potency of institutional logic is based on its ability to interpret the reasons behind the spotted variations or similarities in these practices. Understanding this logic would allow us to finding an interpretation of the manifest differences across Egyptian corporate websites, particularly in respect of CIR practices. Understanding this logic would enable us to understand why Egyptian companies are constantly improving the look and feel of their websites, but neglecting improving their online financial and accounting information. Therefore the current study seeks to attain four main purposes as follows:

- Exploring the nature of the institutional logic that is embraced by Egyptian companies at the organizational level.
- Determining how this logic has been reflected in their CIR practices
- Determining to what extent this logic is pervasively diffused across the Egyptian companies at two institutional levels: the Egyptian stock exchange and industry sectors.
- Identifying which factors contribute most in constructing this logic.

These purposes will be attained by conducting three different studies: qualitative, descriptive and explanatory. The first purpose will be addressed in the qualitative study and to attain this purpose, three main objectives need to be addressed:

- First, understanding CIR practices from a more comprehensive approach to indentify the elements that cooperate together to perform the CIR practices effectively. To reach this understanding the researcher will embrace the system approach. More elaboration about this approach will be provided in the qualitative study section and in Chapter Six.
- The second objective is to identify the key participants, either internally or externally who are involved in the CIR process. To indentify the nature of the institutional logic affecting the CIR practices, it is crucial to understand the role, perception, views, powers and interests of the individuals dominating these practices. This is also recommended by recent research on institutional theory. Bruton et al. (2010) state that both the social and economic strands of institutional theory share the notion that humans are limited in their cognitive and information processing abilities. As a result

they tend to be purposeful and goal oriented but employ heuristics in decision making as a result of their cognitive limits. Humans who are dominating or carrying out certain activities have been described as 'social actors' in institutional theory (Scott and Meyer, 1983). The role of human agency in creating and promulgating innovations was neglected by old instituional theory, which paid more attention to the institutionalization processes (Lounsbury and Crumley, 2007) as explicated in Chapter Three. Recent research on neo-institutional theories, especially those paying more attention to, institutional logic has emphasized the role, perception and views of the individuals held responsible for certain activities in the organizations. Hence, the researcher needs to examine the impact of the individuals who share and construct the institutional logic that directs and dominates CIR practices in Egypt.

- The third objective is to specify the main procedures undertaken to convey business information from the corporate records to the corporate website.

The second and third purposes of this study will be addressed in the descriptive study. At this stage, two objectives need to be attained:

- First, to measure and assess the magnitude of the business information provided on the corporate websites of a sample of Egyptian listed companies. The information provision will be analyzed in two dimensions. The first aims to assess the quality of the website information content in terms of timeliness, usability, credibility and general content. The second dimension aims to assess the magnitude of information according to its type. As a result, the researcher will reclassify the information items into general characteristics of the websites and IR/Financial section, investor relations information (i.e. financial statements, interim reports, auditor's reports, corporate governance and corporate social responsibility, shareholders and stock price information and news and press releases), in addition to information related to Internet embedded tools.

- Secondly, to determine whether the corporate CIR practices are identical and follow certain patterns at the level of the Egyptian stock exchange or at the level of each industry sector. The researcher will aggregate the 12 industries coded by the Egyptian stock exchange (EGX) into three main industry sectors: the banking and financial sector, service sector and industry sector.

- Thirdly, to assess how the induced logic or logics have influenced the CIR practices or the website information content. This will be attained by comparing the developed expectations in Chapter Six with the findings of the descriptive study in Chapter Seven.

In respect of the last purpose, which aims to specify the factors that are related to the embraced logics and exert a profound impact on the implemented CIR practices, the main objective to achieve is to determine to what extent conventional disclosure theories can explain the changes in CIR practices in Egypt.

5.3 Research paradigms

Guba and Lincon (1994) state that there are four types of competing research paradigms that range from ultimate positivism through post-positivism and critical theory, ending with constructivism. Hence, positivism and constructivism constitute two ends of the philosophical scale. This scale ranges from objectivity to subjectivity as it moves from positivism to constructivism. Positivism assumes that reality is external and can be objectively determined. Post-positivism assumes that reality is also external and independent of the researcher, but is only imperfectly and probabilistically apprehendable. Critical theory assumes that reality is historical, so apprehendable reality consists of historically situated structures that are limiting and confining as if they were real. Meanwhile, constructivism or interpretivism assumes that realities are multiple and can be conflicting because they are a product of human intellect.

Generally, research paradigms can be classified into two distinctive paradigms: positivism and interpretivism (Lee, 1991; Sale et al., 2002). Some researchers claim that combining these two paradigms is critical for conducting relevant and valuable research. They argue that the difference between them is only technical (Smith and Heshius, 1986). On the opposite side, another camp of researchers refutes the possibility of integrating these research paradigms, explaining that they are completely paradigmatically determined and cannot be justifiably triangulated or combined because of the incompatibility of their associated paradigms (Smaling, 1994). A third camp tends to take a moderate position and hence believes that merging these paradigms is acceptable but under limited conditions. For instance, Carey (1993) argued that quantitative and qualitative techniques are merely tools; integrating them allows us to answer research questions of a substantial importance.

5.3.1 Interpretivism

Unlike positivism, interpretivism perceives that the same physical artefact, institution, or human action, can have different meanings for different human subjects. The researcher tries to read the behaviour of the observed human subjects as rational, rather than see it as absurd, peculiar, pointless, irrational, surprising, or confusing. The interpretive understanding, once judged to be valid, may then provide the basis on which to develop a positivist understanding (Lee, 1994,pp: 350-51). Another group of researchers claim that these two paradigms can be combined to study a complex social phenomenon because the complexity itself consists of both 'interpretive' and 'positivist' phenomena (Moran-Ellis et al., 2006). Orlikowski and Baroudi (1991) explicate how the interpretive paradigm can help in such a situation:

> "The criteria we adopted in classifying interpretive studies were evidence of a nondeterministic perspective where the intent of the research was to increase understanding of the phenomenon within cultural and contextual situations; where the phenomenon of interest was examined in its natural setting and from the perspective of the participants; and where researchers did not impose their outsiders' a priori understanding on the situation."

In this study, the research will start with the interpretive approach, through conducting multiple case studies of a group of large listed Egyptian companies working in different fields of industry. Then, the researcher will measure the impact of induced factors on the quantity and quality aspects of CIR practices by embracing the positivist approach, since it is more relevant to generate better understanding about the vague aspects related to the CIR process and the system as a whole, and the implicit logic(s) that govern and shape the entire system, including CIR practices.

Thus, the researcher will follow the case study method. This method enables the prediction of either similar or divergent results for the same context (Yin, 2006). The multiple case studies method is a popular method that is dominantly applied in qualitative research to inspect a new context or phenomenon replicated in different settings. Embarking on this, the current research will merge the qualitative and quantitative approaches to deliver a comprehensive study of the logic underpinning current CIR practices in Egypt.

5.3.2 Positivism

Unlike the interpretive approach, the positivist approach follows a scientific view. Thus, this philosophy of science is known as 'logical positivism' or 'logical empiricism' (Lee, 1991). According to Lee (1991) the positivist approach involves the manipulation of theoretical propositions using the rules of formal logic and of hypothetic-deductive logic, so that the theoretical propositions satisfy the four requirements of falsifiability, logical consistency, relative explanatory power, and survival. The key attribute of the positivistic approach is logical consistency, whereby a theory's propositions must be shown to be related to one another by the rules of formal logic, or be logically deducible from the same set of premises. This paradigm will be followed in the quantitative approach to measure the extent to which the Egyptian companies enhanced their corporate Internet reporting systems and to identify the most significant factors that affect that progress.

5.4 Research approaches

Methodological approaches denote how reality is perceived by the researcher and what should be learnt (Sale et al., 2002). Generally, research approaches are divided into two main approaches; qualitative and quantitative. Some researchers combine these two approaches in a coherent and consistent manner to construct what is known as mixed methods approach. Despite the differences between the quantitative and qualitative approaches, each research approach is useful on its own merits or in aggregation to attain certain type of results, in alignment with the knowledge pursued (i.e. ontology) and how it will be obtained (i.e. epistemology). Therefore, the next section addresses these two approaches and clarifies objectives, advantages and disadvantages.

5.4.1 The qualitative approach

The qualitative approach is used consistently in social studies and it helps in developing more understanding and obtaining rigorous knowledge about an emerging context. Therefore, this approach will be followed at the initial stage of this study. Schwandt (2001) defined qualitative research as “a diverse term covering an array of techniques seeking to describe, decode, translate, and somehow come to terms with the meaning, rather than the measurement or frequency of phenomena in the social world” (Rowlands, 2005).

The use of the qualitative approach in economic, accounting and Information Technology and Information Systems (IT/IS) is still relatively limited in contrast with quantitative research. The latter is more pervasive and frequently adopted in conjunction with theories such as agency theory, firm theory and accounting theory. Generally, the term ‘qualitative research’ has been used to represent a typical research study that generates findings without using statistical procedures or other means of quantification (Strauss and Corbin, 1998). This approach is usually applied to management and organizational studies, since they are exposed to social, cultural and humanity issues. Nevertheless, in the last decade more awareness has been raised about the usefulness of a qualitative approach in business and technical communication research in particular (Halpern, 1988). For instance, Barry (1977:153) argues that qualitative methods are increasingly being used to understand the complexity of information seeking and the adoption of information technology by end-users. Qualitative approaches employ different research methods such as systematic collection, organization, and interpretation of textual material derived from interviews or observation.

The qualitative approach is also followed in accounting domain as management accounting (Ahrens and Chapman, 2006; Anderson and Widener, 2006; Vaivio, 2008) but at a limited level. As discussed in Chapter Two, the majority of CIR research followed the quantitative approach and a few studies have used qualitative methods as a complementary part of the research. Thus, it is suggested that using qualitative approaches such as interviews and case studies would useful to our study for the following reasons. Firstly, the CIR process is socially embedded, so it is subject to different professional and social norms and cultural impacts that need to be explored in depth. Secondly, the context of the institutional logic and the other related ideas are socially constructed. Thus, it is essential to understand individuals' values, perceptions, and experiences that might contribute in formulating this logic. Thirdly, the qualitative approach is commonly used when the researcher seeks detailed evidence concerning specific social process, changes in behaviour, or when seeking answers to "why and how" questions (Mason, 2006). Finally, some scholars suggests focusing more on the complexity of the relationship between information technology and organizations by advancing concepts such as emergent and reciprocal causality, and interpretive research methods (Robey and Boudreau, 1999).

5.4.2 The quantitative approach

The quantitative approach, based on positivism, is commonly pursued in the natural sciences (Sale et al., 2002), which view that any phenomenon can be abstracted to empirical indicators which represent the truth, as there is only one truth which is the objective reality that exists outside regardless of human perception. Hence, the interaction between the researcher and the investigated phenomenon is almost absent. In addition, the main purpose of conducting such positive research is to measure and analyze causal relationships between dependent and independent variables. This approach is followed when the researcher is interested in testing a theory and when a consensus needs to be derived by analyzing an extensive number of observations or units which are measurable and objectively identified. Therefore, this approach is popular in accounting, finance and management accounting research.

5.4.3 Mixed methods approach: The embraced approach

Mason (2002) mentioned three reasons for using a mixed methodology in social studies. First of all, it encourages the researcher to be open-minded and not restricted by specific views drawn upon certain research methods, allowing for the exploring of new dimensions of experience. Secondly, it enhances the researcher's capacity for theorizing beyond the macro and micro levels, pertinent for those cases where the macro and micro factors are highly interrelated and highlighting one specific type of factor and ignoring others, especially within social and cultural studies, may lead to inadequate results or improper inferences. The third reason for adopting mixed methodologies is enhancing and extending the logic of qualitative explanations.

This approach entails combining qualitative and quantitative techniques in a certain order to provide strengthened results. To do this, the researcher needs first to determine when and why each technique will be used. In spite of the fact that the mixed approach is deemed significant in enhancing the accuracy and validity of the current research, checking for bias in research methods or even for developing research instruments, the researcher must be attentive when utilizing these techniques in order to answer the research question(s) properly (Denscombe, 2007:114). Combining these two types of data is useful to augment the objectivity of the research interpretation. The aggregative data can shield researchers from being carried away by vivid, but false, impressions from qualitative data, and it can boost the generated findings from quantitative evidence (Eisenhardt, 1989).

5.5 Incorporated studies

In this section the researcher elaborates the conducted two studies which are qualitative and quantitative in nature. These studies are discussed in a sequential order as implemented in practice. The qualitative study has been conducted first followed latter by the descriptive and explanatory studies. The researcher will explicate the research questions in addition to the methods and evidence collected under each study.

5.5.1 The qualitative study

The qualitative study commenced in February 2008 and ended in December 2009. The case studies and interviews were conducted at different points in time during this period. The aim of this study is to identify the type of institutional logic the participating companies are more inclined to adopt. The researcher conducted seven case studies in Egyptian companies operating in different industries and interviewed different groups of stakeholders to address the following questions.

To address the research questions as explained previously in Chapter One and to obtain a more comprehensive view of the CIR practices, the researcher decided to follow the system approach. This approach is pertinent to the institutional logic context as it enables to portray CIR practices as a whole system consisting of inputs, process and outputs (Beynon-Davies, 2002). Orlikowski and Baroudi (1991) suggest using philosophical assumptions that clarify the relationships between information technology, people, and organizations when studying the applications of information technology at organizational level. In line with this perspective, the participants engaged in the CIR practices or the website development process would represent the 'inputs' of this system. The procedures undertaken to upload the information to the website represent the 'process' component, meanwhile the website and its information content represent the 'outputs' of that proposed system.

5.5.1.1 Characteristics of the selected cases

To attain the research purposes and questions, the researcher decided to select cases that represent a sample of large companies operating in different industry fields and which have websites. The websites of these companies are at different levels of quality. Moreover, these companies are listed on the Egyptian stock exchange for a number of years. Some of them have been originally founded for more than ten years.

In social studies, sampling constitutes a key step in the research process. There are two main types of samples: probability samples and non-probability samples (Bryman and Bell, 2007, pp:182-183). A probability sample is one that is randomly selected, so each unit in the population has a known chance to be selected. A representative sample is more likely to be generated following this sampling method. The prime aim of probability sampling is to keep sampling error to a minimum. On the other hand, a non-probability sample is one that has been selected for a specific purpose. In this sense, some units will have higher chances of being selected than others. For the purpose of this qualitative study, the researcher will use non-probability sampling. In qualitative studies the sample is designed to encapsulate a relevant range in relation to the wider universe, but not to represent it directly (Mason, 2007, p. 124). In qualitative studies, the sampling strategy is more orientated towards theoretical sampling. Bryman and Bell (2007) demonstrated three types of non-probability sampling methods: convenient sampling, snowball sampling and quota sampling. A convenient sample is defined as a sample that is simply available to the researcher by virtue of its accessibility. Snowball sampling is akin to convenient sampling, whereby the researcher makes initial contact with a small group of people who are relevant to the research topic and then uses these to establish contact with others. Finally, quota sampling aims to produce a sample that reflects a population in terms of the relative proportions of people in different categories, such as gender, age, social and economic class, etc.

Eisenhardt (1989) explained that the selection of cases is an important aspect of building theory from case studies. As in hypothesis-testing (i.e. quantitative research), the concept of a population is crucial, because the population defines the set of entities from which the research sample is to be drawn. Selection of an appropriate population controls extraneous variation and helps to define the limits for generalizing the findings. He also differentiated between the samples collected in quantitative and qualitative research. Thus, in the qualitative case study, the goal of theoretical sampling is to choose cases which are likely to replicate or extend the emergent theory. Meanwhile in the traditional, within-experiment hypothesis-testing studies, sample selection relies on statistical sampling, in which researchers randomly select the sample from the population. In the latter type of study, the goal of the sampling process is to obtain accurate statistical evidence on the distributions of variables within the population. Therefore, in this study the research selected the sample units using both convenient sampling and snowball sampling. In the qualitative study, the researcher seeks knowledge rather than generalizable results. The researcher used convenient sampling to pick companies that fulfil the following criteria:

- Egyptian company listed on the Egyptian stock exchange (EGX), at least, and other international exchanges, if applicable.
- Has a URL address on the Internet. This address implies that the company possesses a website.
- Operates in any industry field, excluding banks.

Due to contact difficulties and funding limitations, the research was conducted at different points of time. Generally, the contact process was stated in December 2008. At that time, the number of companies listed on the EGX (formerly titled the Cairo and Alexandria stock exchange) and the numbers of companies possessing a website were different from the eventual sample that the researcher used for the quantitative study. For the purposes of the qualitative study, the researcher focused on companies listed on two indices, EGX30 and EGX70. In the table [5-1] below, only 19 companies, excluding banks, met the research criteria. The researcher excluded bank organizations as they operate under restrictive regulation. As indicated eleven companies listed on EGX30 and eight companies listed on

EGX70 as on December 2008 possessed websites. At that time, only 3 websites contain IR/Financial section.

Table 5-1:Egyptian companies listed on EGX30and EGX70 possessing a website on December 2008

EGX indices	No of companies	Comps. without website	websites without financial information	banks with websites	websites with financial information	No. of websites with IR section	No. of websites with financial information not in IR Section
EGX30	**30**	9	4	1	11	1	1
EGX70	**70**	41	14	4	8	2	0
Totals 100	**100**	**50**	**28**	**5**	**19**	**3**	**1**

Table 5-2 below re-classifies the 19 companies according to their industry type. The industry type was classified into eleven different sectors (excluding banking and financial sector) as coded by the EGX.

Table 5-2: Publicly listed Egyptian companies possessing website according to industry type

Industry sector	Companies with websites
Chemicals	0
Basic Resources	1
Construction and Materials	2
Financial services Excluding banks	4
Food and Beverage	0
Healthcare and Pharmaceuticals	1
Industrial goods and services and Automobiles	3
Personal and household products	3
Real estate	2
Telecommunication	3
Travel and leisure	0
Total companies having adequate websites	**19**

After determining the targeted population and size of the convenient sample, the researcher sent an email to the IR managers and general email addresses on the websites of these companies asking for participation in this study. Eventually, and with huge efforts, the researcher succeeded in persuading seven companies to participate in this study: Two from construction and real estate industry, one operating in the financial services, two more in the personal and household products industry, one operating in the telecoms industry and the last one operating in industrial goods. Snowball sampling was used to get more individual participants involved in this study. The researcher started by interviewing departmental managers in charge of issues related to the corporate website or the CIR process. These managers suggested talking to other persons who were also involved in this process. Also, the researcher used informal contact with some IT engineers involved in web designing and developing. Similarly, the researcher used snowball sampling methods to access individual investors who had or were investing in the examined companies, approached via the company managers or other independent individuals. Obtaining lists of individual names was difficult because of confidentiality and long distance constraints. More importantly, there was no investor database available for the researcher to refer to. All these barriers obstructed the engagement of a larger number of participants in this study. The following table demonstrates the numbers and characteristics of the involved departmental managers in this process, their gender and the duration of the conversation with each one.

Table 5-3: Internal participants in the investigated large listed Egyptian companies

Investigated companies	Industry sector	Gender	Participants	Interview Duration	location	Documentation method
Company A	Construction	Male	- IR manager the spokes man of the company	2 hours	Office	Recorded and transcribed
Company B	Industrial goods and services and automobiles	Male	- IR manager	1.5 hours	Office	Recorded and transcribed
		Male	- IT manager	2 hours		
		Female	- project manager	2 hours		
Company C	Personal and household products (household appliances)	Female	- IR manager	1.5 hour	Office	Notes and transcripts (refused recording)
Company D	Personal and household products (rugs and textiles)	Female	- Vice president & manager of	1.5 hour	Office	Recorded and transcribed
		Male	- IR manager	2 hours		
Company E	Real estate	Male	- IR manager	2 hours	Office	Recorded and transcribed
Company F	Financial service excluding Banks	Male	- IR manager	1 hour	Office	Notes and transcripts (refused recording)
Company G	Telecommunication	Male	- E-marketing manager	2.5 hours	Distance Phone Call	Recorded and transcribed
		Male	- IR manager.	1.5 hours		
		Male	- IT Staff	45minst		

The above table illustrates the internal participates who participated in the seven case studies. Meanwhile, Table [5-4] illustrates the numbers and positions of the external interviewees. It also demonstrates the instrument and duration of each conversation.

Table 5-4: External participants involved in the semi-structured interviews

External participants	Interviewees	Gender	Interview Duration	Location	Documentation method
Website developers:	Head of Egypt Web Award competition & CEO and Co-Founder of Egypt Web Academy.	Male	1.5 hours	Distance phone call	recorded and transcribed
	IT managers of web developing firm	Male	1.5 hour	Office	recorded and transcribed
	IT managers of web developing firm	Male	1 hour	Distance phone call	notes and transcribed interview
	IT manager in Toyota Egypt	Male	1 hour	Distance phone call	notes and transcribed interview
	2 individual IT technicians	2Male	I.5 hour	Distance phone call	notes and transcribed interview
	Website developer at IBM	Female	45 min	Office	recorded and transcribed
Financial analysts	Financial analyst manager	Female	45min	Skype and in office	recorded and transcribed
	Financial analysts staff	2 females	30min	Office	notes and transcribed interview
	Consultant financial manager	2 Male		Distance phone call	notes and transcribed interview
Individual investors	7 individual investors who possess shares in one of the investigated companies	3 females 4 Males	On average (30- 45 min/ person	Distance phone call	notes and transcribed interview
Egyptian stock market	General manager of the disclosure department.	Male	1 hour	Office	notes and transcribed interview
Auditors	Accountant & CPAs in a big auditing firm	3 Males	30 min	Distance Phone calls	notes and transcribed interview

5.5.1.2 Data collection process and methods

In an effort to answer the research questions and to gain knowledge about the system that supports the CIR practices, the researcher used the case study method, as it is widely exploited in social studies that investigate a specific phenomenon. This method is designed to investigate the perceptions, mentality and motives of the internal managers that make them eager to establish a website for their companies. Besides, it will help in understanding the key logic that dominates the decisions regarding the development and maintenance of the corporate website content and usage of the Internet facilities. Different methods of data collection may be used to obtain sufficient and relevant evidence that helps in explaining specific phenomena in depth. Yin (2003) suggested five sources of data collection for case studies: documentation, archival records, interviews, direct observations and physical artefacts. The more sources the researcher collects, the more credible the findings and interpretations will be. In this study, the researcher employed various data collection methods such as interviews, inspection of documents and systematic observations of the changes in the corporate websites for the seven companies, using the Internet Archive as a research tool. In general, the case study method helps to collect evidence which is qualitative or quantitative in nature and sometimes both (Eisenhardt, 1989). Walcott (1992) argues that qualitative research based on a case study enables researchers to immerse themselves within a culture or context, producing questions to pursue for further research and understanding phenomena (Tucker et al., 1995). In the following sections the researcher will explain in detail the procedures that have been followed to collect the data through using both website observation and semi-structured interviews.

Website observations: The researcher retrieved old versions of the corporate websites of the seven companies participating in the case studies. These old versions were used to realize how the content and structure of the websites have developed over the years since the first version was released. Understanding how these websites have been developing may provide some implications about what type of logic influenced the original websites, and demonstrate whether this logic has changed in subsequent years. These observations have been considered along with managers' responses in the interviews to enhance the validity of the concluded interpretations and to see the extent to which the participants' claims were consistent with what appeared on the websites. The researcher used a "way back machine" facility on the Internet to retrieve the old versions of the investigated websites. This blog organizes the stored websites in a chronological order starting with the date of first appearance on the Internet and the date of any consecutive updates. The researcher spotted fundamental changes to structure or content that took place during the lifetime of the website and recorded the date of the incurred changes. There are three main methods to interpret text documents in qualitative studies: qualitative content analysis, semiotics and hermeneutics. Qualitative content analysis is very common in social studies, aiming mainly to extract themes from the analyzed document. The key issue is that this method was conceived as a strategy for searching for themes, based on the coding approaches that are employed in the qualitative analysis of the document. Unlike quantitative content analysis, the extracted themes are implicit (Bryman and Bell, 2007:570).

Meanwhile, the semiotics method, or the 'science of signs', analyzes symbols or signs, focusing on the way the messages are communicated as systems of cultural meaning. This method seeks to find a link between the signifier (e.g. a specific word, sound or picture) and the signified (i.e. the message or concept itself). The sign constitutes the relationship between the signifier and signified. Finally, hermeneutics refers to the approach that derives interpretation of a text by bringing out the meanings of the text from the author's perspective. The researcher counted most on the first two methods while analyzing the textual content of the retrieved websites.

Semi-structured interviews: Walsham (2006) explains that interviews are a profound element in most interpretive studies and are considered to be a key means of accessing the interpretation of informants in the field. In the same vein, Kvale (2001) demonstrates that qualitative interviews seek to accumulate descriptions of the life-world of the interviewees with respect to interpretation of the meaning of the described phenomena. Semi-structured and unstructured interviews are most commonly used in qualitative research (Bryman and Bell, 2007), although structured interviews can also be followed in quantitative research. Unstructured interviews resemble conversations conducted on TV and radio programmes, whereby the interview is instigated by a single question, then the interviewee freely answers that question.

On the other hand, a semi-structured interview entails preparing a question list in advance on a topic to be covered during the interview, which is used as a road map or guidelines to organize the research's main themes. The researcher does not need to stick with these questions or to follow the same order, but may add, delete, or merge some questions depending on the situation and the responses of the interviewees. This type of interview is more flexible and mainly directed to know how the interviewee comprehends the examined issues and events. Therefore, what the interviewee views is the cornerstone in explaining and understanding events, patterns, and behaviours. The researcher conducted semi-structured interviews by using various types of questions to generate a comprehensive knowledge. Thus, the introductory questions were provided to collect personal information about the interviewees, their current position, previous experience and educational background. Also, probing questions supported with follow-up questions covering different aspects of the underlying topic were used. The probing questions were different and classified according to the interests of the interviewees.

5.5.1.3 Data analysis process

In this qualitative study, the researcher depended mainly on semi-structured interviews to formulate comprehensive knowledge about the entire CIR system, and to understand the logic that dominates and directs CIR practices in Egyptian companies. However, beside the case studies, the researcher collected more information on the historical changes in the content of the corporate websites of the selected companies.

Analysis of website observations: Principally, the researcher observed the changes in the content and structure of the websites belonging to the examined cases, in an effort to comprehend how the CIR practices have continuously evolved over the years. The researcher was also interested to see whether the companies' orientation was changing as well. The researcher arranged the collected observation notes in chronological order to show the historical evolution for each website, starting with the date of its first appearance on the Internet. The historical development in the contents of the websites under investigation is summarized in Appendices [A6-1] and [A6-2] in Chapter Six. The researcher coded the observations as follows:

- General structure of the corporate website and the main sections contained
- Presence of financial information provided and how it is presented
- Presence of corporate governance and board of directors information
- Presence of IR section or other financial section

These observations allowed for creating more knowledge about the historical improvements in the investigated websites. The researcher synthesized and classified the information content according to each period of change, then reported what was disclosed on these websites and how information was presented on them since the appearance of first website.

Analyzing the interviews using NVivo 8: Concerning the interviews, some of them were digitally recorded; for others the interviewee refused to have their conversations recorded (individual investors and the general manager of the disclosure department in the Egyptian stock exchange). Long distance phone calls were hard to record because of frequent interruptions that forced the researcher to call some interviewees again several times. Only one interview with one financial analyst was conducted using Skype software. This software enables one to record conversations in audio format or to type in the conversation. Then the conversation will directly appear on the screen, organized in a chronological order. The researcher transcribed the recorded interviews in English and sent them over to the interviewees for confirmation and to ascertain that the researcher fairly conveyed the meaning as intended by the interviewees. The interviews in Arabic were also transcribed into English and were reviewed by a colleague to double check that the translation did not impair the meaning. The researcher sent an email to the interviewees informing them that if they did not respond back within ten days, this will be considered as confirmation on their transcripts. The researcher received a few responses back; some positively agreed on their transcripts and others suggested changes in some phrases, which the researcher took into consideration.

After obtaining confirmation on these transcripts, the researcher used NVivo8 software to analyze them. This software enables social studies researcher to classify, code, and aggregate their generated concepts, variables and notifications in a systematic and reliable way. It is very useful when there are long and multiple transcripts to analyze. The researcher used this software to assist in organizing the transcripts for the different groups of interviewees. NVIVO is computer assisted qualitative data analysis software that helps initiate the analysis process by generating codes for the collected data. It replaced software known as NUD*IST stands for Non-numerical Unstructured Data - Indexing Searching and Theorizing. Coding data in NVIVO is performed through creating nodes. A node is a collection of references about a specific theme, place, person or other area of interest (Bryman and Bell, 2007:608-609).

The coding process was conducted in alignment with Bryman and Bell (2007) suggested approach. Hence, the researcher reviewed all the transcripts for each group of interviewees separately, then developed set of codes manually and used NVIVO to recode them by creating free nodes. For instance, the researcher developed seven tree nodes to analyse the transcripts of the company managers involved in the corporate website activities. To create a pattern, the researcher assembled interrelated nodes into a tree node. Each tree node represents one theme such as perceived benefits of the Internet, motives for developing a website, targeted users; CIR processes, participants in the CIR process, developments in the CIR process and future suggested improvements.

5.5.1.4 Reliability and validity of the qualitative study

The quality of a given study is normally assessed using two basic criteria: reliability and validity. However, the importance and meaning of each of these criteria considerably differs in quantitative and qualitative studies. There are two types or reliability: external and internal reliability. External reliability specifies the degree to which a study can be replicated to other cases. This type of reliability is less relevant to qualitative studies which usually cover only a few cases. Importantly, qualitative studies are usually known as an intensive study of a small group of units sharing certain characteristics (Bryman and Bell, 2007:413). The knowledge generated from investigating these units will help in establishing a sort of database for making judgements about the possible transferability of the findings to other similar contexts.

In this case, the small sample means that the theory, but not the exact results, may be generalized across different contexts.

Internal reliability can only be attained if more than one observer or member of the research team agree about what they see and hear. This criterion was attained by incorporating other colleagues in translating the interview transcripts. In another way to attain this internal reliability, the research sought to obtain confirmation from interviewees on the transcripts of their interviews in English. This was done to ensure that the translation and transcription processes did not impair the meaning that the interviewees intended to convey. Altheide and Johnson (1994) describe validity as reflexive-accounting, whereby the researchers, the topic, and the sense-making process interact together. Creswell and Miller (2000) explain that the post-positivist researcher assumes that qualitative research consists of rigorous methods and systematic forms of inquiry. Individuals embracing the post-positivist position both recognize and support validity**,** look for quantitative equivalence of it, and actively employ procedures for establishing validity using specific protocols. Meanwhile, the constructivist or interpretive position believes in pluralistic, interpretive, open-ended, and contextualized (e.g., sensitive to place and situation) perspectives toward reality. According to this perspective validity, procedures would have different meaning such as trustworthiness (i.e., credibility, transferability, dependability, and conformability), and authenticity (i.e., fairness, enlarges personal constructions, leads to improved understanding of constructions of others, stimulates action, and empowers action).

Qualitative studies requires referring to various methods to enhance the validity of the research, such as member checking, triangulation, thick description, peer reviews, and external audits. In our study the researcher considered the validity requirement by referring to different individuals who are involved in the same process or in the CIR context; examining all available documents in both hard copy and soft copy format; and sending the transcripts of the conducted interviews to be validated by the interviewee. Essentially, using mixed methods research per se improves the validity and reliability of the resulting data and strengthens causal inferences by providing the opportunity to observe data convergence or divergence in hypothesis testing (Abowitz and Toole, 2010).

5.5.1.5 Obstacles encountered

During the contact process, the researcher sent emails to all EGX30 companies during the period December 2008-February 2009. The researcher focused initially on this group of companies as they constitute the most actively traded companies and those which could afford to establish a website. However, only two companies in this index responded. Therefore, the researcher decided to expand the contacts to incorporate EGX70 as well. However, the researcher did not receive any response via email.

The researcher decided to contact some companies by calling them directly using the contact details provided on their websites; however, some of these contacts were fake or out of date. Rarely the researcher received answer on these phone calls. Thus, the researcher decided to rely on personal contacts to reach some targeted companies. This was the only way to get the remaining five companies involved in this process. Moreover, during the interviews, several problems were encountered related to the connections of the long distance calls and the objections of some interviewees to recording their phone calls. Therefore, the researcher had to record these responses manually on the spot. Furthermore, the involved companies refused to have follow up interviews or to incorporate other individuals within this study other than those who have been interviewed.

5.5.2 The quantitative study

As explained earlier, this quantitative study integrated with the qualitative study in developing a whole picture of the embraced institutional logic and its effect on CIR practices in the Egyptian companies. Therefore, the quantitative study was conducted in two stages. The first stage aims to measure and assess the CIR level for a sample of publicly listed Egyptian companies in the subsequent period after the interviews took place. This part of the study seeks to address the following questions. The quantitative study is divided into two sub-studies, which are the descriptive study and explanatory study. They are presented in Chapters Seven and Eight respectively. The descriptive study seeks to address the questions related to the contents of the investigated websites and assess to what extent the expectations driven from previous study coincide with what is found on the websites. Further analysis was performed to determine whether the measured CIR disclosure has followed specific patterns at the level of the entire sample (EGX) or at the level of each industry sector. The explanatory study is primarily performed in order to identify which independent variable has a significant impact on nine CIR indices: Total CIR level, Timeliness, Usability, Credibility, General Content, General characteristics of the website, General characteristics of IR/Financial section, Investor relations information and Internet usage.

5.5.2.1 Website selection process

A list of 220 publicly listed Egyptian companies was investigated. These companies were listed on the Egyptian Stock Exchange during the period December 2010-February 2011.

The list of companies and their website addresses was downloaded from the Zawya database. It is a financial smart website that provides a comprehensive database for MENA region countries, including Egypt. Essentially, this database provides the most recent financial statements and other corporate information for companies listed in different stock exchanges in North Africa and other Arabian countries. More importantly, this website enables the downloading of all managerial and financial information directly into Excel for future manipulation. The researcher downloaded the list of companies that were listed on the Egyptian Stock Exchange in December 2010. However, as some companies' financial year does not concur with the calendar year, some companies' financial data was extracted from their annual reports in 2009. Some companies' financial information for the fourth quarter of 2010 was published in February 2011.

In addition to financial information, Zawya provides a list of corporate websites for the listed companies. As the list contains website addresses for the whole population of private, governmental and publicly listed companies, the researcher filtered the website list and kept only those websites that belong to publicly listed Egyptian companies. In a subsequent stage, the researcher verified the shortlisted websites to ensure that they all truly existed. To do so the researcher used other databases such as the Reuters, Google Finance and Alexa websites, which provide information related to domain names, website traffic and demographic characteristics of the users. In addition, the researcher checked for the listed companies that were provided on the Zawya database but had no website. There were a few that already had a website which was not mentioned by Zawya, and there was one with an incorrect URL. For consistency purposes, the researcher relied on the Zawya database in downloading all the required independent variables used in the explanatory study.

5.5.2.2 Data collection process

The researcher took snapshots of the Egyptian corporate websites during the period December 2010-February 2011.Though this time period is relatively short, it is unique because it witnessed an unexpected political incident (i.e. the Egyptian youth revolution on the 25th January 2011). This incident ended up causing a sudden interruption in Internet and wireless communications, all over Egypt, for almost a week. This incident severely contributed to deteriorating most Egyptian stock prices, which compelled the Egyptian Stock Exchange leaders to halt the Egyptian Stock Exchange (EGX) for nearly a month. However, this unexpected interruption had no immediate effect on the Egyptian corporate websites, at least until February 2011. The researcher visited all the sampled websites and observed no changes had been made to these websites, except for some websites that had been suspended for updating and where their board or management members had been accused of committing illegal or corrupting behaviour against the company's interest and/or the Egyptian community. These websites disclosed announcements implying that this news would not affect shareholder rights or the companies' normal operations. The researcher took also a snapshot of the targeted websites, before this dramatic incident, by using website capturing software called Local Website Archive. This software enables the capture of visited pages and their organization in chronological order. Also, the researcher kept hard copy prints of some websites for future reference.

5.5.3.3 The descriptive study: using content analysis approach

As explained earlier, the quantitative study commences with the descriptive study. This part of the study is designed to measure magnitude of business information provided on the investigated websites. Additionally, it describes four quality attributes: content, usability, timeliness and credibility, along with other technical attributes related to embedded Internet facilities. The researcher followed the quantitative content analysis method to analyse the website content of the selected Egyptian companies. Content analysis is an approach to analyzing documents and texts to quantify content in terms of predetermined categories in a systematic and replicable manner (Bryman and Bell, 2007). Likewise, Kolbe and Burnett (1991) stated that "content analysis is an observational research method that is used to systematically evaluate the symbolic content of all forms of recorded communications. These communications can also be analyzed at many levels (image, word, roles, etc.), thereby creating a realm of research opportunities". According to this method, dichotomous values (0, 1) were assigned to each item on the content list, indicating the existence of a given attribute or item. The researcher decided to utilize this method because it is a highly objective, systematic, more flexible and allows for the generation of information about social groups that is difficult to access with other methods (Bryman and Bell, 2007). Besides, this has been frequently followed in prior CIR and IFR research, as in Oyelere et al. (2000), Healy and Palepu (2001), Fisher et al. (2004), and Kelton and Yang (2008).

5.5.2.4 Construction of the disclosure list

Bonson and Escobar (2006) argued that to evaluate the relative quantities offered by companies, one needs to utilize some sort of index to capture the aspects or characteristics of the information that is sufficiently relevant for the users of accounting information. In the CIR and IFR literature, researchers applied different types of disclosure indices containing different items and ranging from very limited to very diversified, as discussed in Chapter Two. Consequently, the current study will adopt the disclosure index used in Abdelsalam et al.

(2007) which was used to measure the comprehensiveness of CIR disclosures on 110 websites for companies listed on the London Stock Exchange (LSE). The original disclosure index comprised 143 items addressing multiple criteria: general content (19), credibility (55), usability (69 items). The researcher slightly adapted this disclosure index to fit the disclosure environment in Egypt by adding other measures related to the language used for both the website and included documents. Tables [5-5] to [5-8] demonstrate the different indices and the number of items contained in each index.

Table 5-5: The general disclosure index and the quality attributes sub-indices

Index/sub-indices	No. items	Scoring scheme
Total Disclosure Score	145	1= item exists, 0= item absent, N/A= item not relevant
Timeliness	15	1= item exists, 0= item absent, N/A= item not relevant
Usability	60	1= item exists, 0= item absent, N/A= item not relevant
Credibility	49	1= item exists, 0= item absent, N/A= item not relevant
General Content	21	1= item exists, 0= item absent, N/A= item not relevant

Table 5-6: Investor relations total index and its sub-indices

Index/sub-indices	No. items	Scoring scheme
Investor relations information total score	110	1= item exists, 0= item absent, N/A= item not relevant
Annual financial reports/statements	19	1= item exists, 0= item absent, N/A= item not relevant
Interim financial reports	10	1= item exists, 0= item absent, N/A= item not relevant
Auditor's report	28	1= item exists, 0= item absent, N/A= item not relevant
Corporate governance & social responsibility	23	1= item exists, 0= item absent, N/A= item not relevant
Shareholders and stock information	23	1= item exists, 0= item absent, N/A= item not relevant
News and press releases	7	1= item exists, 0= item absent, N/A= item not relevant

Table 5-7: Internet usage total index and its constructs

Index /sub-indices	No. items	Scoring scheme
Internet usage total score	21	1= item exists 0= item absent, N/A= item not relevant
Multimedia usage	3	1= item exists, 0= item absent, N/A= item not relevant
User support	10	1= item exists, 0= item absent, N/A= item not relevant
Communication facilities	8	1= item exists, 0= item absent, N/A= item not relevant

Table 5-8: Website and IR/Financial section general characteristics

Index /sub-indices	No. items	Scoring scheme
General website total score	14	1= item exists, 0= item absent, N/A= item not relevant
Website general characteristics	7	1= item exists, 0= item absent, N/A= item not relevant
IR/ Financial section	7	1= item exists, 0= item absent, N/A= item not relevant

5.5.2.5 Measuring the online disclosure

This section endeavours to illustrate the methods that are used to measure the total disclosure score of corporate websites and other sub-scores. Furthermore, it demonstrates the reasons for adopting un-weighted disclosure with dichotomous variables (1,0), supported by evidence from the literature. After developing the disclosure index, as explained in the previous section, a scoring sheet was prepared for each company, separately, to assess the level of disclosure as it appeared on its websites. These sheets were prepared in Excel. Following mainstream IFR and CIR research, the researcher utilized a dichotomous scoring system by giving a value of (1) to an item that existed on a corporate website and (0) if the item was absent; an item that was not applicable was not assigned a value. Then, the index score was aggregated in such a way that the value of the index utilized is the result of summing the scores assigned to each category of information (Bonson and Escobar, 2006). The researcher counted only those items that were pertinent to each company; hence a company will not be penalized for not disclosing an item that seems irrelevant to its activity type. Therefore, the disclosure index, for each company and for each item, will be calculated as the ratio of the total actual score awarded to the possible maximum score applicable to that item or company, using the following formula:

Disclosure score formula:

$$D_{IJ} = \frac{\sum_{i=1}^{nj} X_{ij}}{n_{ij}}$$

whereby,

D_{ij} = total disclosure, timeliness, credibility, content, usability, richness of financial and accounting information, and Internet usage indices.

n_j = number of relevant items for the company j, $n_j \le 115$

X_{ij} = 1 if *i*th (relevant) item is disclosed, 0 if *i*th (relevant) item is not disclosed,

so that $0 \le I_j \le 1$

This formula will be applied to the three main indices and their sub-categories.

Reasons for using un-weighted disclosure indices: Some CIR and IFR research used both weighted and un-weighted disclosure indices such as Marston and Polei (2004), guided by Pirchegger and Wagenhofer (1999), and assumed that users regard the content of a website as more important than presentational features, so that the content section has a weight of 60 percent and the presentation section 40 percent. Likewise, Beattie and Pratt (2003) spotted differences between the preference of preparers of financial reports and the users. Therefore, they assigned more weight to the items particularly valued by users. They assigned press releases and direct contact details 1.5 weights more than the annual reports items and gave video and audio recordings two weights (Bollen et al., 2006). n the current study, un-weighted disclosure indices were used for the following reasons. There is no relevant weighting scheme that can be applied since the researcher employed a comprehensive disclosure index that can benefit a variety of users with different information needs and preferences. Therefore it is difficult to assign fair weights, given this diversity in information needs (Bonsón and Escobar, 2006). In addition, assigning weights to disclosure items is vulnerable to subjectivity, as the researcher will not treat all the items equally. Moreover, researchers who utilized both weighted and un-weighted indices did not find significant differences in the outputs generated (Bollen et al., 2006).

5.5.3 The explanatory study

The explanatory study is conducted in two parts; Chapter seven and Chapter Eight. In Chapter Seven, the researcher examines the significance of variations in the total CIR disclosure indices and sub-indices using a non-parametric test for independent samples, the Kruskal Wallis test. This study is conducted to investigate the relationship between six groups of independent variables (ownership, corporate governance mechanisms, industry type, international exposure, audit firm and firm characteristics) and nine key disclosure indices. The disclosure indices have already obtained from the descriptive study in Chapter Seven.

In this part of the study, the researcher will investigate whether the conventional corporate disclosure theories can provide a robust explanation for the changes in these indices. Besides, some variables which were provoked during the qualitative study namely, management size, international exposure and audit impact will be further examined. Consequently, five sets of hypotheses are demonstrated in this chapter to assess the significance of the relationship between the aforementioned variables and each of the nine disclosure indices.

5.5.3.1 Data diagnostic tests

Conducting the explanatory study entails employing statistical methods to measure and test the relationships between the dependent variables presented by the total disclosure score and the other scores of the CIR quality attributes: content, timeliness, usability and credibility, in addition to the sub-indices of the comprehensiveness index of the financial and accounting information. The researcher examined the data before running the multivariate analysis by conducting tests of normality, homogeneity of variances and collinearity.

To test the normality, the researcher tested whether the dependent and independent continuous data are normally distributed before running the regression analysis. To test the normality condition, the researcher used the following methods, using SPSS software: Kolmogorov-Smirnov (K-S) and Shapiro-Wilk tests. The normality test can be undertaken through plotting the distribution of the collected data and formulating a graph (e.g. histogram), or through calculating the skewedness and Kurtus values. However, these tests only spot the non-normality of the data and may also specify at which side the skewedness is directed; they do not indicate how significantly the data are skewed. Therefore, the K-S using SPSS will show whether the distribution is significantly deviated from normality conditions when ($p < .001$). To test the homoscedasticity of the dependent and independent variables, Levene's test for untransformed data using SPSS was undertaken. This test shows whether the variances in the groups of collected data equal zero. If not, this implies that the variances among the group of collected data are significant, and this requires transforming the data. If the test is not significant at ($p \leq .05$) then the data will not need to be transformed. These tests were carried out before running the multiple regression analysis to see whether the collected data satisfy the regression's required conditions. If these conditions are impaired, the data will need to be transformed to fit in the regression model. More explanation of these tests has been provided in Chapter Eight.

5.5.3.2 Attributes of the quantitative study

The validity and reliability of quantitative studies are essential and can be achieved in a more direct way compared to qualitative studies. Reliability is defined as the extent to which a test or procedure produces similar results under constant conditions on all occasions (Yin, 1994). Therefore, the aim of reliability is to reduce the likely errors and biases in a study; consequently, reliability deals with the data collection process to ensure consistency of results (Amaratunga et al., 2002).

In this study, the researcher used several methods to ensure a higher level of internal reliability. First, the general disclosure index was prepared and used, as explained before, in relation to Abdelsalam et al. (2007). This disclosure has also been constructed by referring to a group of related studies and consists of variables that have been frequently assessed in CIR and IFR literature such as Hedlin (1999), Craven and Marston (1999), Fisher and Laswad (2000), Oyelere et al. (2000), and Abdelsalam et al. (2007). In addition, adjustments in this disclosure index were undertaken to make it more valid to the case of Egyptian companies and to match the Egyptian disclosure environment. These adjustments have been reviewed by other researchers.

Secondly, to enhance the reliability of the collected data, the content analysis was undertaken by the researcher and another colleague and two sets of scoring sheets were contrasted to each other to assess the consistency of theses scores. There was no significant difference in the awarded scores. The differences were highlighted and discussed.

Thirdly, in respect of the independent variables, the researcher relied on only one database which is Zawya, to assure more consistency of the collected data. Furthermore, Zawya is a specialized database for collecting information on stock exchanges and listed companies in the MENA region, Thus, it is dedicated to this type of information. In addition, they provide the corporate information in PDF and Excel formats, so it enables to manipulate the collected information easily. For other information that was not available on Zawya, the researcher consulted two or more databases or other reliable resources to ensure that they provided the same data or piece of information e.g. Reuters, Bloomberg and Financial Times.

External reliability is attainable by using a larger number of companies conforming with the required criteria. In this study, the researcher examined the entire population of publicly listed Egyptian companies that possessed a website by that time. This population contains diversified companies from all industry fields. This would enable us to reach more generalizable results that could be replicated on similar cases. Validity indicates how good is the answer provided for the research question (Amaratunga et al., 2002). Internal validity is concerned with verifying the cause-effect relationship and represent the way that the results support the derived conclusions. External validity refers to the extent to which the research findings can be generalized beyond the immediate research sample. The researcher sough to boost the validity of this study by triangulating the findings in the qualitative and quantitative studies.

5.6 Summary

This chapter is primarily designed to provide an overview about the study's methodological approaches and methods that are put in place to address the research questions. The researcher followed the mixed methods approach which require combining both qualitative and quantitative approaches. This approach provides a more a comprehensive picture about the phenomenon under investigation. This approach is also pertinent to the institutional logic context as so many issues are still blur and need deep investigations. On the other hand, it will identify how this logic has been reflected in current CIR practices in Egypt. Additionally, it will assist in collecting more robust evidence on the qualitative aspects that the researcher may observe during the qualitative study. Moreover, some social and cultural evidence, that is likely to be difficult to measure empirically, can be better investigated through qualitative methods such as case study and interviews. However, the quantitative study will measure the impact of the induced institutional logic by identifying the key patterns and properties that distinguish the CIR practices implemented by the publicly listed Egyptian companies.

This chapter has addressed the purposes, questions, methods, and instruments that will be used for both the qualitative and quantitative studies. It also provides an elaboration of the key research hypotheses that the researcher will test throughout the descriptive study in Chapter Eight and the explanatory study in Chapter Nine. Furthermore, exposes the tests and analyses that the researcher has undertaken to examine the relationship between the dependent variables (CIR total disclosure, timeliness, usability, credibility and comprehensiveness of financial and accounting information and internet usage) and the independent variables (agency problems, governance mechanisms, international exposure, audit firm, industry type, Internet experience, firm characteristics). Finally, this chapter discussed the quality attributes of the quantitative and qualitative studies such as reliability and validity as well as triangulation of research evidence, and illustrates how the researcher tried to account for these attributes throughout the implementation of this research.

Chapter 6: Understanding the institutional logic embraced by Egyptian listed companies

6.1 Introduction

Reviewing CIR research in Chapter Two reveals that until to date no single research conducted on Egyptian companies has used an integrated method while investigating the CIR practices. The mainstream of this research has mainly analyzed the website information content, which represents the outputs of unrevealed system. As a result, many issues related to this unknown system are still vague. Therefore, in this part of the study the researcher will try to reveal some issues related to the participants in this process such as attitudes, perceptions, and powers of the directors and/or managers or other external parties who are involved in this process are still uncovered, why and how this process is carried out. More importantly, the logic underpinning the current CIR practices is largely unrevealed.

Hence, this chapter is organized as follows. Section 6.2 illustrates the characteristics of the Egyptian companies that constitute the cases that will be investigated. Section 6.3 demonstrates the systems approach that the researcher relied on to conduct the case studies and the interviews. Section 6.4 demonstrates the induced logic behind the development of the first website for each case. Then section 6.5 demonstrates the induced logic behind the subsequent renovated versions of the corporate website and the key factors instigated these renovations. Section 6.6 is exposed to the management attitudes and perceptions about the Internet. Section 6.7 discusses the imbalanced power of the external and internal participants who take part in the CIR process. Section 6.8 identifies the targeted users as expressed by the managers. Then, Section 6.9 elaborates the different stages of the website development and different scenarios for the updating process. Section 6.10 highlights the guidelines that the companies follow. Section 6.11 discusses the role and perceptions of the external potential participants in the CIR process. These participants represent different stakeholders and also include some individual Egyptian investors. Section 6.12 discusses the findings of the qualitative study in alignment with the proposed framework. Finally, section 6.13 provided the summary of this chapter

6.2 Characteristics of the participating companies

The researcher covered seven cases representing a sample of large Egyptian listed companies that possessed a website and had disclosed some provision of its financial information online. The interviews with the managers in these companies have been taken place during the from period February 2009-December 2010. Considering the confidentiality requirement, the names of these companies will be anonymous, hence they will be given letters instead (A, B, C, D, E, F, G). These letters are not related to these companies' names, but only used to order them alphabetically. Appendices [A6-1] and [A6-2] demonstrate and summarize these cases. They also compare the main findings.

The participating companies represent a group of Egyptian companies that are publicly listed on two main local indices EGX30 and EGX70. They also operate in different industrial sectors which are financial sector, industry sector (basic resources, construction, household products) as well as service (communication) sector. Companies A, B, C, D, and G were originally established a long time ago and are considered as market leaders in their industrial sectors. Meanwhile, companies E and F only started their activity in the mid 1990s. However, the latter companies have rapidly grown and become well known companies in their domains. Most of these companies compete at both the domestic and international levels(in both stock and product markets). Besides this, they also different in respect of their ownership structure. Four of them are family owned and were originally founded by one person or a group of family members. It has been realized that all these companies are still being run by the founders, as they constitute part of the board members and also part of the management team. Only one company is privatized, but it is still largely owned by the government. In respect of their first websites, companies A, D, and F possessed their original websites as early as 2000, 2001,and 2001 respectively. The remaining ones started their websites after that date. Most of them have changed their websites more than once. These companies possess websites at different levels of quality; the researcher intended to select a diversified sample of companies to avoid biased interpretations and to gain broader view about companies in different industries. Some external shareholders and stakeholders who may be involved in this process were also interviewed.

As illustrated in Chapter One, investigating the selected cases in addition to the interviews with other external participants will help in addressing the first research question which states:

Q1. What is the institutional logic(s) that shape and govern the CIR practices as carried out by Egyptian listed companies?

To answer this question, other sub-question will need to be addressed before which are:

- Q1.a How large listed Egyptian companies perceive the Internet and the current CIR practices?
- Q1.b What are the procedures followed by companies to disclose and present their business information on the Internet (i.e. corporate website)?
- Q1.c Who participated in the CIR process and in the development of the corporate website, in general? In other words, who dominates the CIR process inside the organization?

The researcher found out that the CIR practices are sometimes carried out with a help from other external parties who represent different sources of institutional pressures. Accordingly, another group of research questions has been developed to determine which group of the corporate stakeholders and stockholders is involved in the CIR and/or the website development process and how these groups contribute in this part. The interaction between the internal and external participants (management vs. stakeholders and stockholders) could also help in identifying the nature of the embraced institutional logic. Therefore, another group of questions have been formulated as follows:

- Q1.d Which external participant(s) are involved in CIR practices and in the development of the corporate website?
- Q1.e To what extent these participants are involved in developing and maintaining the CIR practices?
- Q1.f How do the external participants perceive the legitimate CIR practices?

In order to collect enough evidence from the investigated cases, the researcher used various resources such as the semi-structured interviews, retrieving and screening old versions of the investigated companies' websites, taking notes about the main changes in these websites following the qualitative website content analysis, checking appropriate documents related to the companies under investigation (e.g. company annual report, investor presentation) or others disclosed on reliable websites such as EGX, Bloomberg, and the Reuters database.

The researcher interviewed the managers who are in charge of disclosing the corporate financial information over the Internet or at least participate in the CIR process. Other departments such as human resources or public relations may also be engaged in the development process of the corporate website, however their role and duties are beyond the scope of the current study. Therefore, they were not included.

6.3 CIR practices and the system approach

Investigating the research methods employed in prior CIR literature reveals that one part of the CIR practices has been predominantly analyzed which is the information content provided on the Internet. Hence, this study will delve into the CIR as a process to reveal the blurred issues by looking at the whole system components that cooperate together to transfer company's information online. This approach is widely applied in information systems research

Disclosing corporate information online is part of the whole information system used by companies. A whole system is normally constructed of four main parts which are inputs, process, outputs, and the feedback channel (Beynon-Davies, 2002). This integrative approach allows for understanding the real motivations that drive companies to adopt the CIR (Esrock and Leichty, 1998, Beatty et al., 2001) . It would also help in identifying the role of the social community, including stakeholders (Kent et al., 2003; Kim et al., 2010). This approach is not only approperiate to the CIR research, but it is also consistent with the interpretive research. Klein and Myers (1999) argued that interpretive research perceives the whole as consisting of the shared meanings that emerge from the interactions between these meanings but in an iterative way. Thus, CIR practices could be viewed as a dynamic information system, which disseminates corporate information (e.g. financial and non-financial) at a larger scale and on a timely basis. In this study, the researcher highlights the constructs of that system while investigating the potential logic(s) that govern this system.

6.4 The logic underpinning the first website

During the interviews with the Egyptian managers, it was recognized that most of the participating companies have changed their original websites more than once in the last ten years. Even the people who were involved in this process at that time are not involved any more or have already left the company. However, some interviewees were there when the first website was released or attended the changes in the subsequent websites. Hence, they were able to provide some knowledge about how their first website was established and how it was renovated afterwards. The researcher also managed to retrieve the old website versions for the companies under investigation through using the Internet Archive facility on the Internet, as explained in Chapter Five.

Given that Internet technology entered Egypt for the first time in1993, the timing factor was crucial when analyzing the cases. As shown in tables [A6-1] and [A6-2], Most of investigated companies had commenced their use of the Internet since 2001. Indeed, at that time, the infrastructure and accessibility of the Internet technology was still quite limited in Egypt. Thus, it was exclusively used by few governmental units and universities, as discussed in Chapter Three. Therefore, it can be noticed that the first website features for these companies were static and simple, composed of a few pages and displaying a limited amount of general corporate information. Investigating the old versions of the companies' websites appearing on the Internet at this early stage, almost all of them except for company A, C and D lacked any financial information. Even company A disclosed partial of its financial statements in an Arabic language only. Over the years, more companies started disclosing excerpts of their financials under the IR or other titles. Company A, for instance, upgraded its website in 2003 by establishing a new section for IR on the main website. The following quote was found on an old website version during the period (2003-2005). This quote clearly declares that the corporate financial statements are originally prepared in Arabic as required by the EGX. However, this company insists on disclosing their financials only in English language.

> *"This section contains [Company's name] most recent financial results. The official language of our reports is in Arabic. For an English speaking audience we provide annual summaries of developments financial results".* (Quote from company's A website)

Similarly, the website of company D that appeared on the Internet during the period 2002-2003 had contained a section for new investors and also an IR section. In this section the company announced that:

> "*an aggressive investor relations department has recently been established in order to serve [Company name] shareholders. The IR department will display the most recent reports on the company's performance and prospects to its investors. At the same time it will work to bridge the gap between the intrinsic value and the market value*." (Quote appeared on company D website; 2002-2005)

The above quote indicates that the IR section per se was newly established by the late 2002. This might explain why the IR section was not available on the old versions of the company D website. For other companies, it was noticed that the IR section did not appear on the companies' websites before the mid 2000s. This may be related to the fact that the investor relations position has become more common just in the last few years in Egypt, as explained by the IR manager in company C.

At the earlier stage, most of the websites were devoted to providing general information about the company's activities, its historical development, vision and mission and other general information. Few companies, especially industrial ones, offered photos of their products associated with a few narrative lines. More importantly, nearly all of the investigated old websites contained a section for news and press releases to provide the latest news about the company. For instance, the IR manager in company comment on their website which appeared on the Internet in 2001 and lasted until 2005 as follows:

> "As I remember the first website for the company was established for the first time in 1999. It was simple, general and provided general information about the company's name, profile and history. It was replaced then by an new one in year 2003 to reflect the entire sector. This sector represents only one of the many activities that the company performs. This new website [the current website] is focusing only on the parent company rather than the entire group of companies as followed in the original website. However, the domain name still the same and reflects the entire activities rather than expressing the parent company's sector" *(IR manager, company A)*

Similarly, the IT manager in company B, who was part of the team which created the original website internally, described how their first website looked like as follows:

> "... at that time the corporate website was very basic and it did not incorporate any advanced technology or Know-how. The key objective of the first website is to market the company to the global market and to introduce the company to the public ..." *(IT manager, company B)*

These features indicate that the first websites were created mainly to merely introduce the company to the external audience in persuasion of a wider publicity. Similarly, the IR manager in company A explained the outlook of their first website by stating that,

> "... As I remember the first website for the company has been established for the first time in 1999. It was simple and general providing general information about the company's name, profile and history ..." *(IR manager, Company A)*

Another triggering motive to establish the first website is to introduce the company to remote website users by providing basic and limited information about the company's products and services. For instance, the e-marketing manager in company G clearly pinpointed the key objectives that the first website was designed specifically to attain some objectives:

> "... the main objectives of the old website were: providing a comprehensive description of the company's promotions and products to the customers, increasing the ability to place an order or deliver service online, developing a pervasive and low cost instrument for collecting bill fees [revenue], attaining online self-help channels by reducing calls to the call centres." *(e-marketing manager, company G)*

6.5 The logic underpinning subsequent modifications

By the mid 2000s, the companies under investigation had witnessed a lot of changes in their environment and operations. At the same time, Internet awareness in Egyptian society was rapidly improving as well. Consequently, Internet usage also expanded and became more popular. However, it was mostly used for entertainment and social communication as illustrated in Chapters One and Four. The most popular reasons behind the subsequent modifications of the websites or even the entire replacement of the old ones by a brand new website are summarized as follows:

First, the expansion in the companies' activities and penetration of new markets as in company B and company E. The IT manager explained that the company B acquired other companies abroad and established new branches inside Egypt and outside. He also provided full details about the company's strategy related to the usage of the Internet in supporting their marketing strategy. This strategy is a long term strategy that is carried out at three phases:

> "... our current website, which was developed before 2009, has been specifically established to be flashy and attractive to the website users. Yet, the new wave of development, which started at the end of 2009, takes three phases. Phase number one has already been implemented and it incorporates changing the technology employed in this website, maintaining a database for the product. This did not exist before ...The second phase of the corporate website development which will be implemented in the near future aims at preparing the website and internal departments for e-commerce functionality. The company postponed this until they had built an e-commerce module that dealt with a database of standard products. As a result, the customers would be able to order and purchase a standard product online but it would be difficult to some extent to provide customized products since the company is committed to produce certain types of product to the market … The third phase of the website development focuses on e-business functionality which requires the infrastructure to accommodate these adaptations. The most significant part in this new stage of website development is the product design. At this stage, each customer will be supplied with facilities to create his/her own product over the Internet. To do that the company needs to be a 'transformed company' which means that the customer is capable of designing the product according to his needs and the company should be fully committed to executing these orders. Thus, at present the IT staff are working hard to set flexible internal design systems that can be integrated with Internet technology; i.e. the corporate website. Once this integrated system has been put in place, then users will be able to design their own cables before sending their documents through the traditional communication tools. Indeed, electronic recruitment and currently the e-help desk are initial steps headed toward stage three." *(IT manager, company B)*

Consequently, the company decided to release a new website that reflects these new changes and to provide fast communication channels to contact their overseas clients. Companies D and G faced the same situation. For company D, the IR manager and financial vice president explained how the ownership transformation process has necessitated the development of a new website as follows.

Secondly, changes in the organization structure, ownership structure, or hiring new managers in some departments especially in IR departments, as occurred in company E, C and G. This was another vigorous driver to release a new website. Indeed, newly hired managers were energized to improve the corporate conditions and update its operations. Thus, they decided to update their websites to reflect these changes. In company E, for example, the IR manager argued that old management was not successful in many aspects, in addition the progress of the company was limited at that time. The new management had worked hard since 2006 to improve the corporate image and using the Internet in disseminating their business information was part of that logic, as stated by the IR manager in company E:

> "Since our recruitment, we improved our company as well as the website to reflect these improvements. So, we re-branded our website by taking a marketing initiative to improve the company in overall …Before, the company had only one project and we had neither sales no constructed units by that time. Accordingly, we updated our website to incorporate this new information" *(IR manager, company E)*

In company G, the newly hired e-marketing manager clarified that the increasing competitive pressures since 2005 and the constant reductions in the companies' operating revenues compelled them to find better ways to contact their customers and facilitate the their payment process, simultaneously. This triggered the need to modify the corporate website and part of this modification is to design a standalone section for corporate financial information. Generally, the objectives of the new website are marketing oriented.

> "improving the image of the company, appearing in a more professional interface in front of the customers and competitors, enhancing and support the marketing campaigns, improving the direct communication channels between the company and its customers, updating all the online data frequently and on a timely base, providing better customer services, creating a customer database and finally evaluating the company's performance and customer impact through conducting online surveys." (*e-marketing manager, company G*)

Similarly, the IR manager for company A declared that, "we market our stocks as we market our products". Interestingly, it has been realized that this marketing perception was shared by most of the interviewed managers and continued dominating the development process of many Egyptian websites in the recent years. Basically, most of the early versions of the corporate websites, and still those which have not been updated yet, were neither designed nor operated up to the best practices that were widely adopted. Therefore, most of the original corporate websites were simple, with few pages and very generic, merely devoted to present a product or service without being involved in e-commerce activities. Given this marketing perception or logic, it is not surprising that some of the websites that were investigated at the time of this research, as in company A, B, C, D in particular, lacked much important information, especially for the individual and institutional investors. Managers in four of the seven companies clearly declared that their website is designed to provide basic information for all the website users. However, the interested person may acquire more details directly from the company itself or from other financial intermediaries such as brokerage firms. For example, company B's IR manager stated:

> "… the current information disclosed on our website is general and only displays information about the company, its activities and financials. This information is not sufficient to construct a predicting model to anticipate the financial position of the company for the next upcoming years …" (*IR manager, company B*)

He also added:

> "… any other required information can only be provided on an individual basis, since not all the information could possibly be disseminated online because of technical and competition considerations. For example, the competitor may take advantage of some information even if it was useful for the investors … In addition, not all information is useful to everyone, therefore if someone needs more elaboration or needs certain piece of information that is not disclosed online, it will be sent direct to his email."

6.6 Management's attitudes towards the Internet and CIR practices

As the internal managers are the key players in developing and maintaining the CIR process as indicated so far, it is essential to understand their attitudes and perception about the Internet in general and the role of the Internet in the business reporting process, in particular. As clarified in Appendices [A6-1] and [A6-2], It was noticed that most of the IR managers who are responsible for the IR section on the corporate website were skilful, highly educated, open minded and had a good command of financial background. This enabled them to utilize Internet technology to address the information needs of their well identified investors or customers. Also, the personal characteristics and experience these managers directed their perceptions and attitudes about the Internet in general and CIR in particular. Nevertheless, in almost all of the investigated companies, the management's responses indicates that their attitudes are highly affected by the culture of secrecy, which is dominantly characterising Egyptian companies' traditional disclosure practices. It seems that this mentality has also influenced the Egyptian companies' online disclosure practice. This secrecy encourages the tendency toward conservative behaviour, which leads to disclose general and very limited disclosure of business information. It also impels the company to be highly vigilant when deciding what to disclose on the Internet and what to reveal on individual basis.

In total, some managers described their websites as “storage” for historical and frequently demanded information rather than a dynamic communication channel between the company and its stockholders or stakeholders. This conviction decreases the interactivity of the Egyptian corporate websites and reduces the effectiveness of the online communication between the company and its stockholders and stakeholders. This is clearly supported by the fact that most of the interviewed companies still prefer conventional communication means such as phone calls and face to face meetings over using the Internet. The researcher has tested this further by sending fake messages to these companies and others: only companies A and B replied back by email.

6.7 The role and power of external participants

It has been realized that the number of managers and the type of the involved department in the CIR process differ from one company to another depending on the companies' organizational structures, activity types and online disclosure strategies. However, one common observation was noticed in all investigated cases: there is no single department has been assigned to handle the corporate website. Besides, the accountant and internal auditors are still engaged in their conventional tasks and not directly involved in the online disclosure process. The external auditors were not asked by the companies to verify the credibility of the corporate website, as will be also explained in the following section while discussing the role and perception of the external participants. Ironically, it was realized that almost all the companies were inclined to market themselves through the Internet rather than to market their stocks. This was proved by their assigning the authority and responsibility of the website issues to the marketing or public relation departments. The internal managers clearly expressed that the marketing department helps in setting the corporate website information content in alignment with the company's overall strategy. This also be attested by scrutinizing the news and press release section, which tends to be promptly updated with the most recent news of the company. Additionally, most of the renovated website features primarily focused on the overall structure and background of the website, product and service information as well as the multimedia features more than the financial part.

6.8 Targeted website users and methods of communication

Despite the general agreement among the interviewed managers that they are disclosing their financial information to benefit the institutional investors and professional users as financial analysts, the website information content for all of these companies is not at the same level. Also, no specific trends have been widely followed by most or all of these companies. This indicates that the website content is highly affected by the internal managers' perspective and the availability of technical and professional capabilities to the organization. For most of the investigated companies, institutional investors such as companies and banks, as well as foreign investors, are the key stockholders from the Egyptian companies' perspective. On the other hand, the individual investors have been evidently neglected by these companies and treated passively for the following reasons:

First, the individual investor ownership weight in comparison to the institutional investors' ownership is quite low.

Secondly, some managers believe that individual investor (i.e. retail investor) is unqualified enough to read and understand the corporate financial statements that is presented on their websites as they lack necessary financial background.

Thirdly, most of the managers believe that the individual investors should seek professional advice from other experts such as financial analysts and brokerage firms. Therefore, they do not need to contact the company directly.

Therefore, different communication methods were used to contact website users. For instance, they prefer to contact foreign and professional users through email, mailing lists or conference calls. They may arrange for investors' presentation meetings, either nationally or abroad on the Internet. However, they prefer face to face meetings or direct phone calls when contacting local or individual investors as illustrated in Appendices [A6-1] and [A6-2]. These managers claim that phone calls are more effective to handle individual investors' enquiries rather than responding via email.

6.9 CIR procedures and scenarios of implementation

In total, the website related process can be classified into two sequential stages. The first stage incorporates launching an entire website for the first time or replacing an existing website by a brand new one . In this case the website developers used to work closely with one of the corporate managers who act as an internal coordinator. This coordinator sets the main features and technical requirements that reflect the company's identity. This stage is usually dominated by the web developer or may be said to be under 'creative designer' control. The developer meets the decision maker at the client side (i.e. company). Usually, the decision maker is one of the companies' key managers who is familiar with the company's vision and objectives, to be able to convey the company's image and objectives to the website developer. This coordinator also acts as a connecting point between the company and the web developer. Consequently, any future communication or problems would be tackled through that person. In most of the studied cases, the coordinator was wither the marketing or e-marketing manager, as realized in Company G. Only in company C the coordinator was the IT manager who was involved in this process since the company originally developed its first website internally. In addition, in company F the coordinator was the manager of the finance and administrative department as this company had no IT department.

At a subsequent stage, the web developer prepare two or three prototypes of the awaiting website. Thirdly, the coordinator should review these prototypes and suggest modifications if necessary. Another meeting would be held to discuss any technical aspects related to the corporate website such as screens, functions and the different dynamic modules to be used. This preliminary prototype would be tested first before its deployment. Finally, after being tested and approved, the website will be ready to be launched on the Internet.

At this stage, the web developing firm or the involved IT experts will try to use the latest technological features that look pertinent and affordable to the company. One of the website developers explained that they normally follow specific rules such as the international W3 industry standards for HTML design. He comments that:

> "… the development process of the corporate website, in general term, is much the same as the software development process. Thus, it follows the same rules of the software development process" (*IT manager in a website developing firm*)

Another IT engineer agreed:

> "… the website development process is standardized, so we follow the general rules required by IBM. However, we might do some modifications to match the nature of Egyptian companies and its objectives" (*IT engineer, IBM*)

Once the new website released, the website remains stable until new incidents take place. In this case, the management will update the content of the website to disclose these changes. All of the interviewed managers declared that the online dissemination of business information is not a regular process, so the information content might be updated daily, quarterly or annually depending on the type and materiality of the information. For instance, the annual and semi-annual financials are updated periodically. Meanwhile, press releases or news items are updated promptly once announced.

Additionally, it was that there are two sets of procedures that the IR manager or the person in charge in the company needs to be vigilant about. These procedures are contingent upon the nature of disseminated information. The procedures that are applied to financial information or 'material information' which is related to the stock price are totally different from those applied to other nonfinancial or immaterial information. In respect of material information or financial statements, they need to be submitted to the Egypt stock Exchange (EGX) to be disclosed first on their internal terminals and/or website. During the course of this study, EGX were not obliged to prove the online financial information. They only need to check whether the financial statements in hard copy format and those presented on the corporate website are typical. These procedures conform to the requirements of the EGX Listing Rule issued in 2002 and amended in 2010. For example, Articles 13 and 18 of the Decree of the Capital Market Authority's Board of Directors No. 30, June 18, 2002 clarifies the disclosure requirements that listed companies need to follow:

> "The company is prohibited from making exaggerated disclosure or publishing any data or information that does not coincide with the company's conditions. In all cases, any information published by the company should be supported with documents and provided to the Stock Exchange upon request" (Article 13)
>
> "The company shall also notify the Stock Exchange with information and press releases that may have an impact on trading the company's securities according to the procedures set by the Stock Exchange". (Article 18)

Similarly, Capital Market Law No.95 for year 1992 illustrates the list of items that Egyptian corporations are entitled to disclose on a minimum basis:

> "The basic information that should be disclosed are business history of the company, names of the board members, directors and responsible officers and their experience, name and ownership percentage of each shareholder of nominal shares who owns more than five percent of the company's shares, a brief of audited financial statements of the last three years, or for the period from the date of company incorporation whichever is less; prepared in accordance with the disclosure rules stipulated in the Executive Regulations and using the forms provided by the Authority" (Article 5).

It is noteworthy that some of the investigated companies are also listed on the London Stock Exchange (LSE) and other foreign exchanges, and are thus also subject to the disclosure rules for these exchanges. Hence, the researcher further investigated the LSE website. The international companies that are registered on the London Stock Exchange are required to provide financial statements and other basic financial information electronically, according to the RNS requirements. Nonetheless, this information will be rearranged by the LSE into a specific format. Besides this, the LSE provides the corporate website URL address attached to the corporate information. LSE might provide assistance in developing the company's website if necessary, as indicated on their website[1].

Regarding the procedures required for disclosing and presenting nonfinancial information, the company is not required to go through all of the previously mentioned procedures. Hence, after confirming the information by the CEO, the IR manager or person in charge can directly upload that information onto the corporate website. If there is any uncertainty about the materiality of a certain piece of information, the IR manager or person in charge needs to discuss this with the disclosure department of the EGX first. If the company committed any illegal or irregular disclosure behaviour, it would be delisted at once. For financial information, these systematic procedures are stated by the general disclosure rule that is issued by EGX. Yet, for the non-financial or immaterial information, IR best practices are followed. Indeed, uploading the information to the corporate website is not necessarily conducted by the IR manager. It depends on the sophistication of the information and communication system within each company. There are three possible ways to carry out this task. The direct way is to assign this task directly to the IR manager or to another person inside the organization to be responsible for updating the information content through using the management content system (MCS). This system enables a non-technical person to update the content of the website easily by logging into the website. This facility is only available to those managers who should have access to the company website.

The second alternative is to assign specific department as a central point between the company and the website. This central point could be the IT/marketing department which will be responsible for updating the website content after contacting the IR manager or the person in charge first. Although most of Egyptian companies followed this pattern in the earlier stages when the websites were static. This resulted in a number of problems. For example, the IT staff became overloaded, consequently they had no time to carry out their main tasks. This made the IT staff defer updating the information, as they feel this is not their responsibility since "their main responsibility is to make sure that the corporate website is running smoothly", as was explained by one of the external web developers.

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[1] **http://www.londonstockexchange.com/exchange/prices-andmarkets/stocks/international-companies**

The third pattern of updating is outsourcing. In this case, the IR manager or the person in charge contacts their website developing firm either through email or a direct meeting to ask them to upload certain information or to update existing information. Though this alternative might be more effective, still some delay in updating the website content could be encountered if the IR manager or the person in charge does not find time to contact the external technical firm, bearing in mind that some of these external firms are working abroad.

6.10 Common guidelines governing CIR practices

At the organizational level, it seems that there are no specific rules or guidelines that are followed by the internal managers and they are still deliberately provided according to the view and responsibilities of the department and manager in charge. However, corporate financial information is normally prepared in light of the Egyptian Accounting Standards or International Accounting Standards if the company is listed on other foreign stock exchanges. Then it is confirmed by the board of directors and audited by the external auditors as usual before being submitted to the Egyptian stock exchange. After being published by the Egyptian stock exchange, according to the listing rules, the managers could disclose them on their website. There are no rules are imposed on Egyptian listed companies in any industry field determining how or what to disclose on the Internet. Therefore, the process is still unregulated and voluntarily exercised until the date of this study.

6.11 External participants' role and perceptions

To assess the strength of the external institutional pressures exerted by stakeholders and/or stockholders, several groups have been interviewed. The individual investors represent the social pressures. Financial experts and Internet experts (i.e. website developers) represent the professional or normative pressures. Egyptian stock exchange, represented by the disclosure department, in addition to external auditors and accountants who are independent from the investigated companies, encompass the coercive pressures. The semi-structured interviews were designed to capture the effect of these external institutional actors on the CIR practices and understand how they perceive the current website information content.

6.11.1 Individual investors

Financial reporting process is supposed to address the needs of both institutional and individual investors to enable them to monitor, manage and allocate their investments efficiently. However, institutional investors such as corporations, banks and pension funds are expected to have the appropriate competences to analyze and interpret such information. Meanwhile, individual investors, especially in the developing countries, do not have equal opportunities as institutional investors. Therefore, the researcher will try to understand the role, perceptions and attitudes of these users.

Debreceny and Abd Elrahman (2005) argue that online disclosures have both causes and effects. Causes are variables that determine the level or nature of voluntary disclosure. Meanwhile, effects are investor and market reactions to voluntary disclosure or changes to market parameters arising from voluntary disclosure. Therefore, this exploratory study enlarges the scope of analysis to account for the website users' perceptions. It also explores the extent to which these participants contribute to the CIR process and whether they were given an opportunity to participate in this process. According to the interviewed managers, some companies are keen to submit their financial information online to the institutional investors who are added to the email list or who directly attend the annual investors' presentation. Still, this group of investors can obtain the required information through other formal and informal resources. Most of the interviewed IR managers insist that they emphasize the institutional investor when disclose corporate information online. Thus, this investor is implicitly impose some companies to provide more information and present them in a transparent manner. The institutional investor might be international investor or bank and an insurance company. Some managers announced that the CIR is important for two reasons: To help these users to benefit from the disclosed financial statements; and to save effort and time in sending these statements on a hard copy. In contrast, individual (e.g. novice) investors possess limited financial background and might be unable to access the company directly to collect more information to make better investment decisions. Consequently, the researcher conducted semi-structured interviews with this group of investors.

The researcher interviewed seven individual investors to understand their attitudes about the Internet and the its legitimate role in the business reporting process. The researchers also sought to know the reliable sources of information that they trust most and normally count on when evaluating their investments. Apparently, the traditional media such as the T.V. and daily news, remain the common source of information followed by the Internet and Egyptian stock exchange at the end. Investor (2) and (1) announced:

> "I think the conventional media still plays the key role as a source of information."
> *Investor (1)*

"When I first thought about investing in the stock market, I counted on daily Egyptian news to get the required information. Now, I used to follow up the information provided on EGX website.........The newspapers and any other external resources that is not obtained from the company is more reliable from my point of view. Therefore, I believe that the news, daily newspapers, brokerage firms are more reliable sources of information than the companies' websites because sometimes the companies may disclose blurred or incorrect information about their financial position or other information about their operational activities." .*Investor (2)*

Similarly, Investors (4) and (7) advocated the above view by stating that:

"I count mostly on Mubasher's website which offer all the investor needs of information about the companies listed on EGX. I rarely use the company's website as most of the provided information is directed to its clients rather than its investors."Investor (4)

"Actually there are multiple sources of information such as the national newspapers, some specialized websites on the Internet, news and even friends." Investor (7)

Investor (6) also perceives traditional media as more reliable. He commented that:

"Newspapers are a more trusted source of information since most of the companies use their websites to talk about their achievements as a promotion for its name, but they do not care about updating their websites with correct and trusted information."

The same investor explained where he used to go to get better understanding about corporate information:

"I used to refer to some employees inside the company in the customer services or public relation departments. If the information was not very clear for me, I used to ask the brokerage firms for help."

Some investors discussed that the Internet usage in Egypt, at the moment, is very limited and mainly used by youths. They also expressed that this usage is predominantly directed towards entertainment, social communication and news publicity.

"I guess that the Internet in Egypt is used by young people at age 15-35 years. Besides, they usually use it for entertainment and to follow the daily news." *Investor (1)*

However, this investor has a positive perception about the future of the Internet :

"I believe that social awareness about the Internet is increasing, especially, after the obvious spreading of Internet networks in most Egyptian governances. Also, because of adding 'computers' as a new subject in the school curriculum starting from primary level. Thus, education and rendering the daily services required by Egyptian people through the Internet are the key mechanisms to activate the Internet usage and to leverage national awareness about technology. For example, it was noticed that the use of ATM machines has also increased." *Investor (1)*

Investor (2) commented on the magnitude of the Internet usage in Egypt as follows:

"In my point of view, it is fairly good especially that I can use the Internet for doing many tasks either in my work or my daily life. I also feel that Internet usage is spreading in Egypt and it has become a very common source of information for a large number of people nowadays."

Other investors believe that current Internet usage is limited and needs to be directed for other purposes. Investor (7) said:

> "The Internet usage is awfully weak since most Egyptians view Internet technology as an entertainment instrument, no more no less. We still need to increase the awareness about Internet benefits through media, press and even forums."

Investor (4) shared the same opinion and suggested a solution to improve Internet usage in Egypt:

> "Unfortunately, Internet awareness is very limited in Egypt. The most important factor for developing this awareness is to update the current school syllabuses to meet the requirements of the Internet development."

The individual investors are the focal point in the developed countries. Therefore, investor relations activities have been institutionalized in these countries and became more imperative (Hedlin, 1999; La Porta et al., 2000; Ettredge et al., 2002). Researchers have called for enhancement of the transparency and quality of the investor relations activities conducted online to enable other external investors to monitor the management and protect their investments (Smith and Peppard, 2005; Cormier et al., 2010). In Egypt, it seems that individual investors are not paid the same attention; this is noticeable from their expressions about the quality of the Egyptian corporate websites and whether they satisfy their information needs. Investor (4) expressed his dissatisfaction as follows:

> "The corporate websites did not really allow me to understand the financial position of Egyptian companies better. On the contrary, there are alternative websites that interact directly with the investors' needs of information such as Mubasher which benefit me a lot " *Investor (4)*

Investor (1) complained from the constant ignorance for the investors' needs by many companies, even over the Internet:

> "… Actually, I do not see the Internet has any influential role, at the moment, in enhancing the investment decisions here in Egypt. It is exclusively devoted for marketing purposes and orienting their clients about the company's activities and products without providing any useful information to potential or current investors who may show an interest in a specific company." *Investor (1)*

Investor (2) agreed and explained why Egyptian websites are not satisfying the investors' information needs:

> "There are no tools or means we can use to enhance or improve our understanding about the business or financial information provided on these websites. However, the websites that are created by financial analysts, sometimes, provide us with our needs of information in both languages, English and Arabic and in a very simple way. They also provide contact details so anyone can contact them to get more information or clarification on specific issues." *Investor (2)*

In addition, Investor (7) pointed out some pitfalls in Arabic versions of corporate websites:

> "...of course there is no comparison [between Egyptian and international websites] because of the difference in culture, and the mechanisms that are employed to enhance the usage of the Internet. I see that most of the Egyptian companies, which provide their websites in Arabic language, develop their information content in a poor shape." *Investor (7)*

The interviewed investors visited some Egyptian websites looking for information about the company, its activities or profitability. Unfortunately, these attempts were frustrated and the investors failed to get their needs. As a result, these unsuccessful investors viewed these websites negatively and described them as incompetent and poor in quality and content.

> "Actually, most of Egyptian companies used to establish websites for marketing purposes and to promote their products/services to other potential clients either in Egypt or outside. Indeed, I do not believe that these websites can enhance investment awareness, at the present time. In spite of the fact that many of the Egyptian corporate websites are attractive and well designed, some companies are not keen to update their information frequently or to correct erroneous information instantly." *Investor (2)*

He added:

> "I think the Egyptian companies' websites are not at the same level as their counterparts in other developed countries and even when compared with other corporate websites in some Arabian countries, such as Saudi Arabia and UAE. I do not understand why, but I think those countries put high emphasis on Internet transactions especially those related to the business domain. Anyhow, I have realized that some large Egyptian companies such as El Masria, for instance, have remarkably developed their website in the last few years. It looks very professional and they also tend to disclose and present their business information to higher standards similar to those followed by some companies in the developed countries."

Similarly, it was argued

> "I do not think that the quality of the Egyptian corporate websites is up to the standards of the worldwide websites because of the absence of the investor or customer notions as in the international standards and the lack in the social awareness about the usage of the corporate websites which is mainly used to get secondary data." *Investor (1)*

Some investors realized that the Egyptian websites are serving advertising and marketing activities more than investment activates. For instance, Investor (6) argued:

> "Most of the Egyptian companies do not use their websites to disclose data about its company, but mainly for marketing their products and hence there are only a few companies that provide their services on the Internet effectively." *Investor (6).*

Investor (5) supported all the previous opinions and further indicated that corporate websites lack good communication between the company and both their investors and clients. Investor (6) complained about the email system adopted by Egyptian companies because it is not employed seriously to contact individual investors:

> "The emails are only useful for those companies which express a great concern with providing their services through the Internet. However, in most of the Egyptian companies email does not receive any attention." *Investor (5)*

Some of investors criticised credibility of many of Egyptian websites as these websites are not subject to any independent review. For instance, Investor (5) argued that:

> "I believe these websites to be less efficient and less competent than the reciprocal international websites, since they are poor in the disclosure and presentation of the relevant information that is important for their customers and investors …... Therefore, I believe they lack the trustworthiness". Investor (5)

Furthermore, investor (1) explained the reasons that make investors reluctant to rely on corporate websites:

> "There is no online governance rule that necessitates the companies to set their websites in a certain shape or to produce certain content when they are disseminating their information on the corporate website. Added to this, the lack of a method that systematically measures the clients' or investors' needs of information or to find out whether the information produced on the corporate websites are really used by these users. This reflects the prevailing trend that Egyptian companies are following in these days ….. providing only the positive information that the company wants to reveal instead of providing what the users really need." *Investor (1)*

Investor (6) suggested a remedy to resolve this lack of credibility:

> "I suggest that these websites should be certified by a governmental body or to be instructed by some generally accepted International standards to organize the incorporated documents, concepts as well as the electronic signature." *Investor (6).*

Others contest the quality of corporate website content and presentation. For instance, some investors were asked whether they recognized any improvements in the Egyptian websites in the recent years, they replayed :

> "Yes, of course, but though the development was in the number of the companies that have possessed a website, the content and notion behind possessing a corporate website have not developed yet." *Investor (3)*

> "There is progress in the Internet usage and the number of Egyptian companies possessing websites increased. Besides, there is an increase in the contents of the corporate websites albeit very limit. Overall it is better than ever." *Investor (1)*

Despite all of the complaints provoked by the investors, the researcher noticed that these investors were acting passively, so none of them tried to contact the companies directly. This was also mentioned by the IR manager in company G. The investors also explained that they did not participate in online as none of Egyptian companies provided this survey. For instance, investor (2) replied as follows:

> "... no, simply I have not seen any Egyptian companies provided that [survey] before, but there are some companies starting to provide one or two questions concerning their services, which are provided online, but not the content of their websites." *Investor (2)*

Investor (1) clarified in detail why some individual investors act passively by looking for other trusted sources of information rather than contacting the companies directly or through email addresses provided on their websites:

> "Some large companies are keen to provide useful information to the investors. Yet, still this amount of information is not sufficient to make investment decisions. Also, the non-sophisticated investors are required by law to count on the brokerage firms and the financial investors when they need to conduct any investment transaction. Therefore, there are two reasons for counting on those professional people rather the corporate website. The first issue is, the lack of awareness and efficacy of those investors to read and analyze the financial data properly. The other issue is that all the sell/buy transactions should be done through the brokerage firms that took the burden to make all the required analysis and evaluation instead of the Investors. That is why the individual investors may not need to look for the financial information. Therefore, most companies find that is not necessary to put their financial data on the website." *Investor (1)*

6.11.2 Professional users and developers

The researcher classified the professional actors into professional website users, represented by the financial analysts, and professional website designers, represented by the technical engineers who work in expert IT firms independently from the company. The professional actors are the chief source of normative pressures that lead to the development of more isomorphic structures. Powell and DiMaggio (1991:71) pointed out that professionalism is generated by two main sources: the education system and cognitive base created by university specialists; and the powerful professional networks which extend the organization and contribute in diffusing new models. In this sense, the researcher investigates the extent to which the professional actors influence managers' decisions regarding the disclosure and presentation of business information online; the influence of the professional groups will be also be assessed in terms of the design and operation of the corporate website.

The financial analysts represent the professional financial users of the corporate website. They are responsible for providing financial consultancy for both stock buyers and sellers. Therefore, they used to study the company financial history as well as assessing the surrounding events that may affect their estimation of the stock prices or the powerfulness of the company's financial position. Thus, Five financial analysts, from three different consulting firms, participated in this study. The interviews conducted from January to April 2010. These experts have 10years of experience, on average, in analyzing corporate financial positions for both Egyptian and international companies and producing reports for interested investors. They also possess a good command of experience in using the Internet facilities. According to the interviews, these financial analysts were relatively unsatisfied with the quality of the current website disclosure. Financial Analyst (2) pointed out that Egyptian companies' websites are poor and not competent enough in contrast with their international peers:

> "... I do not usually refer to the corporate websites. According to my work as a fundamental analyst, I am interested in information about stock prices and changes in their daily prices. So, it is impractical to visit every single corporate website to get this piece of information. Therefore, I always rely on other websites such as Mubasher, for instance, which provides me with daily prices of all listed stocks in the Egyptian stock market. Also, I used to refer to the Egyptian stock Exchange website because it provides me with similar information and much more."

The interviewed financial analysts , in total, declared that the existing corporate websites are unreliable source of information for multiple reasons. Firstly, seldom they could find mandatory financial statements on the Egyptian websites, even if were available they were presented in different forms and at different levels of quality. Sometimes, the same information could be presented in different sections on the corporate websites. For instance, Financial analyst (1) who was involved in analyzing Canadian and Indian financial statements, commented that:

> "... For the Egyptian companies it is difficult to count on their websites to get proper financial information or any other business information .... For example, sometimes they do not provide audited financial statements on their website. Even those unaudited financial statements sometimes are provided in unclear format. Others may be totally corrupted and misleading. For instance, the PDF copy may be too dark or too faded because the original hard copy format is poorly prepared. So, it is preferable to find audited financial statements attached with the auditor's report. Another thing, the Egyptian companies are not designing their websites in a similar way, so it takes a great effort to find the required data or information. I intend to say that most of the financial information is presented in different ways on the corporate websites, under different titles. Therefore, in order to look for a specific piece of information, I need to browse the entire website."

Financial Analyst (3) explained the difficulty they encounter to collect financial information from Egyptian companies:

> "... only 10 percent of the listed companies have websites and most of them do not provide sufficient information on their websites. Many times, we need to pay for the information that we use to produce our financial analysis either from companies themselves or from the Egyptian stock exchange. Sometimes, we used to refer to the Egyptian stock exchange website. Some companies were apprehensive even to submit us with their financial reports because they thought that we are from the tax authority."

Another important point made by Financial Analyst (3) regards communication with the Egyptian companies:

> "... some Egyptian companies such as banks use their website for information dissemination because they are marketing themselves. On the opposite, industrial companies are not that good. So, we sometimes are enforced to buy the required information from other parties such as Egyptian Stock Exchange."

Financial Analyst (1) tried to compare the CIR practices of the Egyptian companies to other international companies:

> "Indian companies provide too long annual reports in around 200 pages. Meanwhile Canadian companies provide relatively short financial reports of around 10 pages. So, despite the fact that Indian companies provide all the required details, it took me some time to search and get an item out of their annual reports. The Canadian companies found a very good solution to enable them to provide all the required financial statements ..... they provided a link on their websites to other websites that provides all financial information for all the Canadian companies."

This interviewee added that if the financial analysts had any queries or needed further detail they contacted any international company using the email address provided on their websites. However, they could not do this with the Egyptian companies since these companies tend not to reply to their emails. Therefore, the communication policy of this firm in particular requires contacting Egyptian companies though postal services. Financial analyst (4), who has spent around 10 years analyzing Egyptian corporate websites, explained:

> "... Giving a financial consultancy is not an easy task and I need to get all relevant and reliable information about the company even if I need to talk to their auditors myself. Simply, I cannot count on what is displayed on the Egyptian corporate websites because this information expresses the company's view, thus it will be biased. Even then I cannot count on the analysis made by other analysts because again they will be prepared according to their own terms."

This attitude indicates that the information presented on the Egyptian websites is perceived by some financial analysts as unreliable or less useful for preparing professional consultancy. However, this obviously contradicts with the managers' perception about their targeted users, as explained in the previous chapter, and it shows that the companies are not surveying the needs of their website users. This was clearly stated by almost all of the interviewed managers. Financial analyst (2) distinguished between strategic and speculative investors. He clarified that the usefulness of the online financial statements might differ for these two types of investor:

> "I think the company provides this information on their websites for professional people such as financial analysts, institutional investors, brokerage firms who are capable enough to understand this information and to evaluate them for pure business purposes such as providing consultancy services ... For the individual investors, I think they may benefit as well but not all of them are keen to look for accounting and financial information over the Internet. Some long term investors (strategic investors) who hold their stocks for a longer period of time might be interested to assess the financial position of the firm and to develop some predictions about its future profitability; in this case they would seek the corporate financial statements. However, this issue may not be of any interest to short term investors (speculator) who are investing for the short term only."

In respect of the role of financial analysts, the interviewees explained that they do not assist the companies in determining the adequate provision of information or what type of information should be disclosed on their websites. On the contrary, they work independently from the companies and mainly serve the individual investors. Most of the interviewed analysts clarified that they did not participate in any online surveys for developing corporate websites because they had not come across such a survey before on any Egyptian website. Besides, they confirmed that they have not been asked by any Egyptian companies to provide them with any advice to enhance their online disclosure and presentation practices.

Yet, probably these companies do contact other financial analyst firms which they refer to on their websites. They provide contact details for these analysts for interested investors to contact separately if they need further information about the company. As explained by some managers, these analysts prepare more specialized financial reports that the investors can count on when making an investment decision. It has also been realized that there are increasing numbers of big financial analyst firms that possess a website to display extensive financial data and information about all the economic sectors in Egypt and all the listed companies.

These websites have gained considerable attention from brokerage firms and other financial analysts, as they provide a full set of audited financial statements for each listed Egyptian company attached with the auditor report and presented in a clear format. Financial analyst (5) named some of the professional sites that she usually refers to in order to collect full and confirmed financial statements of Egyptian listed companies. These websites provide the most recent financial statements in full and in PDF format. Some companies submit better copies of their financial statements than those they disclose on their own website. Also, this analyst referred to the EGX website as it disclose up-to-date news of the listed companies. She explained that this information is only available for a short time then it will be removed.

The researcher interviewed seven website developers. Three developers worked for Toyota Egypt and, Fekrasoft, and IBM. Another two general managers participated in the interview who manage web development firms, in addition to another two engineers who have started developing their own websites after spending a number of years in this domain. On average, these developers have been operating in the website developing domain for more than ten years, gaining much experience with activities such as design, implementation and updating websites. Many of them have dealt with different Egyptian companies, either large or small, operating in different industry sectors. The IBM developer said that they mainly serve government departments and public companies by developing websites for e-governmental services; Toyota developers are involved in developing websites for Egyptian and non-Egyptian companies in the private sector and not necessarily listed on any stock markets. However, the remaining developers are involved in developing Egyptian websites for some of the listed companies. Indeed, one of them is the manager of the IT firm that developed the websites of two of the investigated companies and has also developed websites for other large listed Egyptian companies outside the current industry.

Almost all of the interviewed web developers agreed that Egyptian companies' awareness and usage of the Internet have been obviously increasing in the last years. This trend has been recognized for all types of companies, public or private, small or large. However, they differ in the availability of funds, the purposes of having a website and the mentality of the managers, especially the CEOs. Some website developers explained that the key factor for the success of any website is the CEO. The more convinced and knowledgeable the CEO is about technology, the more successful the corporate website will be. Although the possession of a website could be a requirement from all companies, these companies' perceptions and objectives are diverse. One IT manager explained:

> "Large companies are predominantly keen to possess a website because of their image and their concern about competition. Clearly, many large companies envisage that if they do not have a website as their rivals do, they will lose their business."

He added that the government supports the development of corporate websites for up to 80 percent of their cost through the Expo-link and IMC initiatives. Therefore, large companies conceive that having a website is essential for their public relations and their image in the market. On the contrary, smaller companies consider having a website as relatively useful for their business. Therefore, some may postpone having a website to the future and some may not feel it necessary to have a website at all. However, as the IT manager argued, if the work of these firms is related to the Internet or international clients they would place high importance on having a website. This IT manager explained in detail the potential benefits that companies are seeking to attain by possessing a website:

> "[The benefits]… they depend on their field of work. Having a website will open new marketing channels locally and internationally and will help in attracting more customers and maybe investors from anywhere in the world. In addition, their customers will be more confident when dealing with a company which offers online customer support service and has a professional website."

However, this IT manager views the quality of the current Egyptian corporate websites as poor and lacking a professional look and feel; the content is not well written and mostly not updated. He also explained that these websites are still missing some features such as interactive services, and B2B services are not yet fully utilized. In addition, the web developers recognized that Egyptian companies have a tendency to imitate international websites, especially for companies that practise the same business or carry out similar activities, because the international companies have longer experience in this realm; they are trying to benefit from this experience while developing their own websites. Similarly, the IT engineer who was CEO of one of the web developing companies and the head of E-commerce and the Internet group in the Chamber of Information and Communication Technology (CIT) in Egypt, described smaller companies copying their leaders in the local markets and large companies imitating equivalent international companies. This coincides with the findings of Webb and Sayer (1998).

According to the website developers' perception, Egyptian corporate websites are created specifically for publicity (i.e. public relations). Normally, they do not provide any e-commerce facilities so they only provide information and photographs of their products, activities or factories. However, they do not provide an appropriate amount of financial data. Most of the financial data are presented in bad formats or abbreviated in a very confined section. In addition, most of the information is old fashioned and not regularly updated. Therefore, the idea of building a website to enhance external users' knowledge about the company's stocks and financial health has not been planted in the Egyptian culture yet.

The ex-chairman of the CIT in Egypt discussed why Egyptian companies are not capable of competing with their peers by developing professional websites:

> "This is due to the fact that the website if administered in a very classical way; no one proves that he can run an entire website. Also, the limited diffusion of e-marketing makes the return on investment for websites very low. For instance, the website owner develops his website to generate returns out of it. Later, he may not keep on developing his website, so then he will not generate return out of it or he might not get new investors so he will leave it as it is … On the other side, the website developers firms do not have sufficient knowledge about the complete e-business cycle, for instance, the role of e-marketing and its importance, the management of the website, and the role of strategic analysis. Therefore, they do not transfer these skills to their clients. As a result, each client will have a different set of capabilities depending on his web-developer firm."

This interviewee went on demonstrating the reasons for having highly technical websites rather than informative websites which satisfy the information needs of multiple investors:

> "Indeed, these firms are focusing on elevating their technical skills since most staff in these firms are web designers and programmers, but their business orientation has not been improved yet. So the web-developers perceive that a good website is that something looks attractive and runs smoothly. So, he doesn't care about whether this website adds value to the company by attaining its planned goals or achieving any efficiency or generating sales; therefore, the notion of the internal return on the website investment is still absent for most web developers. In general, most of the website developers have only technical skills so if the website is administered by the IT side it will be unsuccessful. On the contrary, if the website has been administered by the marketing department it will be successful. At least, [the marketing manager] looks at segmentation, communication, he will try to look at the return on investment and the best channel to communicate."

According to the above argument, it seems that this participant perceives that the website developing process should be handled by technical and marketing managers who need to be supported with business knowledge first. Another IT manager supported this conclusion by clarifying the reasons for outsourcing website developing tasks:

> "... I think [the companies] always need to outsource the development of their websites to a dedicated firm with experience in web development, Internet marketing and ongoing support for future updates."

A third IT manager working for a web-developing firm licensed by Microsoft elaborated that sometimes the updating process is exhausting for IT staff who are overloaded with other technical tasks, therefore he suggested that each company needs to assign a group of people internally to assure that the corporate website content is updated as necessary:

> "[…] disclosing information about the general assembly of the share price … is difficult to perform since it requires devoting some people to frequently update this information. However, it is available through using website content management software. This program enables the person in charge to change the website content promptly and easily. The only problem is to make sure that the website content has been updated regularly."

Moreover, the IT manager added that none of the companies that he dealt with assigned a person or department to review and verify the content of the corporate website. Therefore, the maintenance of the information content is totally assigned to the departmental managers who are responsible for deciding what to disclose and how to present the corporate information on the Internet.

The IT engineer in IBM explained that public companies' managers are handled differently from their counterparts in the private sector, because of the characteristics of the public sector and its managers. She explained how understanding managers' characteristics is significant for the website developer, especially when developing a website for a public or governmental institution.

> "... managers in the public companies, especially who will retire or leave his position very soon, will try to show that he made a remarkable achievement or added some value to his work. ... They have a higher tendency to resist change. At the executive level, they have more ego whereby managers have a propensity to show that they added value to their positions, some have hidden agendas, others are promoting some software house versus others because they may have some mutual interests with them, some of them encounter competition between other officers inside the organization or another one in the ministry. Thus, such a person would like to show himself better than his opponents ... Very few of them, you feel they are serious about this process ... customer handling and psychology perspectives is a profound issue when dealing with managers in the public sector. On the contrary, in the private sector they are a higher calibre, paid more, are more open minded are motivated by specific results they need to attain and present to their direct supervisors ... also the quality level of their work is higher with less bureaucracy,

> this is reflected in the quality of the website and schedule of handling website developing tasks."

The above IT engineer clearly stated that there is intensive confidentiality in the public sector. Therefore, they tend to disclose their information in aggregation as a single figure.

6.11.3 Regulatory actors: Egyptian Stock Exchange

Principally, regulative actors are normally perceived as the main source of coercive pressures. Because of this, they constitute profound pressure towards isomorphism, as implied by institutionalists. Committing to certain rules or enforced guidance imposes human or organizational behaviour to take an identical form. Therefore, the absence of regulative pressures might incite and increase divergence to some extent. As the same time, there are cases where regulations and legislation exist without being executed. Regulative actors, according to this study, should represent authoritative agencies or institutions that are entitled to issue rules and regulations, or to monitor the execution of Internet business reporting practices. Despite the great effort exerted by Egyptian government since the inception of the Internet, in 1993, to diffuse Internet connections and usage all over Egypt, they have not spent equivalent effort on issuing rules and regulations to govern and harmonize the usage of the Internet in the business realm.

Given the nature and characteristics of the disclosure practices that are undertaken by Egyptian companies, the use of the Internet unfortunately augmented these shortcomings in financial reporting. Nevertheless, the companies are still committed to the conventional rules of the Egyptian Stock Exchange when preparing and disseminating their financial information to the public. Noticeably, there has been a wide prevalence of Internet usage for publishing news and business information in Egypt. Many newspapers and media outlets have added Internet research to their traditional tools, and media tools that rely primarily or entirely on the Internet have been established[1]. However, recently, a report has been issued by the International Transparency Organization (2010), announcing that four countries - Egypt, Lebanon, Palestine and Morocco - share the problems of extremely underdeveloped public accountability systems and uneven enforcement of existing anticorruption laws (Transparency International, 2010). Similarly, a global integrity report described Egypt as "very weak" with a score of zero in public access to information (Global Integrity Report, 2010). Given all of these facts, up until now, there has been no single regulation imposed on Egyptian companies to own a website or to disclose their business information online through

[1] http://www.irex.org/programs/MSI_MENA/2008/MSIMENA_egypt.asp

a website. No single professional or constitutional body has taken the initiative to issue guidelines for publicly listed companies in this regard.

The disclosure department in the EGX is entitled for supervising the business reporting practices in Egypt and making sure that the listed companies are conforming the required disclosure rules . Yet, it is not clear if this department contributes in reviewing or organizing the CIR practices in one way or another. Therefore, the researcher sought to understand how such essential institution see the current CIR practices and how they affect them. The researcher conducted a semi-structured interview with the general manager (GM) in the disclosure department. He refused to be recorded and asked the researcher to take notes instead. During the interview, the GM confirmed that there no laws have yet been issued in Egypt that impose any commitments on the companies to disclose their financials online. He argued that some companies, mostly in the private sector, opt to have a website as a source of prestige or to signal themselves as one of the large companies. He explained that some companies may even follow this pattern only in an attempt to give this impression without a real need for doing that. On the other hand, he also mentioned that some companies are more serious and may disclose their business information for good reasons. He pointed to some barriers that may confront companies from disclosing their financials online as follows:

> "... some of them may really make use of this new innovation, but still this practice cannot be applied to all other listed companies, especially those operating in the public sector, as some of them do not have even computers."

During the interview, the GM did not mention that the EGX exerts any form of pressure on the listed companies to disclose their reports on the Internet. However, he elucidated that the current responsibility of the disclosure department is confined to checking that the financials displayed online are identical to what they have received in a hard copy format. He also clarified that, in the absence of binding regulations, neither the disclosure department nor the company is liable for providing insufficient financial information or irrelevant disclosure on the Internet, including financial statements, since there is no obligation compelling them to take on this burden. In addition, the GM insists that:

> "... at least at the present time, the EGX cannot enforce and is even not entitled to instruct companies to improve their online reporting practices as long as there is no law issued to discipline CIR practices in Egypt."

Five external auditors, working as CPAs in two large accounting firms, were interviewed to understand how they perceive the Internet business reporting practices that are conducted by the Egyptian companies and whether they participate in this process in any way. These interviews were relatively short at around 30 minutes on average, since these participants have not been engaged with CIR practices before. The auditing firms that these interviewees work for have audited some of the investigated companies and other listed Egyptian companies. Some of the interviewed auditors were not aware whether the companies they audit possess websites. They also stated that they had not even visited these websites and hence they had not examined how they disclosed the auditors' reports. However, they said that they may refer to the online financial statements that have been audited by their firm in the near future, if necessary. One auditor asserted that they are not currently involved in this process, but they are still committed to undertaking the conventional auditing process and submitting audited statements to the company:

> "… All I know is that our responsibility ends at auditing the financial statements and delivering them to the companies. However, I do not think that we are required to audit the information provided on the corporate website."

Similarly, almost all of the interviewed auditors ascertained that they do not participate in the Internet business reporting process in any way:

> "We have performed routine auditing procedures such as reviewing the financial statements to provide our opinion on them at the end of each interim or at the end of the year. Yet, so far, we are not involved in the online reporting process and this is the entire responsibility of the company, not the auditors. Sometimes I have gone to the company's website to collect some data."

They refused the responsibility for disclosing their audit reports in an inappropriate way on the Internet:

> "I believe that it is all the company's responsibility. Thus, if they committed any mistakes, misleading or illegal behaviour we will not be involved in this liability. I also believe that if a company published their financial statements without it being attached to the auditors' report, it will have no value. […]the non-audited statements are nonsense and useless to the users because they are not reliable."

Some auditors elucidated that their firm may only double check whether the company disclose the same audit report online. In addition, it has been realized that no professional standards have been issued to enforce either Egyptian companies or Egyptian auditing firms to verify the websites' information content. Thus, auditors may provide this services to their clients, not as a part of the auditing process. The interviewed auditor added that this will be expensive for their clients because some experts will be hired to render this service:

> "Yes, we are ready to help in this process, but the fees will be high and I think the client will refuse to pay this fee. I do not believe the auditing risk will be high, in this instances, since we will incorporate other specialized people to help in reviewing the client website."

Consequently, the potential high fees of the website verification would make a number of companies reluctant to request this service, especially they are not legally obliged to do that at the present time. These views are consistent with the findings of a study conducted by Ismail (2009) which attempted to investigate the factors affecting auditors' perceptions of the work needed to audit financial statements on the Internet in Egypt. It was found that that Egyptian auditing firms are not yet involved in the CIR process. The researcher also pointed out that the readiness of these auditing firms relies on different variables related to the auditor himself, the characteristics of the auditing firms and the type of procedures under revision. On the other hand, the outcomes of this study related to the auditor's role and perception are not consistent with studies (Lymer, 1999; Lymer and Debreceny, 2003; Jones and Xiao, 2003; Fisher et al., 2004) that imply that the auditing profession is expected to be more involved in this process and to play a profound role in disclosing corporate financial information on the Internet.

6.12 Induced institutional logic embraced by the participating companies: Discussion and expectations

This section discusses and interprets the findings of the examined cases in conjunction with the outcomes from the interviews with the external institutional actors, in an effort to identify the nature of the institutional logic embraced in the investigated companies. In addition, it seeks to explore the most important factors that formulate and control such logic. Later, the explanatory study will test the impact of these suggested factors on the extent and quality of the attributes which categorize the legitimate information systems. It will also measure the significance of the influence of these induced factors.

During the interviews, it was recognized that website usually goes through two distinctive stages. The first stage is when the website is created by the company for the first time. The second subsequent stage is when the company decides to replace their original website with a new one. The latter decision is iterative and might be repeated in the short or long term, depending on the surrounding circumstances and competences of the company. Essentially, it is realized that during these two stages, different people are involved, different perceptions emerge, different skills are gained, and different motives are expressed.

At a society level, it is argue that various cultural, organizational, and industrial factors explain the diversity in the content and presentation of the corporate website (Debreceny et al., 2002; Oyelere et al., 2003; Robbins and Stylianou, 2003; Debreceny and Rahman, 2005; Bollen et al.,2006; Bonsón and Escobar, 2006; Cormier et al., 2009). On the contrary, the researcher investigated the causes of this diversity by looking at the organizational rather than societal level. The researcher found out that the CIR system is dominated by the power of internal managers in cooperation with external website developers. These two powerful groups possess special skills and powers and each is trying to dominate the other as none of them possesses all of the technical, financial and managerial knowledge at the same time. Also, the absence of mandatory or instructive and professional standards as well as independent review induced the companies to direct the disclosure practices according to their marketing strategy and according to their pure internal vision.

It was also noticed that the institutional logic of the companies was getting mature over the years due to the development in Internet technology and the increase in social consciousness about the benefits of the Internet. Moreover, increasing the corporate network of relations nationally and internationally impels some Egyptian companies to advance their website features and functions. Part of the culture impact is the mentality of some managers. The poor performance of some companies in respect of the quality of the website and the comprehensiveness of the information contained on these websites was not only attributed to the simplicity of the Internet technology and limited access of the Internet, but also it was attributed to the mentality of some managers and their lack of knowledge about the Internet and the perceived importance of information to some investors, as explained by the IR manager in company C who joined the company only in 2007 after working for years in the banking sector:

> "... the narrow minded managers resisted the idea of being online because they did not have the sufficient and appropriate awareness about the importance of publishing and communicating corporate information to the public via the Internet and they were quite concern with the confidentiality of the published information and the risk of influencing the company's competitive position in the national market."
> *(IR manager, company C)*

6.12.1 Evidence of competing logics

According to the proposed theoretical framework in Chapter Four, which is driven according to the empirical findings of prior literature on CIR applied in Western countries, it is presumed that CIR practices are affected by four alternative types of institutional logic. The efficiency based logic is based on increasing the corporate benefits and decreasing any incurred costs or expenses associated with these practices. Technology based logic entails stressing the technical aspects of the corporate website rather than the content, which is related to the look and feel, usability, search-ability, security, connectivity and smoothness of operations. The third logic is based on the marketing perspective. This logic stresses the practices that should distinguish the company from other competitors. As a result, the companies will try to design and run their websites in more unique ways. Marketing based logic would make the company more vigilant about its competitive position and the needs of the clients of their product or service. On the contrary, the logic based on legitimacy is derived from the external needs of the companies' societies and professional groups or the imposed regulations. Therefore, this logic entails following specific patterns that are adopted by most similar companies in an attempt to be more legitimate. Following this logic will lead to create more identical websites in structure and contents. Companies may follow this logic for rational or irrational purposes.

Examining the seven case studies and the interviews shows that the Egyptian companies possessed the four proposed logics over the years. At the earlier stage, the Internet technology was just introduced to the Egyptian community. Individual awareness about such technology was very limited. Only a few companies in the private sectors started using this technology at that time. Therefore, the IT engineering staff were in a better position as they possessed pertinent skills and knowledge to deal with the Internet, compared to managers. In some companies the old management staff were not familiar with computerized systems or the Internet. More importantly, the website design process did not allow them to change the content easily. Thus, according to these circumstances the increase in the website numbers was very limited, especially in the public sector and small companies. On the contrary, the societal use of the Internet increased rapidly and pervasively, but for social communication and entertainment purposes rather than for commercial of business purposes. At this stage, the investigated companies had more propensity towards imitating other companies internationally, as they were initiators in this realm. Also, they sought to distinguish themselves from the domestic following companies by following advanced international standards related to the design and operations of the website rather than the content. This observation was more viable for those companies possessing commercial relations abroad. At that time, Egyptian companies experience was very limited in terms of the techniques, presentation and online financial reporting aspects they employed. Therefore, many companies possessed a website "just to have a presence on the Internet" (Sullivan, 1999) or to promote their products and services (Liu et al., 1997), rather than in order to conduct effective communication with their investors or investor relations activities (Hedlin, 1999; Pirchegger and Wagenhofer, 1999; Hurt et al., 2001).

In time, the companies gained more experience and knowledge about Internet business reporting. They were also supported by external website development firms who provided them with the latest techniques in this domain. Some companies tended to benchmark their website with the latest developments of similar companies' websites in Arabic countries such as Saudi Arabia (company G). Such companies are perceived as potential competitors to the Egyptian companies. These findings are consistent with earlier studies: Nordberg (1998), Lymer (1999), and Hedlin (1999), for example, argue that the first website generation was devoted to advertising and marketing purposes. Lymer (1999) described this primary stage as "experimental". Nevertheless, he indicates that the first generation websites were not merely devoted to advertising, but also contained limited amounts of financial data.

Some investigated companies leaned on hiring foreign website developing firms (company A and D) as they could afford it. The rest hired well known domestic website firms as in companies B, C and D. However, it is hard to say that the companies identically imitated the websites of international companies. It was realized that the companies adapted their websites to reflect their own image and their perception. This image and perception were based on their previous experience and their conventional disclosure practices. Arguably, the companies followed internal legitimate standards rather than external or societal legitimate standards. Therefore, the companies were adapting their CIR practices to global best practices rather than domestic or sector legitimate standards. In addition, the companies were seeking individualistic characteristics rather than communal characteristics which increased the deviations in the website features and content. We can also recognize that the efficiency logic had no real impact on the investigated companies' decisions related to the establishment and updating of their first website. Indeed, the seven companies are large in size and were listed as actively traded companies during the period of investigation. Their financial position and the magnitude of their profits enabled them to seek the highest website technical capabilities. However, it was realized that the management played an important role in confining or enlarging the uses of this technology.

In subsequent years and from the deployment of the first websites until the time of this study, no regulations or laws have been mandatorily imposed on the Egyptian companies enforcing them to dissimilate their business information, including financial information, on the Internet. Therefore, in this deregulated environment, companies are ultimately free to disclose and present their information as they want. Essentially, it has been realized that the companies that have become more involved in international relations by trading their products, services or stocks have become more orientated towards the international markets' information needs. Therefore, their CIR practices in terms of quantity and quality relatively improved. Still, the management which represents different departments in the company is the dominant party. Specifically, the marketing department is the key player in the website development and maintenance processes. Even other departments presented on the Internet as the IR department adhere to their logic. Therefore, it is realized that managers believe that the corporate website should be attractive, interactive and usable, but less informative. On the contrary, they visualize the IR section as storage for corporate historical information rather than a communication channel between the company and its shareholders and stakeholders. They also insist that the corporate website should only provide general and basic information to the public users. More details should be provided through email, face to face meetings or on the phone, mainly on an individual basis. Briefly, in the subsequent stages of corporate website development, it can be realized that marketing logic vigorously dominates the website and CIR system in the Egyptian companies and it is mainly orientated to respond to the needs of foreign investors, institutional investors and professional users more than individual investors. This logic is also struggling with technical based logic which is largely imposed by the website developers who are responsible for the corporate website developing and maintenance processes. Occasionally, the requirements of the internal departments contradict with the technical potentiality of the website, and hence the information may be presented in low quality or disseminated late. This contradicts the logic embraced by the Western countries, which envisage the website as a vehicle for investor relations. They developed disclosure and presentation practices to respond to the investors' information needs. This logic is also more based on the efficiency perspective which entails decreasing the cost of producing and disseminating corporate information or cost of capital by enhancing the investors' monitoring of the management through being updated with corporate information on a timely basis.

6.12.2 Legitimacy and the internal response to the external institutional pressures

Institutional theory, specifically the neo-institutional theory strand, stresses the impact of external institutional pressures as explained in detail in Chapter Three. This prominence is based on an implicit postulation that the actors are passive and so would only conform to external pressures, and hence companies that are operating in the same field will be exposed to the same institutional pressures and therefore may react similarly by adopting similar structures or practices. However, this scenario is not compatible with the situation in the investigated Egyptian companies. These companies are operating in the same country and facing the same economic, social, political and technological conditions, and they are also listed on the EGX, so are subject to the same disclosure rules. However, their website disclosure and presentation practices are quite different in quality and quantity terms. Even when two companies are both listed on the EGX and London stock exchange (A, G), the IR section of company G's website is more developed than the IR section for company A, This will be also measured in Chapter Seven. Therefore, this situation may be better explained by following the other doctrine that advocated by Royston (1996), Thornton (1999) and Dacin

(2002). These researchers argue that in the private sectors the considerations of interests, power and individuals' perceptions and psychology are crucial triggers inducing variations in organizational or individual behaviours. Yet, these elements are persistently neglected in the institutional theory research (Hoque, 2006). In this study, the researcher recognized that the legitimate practices related to CIR in particular are largely and persistently shaped according to the management perception within the absence of coercive pressures. Therefore, the management' experience, skills, personality and education level were among other things that affected the CIR practices. Besides this, the IR managers' delegated authority over the internal accountants and auditors deprived them from participating in this process. Even external financial consultants have no direct impact on the companies in this respect.

6.12.3 Expected impact on the corporate website information content

This part of the study revealed new issues related to the internal institutional environment of the CIR as a system in the Egyptian companies. These findings revealed that:

- CIR practices are considered as a complementary part of the company's overall website development strategy.
- Marketing based logic supported by technical based logic are the dominating logics that generally govern website related decisions and the CIR system.
- There is no single department devoted to looking after the corporate website and the process is still either fragmented over the involved departments or centralized and delegated to a single department in liaison with external website developing firm.
- Occasionally, website developing firms may attempt to impose their technical based logic by advising corporate managers that they recommend the best practices that are followed worldwide. The company's management sometimes uses its power by refusing some practices and suggesting others. In many cases, the legitimate structure of the website and content is determined internally without any direct participation from the external shareholders or stakeholders.
- The structure and content of the corporate website that would be legitimatized by the external website users (individual investors, financial analysts, auditors, and accountants) do not coincide with what is provided on the corporate websites at the moment.
- In respect of the publicly listed companies on the EGX which operate in the private sector, it has been noticed that the external institutional pressures that might be imposed by the social community, professional groups or industrial sectors of the regulative and supervisory bodies are evidently weaker than the internal pressures

that are imposed by the managers in charge who participate in developing and maintaining the CIR as a system.

Accordingly, it is proposed that if the marketing and technical based logics were pervasively embraced by other Egyptian listed companies, the corporate information content would be disclosed and presented in alignment with the following expectations.

1. The websites be more attractive, colourful and well structured, but less informative. Hence, the financial and accounting information on the website will be limited, general and aggregated.
2. Companies will be more inclined to disclose information profile, products and services information more than financial information.
3. The website information content, particularly the financial section, will contain more historical information less detailed and more general.
4. It is more likely to find available communication facilities and contact details on the corporate website outdated or inactive.
5. The IR section on the corporate website will provide a limited amount of information that is usually required by institutional and professional investors such as financial statements. Other information related to shareholders' information or corporate governance are not expected to be found in many of the websites as they are rarely used.
6. As the EGX and external auditors are not yet involved in verifying the content of company's websites, the credibility of the website is expected to be an issue .
7. As the updating process of the corporate information content is controlled by technical staff or external website developers, it is expected that the timeliness of the corporate online information will be low.
8. As the companies may be driven by the marketing perspective, it is more likely to see much more variation in the corporate websites than similarity, even within the same industry sector. Specifically, the variations will be more in the content part than in the technical features as these parts will be treated by professional technical staff.
9. Embracing marketing and technical based logics impel companies to improve their image/reputation or even create demand on their products or services more than addressing their investors needs of information. Hence, these companies would pay more attention to technical aspects to enhance the attractiveness and usability of their website more than the its formativeness.

6.13 Summary

This chapter represents the qualitative study that contains investigations of seven cases representing seven large listed Egyptian companies that have possessed a website for several years. Also, this study included the perceptions of other external stakeholders who are presumed to impose some sort of institutional pressures on the organization. The individual investors represented the social pressures, meanwhile the financial analysts and website developers represented the professional pressures emerging from their financial and technical professionalism. In addition, the external auditors and the disclosure department in the EGX represent the regulative pressures.

A case study method was undertaken to explore the entire system of the CIR which is entitled to disclose and present corporate information on the Internet. Therefore, the researcher selected seven publicly listed Egyptian companies that are indexed on EGX30 and EGX70 as on December 2008 and which operate in different industry fields, in order to construct general view about how Egyptian companies manage and maintain their websites, particularly those sections that contain most of the corporate financial and accounting information. These companies have been selected according to specific criteria determined after screening most of the corporate websites that appeared on the Internet in late 2008. By embracing the notion of institutional logic as illustrated in Chapter Four, it appears that the institutional logic has been constantly evolving during the last two decades. Therefore, in the early days, most of the Egyptian companies, even the large ones like those participating in this study, tended to imitate the pioneer international websites. They were mainly established and designed to introduce the company to the domestic and international website users. Over time, the companies slightly shifted towards the marketing logic. Thus the companies tend to distinguish themselves by establishing a unique website in terms of quality and quantity. Domestic and international market competition and changes in corporate size, management team, ownership structure and projects were the key reasons behind the changes in the subsequent websites. Moreover, the researcher highlighted the impact of the management characteristics such as perception, education background, and power they are important to react against external institutional pressures and how this contributes in formulating the logic driving the CIR practices..

The technical based logic has been primarily embraced by the website developers or the IT managers inside the company. This logic governs website decisions related to the technical features. Therefore, the company managers involved in the CIR process are valuable in compromising between these two logics. The researcher could not realize a considerable impact of efficiency based logic on the corporate decisions related to website information content. More importantly, it has been realised that the corporate management is the dominant actor in the process and the corporate external stakeholders and stockholders are still acting passively. In spite of the fact that institutional theory suggest that organizations are strongly influenced by institutional pressures for compliance exerted by their institutional actors (e.g. referents), the legitimate features of the corporate website, and particularly the CIR practices, are determined internally and on individual basis, rather than externally as implied by the institutional theory. The researcher also proposed several expectations related to some CIR practices and the website characteristics. If these expectations have been attained by most of Egyptian corporate website, as will be proved by the descriptive study, this will provide an evidence that marketing and technical based logics are the most pervasive one that largely dominating the CIR practices in Egypt during the research period.

Chapter 7: Measuring the CIR extent, quality, comprehensiveness and the Internet usage: A descriptive study

7.1 Introduction

The purpose of this chapter is to analyze and describe the status quo of the CIR practices and investigate how the induced institutional logics have influenced these practices by other Egyptian companies. This will be accomplished by collecting and analyzing the information provided on the websites of Egyptian publicly listed companies. The analysis took place during the period December 2010-February 2011. The selected websites contain 115 websites representing all industry fields. The different industries have been grouped into three main sectors: the banking and financial, service and industrial sectors. The data was collected following the content analysis approach as explained in Chapter Five. Therefore, the descriptive study is conducted to answer the following research questions:

Q1: To what extent the CIR practices are adopted by Egyptian listed companies?
Q2: Which aspects of the adopted CIR practices are more advanced?
Q3: To what extent the CIR practices are isomorphic at Egyptian stock market level and industrial sectors level?

Hence, this chapter will be organized as follows. Section 7.2 describes and illustrates the characteristics of the investigated sample. Section 7.3 describes the main and sub-indices of CIR practice. This section analyzes in details the quantity and quality attributes (i.e. timeliness, usability, credibility and general content) of the CIR practices on Egyptian corporate websites. Then section 7.4 empirically investigates the impact of the institutional environment (i.e. EGX and industry sectors) on CIR practices. This section will be tested using a non parametric test: the Kruskal Wallis test. Eventually, section 7.5 contrasts the obtained evidence to the expectations driven from the examined cases and the interviews provided in Chapter Six. Finally, Section 7.6 concludes with the key points.

7.2 Websites selection and data collection

This section describes in detail the size of the selected sample and the key characteristics distinguishing the companies formulating this sample.

7.2.1 The websites under investigation

The researcher downloaded a list of 220 publicly listed Egyptian companies as on December 2010. This list contained the companies' names and website URL addresses downloaded directly into Excel sheet from Zawya database. Two more lists were also downloaded: one contained board of directors and management information; the other contained the financial indicators of the selected companies (i.e. firm characteristics). After investigating the list of 220 publicly listed companies, it was found that more than half of the sample 122 (55%) had a website address. Seven websites were eliminated: four were under construction and three suffered operational problems. This filtration resulted in 115 active websites representing (94%) of available websites during December 2010 until February 2011. Indeed, these websites represent the population of well operating websites owned by publicly listed Egyptian companies. The following table clearly summarizes these figures.

Table 7-1: The population of investigated websites

Status of the Egyptian websites	N	%
Number of publicly listed Egyptian companies as on December 2010	220	100%
Number of companies with URL address	122	55%
Number of companies with inaccessible/faulty websites	7	3%
Number of accessible & searchable websites	115	52%

The researcher puts more emphasis on the websites of Egyptian listed companies that operate in the private sector, including those partially privatized. Thus, total state owned companies or non-Egyptian companies listed on EGX or those closely owned companies are excluded. The researcher intends to emphasize Egyptian listed companies as they are entitled to disclose their financials periodically either on conventional media of on others such as the Internet. Some Egyptian companies are also listed on foreign stock exchanges and thus they are expected to submit their financials on a timely basis to these markets.

7.2.2 Characteristics of the selected websites

The population of the study is composed of 115 websites owned by publicly listed Egyptian companies. These companies operate in different industry fields. The key attributes of the selected companies incorporate ownership structure, board and management structure and corporate activity (i.e. industry sector), internationalization, audit firm and firm characteristics (measured by total assets). Moreover, corporate financial performance is incorporated as control variable. These attributes will be divided, according to the nature of the variables, into two groups: dummy variables presented as dichotomous values (0,1), and continuous variables presented as a percentage, monetary term or integer number. These variables represent in total the independent variables for the current study.

7.2.2.1 Categorical variables (dummy)

Table [7-2] presents the dummy variables . The first column in this table contains the codes or titles of each variable as used in the SPSS. Some variables have been measured twice, once as dummy variable and once as a continuous variable. Thus, the code of dummy variables take number (2) and continuous variables take number (1). The second column represents the constructs under each of these titles. It also distinguishes the dummy variables are presented by two digits (1,0). The examined criterion will take (1 or Yes) if exist and (0 or No) if otherwise. The last column presents the percentage of each construct, calculated by dividing the value of each construct to the total amount of all constructs related to the specific title in column one.

Table 7-2: The categorical (dummy) variables

The independent variables		N	%
1. INDUSTRYTYPE	Banking and financial sector	22	19%
	service sector	17	15%
	Industry sector	76	66%
2. INDEPND2	No	0[1]	0%
	Yes	111	100%
3. FOREIGNDIRB2	No	95	85%
	Yes	17	15%
4. FOREIGNDIRM2	No	93	83%
	Yes	19	17%
5. DUALITY	No	46	41%
	Yes	66	59%
6. AUDITFIRMSIZE	No	60	52%
	Yes	55	48%
7. FOREIGNINVESTOR	No	97	86%
	Yes	16	14%

Note: 1. Industry type, 2. Presence of independent directors on Board, 3. Presence of foreign directors on Board, 4. Presence of foreign managers, 5. Presence of duality case, 6. Presence of one of BIG4 audit firms in the company' s auditing team, 7.Presence of foreign investors as major shareholders.

[1] There is no information available about the board members for four companies on the Zawya database. Out of 115, 111 companies have some independent directors as members on the board.

7.2.2.2 Continuous variables

Table [7-3] illustrates the frequencies and statistics of the continuous variables. It represents five groups of explanatory variables in addition to the control variables.

Table 7-3: Frequencies and statistics of the continuous variables

Independent variables	Mean	Median	Maximum	Minimum
1. Ownership Structure				
1 INSTITRATIO	0.2511	0.1165	0.98	0
2 GOVERATION	0.2015	0.01	0.9571	0
3 MANGRATIO	0.1801	0.027	0.99	0
4 MAJORATIO	0.0354	0	0.68	0
5 FLOATRATIO	0.2935	0.2673	1	0
2. Corporate governance				
6 BOARDSIZE (members)	8	8	24	1
7 MANGESIZE (members)	10	8	47	0
8 INDEPND1	0.7875	0.8	0.9889	0.2727
3. Internationalization				
9 FOREIGNDIRB1	0.0609	0	1	0
10 FOREIGNDIRM1	0.0355	0	0.6429	0
5. Audit firm				
11 AUDITFIRMNO	1	1	4	1
6. Firm characteristics (Control variables)				
12 TOTALASSETS (Firm size)	1017.57	198.98	11682.4	0
13 REVENUEGROTH (competition)	3.26	-2.98	755.77	-330.83
14 MARKET PRICE_BOOK (growth)	3.6	2.1	34.6	0.1
15 ROE (profitability)	12.98	12.03	55.39	-130.88
16 DEBT_EQUITY (leverage ratio)	33.01	7.94	1046	-194.54
17 LIQUIDITY (Quick ratio)	2.41	1.48	18.44	0.12

Notes: 1. Institutional ownership, 2. Government ownership, 3. Management ownership, 4.Major shareholders, 5. Float rate ration, 6. Board size, 7. Management size, 8.Percentage of independent directors on the board,9. Percentage of foreign directors on the board, 10.Percentage of foreign managers, 11. Numbers of auditing firms audit the company, Variables from 12 – 17represent the control variables.
-The Total assets figure is presented in absolute value. The researcher found out that Using natural log has no material impact on the statistical tests. This figure was measured in Million Dollars by Zawya database.

In aggregation, Tables [7-2] and [7-3] show that the investigated companies are covering range of industries. Majority of them are industrial companies 76 (66%), followed by banking and financial firms 22 (19%), and service sector 17 (15%). These percentages relatively reflect the general structure of the Egyptian companies traded on the EGX, whereby most of them are involved in manufacturing and construction activities.

In respect of the ownership structure, it was noticed that internal ownership, is relatively high, approaching 70in some companies compared to the ownership available to the public which is less than 30% as denoted by flotation rate. This internal ownership is closely held by management (including family members or founders) and employees. Abdelsalam et al. (2007) argue that a higher proportion of director ownership would reduce the agency problem and subsequently the need for shareholding monitoring through disclosure. Therefore, it is expected to find lower disclosure scores for those companies that have a high level of blocked ownership. On the other side, major individual shareholders ownership constitute less than 5%. This observation indicates that the agency problem in the Egyptian companies is limited. Consequently, the demand for public disclosure may not be triggered.

In respect of the structure of the board and management, the tables show that both board and management size are large and reach 24 and 47 members at maximum, respectively. It is also recognizable that the independence is high in the Egyptian companies. Thus, 100% of the companies have independent directors on the board. This independent directors occupy 78% of the board size, on average. However, duality is relatively high: the positions of CEO and chairman are held by the same person in around 60% of companies. This observation may also indicate that the expected level of online disclosure of the investigated websites would be low.

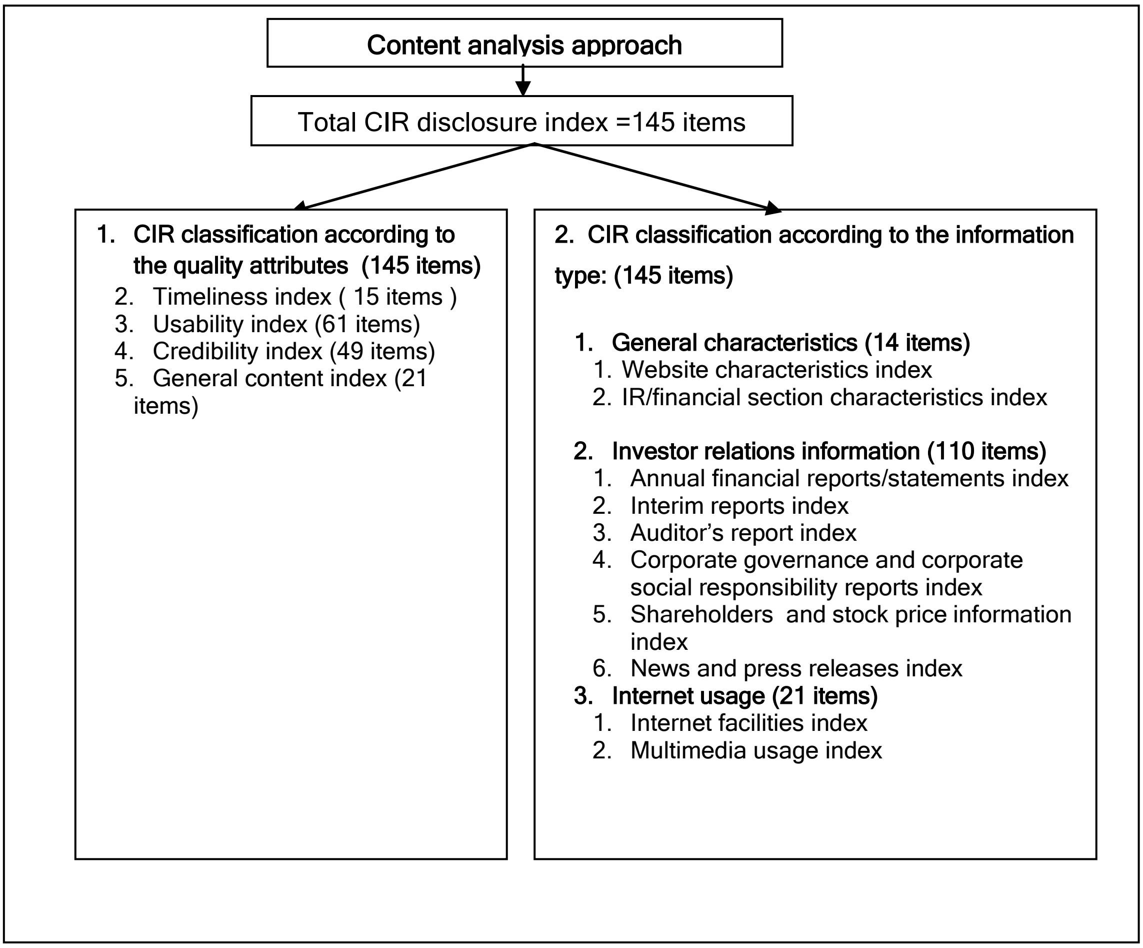
In respect of the international exposure, it is measured by three variables. The first one is the presence of foreign investors (institutional or individuals) as a part of the major shareholders. It is realized that 14 % of the sampled companies do have foreign investors as major shareholders. The second and their variables are the presence of foreign directors on the board or in management. it was realized that 15% and 17% of the investigated companies appoint foreign directors on their board and in management respectively. However, the presentation of these directors and managers is low, only 6% of the board and 3% of management. Generally, this diversity in the board and management structure may contribute in enhancing the corporate disclosure level. For instance, the foreign directors may try to advise these companies to use Internet technology in advancing their business reporting practices. In respect of the auditing firms. Table [7-1] illustrates that less than half of the sample (48%) is audited by an auditing firm representing one of the Big Four firms. Also, Table [7-2] shows that on average only one of those firms audits these companies.

Firm performance indicators such as market cap, profitability and growth, show that the investigated sample companies are large in size, profitable, moderately liquid and highly leveraged. The characteristics of the investigated companies are closely akin to those investigated by Ezat and El-Masry (2008) who examined 50 websites of the most actively traded Egyptian companies on the EGX at the end of 2006. The researchers reported that more than half of the sample (56.8%) operate in the industrial sector and the rest operate in the service sector (43.2%), with 64.9 % duality on board, around 20% profitability, Liquidity was about 1.6, leverage 1.2. The free float rate was lower than 30% and independence percentage was 77%. Most of these indicators are close to those in the current study which implies that Egyptian companies' attributes have not dramatically changed until 2010.

7.3 The CIR disclosure index and sub-indices: The dependent variables

The content analysis approach will be followed not only to measure the extent of the CIR practices of the Egyptian listed companies, but also to scrutinize the information content provided on the investigated websites from two angles. One angle focuses on the quality attributes that usually characterize corporate websites: timeliness, usability, credibility and general content. The researcher will describe and measure these quality attributes individually and in aggregation. The second angle focuses on the types of information provided on the examined websites. These types are aggregated in three main groups of indices: General characteristics, Investor relations information, and Internet usage. These indices will be examined. The main CIR disclosure index and the other driven indices and sub-indices are elaborated in Figure [7-1] in the following page.

Figure 7-1 Structure of the disclosure indices (the dependent variables)



The proposed classification above seems consistent with the findings of the case studies in Chapter Six. As it was realized that website developers play a fundamental role in designing and maintaining the corporate website in a usable condition. Thus, they are responsible for the information related to the technical aspects of the Internet such as those required to ease the online communication and interaction functions, the website structure, e-mails as well as website searching facilities. Actually, such facilities are more related to technical aspects than to business disclosure decisions. Separating the disclosure of these items from financial and accounting information will clarify better which aspect is more provided and presented on the Egyptian websites.

In addition, the CIR disclosure, in total, for the whole websites will be measured first. This total contains all information items related to the financial and non-financial information or even those related to Internet facilities. Afterwards, more analysis will be conducted on the IR related information and the Internet technical facilities separately. Finally, the generated outcomes in this chapter will be compared with the expectations driven in Chapter Six to determine the extent to which the induced logics (marketing and technical) have also affect the CIR practices carried out by other listed Egyptian companies.

7.3.1 Assessing the validity of CIR disclosure indices

Validity indicates whether the indicator that devised to gauge a concept really measures that concept (Bryman and Bell,2007). There are different types of validity such as face validity, concurrent validity, predictive validity and construct validity, yet the most pertinent one s to the current study are face validity and construct validity. Face validity or sometimes called content validity is important especially if the researcher develops a new disclosure index (measure). Face validity indicates that the measure reflects the content of the concept in question. This can be achieved by referring to other expert people to verify and judge whether this measure is really measure what the researcher intendeds to measure. Another way to assure the face validity in the used measure is to use pre-developed measure that has been previously used in measuring same theory or concepts. The researcher followed the latter option. Thus, the disclosure index has been developed by Abdelsalam et al (2007) to study the comprehensiveness of the CIR practice on the websites of UK companies. This index per se encompasses most of website information contents that have been measured in other related studies such as (Xiao et al., 2004; Ettredge et al., 2001; Abdelsalam and Street, 2007; Abdelsalam and El-Masry, 2008)

There is another type of validity measurement ,which is construct validity. Construct validity is an important, but more difficult, measurement property to evaluate. Carlson and Herdman, (2012) explain that there is no single test of the construct validity of measures exists (Schwab, 1980). Instead, the researchers used to utilize various forms of evidence to determine the extent to which a measure possesses the properties expected of the focal construct. As, there is no means of developing numerical estimates of construct validity currently exist, convergent validity is sometimes used instead. Convergent validity refers to the relationship between measures. It reflects the extent to which two measures capture the same information. The more similar the information they capture, the more likely they are to produce equivalent research results. Carlson and Herdman, (2012) elucidate that although convergent validity is not equivalent to construct validity, it is a form of evidence used to judge the construct validity of a measure. This evidence of convergent validity is commonly assessed using the magnitude of the zero-order correlation between the proxy and another closely related measure. Thus, a strong correlation between two measures related to same construct suggests that the measures capture that construct. Correlations closer to r = 1.0 indicate stronger convergent validity. However, although strong convergent validity is a necessary condition for construct validity, it is not sufficient. The following tables demonstrate the Spearman correlation coefficients of the un-transformed values of the main CIR disclosure indices and sub-indices. It is obvious that most of the indices are highly correlated to each other with (r > 0.07) which indicates the convergent validity of the exploited disclosure index is high and the results that will generated depending on these indices will be meaningful and reliable.

Table 7-4: Correlation matrix of the CIR indices

Spearman's rho		1	2	3	4	5	6	7	8	9
TOTALSCORE	1	1								
USESCORE	2	.975**	1							
TIMESCORE	3	.866**	.819**	1						
CONTSCORE	4	.946**	.918**	.819**	1					
CRIDSCORE	5	.936**	.876**	.792**	.868**	1				
GENWEBSCORE	6	.511**	.555**	.557**	.455**	.379**	1			
IRS_FINSCORE	7	.864**	.848**	.742**	.854**	.792**	.393**	1		
COMPSCORE	8	.970**	.926**	.836**	.928**	.969**	.428**	.827**	1	
INTUSESCORE	9	.729**	.763**	.681**	.720**	.600**	.422**	.561**	.619**	1

Notes: **. Correlation is significant at the 0.01 level (2-tailed).
1= Total CIR index, 2= Usability, 3=Timeliness,4=General content, 5=Credibility, 6=General Characteristics of the Website,7= General Characteristics of IR/Financial section, 8= Total investor relations index, 9= Total Internet usability index.

Table 7-5:Correlation matrix of the investor information indices

Spearman's rho		1	2	3	4	5	6	7	8	9	10
COMPSCORE	1	1									
INTUSESCORE	2	.619**	1								
ANNFINSTASCORE	3	.874**	.504**	1							
INTRSCORE	4	.774**	.433**	.707**	1						
AUDITSCORE	5	.843**	.423**	.794**	.759**	1					
STOCKSCORE	6	.775**	.542**	.593**	.627**	.553**	1				
CGSCORE	7	.810**	.639**	.662**	.484**	.591**	.647**	1			
MULTIMEDIA	8	.372**	.403**	.241**	.289**	.242**	.437**	.385**	1		
FACILITSCORE	9	.615**	.998**	.504**	.431**	.420**	.533**	.635**	.367**	1	
NEWSSCORE	10	.719**	.656**	.546**	.540**	.535**	.674**	.608**	.459**	.647**	1

Notes: **. Correlation is significant at the 0.01 level (2-tailed).
1=Total investor relations index, 2= Total internet usage index, 3=Annual financial information/reports, 4=Interim reports, 5= Audit report, 6=shareholders and stock price information, 7=Corporate governance information, 8= Multimedia, 9=Internet facilities, 10= News and press releases

7.3.2 Assessing the reliability of CIR disclosure indices

Reliability is a statement about the stability of individual measures across replications from the same source of information (Straub, 1989). Reliability refers also to the extent to which the measure minimizes errors of measurement and yields consistent numeric scores across assessment events (Carlson and Herdman, 2012). Cronbach's alpha is the most common measurement of reliability. As rule-of-thumb, (0.80) used as a gauge for reliable measures (Straub, 1989). Table [7-6] below shows the coefficients of the main disclosure indices and sub-indices have already passed the (0.80) rule of thumb measure. This indicates a high consistency in the measurement of the disclosure indices.

Table 7-6: Results of the reliability test using Cronbach's Alpha

The disclosure indices	**Reliability Statistics**	
	Cronbach's Alpha	No of Items
Total CIR disclosure, and five quality attributes indices	.954	9
IR investor relation index and the information types sub-indices	.927	7
IR investor relation index and the information types sub-indices and the Internet usage index and its sub-indices	.933	10

7.3.3 Measurement and assessment of the total CIR disclosure index

In this section, the researcher measures and assesses the total CIR disclosure level provided by the sample at two institutional levels as shown in Table [7-7] below. The first institutional level is at the entire sample level and this represents the Egyptian Stock exchange level. The other related institutional level is the industry sectors level to determine how far the CIR practices are comparable across Egyptian listed companies. The impact of the industry will be further examined the end of this chapter.

Table 7-7: The CIR disclosure level for the population and industry sectors

	TOTAL CIR SCORE				
	Mean	**Median**	**Minimum**	**Maximum**	**SD**
Population (all websites)	0.2238	0.1504	0.0152	0.6765	0.1855
banking and financial sector	0.3330	0.3643	0.0526	0.6716	0.1708
service sector	0.2720	0.1407	0.0227	0.6765	0.2499
industry sector	0.1814	0.1199	0.0152	0.5704	0.1580

In Table [7-7], the total CIR disclosure level for the entire population is less than a quarter (22%) on average indicating a low disclosure level for the entire population. The standard variation of (SD=19%) and the range of disclosure is between (2%-67%)[1] which reflects a notable variation in the disclosure level. Examining the level of CIR disclosure at industry level reveals that on average, banking and financial sector attains the highest disclosure level (33%), followed by service sector 27% and industry sector (18%). However, the industry sector has the lowest variation in CIR disclosure compared to the other two sectors, as indicated by the standard deviation results.

The results indicate that the online disclose level for most of Egyptian listed companies remains limited. Besides, comparing these observations with previous studies shows that Egyptian companies still lagging behind their counterparts in the developed countries. For example, Bollen et al. (2006) investigated 270 websites of companies listed on the Australia Stock Exchange covering six countries, and possessed a website covering lower levels of their un-weighted and weighted disclosure index 17.07 % and 23.94% respectively. The variation in the CIR disclosure levels was relatively low, as indicated by the standard variation rate for un-weighted and weighted indices of 4.09%, 6,10% respectively. Similarly, Abedelsalam et. al (2007) applied this disclosure index to UK companies and found that these websites attained 66% of the disclosure items (143) with fewer variations as indicated by the standard variation rate (8.8%). Nevertheless, the disclosure results of the Egyptian listed companies demonstrate that the on; CIR practices in Egypt is comparatively better than in other developing countries in extent and quantity terms. In Bangladesh for instance, 24

[1] The highest scores were attained by companies operating in the communication service sector: Raya Holding Company (68%), Telecom Egypt (68%), Orascom construction (56%) and Orascom Telecom (61%). The lowest scores were attained by industrial companies e.g. AJWA (4.5%), ASEC for mining (7.5%), Abu Qir fertilizers (8.3%).

(40%) of the top 60 companies had websites and the information disclosed by these companies were around company profile, product and service information, investor relations, press releases, performance reporting, human resources, marketing and other promotional materials about the companies and their activities (Khan et al., 2006). In Bahrain and Oman, until 2006 only 59% of Omani and 28% of Bahraini listed companies had a website; 36% of Omani companies disclosed little provision of financial information and 80% of the Bahraini websites provided similar information (Mohamed et al., 2009). However, to some extent, Saudi companies are doing much better: Hussainey and Al Nodel (2009) found that 83% of 77 listed Saudi companies possessed a website in 2006. The majority of Saudi listed companies utilize the Internet to communicate some information related to corporate governance to stakeholders (71%) (Hussainey and Al-Nodel, 2009).

Moreover, comparing the obtained results to the findings of similar studies conducted on Egyptian companies such as Desoky (2009), Ali et al. (2010) and Ezat and El-Masry (2008) reveals that recent years have witnessed limited progress in the extent of CIR practices in Egypt, mainly in the numbers of established websites, as shown in Table [7-8]. This table summarizes and compares the initial findings of the current study to other studies that measured the extent of CIR practices among Egyptian companies in the last five years.

Table 7-8: A comparison between the current study and other related studies on Egyptian companies

Study	Current Study	Aly et al.(2010)	Desoky (2009)	Ezat and El Masry (2008)
Data collection date	Dec 2010- Feb 2011	Oct 2005-Jan. 2006	Feb 2008	Dec 2007
Disclosure indices	145 items 21 (contents) 60 (usability) 49 (credibility) 15 (timeliness)	90 items 59 (contents) 31(presentation)	39 items 26 (content) 13 (format & user support)	127 items 85 (content) 31(presentation) 11 (timeliness)
Investigated companies With URL address	122 (publicly listed Egyptian companies)	100 (actively traded)	88 (actively traded)	432(all listed Egyptian companies)
Sample size	115 (94%) including banks and financial firms	62 (62%) excluding banks and insurance companies	57 (64%)	225 (52%)
Websites with financial information	62 (54%)	35 (56%)	45 (78%)	80 (35%)
Websites without financial information	53(46%)	27 (44%)	12 (22 %)	145 (64%)

The table above shows that there is an apparent increase in the number of newly released websites from only 52% (2008) to 94% (2010)[1]. Besides this, it shows that the number of corporate websites with financial and accounting information has risen in size from 35 websites in 2005 to 62 in 2010. However, the most common observation highlighted by all of these studies is that CIR practices in the Egyptian listed companies are still considerably underestimated. This may be due in part to the lack of the agency problem as indicated from the independent variables related to the ownership and corporate governance, and the absence of influence of the Egyptian stock exchange and auditing firms on CIR practices as explained in the interviews in Chapter Six.

Comparing the CIR practices to the traditional disclosure behaviour of Egyptian companies remarkably depict that these companies did not utilize the Internet in advancing their business reporting practices. This may be attributed in part to some culture issues that discriminate Egyptian companies. For instance, Dahawy (2009) argues that the degree of disclosure by the Egyptian companies is affected by the highly secretive Egyptian culture. In his study, the highest level of compliance reported was 73% and the average score was 54% for a sample of 41 companies actively traded on CASE (i.e. the Egyptian Stock Exchange, now EGX). In addition, Hassan et al. (2009) denote that low penalties and lack of enforcement make compliance with the International Accounting Standards a voluntary issue. The impact of culture is also recognized for CIR practices by some researchers as Samaha and Dahawy (2010). It seems that the CIR practices are also affected by same cultural and institutional aspects that prolong characterize the Egyptian business reporting system. Therefore, the persistent increase in the numbers of new websites does not necessarily lead to an increase in the quality of the online information Hence, the researcher will assess the quality attributes and frequency of each d type of information disclosed online. Furthermore, the researcher will assess the extent of the advanced technical features embedded in the website and in conjunction with the IR/financial section.

7.3.4 Measurement and assessment of the quality attributes of the CIR practices

Smith and Peppard (2005) describe the quality of the corporate website by emphasizing the importance of providing clear information. In their words, the quality of the content displayed on the website plays a crucial role in the business of an organization. Content should be crystal clear and to the point in order to meet the needs of potential users. Various quality

[1] This may provide an unfair comparison as the companies included in the studies are relatively different in size and activity but it gives a general overview about the extent of CIR practices in Egypt.

attributes have been probed in the prior research. Many studies in Western countries addressed the quality issue. For instance, Abdelsalam et al. (2007) investigated the credibility, usability, general content, and comprehensiveness of the website content of a sample of UK companies. Also, Dull et al. (2003) empirically examined the impact of hyperlinking audited information to unaudited information on three aspects: credibility of the online information, the investors' prediction decisions about future income, and the time consumed in making this decision. Other researchers highlight the importance of the timeliness of online business reports, such as Ettredge et al. (2002), Debreceny and Rahman (2005), Abdelsalam et al. (2007) and Ezat and El-Masry (2008). Another group studied the presentation aspect by emphasizing the importance of incorporating advanced computer languages such as eXtensible Markup Language (XML) or Language (XBRL) or incorporating different electronic formats (e.g. HTML and PDF) to respond to the different information needs of the website users and to facilitate manipulation of business report information (Debreceny and Gray, 2001; Williams et al., 2006; Bonsón et al., 2009).

However, little research has investigated the quality of the CIR practices in the developing countries, except for Ezat and El-Masry (2008) who examined the timeliness of Egyptian corporate websites. Accordingly, the researcher will re-examine the levels of timeliness and usability and the general content scores to see if these quality attributes have been improved by the Egyptian companies. In addition, the researcher will assess the credibility of the information provided, as this has not been investigated yet for the Egyptian websites. Table [7-9] presents the level of the quality attributes as demonstrated by the average and median scores. The variations in these scores have also denoted by the standard deviation figures.

Table 7-9: Statistics of the total disclosure score and the four quality attributes

Description	Timeliness	Credibility	Usability	General Content
Items No.	**15**	**49**	**60**	**21**
Min	0.0000	0.0000	0.0175	0.0000
Max	0.8000	0.6744	0.6724	0.8421
Mean	0.1849	0.1810	0.2437	0.2806
Median	0.1333	0.0732	0.2069	0.2500
Standard Deviation(SD)	0.2063	0.2110	0.1714	0.2212

The codes and measurements of total CIR disclosure index and other quality indices are provided in Appendices [A7-1] and [A7-2]. The construct of each index in the above table will be further discussed in the following sections.

7.3.4.1 Timeliness index

The timeliness score indicates how timely is the information content. Historical information has been criticized by accounting researchers for its irrelevancy for decision making processes, which has reversely affected the value of accounting and financial information (Cooper and Keim, 1983; Alford et al., 1993; Hung, 2000). Also, for companies operating in dynamic environments, it is crucial to disclose more recent information to their stakeholders and stockholders (Deller et al., 1999; Ettredge et al., 2001; Debreceny et al., 2002; Ettredge et al. 2002; Geerings et al., 2003; Xiao et al., 2004). Timeliness of information processing is a key attribute that characterises Information and Communication Technology (i.e. the Internet). Likewise, timeliness of disseminating corporate financial information is considered a vital requirement (Whittred, 1980; Zeghal, 1984; Soltani, 2002). However, fewer studies examine this quality attribute in relation to CIR practices, such as Abdelsalam and Street (2007), Ezat and El-Masry (2008) and Abdelsalam and El-Masry (2008).

According to Table [7-9] the timeliness attribute is low, 18.5% on average. Moreover, the timeliness range (0% -80%) and standard variation (21%) proves that there is a significant timeliness gap between the best performing website and poor performing websites. According to [A7-3] the items that are most frequently provided and updated are Year of the latest website update 64 (55%), Updates on press releases/news 43 (37%), Interim reports 38 (33%) and Quarterly reports 38 (33%). Other items were less frequently provided such as Updates of the stock prices on the corporate website 21(18%), today's share price on the website and Calendar of future financial events are both provided on 17 (14%). The items that are rarely provided are the Financial events on the stock exchange website 2 (1%), Webcasts 3 (3%) as well as a Link to today's share price on the stock exchange 9 (7%).

These results indicate that Egyptian companies are more concerned with providing their interim reports and news or press releases more frequently than providing their stock price information. In addition, it can be realized the advanced features of the financial calendar on the corporate website of EGX website, and Webcasts are rarely used on the investigated websites. These results relatively contradict Ezat and El-Masry (2008), who found that only seven of fifty listed Egyptian companies in 2006 provided the most recent interim reports, and only eight provided the date of the last website update, which shows that Egyptian companies have worked on improving these aspects. Meanwhile, other aspects such as the calendar of financial futuere events provided by 21 press releases/news, current share price

25 and a link to regulator news service 22 did not witness a remarkable improvement during recent years.

In the same vein, Abdelsalam and El-Masry (2008) found that Irish listed companies attained 46% (16% standard deviation) of the timeliness index. Another study by Abdelsalam and Street (2008) analysed the websites of 115 companies listed on the London stock exchange (LSE). The researchers reported that these websites attained 56% on average of the timeliness score. The timeliness score ranged between (18% and 82%) with 13% standard deviation. They also noticed that the latest interim reports, latest stock price, share price update time and calendar of future financial events were the most frequently disclosed items, attaining 99%, 96%, 95% and 80% respectively. Meanwhile, link to Regulatory News Service (RNS), quarterly data and webcasts attained lower scores 70% , 64%, and 24% respectively. Ettredge et al. (2001) reported that quarterly reports (54%) and links to Edgar (50%) were the most common items on USA company websites covering 15 industries. Likewise, Kelton and Yang (2008) reported better levels of recent quarterly reports disclosed by around 61%, same day stock prices (74%) and last year's annual report (around 90%). Comparing the current results to the results of studies on developed countries illustrates that Egyptian companies, especially those listed on foreign stock exchanges need to implement a large number of improvements to raise their timeliness level.

7.3.4.2 Credibility index

Credibility measures how much information presented on the website is transparent, trusted and reliable for decision making purposes. Mercer (2004:187) defined credibility as "investors' perception of the believability of a particular disclosure". Corritore et al. (2003) identified four dimensions of credibility: honesty, expertise, predictability and reputation. The researcher considered these important characteristics of an object of trust in both online and offline documents. Abdelsalam et al. (2007) developed credibility indicators including items referring to timely presentation, corporate governance, auditor's opinion, as well as webcasts. Likewise, Debreceny and Gray (2003) stressed the importance of credibility for CIR practices, especially a large number of annual and auditors' reports being already presented on the web. More importantly, in many cases, the companies are the key part driving the process. Meanwhile, audit firms and their professional organizations appear unsure about how to respond. They declared that none of the auditors' reports identified, in their or in previous research, had links back to the audit firms' own websites.

Table [7-8] previously shows the credibility level across the entire sample. Apparently, the credibility index has the lowest score in the other indices. It attains 18% (7%) on average. The range of credibility score (0%-67%) and standard deviation (21%) indicate the variations in the credibility level across the investigated sample. This result is inconsistent with Abdelsalam et al. (2007) reported that companies listed on LSE attained a 58% average credibility score, ranging between 31% and 80%. Additionally, the variation in the sample was very low, as indicated by the low standard deviation rate of 9%.

According to [A7-5] some credibility items are disclosed by most companies, such as recent annual financial statements 52 (45)%, financial statements in (PDF) format open in a separate window 47 (40%), audit report highlights which GAAP is used 41(36%), Audit financial statements are accompanied auditor report 41(36%). Other items have been totally absent in all of the sampled websites such as the presence of an intermediate warning message when entering/leaving the audited annual report, audit firm logo hyperlinked to the auditor's website, statement in the audit report explains control issues related to the approval of financial information on the website and security. Though the credibility score is considerably low for the investigated websites, it was observed that some of the investigated companies avoided hyperlinking their financial statements or audit reports to other non-audited information. Hodge (2001) suggests that using hyperlinks to join online information or documents may mislead the website users by giving them an impression that all of the information originated from one comprehensive document.

7.3.4.3 Usability index

Usability is conceived as a gauge of the ease of the navigation process and clarity of the website structure and functions as perceived by website users (Abdelsalam et al., 2007). Usability is vital to facilitate the exploitation of the website and enhance its usefulness for business purposes. Besides this, it is a good indicator for the technical complexity of the CIR practices. Hence, the higher the level of this attribute, the more advanced the corporate website. The usability items covered in this study illustrate how the information is presented (PDF, HTML, XLs, XBRL, Word Document). They also determine which language is used for the whole website or the online documents (e.g. English, Arabic, multiple languages). Nantel and Glaser (2008) found that the perceived usability increases when the website is originally conceived in the native language of the user.

According to Table [7-8] provided in the previous pages, the average score of usability is 24%. It is slightly higher than the timeliness and credibility scores. This indicates that

Egyptian listed companies are more keen to enhance the usability of their websites rather than improving the timeliness and credibility of its information contents. The range of the usability score (1%-67%) and standard deviation 17% prove that there is an obvious variation in respect of the usability across the Egyptian company websites. Yet, this variation is relatively lower than it is in the timeliness and credibility indices.

Abdelsalam et al. (2007) showed that usability levels in the UK companies reach 70% and range between 53% and 89% with low standard deviation of 9.4%. Another study by Bollen et al (2004) reported that the investigated websites of the total six countries attained 36%, 54% and 54% of the total score for presentation, content via email or email list and video/audio recording, respectively. As shown in Appendix [A7-4] some items totally disappeared from the investigated websites such as Spell checker, Executives' or Director's experience in PDF and auditor's report in other languages. Other items have been largely disclosed such as website in English 110 (95%), consistent use of arrows such as having some arrows controlled scrolling 89 (77%), website working effectively in all languages 83 (72%), avoiding making the user scroll to get important navigation or submit buttons 80 (70%). Other items have been moderately available such as consistent navigational structure 64 (55%), and website in Arabic 56 (48%). These observations show that most Egyptian websites do not take into consideration the accessibility needs of the native users and users with special needs.

7.3.4.4 General content index

The general content index measures the extent of the financial and non-financial in total on the websites including its presentation format. Therefore, the researcher decided to develop another index that measures the extent of the investor relations related information that frequently required by investors and stakeholders.

As illustrated previously, Table [7-8] shows that the average score of the general content is 28%. Though this percentage is low, it is the highest score attained across the four quality attributes. The range of the general content score is between (0% and 84%) and the standard deviation (22%) indicates that there is an apparent variability in general content across the Egyptian corporate website: the general content score is also low.

The results reported by Abdelsalam et al. (2007) show that the content level for UK companies is quite a lot higher (79%) than that of the Egyptian companies. However, the variations and magnitude of the general content across the UK companies' websites are also noticeable as indicated by the range (25%-100%) and standard deviation which reaches 15%. It is realized that standard deviation in the general content recorded the highest score compared to the CIR total score, usability, and credibility.

The low level of general content is expected and consistent with our interviews. Most of the interviewed IR managers explained that their websites are established mainly to provide very basic knowledge about the company. Accordingly, the website users who is interested in further details needs to contact the responsible managers to give him that information. Moreover, the noticeable variation in the general content may be attributed to the inclination of some Egyptian companies to manage their online information content according to their marketing strategy, as understood from the interviews. Further analysis will be conducted in the next section to study the extent of each information type individually.

According to [A7-6], the only content item that has not been provided on the websites of the entire sample is the segmental report. Additionally, items that have been disclosed on less than 10% of the investigated websites are excerpts of financial statements, currency exchange rates or links to currency convertor sites, glossaries containing explanations of difficult financial terminology and link to Stock Exchanges where the company stocks are listed (EGX or other foreign exchanges). Meanwhile, items that have been disclosed on more than half of the websites are online user feedback facility or contact us (95%), IR/financial section (63%) and IR/financial section containing financial data (53%). Meanwhile, press releases and news section/page, Sitemap/directional section, internal search engine and sharehholder information have been provided by less than 40% of the sample. Oyelere et al. (2003) found that product or service information 99.2 %, company history or background 94.3%, financial information 73.2% as well as news and announcements 67.5% are the most commonly disclosed information by companies listed on New Zealand stock exchange.

7.3.5 Measuring and assessing the types of online information

In this section, the researcher will assess the commonality of the business information as frequently appeared on the Egyptian websites contained in the sample. This information has been generally classified into three categories: general characteristics, investor relations information, internet usage information. Each category will be analyzed further by sub-categories.

7.3.5.1 General characteristics of the websites and IR section

As indicated by the empirical research in the developed countries, the majority of companies are inclined to disclose their financial information under the 'investor relations' heading. Yet, it is not clear whether the Egyptian companies have followed the same trend. To find out, the researcher classified the websites containing financial/accounting information into websites with IR sections and websites with other financial sections. Besides this, the researcher studied the general characteristics of the entire website and the IR section as well. Appendix [A7-7] demonstrates that large proportion of the sample possessed a website in English 110 (96%). Meanwhile, fewer numbers possessed websites in Arabic 56 (44%) and rarely did they develop a website in other languages such as French, Italian or German 6 (5%). These websites were developed in either a single language or in multiple languages 51 (44%). Appendix [A7-9] reflects the general characteristics of the IR/ financial section. There are 73 websites of the investigated 115 websites provide IR/financial section. This section is easily accessed for the majority 68 (59%) from home page. It is also realized that 60% of 73 websites had financial sections with different titles. Some of these headings reflected the type of the enclosed information such as annual report, financial data, finance and shareholders, financial parameters, investors or budgets. However, others were quite vague or too general, such as our firm, about us, statistics, smelter, performance indicators and corporate information. Furthermore, it was realized that only two companies disclosed their financial information on two sections of their website, with one of them the IR section. It also shows that 62 of 73 contain some financial or accounting information. The others contained only contact details or included no information at that time. The contact details for the IR manager or financial department were found on less quarter of the websites. This shows that electronic communication is not prioritized by the majority of Egyptian companies. This was also recognized from the responses of most of the IR managers that they prefer the communication through phone calls or face to face meetings.

7.3.5.2 Investor relations information

Bearing in mind that not all the investigated websites contained accounting and financial information, we will focus only on 73 websites disclosing some provision of accounting and financial information. Again the analysis of this index will be presented at two levels: the whole sample and industrial sector levels. Table [7-10] below describes extent of IR related information which categorised in six types of information..

Table 7-10: Statistics of the investor relation information main index and its sub-indices

The main index & sub-indices	Mean	Median	Maximum	Minimum	SD
Total investor relations information index	0.3188	0.3284	0.6700	0.0000	0.1808
Annual Financial statements/Reports index	0.4552	0.5000	0.8000	0.0000	0.1881
Interim Report index	0.3355	0.4000	0.8000	0.0000	0.2668
Auditor's report index	0.4002	0.5600	0.7200	0.0000	0.2959
Shareholder& Stock price index	0.1837	0.0870	0.6957	0.0000	0.2094
CGS & CSR index	0.2764	0.2500	0.7727	0.0000	0.2192
Press releases & news index	0.2857	0.2857	1.0000	0.0000	0.2713

From the table above, it is recognizable that Egyptian listed companies in aggregation have a relatively low level of financial and accounting information. On average, 32% (33% median) of the sample disclosed investor relation information. Besides, in total, the variations for the whole sample, as indicated by the range of disclosure (0%-67%) and standard variation 18%, is relatively high. The following sections elaborate discuss each type of the accounting and financial information that is normally disclosed online and which constitute the constructs of the comprehensiveness score. As explained earlier, the comprehensiveness score is composed of six categories: annual financial statements and annual reports, interim reports, auditor's report, shareholder and stock related information, corporate governance and finally, press releases.

Annual financial statements and reports index: According to table [7-10] it can be realized that Egyptian listed companies provide almost half of 45% this index on average. The deviation across companies is slightly limited (SD= 18%). Moreover, Appendix [A7-10] shows that more than a quarter of 73 websites, possessing IR/financial section, disclosed financial snapshots showing the historical development of the corporate financial information in the last five years. Yet, only 52 (45%) of them provided annual financial statements either in a full report format or separately. The full annual report is provided by 29 companies, compared to 47 companies provided their annual financial statements separately. In total, only 58 websites disclosed the annual financial statements online, and 40 provided interim reports. Essentailly,71% disclosed a full set of financial statements (balance sheet, income statement, cash flow statement, changes in owners' equity in addition to the auditor's report), meanwhile 30% provide excerpts of their financials. It was also found that almost 40% of 73 websites provided their financials in a full annual report presented in PDF format. Similarly, most of websites disclosed the annual financial statements 46, and interim report 37 in PDF format rather than HTML or spreadsheet. Some may use the latter formats as complementary to the documents in PDF. In respect of language, English was the dominant language in which financial statements are presented. For instance, 71% and 56% of 58 websites provide annual financial statements in English and Arabic, respectively. Regarding the interim reports, 63% and 60% of website provided them in English and Arabic respectively. Only 41 websites provided auditor's report. This was also proved by prior research especially in the earlier years of the Internet inception, such as Debreceny and Gray (1999), Lymer and Debreceny (2003), Allam and Lymer (2003).

Interim reports index: In Table [7-10], Egyptian companies provided around 34% of the interim reports' index. Yet, the deviation (SD= 27%)in this index is higher than it is in the annual report. Appendix [A7-11] summarizes the findings of the Interim report disclosure index. It is realized that 38 (33%) of websites provide interim reports and smaller number of websites disclosed quarterly reports 22 (55%) or semi-annual interim reports 18(16%). Less than half of the websites 40 (34%) contained interim reports, displayed in PDF format in 37. Meanwhile, only two companies used HTML format and only one provided these statements in both PDF and HTML. Additionally, the online interim reports on 40 websites were presented almost equally in English 26 (22%) and Arabic 23 (20%) and 10 were presented in both languages (25%). It is also noticeable only 26 provided their interim reports attached to the auditor's report. The absence of full sets of audited financial statements asserts that the auditors are not directly involved in reviewing the online information content, especially the financial statements. This was also induced from the interviews in the previous chapter.

Auditor's report index: Table [7-10] in the previous pages, illustrates that Egyptian companies attained 40% of the audit firm disclose index on average and that the deviation in this index is higher than it is in the annual financial statements and interim reports indices. In more elaboration, Appendix [A7-12] illustrates the auditor's report information items disclosed by the investigated websites. Generally, this report is still in its traditional format (scanned copy). Thus, no advanced electronic format was provided for the auditor's report. Furthermore, none of the online disclosed auditor's report included any statement explaining control issues related to the disclosed financial information or the security of using the website content, neither do they contain any disclaimer or unique opinion or warning to the users about the authenticity and security of the online information. Even the websites themselves are entirely free from such warning statements. This may be due to the fact that there is still no legal regulation coercing these companies to display this warning notification, and they will not be penalized for such impeachment. The online audit report is presented in two languages only. As with other disclosed statements, auditor's reports in English 30 (26%) relatively exceed those prepared in Arabic 25 (22%).

More importantly, majority of the audit reports were attached to the annual financial statements in a single PDF file.. Therefore, it is less likely that users may be deceived by mixing audited with non-audited information. However, the main problem is that the majority of the investigated websites attach the unsigned audit report: 38 of 44 audit reports had the auditor's firm name already printed (without signature) while only 24 had a handwritten signature. This may deceive novice investors who will trust these statements. Generally, most of the attached auditors' report are unqualified 40(91%).Meanwhile, only company disclosed their qualified auditor's report. Meanwhile, others did not disclose all of the auditors' report. In addition, the majority of the disclosed auditor's reports 41(93%) were presented in PDF format. Only three websites disclosed their auditor's report in HTML.

Shareholders and stock price information index: Though, shareholders information as well as the daily changes in the corporate stock price are important voluntary information items that are persistently required by investors, it seems that the disclosure of such items is scarce on Egyptian websites. Table [7-10] shows that the investigated Egyptian companies have addressed less than quarter (18%) of the shareholders and stock price index with notable variations as indicated by the disclosure range (0%-70%) and standard deviation (SD=21%). Besides, Appendix [A7-13] reveals that few websites 9 (8%) provide a link to the EGX or other foreign stock exchange websites. Besides, none of the investigated websites is linked to a regulatory database. It is also very rare to find hyperlinks to financial analysts websites 3 (3%) or analysts' contact details 10 (9%). Also, 33 (29%)websites disclosed information of their shareholders. Furthermore, daily stock prices, or the stock price performance over number of years are rarely disclosed. Also, only 21 (18%) of the websites disclosed a update date of the stock price. However, only 7 (15%) provided FAQs to answer the investors' frequent queries.

Corporate governance and corporate social responsibility index: Corporate governance mechanisms enable publicly listed companies to operate efficiently through reducing agency costs and information asymmetry, as will be discussed in Chapter Eight. It also allows controlling any opportunistic behaviour, increasing the monitoring effectiveness management and assuring more compliance with the stockholders' interests (Jensen and Meckling, 1976; Zahra and Pearce, 1989; Hart, 1995; Fleming et al., 2005). Table [7-10] shows that the investigated Egyptian companies have addressed only 27% of the Corporate Governance index. Appendix [A7-14] shows that although corporate governance information was largely found on more than half of the sample 69 (60%), only 25 companies (22%) designated a standalone section for CG and CSR items and 22 of them link directly to the home page. The same also illustrates the frequently disclosed CG and CSR information items and those which are rarely disclosed. Nevertheless, fewer than 10% of the websites disclosed information regarding their governance guidelines and rules, even if the company was listed on foreign stock exchanges.

In addition, information items related to the remuneration policies of board of directors or management members, corporate code of ethics, and social responsibility are rarely disclosed , only 10% of the websites contained such information. Similarly, management and board members' education appeared only on 4% of the investigated websites. Meanwhile, it is commonly presented in HTML 27 (37%), experience and previous positions are not provided in PDF[1] (0%) and 30 (26%) in HTML. For those websites that disclose information about the board members and/or management team 29 (25%) of them provide only a list of names of the management and board members in HTML. A corporate social responsibility (CSR) section was disclosed separately on less than half of the websites 25 (32%). Fewer companies presented this piece of information in a PDF format 8 (11%) embedded in the annual report but more used HTML format 28 (38%). Some companies tend to disclose their social responsibility reports in HTML as a part of the corporate governance section rather than devoting a separate section to it. It is apparent that some Egyptian companies are keen to disclose this information to improve their image in their social community but this is not commonly followed across the Egyptian companies.

The Chairman's message was a key item on 32 (44%) of websites. This information appeared in 32 (44%) websites on the CG section and in HTML format. However, less than half of investigated websites 29 (40%) displayed this message in the full annual report prepared in PDF format.

Press releases and news index: The press release and news section is a vital part of many corporate websites because it keeps the website users informed about the latest important events held by the company. Some of the investigated Egyptian companies erroneously disclosed part of their financials in the press releases. Some went beyond that and used their press releases section mainly to disclose the companies' earnings releases without providing further financial information. Table [7-10] in the previous pages demonstrates that the investigated Egyptian companies provided almost 28% of the Press releases and news index. The variations in this index is relatively high (SD=27%). Furthermore, Appendix [A7-

[1] Some companies may provided board of directors information related to experience and education as a part of their full annual report and this will be presented in PDF format.

15] represents the frequency of the most disclosed items and least disclosed items related to press releases and news.

It was also noticed that some companies devote a fixed panel to upcoming news, at one edge of the home page, so users can easily access the latest news, even when browsing other web pages. Only 22 (30%) of the websites provided copies of the latest regulatory news and less than 10% (11) provided a direct link to RNS. Less than a quarter of the investigated websites 17 (14.8%) provided a calendar that showed upcoming financial events and only 2 (3%) provided a direct link to the latest corporate news on the EGX website (this website does not provide an online calendar but rather a small section displaying the latest important news about listed companies).

7.3.6 Measurement and assessment of the Internet usage

Internet technology is continuously evolving. This enables many companies to advance their business reporting activities by disseminating their financial and accounting information in a few seconds and transferring massive amounts of financial and non-financial business information in various electronic formats to serve the various users' information needs. This contributes to enhancing the business reporting process in terms of efficiency and quality. Therefore, this section studies thoroughly how the Egyptian listed companies utilize Internet facilities in enhancing their business reporting process.

The Internet facilities index: Generally, the usage of Internet facilities is relatively low, as only 17 (15%) of the websites disclosed more than 50% of the Internet facility index as shown in Appendix [A7-16]. This also demonstrates that advanced Internet features are rarely used by the Egyptian companies. Webcasts, for instance, are disclosed on 3 (3%) websites. These websites belong to large listed companies in the communication and real estate industries. However, 7 (6%) websites include transcripts of their webcasts, although some of them did not disclose the webcasts themselves.

Measuring and assessing the online user support and communication index:

Appendix [A7-16] shows the information items that reflect the level of user support and communication facilities in addition to the use of multimedia. It has been noticed that there were no websites providing a spell checker facility. Additionally, facilities such as links giving different colours to visited/non-visited areas 4 (3%), glossaries of terms 5 (4%) and zoom in/out facility 5 (4%) are rarely disclosed. In addition, only 13 (11%) provided a facility to print a long page. The site map facility has also been embedded in less than half 45 (40%) of the websites. In terms of communication facilities, none of the investigated websites provided a responsive message stating when the company will reply to an email or instant message sent by a website user. The researcher randomly tested this facility for some companies by sending a false message requiring some information about the company's products, but there was no response to the message or notification stating when the company would reply. Almost all companies provided their contact details online. However, only 16 (13%) provided a privacy policy (especially on websites belong to the banking and the financial sector). Moreover, only 9 websites utilised multimedia features such as video, and audio clips. These features were mainly devoted to displaying advertisements for the company or showing its achievements and production process (i.e. publicity). Regarding the incorporation of multimedia in the websites, Appendix [A7-16] provides only three measures of multimedia facilities: webcasts, audio or video clips and recorded speeches and transcripts for spoken audio. These facilities were rarely provided and were only founded on 10 (6%) websites.

7.4 Studying the impact of organizational field on the CIR indices

In Chapter Four, the researcher illustrated that earlier neo-institutional theory has been criticized for concentrating on homogeneity and persistence, with a relative negligence of the role of interest and agency in shaping action. However, recent research on institutional theory has sought to address this criticism by acknowledging both variations and change in the institutional environment (Oliver, 1991; Baum and Oliver, 1992; Oliver, 1997; Dacin et al., 2002; Scott, 2003) by bringing the human agency role into the analysis. This research paradigm raised the importance of understanding the impact of the embraced institutional logic on the organizations' behaviours, particularly those operating within the same field. They argued that institutional logics provide the organizing principles for a field (Friedland and Alford, 1991, as in Suddaby and Royston, 2005).These logics also constitute the basis of taken for granted rules guiding the behaviour of field-level actors, and they "refer to the belief systems and related practices that predominate in an organizational field" (Suddaby and Royston, 2005). Departing from this point, the researcher will assess the extent to which the induced logics have affected CIR practices at the level of industrial field.

It is recognizable that CIR practices evidently vary across the investigated websites. However, it is difficult to tell whether these variations are substantial at industry level. Therefore, the impact of the organizational field (i.e. industry sector) on the CIR main index and other sub-indices will be further examined. According to Bourdieu (1990), fields are structured systems of social positions within which strggles take place over resources, stakes and access. Purdy and Gray (2009) explain that fields that have collectively agreed upon rules, norms, and practices to which their members adhere are considered highly institutionalized. The organizational field in this study will be divided into two levels. The first level will be the Egyptian stock exchange. At this level, all national companies in the sample, with stocks traded on the same stock market are compared to each other. The second field level will be the industry sector. To this end, all companies operating in the same field will be compared to each other. Also, different industry sectors will be compared to each other. Consequently, it can be hypothesized that:

$H1_0$: There is no difference within or in between the three industrial sectors in respect of the CIR main and sub-indices

Furthermore, it is useful to study the significant differences between the Egyptian companies in respect of their exploitation of Internet technology. Hence the second null hypothesis will be:

$H2_0$: There is no difference within or in between the three industrial sectors in respect of internet usage, facilities and multimedia exploitation.

To test these hypotheses, the researcher used non-parametric test: the Kruskal-Wallis test that compares several means when different units take part in each condition and the resulting data are not normally distributed (Field, 2005). This analysis has also been carried out by Craven and Marston (1999). They used this test in investigating the association between firm size and six industry categories and the extent of CIR disclosure. They suggested that using too many industry classifications may cause problems with statistical testing leading to insignificant results (Craven and Marston, 1999). Hence, the researcher will run the analysis on three industrial sectors only. Table [7-11] below provides the results of the Kruskal-Wallis Test.

Table 7-11: Measuring the difference in CIR quality attributes at industrial sectors level

Kruskal-Wallis Test		**Total CIR**	**Usability**	**Timeliness**	**General Content**	**Credibility**
Chi-square (H)		12.272	10.307	9.815	10.13	14.734
df		2	2	2	2	2
Asymp. Sig.		**0.002**	**0.006**	**0.007**	**0.006**	**0.001**
Monte Carlo Sig.	Sig.	0.002	0.005	0.005	0.005	0.001
99% Confidence Interval	Lower Bound	0.001	0.003	0.003	0.003	0
Grouping Variable: INDUSTRYTYP	Upper Bound	0.003	0.006	0.007	0.007	0.001

The table above shows the values of the Chi-square of (H) are significant for the four quality attributes of CIR, for the three industry sectors. The total disclosure score of CIR: H (2), 12.27, p <0.01, Timeliness, H(2), 9.82, p <0.01, usability H (2), 10.3 p < 0.01, General content H(2), 10.13, p <0.01and credibility, H(2), p < 0.01. This implies that there is a significant difference between the three industry sectors in respect of all the studied attributes. Hence, the null hypothesis should be rejected and the alternative hypothesis will be accepted. In respect of the second null hypothesis, about the differences in the Internet usage, the results in Table [7-8] reveal that there is significant difference between the three industry sectors in respect of their Internet usage overall and usage of the embedded Internet facilities as indicated by Chi-square values (H).

The results do not show significant variations across the three industrial sectors in respect of the multimedia features. This could be attributed to the limited usage of the multimedia or to the proposition that these features are highly structured and determined according to the available technology. Therefore, the second null hypothesis can also be rejected and hence the alternative hypothesis will be accepted. Further analysis has been performed to test the differences in respect of the general design features of the corporate website and the IR/Financial sect.

Table 7-12: Measuring the difference in the Internet usage at industrial level

			Total Internet usage	**Multimedia**	**Internet facilities**
Chi-square (H)			**7.152**	**2.959**	**7.492**
df			2	2	2
Asymp. Sig.			**0.028**	**0.228**	**0.024**
Monte Carlo Sig.	**Sig.**		**0.024**	**0.17**	**0.022**
	99% Confidence Interval	Lower Bound	0.02	0.161	0.018
		Upper Bound	0.028	0.18	0.025

According to the table above there is significant difference in respect of the general website characteristics (Monte Carlo sig < 0.01). However, there is no substantial difference in respect of the characteristics of the IR/financial section (Monte Carlo Sig = .213)

Table 7-13: Measuring the difference in the website characteristics and IR section at industrial level

			General characteristics	IR / financial section
Chi-square (H)			11.524	3.09
df			2	2
Asymp. Sig.			0.003	0.213
Monte Carlo Sig.	Sig.		**0.002**	**0.213**
	99% Confidence Interval	Lower Bound	0.001	0.202
		Upper Bound	0.003	0.223

More details about the significance of the differences in the six types of information are demonstrated in Table [7-14] as follows.

Table 7-14: Measuring the difference in the investor relations information at industrial sectors level

		Financial statements/ Annual report	Interim reports	Auditor's report	Shareholder and stock price info.	CG & CSR	News and press releases	investor relations index
Chi-square (H)		11.681	5.606	10.594	8.126	6.64	5.796	12.648
df		2	2	2	2	2	2	2
Asymp. Sig.		0.003	0.061	0.005	0.017	0.036	0.055	0.002
Sig. Monte Carlo Sig.		**0.003**	**0.064**	**0.004**	**0.017**	**0.036**	**0.055**	**0.002**
99% Confidence Interval	Lower Bound	0.002	0.058	0.003	0.014	0.031	0.049	0.001
	Upper Bound	0.004	0.07	0.006	0.02	0.041	0.061	0.004

As illustrated above, there are significant variations among the three investigated sectors in terms of all the information types. However, the difference seems little regarding interim reports and press releases. The researcher extended the investigation further to determine the direction of the observed variations through using the Jonckheere-Terpstra Test. In Table [7-15], the negative sign indicates that the disclosure decreases whenever we moved from category number (1) representing banking and financial sector towards category number (3) representing the industry sector. Generally, Jonckheere-Terpstra Test describes the ordered pattern of the medians of the three industrial sectors (Field, 2009). Given that the bank and financial sector is coded (1), the service sector is coded (2), and industry sector is coded (3), the negative signs of J-T statistics indicate that the median values of the five scores decrease whenever we move from (1) to (3) or from the banking and financial sector towards the industry sector

Table 7-15: Results of Jonckheere-Terpstra Test

Jonckheere –Terpstra Test (*)						
		Total CIR score	Usability score	Timeliness score	General Content score	Credibility score
Number of Levels In Industry Type		3	3	3	3	3
N		115	115	115	115	115
Observed J-T Statistic		1095.5	1131.5	1177	1148	1048
Mean J-T Statistic		1669	1669	1669	1669	1669
Std. Deviation of J-T Statistic		172.873	172.791	169.809	171.721	170.673
Std. J-T Statistic		**-3.317**	**-3.111**	**-2.897**	**-3.034**	**-3.639**
Asymp. Sig. (2-tailed)		0.001	0.002	0.004	0.002	0
Monte Carlo Sig. (2-tailed)		.001	.002	.003	.003	.000
99% Confidence Interval	Lower Bound	0	0.001	0.001	0.002	0
	Upper Bound	0.002	0.003	0.004	0.004	0.001
(*) Grouping variable: Industry type						

Actually, Jonckheere test reveals a significant trend in the online corporate disclosure. This trend shows that it is more likely for a company in the banking and financial services sector to have better CIR disclosure than those in the service or industry sectors. More importantly, the difference is highly significant in respect of the credibility of the website. It shows that industrial companies have a lower credibility level than the other two sectors.

7.5 Assessing the impact of the institutional logics on the CIR indices

In Chapter Six, it was argued that the interviewed companies are compromising between marketing and technical based logics that are imposed by marketing and/or IT managers inside the company, or external website developing firms outside the company. It was also realized that these companies are more attentive to their institutional and foreign investors' needs of information than to those of individual or domestic investors. Therefore, they strive to present their websites in more advanced and appealing profile. Moreover, although some of the interviewed companies were also listed on other foreign stock exchanges, they were more concerned with their competitive position (nationally or internationally) than their access to foreign capital markets. Therefore, the researcher developed some expectations driven from the analysis of the case studies addressed in Chapter Six. Table [7-16] below draws a comparison between prior driven expectations (from Chapter Six) and the collected evidence from the descriptive study:

Table 7-16: A comparison between prior expectations and the empirical evidence

Expectations	Assertion	Evidence provided
1 The websites be more attractive, colourful and well structured, but less informative. Hence, the financial and accounting information on the website will be limited, general and aggregated.	Attained	- Average attainable CIR score (22% mean,15% median). IR information index average attainable score (18% mean, 9% median) vs. usability (24% mean, 20% median)
2. Companies will be more inclined to disclose information profile, products and services information more than financial information.	Attained	- IR/Financial section provided by 73 (63%) websites. Only 62 of them disclosed financial information . Financial statements average score is (45% mean, 50% median) Interim reports average score (33% mean, 40% median).
3. The website information content, particularly the financial section, will contain more historical information less detailed and more general.	Attained	- Timeliness score (18% mean, 13% median). - 22 websites contain quarter reports and 2 presented semi-annual reports, 16 provided both. - 38 websites provided recent interim reports. - 26 provided websites Today's share price. - 51 websites provided recent annual F.S.
4. is more likely to find available communication facilities and contact details on the corporate website outdated or inactive.	Attained	- Webcast services provided by only 3(3%) - Less than 25 websites provide IR managers' contact details - 23% provided feedback on when to receive a reply on online message or query. However, the empirical test provided no response at all. - 56% of the sample provided an option including RSS, register, mailing list, Subscription, Email notifications
5. The IR section on the corporate website will provide a limited amount of information that is usually required by institutional and professional investors such as financial statements. Other information that is related to shareholders information or corporate governance is not expected to be found in many of the websites as they are rarely used.	Attained	- IR/financial section appeared on 73(63%) of the sample, 62 of them provide financial statements - Websites disclosed full annual reports (41) of 58 disclosing financial statements and 40 with interim reports (38) provide recent quarterly reports. - websites disclose more than 50% of financial statements index (3%) - websites disclose more than 50% of the CG index (4%) - websites disclosed more than 50% of the shareholder index (6%)
6. As the EGX and external auditors are not yet involved in verifying the content of companies' websites, the credibility of the information provided is expected to be an issue .	Attained	- Credibility and timeliness scores are lower than general content and usability scores - Websites disclosed auditor's report explaining control issues (0) - Audit firm logo is hyperlinked to the auditor's website (0) - Websites avoided hyper linking audited statements to un-audited information 44 (36%) - Audit signature appeared on the financial statements on 23 websites only.
7. As the updating process of the corporate information content is controlled by technical staff or external website developers, it is expected that the timeliness of the corporate online information will be low.	Attained	- Timeliness score (18%), Credibility (18%) are the lowest scores compared to Usability (24%), General content (28%). - Most of the indicators that show the timing of the disclosed information is absent. 43 (37%) of the websites disclosed the date of the news, 17 (15%) disclosed today's stock price on the website. 12 (10%) provided the latest regulator news.

8. As the companies may be driven by the marketing perspective, it is more likely to see lots of variations in the corporate websites than similarities even within the same industry sector.	Attained	- The calculated standard deviation for most of the main and sub-indices of the CIR is relatively high when compared to the results in the developed countries. - There is a significant variations in the total CIR disclosure and investor relations related information, but not in Internet usage. - Investigated websites are different from each other at the EGX level and at industrial sector level.
9. Embracing marketing and technical based logics impel companies to improve their image/reputation or even create demand on their products or services more than addressing their investors needs of information	Attained	- On average, the General content index (28%) is higher than timeliness (18%), usability (24%), and credibility (18%). - On average, attainable Internet usage score (27%), total CIR score (22%) and IR score (18%).

Based on the results of this study, it is noticeable that most of publicly listed Egyptian companies do not really benefit from using the Internet in improving their financial and accounting disclosure practice. Internet technology has not been exploited to its full potential to enhance the communication between the company and its stock and stakeholders; rather it is only used to introduce the company to national and international website users. This was also supported by comparing the results of the timeliness and credibility attributes to scores of the general content and usability as in Table [7-17]. This indicates that the Internet usage is more directed towards the marketing perception than the disclosure perception. Besides this, the Internet usage score was relatively higher 26% (20) than main indices of the total CIR score 22% (15%) and investor relations score 18 (9%), as shown in the following table:

Table 7-17: Statistics of the main indices

Main disclosure indices	Mean	Median	Minimum	Maximum	Standard Deviation
TOTALSCORE	.22382	.15038	.01515	.67647	.18550
COMPSCORE	.18505	.09901	.00000	.67000	.19872
INTUSESCORE	.26975	.20000	.00000	.71429	.17638

This result is consistent with Gowthrope (2004) study that was conducted in small size UK companies and found that the Internet did not significantly decrease the information asymmetry between the company and its stakeholders and stockholders. Furthermore, the disclosure of voluntary information such as corporate governance and corporate social responsibility, shareholders and stock price are provided on a little number of Egyptian websites. More importantly, the information content per se is quite limited and overdue. It is noticeable that that management and board of directors as well as shareholders information are mostly missing or out of date. The lack of such information could influence the investors' decisions. Consequently, after the Egyptian revolution took place on the 25th of January

2011, the Egyptian Financial Supervisory Authority (EFSA)[1] decided that Egyptian listed companies should disclose the management and board of directors' information clearly to all investors on quarterly basis. Therefore, a new paragraph has been added to Article 18 of the Listing and De-listing Rules:

> "Any company that has listed shares or Egyptian GDRs shall notify EFSA and the Egyptian Exchange periodically of a disclosure report that clarify the structure of shareholders and BOD as well as any change that may occur in them. This disclosure report shall be submitted quarterly (every three months) according to the form attached to these rules within ten days from the end of each period."

In addition, there was some clear evidence that the CIR practices were quite different from one company to another and from one industry sector to another. This evidence indicates that there is no legitimate behaviour which is commonly followed by the investigated companies, and hence the legitimacy is determined on an individual basis rather than a collective basis. On the other hand, more similarity was observed in the Internet facilities and multimedia usage. This indicates that these features are more commonly exercised by the investigated companies, as the legitimacy of these practices is normally determined by the professional IT or website developers rather than the companies' management.

According to the above argument and the expectation table, it is realized that most of the expectations are attained, implying that the two proposed logics, marketing and technology based logics, are pervasively embraced by most of Egyptian listed companies rather than the efficiency or legitimacy based logics. To gain more vigorous evidence, the next chapter will investigate the significant factors that may exert an influential impact on the CIR practices of the Egyptian companies in terms of the quality and quantity aspects.

[1] http://www.efsa.gov.eg/content/efsa2_ar/laws_cma/laws_cma.htm

7.6 Summary

This chapter aims to find out whether the induced logics are pervasively adopted by all of Egyptian listed companies. It also seeks to demonstrate how such logics have affected the contents of these websites in terms of quality, quantity and technicality. Thus, the descriptive study was conducted to measure the extent of CIR across publicly listed Egyptian companies during the period December 2010 to February 2011. It was shown that almost half of the Egyptian listed companies 122 (55%) of 220 had already possessed a website. effectively, only 115 websites were operating normally during this period. Only 73 (63%) of accessible websites provided an IR/Financial section, 62 of them contained financial and accounting information. Most of websites 58 provided financial statements provided individually or in a full report. It also noticed that most of financial websites 41 (70%) offered a full set of financial statements containing balance sheet, income statement, cash flow statement, statement of owners equity as well as auditor's report. Most of them are presented in PDF format. The remaining 21websites were inconsistent and only disclosed excerpts of financial statements (e.g. balance sheet only or balance sheet and income statement only). Interim reports and auditor's report were provided by a limited number of websites.

Briefly, the descriptive study showed that mandatory information such as annual financial statements, interim reports and auditor reports is not a common component on the Egyptian websites. Furthermore, Kruskal-Wallis Test and Jonckheere-Terpstra Test show that variations across the investigated websites were manifest for the entire investigated population or at the level of industrial sectors. Regarding the quality attributes of Egyptian corporate websites, it is realized that General content attribute obtained the highest average score 28% , followed by usability 24%, credibility 18% and finally, timeliness 18%. The results imply that most of Egyptian websites are poor in credibility and timeliness. However, they are much better in respect of usability and general content. This supports our suggestion that Egyptian companies are mostly oriented by marketing and technical logics. Concerning the institutionalization of CIR practices, it was released that the differences in the website contents, features and quality attributes are generally noticeable at either the industrial sectors or at the entire population. Specifically, variations in the contents were even more significant than the variations in the technical features. This confirms that the CIR practices are not yet institutionalized in Egypt. It was also revealed that these practices are not yet a legitimate source of information. The empirical results largely agree with most of the driven expectations from the conducted case studies and interviews. This implies the marketing and technology based logics are the most dominant logics that embraced by the majority of Egyptian companies. This resulted in diversity in the magnitude and quality of the websites.

Chapter 8: Key factors affecting CIR practices in Egyptian listed companies

8.1 Introduction

The current chapter complements the descriptive study and seeks to identify the key factors that substantially contribute in formulating the embraced logics which affect the CIR practices in return. Initially, the previous two chapters revealed that marketing based logic and technical based logic are largely dominating the CIR practices in most of Egyptian listed companies. This chapter will add to these findings by assessing and comparing the potency of two types of pressures that Egyptian companies may confront while managing their websites and they are institutional and economic pressures. Thus, the incorporated independent variables will be driven from both economic and institutional theories. Thus, the third research question provoked at this stage of our study is:

Q1: Which pressures, economic or institutional, impose more impact on the quantitative and qualitative attributes of the CIR practices of Egyptian listed companies?

It was noticed that most of CIR research tackled that question by examining on one dimension only which is the total CIR disclosure level. Few studies looked at other dimensions such as timeliness, usability, credibility (Abdelsalam et al (2007); Abdelsalam and Street (2007); Ezat and El-Masry, 2008). Yet, the current study will contribute to this line of research by studying the impact of economic and institutional pressures on nine dimension of CIR practices simultaneously. These dimensions are reflected the following sub-questions.

Q1.1 Which factors impose a substantial impact on the total CIR disclosure level and the website's qualitative attributes? (this covers five CIR dimensions including four quality attributes).

Q1.2 Which factors impose a substantial impact on the general characteristics of the website, including the IR/financial section and on the usage of the Internet facilities and multimedia? (this covers three more dimensions related to the absolute technical features).

Q1.3 Which factors impose a substantial impact on the disclosure of the investor relations information? (this covers one dimension related to the type of information provided)

Hence, this chapter will be organized a follows. Section 8.2 introduces the research hypotheses that will be tested and which addresses both the economic and institutional views. Section 8.3 illustrates and describes the nature of the independent variables: continuous and categorical. Section 8.4 presents the results of the association between underscored disclosure indices and five groups of independent variables along with control variables Section 8.5 demonstrates the results of prerequisite tests for running the multiple regression analysis. Then, section 8.6 demonstrates the results obtained of the multiple regression analysis using the SPSS. Section 8.7 demonstrates the impact of each independent group on the nine CIR disclosure indices and contrast these results the literature and the outputs provided in Chapters Six and Seven. Afterwards, Section 8.8 discusses the implications of the empirical findings within the institutional logic framework. Eventually, Section 8.9 provides a summary of the main findings and implications.

8.2 Research hypotheses

This chapter investigates which theories are more pertinent to explain the changes in CIR practices. From the institutionalists point of view an organization exists in socially constructed world that is filled with taken for granted meanings and rules Carruthers (1995). According, the undertaken actions are neither intentional nor conscious. Therefore, companies that are more connected to its environment are more likely to follow isomorphic structures be seen as legitimate and to secure more resources. Carruthers (1995:315) emphasizes that this isomorphism is not dictated by technical criteria as much as it is dictated by cultural and political processes that account for legitimacy and power. Thus, early institutionalists discard the idea that conducting legitimate practices would necessarily lead to more efficient decisions or better outcomes (e.g. Meyer and Rowan,1977, 1991). Instead, they claim that these practices are only followed to maintain appearance. Other researchers Roy (1997) and Bruton et al. (2010) articulate that institutional theory is more concerned with regulatory, social, and cultural influences that promote survival and legitimacy rather than efficiency which represents a prime parameter in the classic economic theory. Following Beckert (1999), Battilana (2006) and Hasselbladh and Bejerot (2007), these two theoretical views will be compromised by identifying whether CIR practices are conducted for legitimacy reasons, or for efficiency reasons.

Table [8-1] displays suggested theories and summarizes the explanatory and control variables related to them. The meaures and codes of these variables will be explained latter in a subsequent section. In this tabel, agency theory and corporate governance related theories reflecte the economic view which is dominantly adressed in the voluntary disclosure litrature. the independnet variables related to agency theory have been catergorized in two groups. The first group represents the ownership structure and the second is the ownership dispersion. The ownership structure will be divided in its turn into endogenou and exgeonous. The endogenous ownership indicates a source of capital fund secured by internal investors such as management (e.g. founders, CEO, directors, Chairman, executive managers), employees or family memebers. Meanwhile, exegeonous ownership indicates a source of capital that is secured by the external investors. The dispersion of ownership reflects to what extent the company is reying on the external funds. In respect of Corporate Governance related theories, four related independent variables will be examined and they are Board size, Management size, Duality role and Independence of the board of directors.

Table 8-1: Contested theories and related explanatory and control variables

Supporting theories	Related variables and Proxies
1. Agency Theory	
1.1 Impact of ownership structure: Exogenous Vs. Endogenous	Management ownership
	family ownership
	Governmental ownership
	Institutional ownership
	Major shareholders
1.2 Impact of ownership dispersion	Free float rate
2. Corporate governance theories	Board size
	Management size
	Board independence
	Duality role
3. Institutional theory	
3.1 Normative pressures	
Industry type: (professionalism)	Banking and financial sector
	Service sector
	Industry sector
3.2 Cognitive pressures:	
International exposure	Foreign investors as major shareholders
	foreign managers
	Foreign directors on the board
3.3 Coercive pressures	
a. Audit firm impact	Audit firm size (BIG4)
	Number of audit forms
b. Foreign stock exchanges	Foreign stock exchanges
4. Control Variables: Firm characteristics	**Firm size**
	Profitability
	Leverage
	Growth
	Liquidity
	Competition

Corporate governance is also related to the economic view as it perceived as a mechanism to reduce agency cost on one side, and increase firms' valuation on the other side (Chen et al,2009). It is also suggested that complying with corporate governance rules could mitigate the agency problems by increasing the effectiveness of the board monitoring through employing several internal mechanisms such as board size, independence and composition (John and Senbet, 1998). Hence, it is expected that these mechanisms may also drive the online disclosure practices in some companies. In respect of the institutional view, industry type, international exposure, audit firm and foreign stock exchanges constitute a range of institutional pressures which may drive the CIR practices. They are discussed thoroughly in section 8.3. Concerning the control variables, they represent other economic resources, yet the researcher will only control for their impact. In the following sections the researcher will elaborate the research hypotheses related to these theories in respects of their impact on nine disclosure dimensions which are the total CIR disclosure level, Timeliness, Usability, Credibility, General contents, General characteristics of the website and the IR/financial section, comprehensiveness of the IR information and the usage of the Internet. These constitute three main disclosure indices and six sub-indices.

8.2.1 Agency theory and the ownership impact

Agency problem primarily stems from separating ownership and management. In other words, agency problem appears whenever a company relies on external equities (exogenous ownership) more than on internal equities(blocked ownership). It is also likely to occur when the shareholders base is highly dispersed as empirically proved by a number of voluntary disclosure research (Gorton and Schmid, 1999; Xu and Wang, 1999; Singh and Davidson Iii 2003; Chen et al., 2006; Céspedes et al., 2010). The impact of the ownership structure classified by the source of capital and dispersion of ownership will be examined for the Egyptian listed companies in respect of their online disclosure practices.

First of all, endogenous ownership will represent the part of capital which is funded by internal investors. The researcher defines the internal investors as those who are involved in the company's management or who could be external but closely related to the company (e.g. family members). The impact of the endogenous ownership on voluntary corporate disclosure, whether disclosed through conventional or electronic media, is inconclusive. For instance Chau and Gray (2010) reported that higher level of family ownership (more than 25%) is associated with more voluntary disclosure. On the contrary, a recent study in New Zealand revealed that companies with concentrated ownership and largely hold by management or financial institutions tend to have higher information asymmetry as these owners may have access to private information which could be used to expropriate minority shareholders' interests (Jiang et al , 2011). Asian countries are consistently characterized by internal ownership which is largely held by family members. Two-thirds of firms in nine East Asian countries are controlled by a single shareholder (Clanessenes et al 2000). Also, managers used to be relatives of the controlling shareholders family. Chau and Gray (2002) reported that the level of information disclosure in Asian countries tend to be less for family controlled companies. Similarly, Xiao et al (2006) reported that state owned ownership, which is not publicly traded, has little incentive for voluntary financial disclosures as company's profitability is not their priority. Kelton and Yang (2008) investigated the impact of blocked ownership and found an inverse impact on the online corporate governance disclosure for USA companies. As the majority of research indicts a negative relation between corporate disclosure and endogenous ownership owned by whatever type of investors, the following hypothesis could be stated as follows.

H1a: Endogenous ownership will have a negative impact on the CIR disclosure indices

Regarding Exogenous ownership, it is widely realized that companies with larger proportion of external investors are more exposed to pressures to keep the interests of their investors in alignment with the management and internal investors' interests (Healy and Palepu, 2001) in an effort to decrease the information asymmetry, resolve the interest conflicts and reduce the agency cost (Fleming et al., 2005). Singh and Davidson Iii (2003) concluded that higher inside ownership aligns managerial and shareholders' interests and lowers the agency costs in large US. Similarly, McKnight, and Weir (2009) observed that increasing board ownership helps in reducing agency costs in a number of UK non-financial firms incorporated in FTSE 350. In the developed countries, individual investors constitute a powerful pressure on the CIR disclosure (Oyelere et al., 2000; Debreceny and Gray, 2001; Debreceny et al., 2002; Oyelere et al., 2003). In Asian countries, the government are more influential than individual investors, in most cases. The impact of the government on the corporate disclosure in such countries is inconsistent. Eng and Mak (2003) found that Singapore listed companies with significant level of government ownership attained higher level of CIR. Conversely, in China, managerial ownership, state ownership, or legal-person ownership are found not to be related to corporate disclosure (Huafang and Jianguo, 2007). The variety in the external investors' needs of information entails providing more information on a timely basis to achieve better external monitoring. Hence, the second hypothesis will be formulated as follows:

H1b: Exogenous ownership will have a positive impact on the CIR disclosure indices

Accordingly, companies with dispersed investors are expected to design flexible websites covering arrange of financial and non-financial information. Such flexibility should also take into consideration the differences in languages, cognition-ability, and technical browsing and searching techniques that are required to facilitate the website usage. One study denotes that financial disclosure decision is complex and usually influenced by several national, cultural (e.g. language) and corporate operating factors (Archambault and Archambault, 2003). Nevertheless, many companies still identify the website users' needs intuitively (Gowthorpe, 2004), rather than conducting a formal survey to identify the required information directly. Debreceny and Rahman (2005) declared that the ownership dispersion encourages companies to increase their frequency of online disclosure especially in respect of the dictionary information (i.e. prospective information) to decrease their information asymmetry and hence the agency cost. The dispersion of corporate investors could lead to various agency problems to companies, especially the larger one. For example, it may increase the conflicts in interest between the management and shareholders. As a result, information asymmetry will increase as well (Healy and Palepu, 2001). The information asymmetry per se may raise the need for more timely information to enable external investors to obtain the required information at a reasonable time. Consequently, it is expected that companies with dispersed ownership would intensify their usage of the Internet to support their business reporting process (Ashbaugh et al., 1999; Craven and Marston, 1999; Hedlin, 1999; Larrán and Giner, 2002; Oyelere et al., 2003; Geerings et al., 2003). Consequently, one can predict that companies with dispersed ownership are more likely to improve their CIR practices. Thus, the hypothesis can be formulated as follows:

H1c: Shareholder dispersion will have a positive impact on the CIR disclosure indices

8.2.2 Impact of corporate governance mechanisms

Corporate governance is considered a powerful solution for many corporate problems that primarily emerge because of the opportunistic behaviour that may be exercised by some managers and even board members against the interests of the corporate stakeholders. The company may deal with different groups of stakeholders such as equity holders, creditors and other claimants who supply capital. They also could be employees, consumers, suppliers, and the government (John and Senbet, 1998). Therefore, conformance with corporate governance rules would guarantee more protection to the interests of those shareholders.

Corporate governance mechanisms need to be effectively designed and controlled in order to enhance the transparency of the corporate disclosure and to attain higher level of protection for the minority rights and many of stakeholders. CIR practices. There are two types of governance mechanism: internal mechanisms such as board independence, audit committees, board leadership composition, and dual roles and external mechanisms related to the regulatory environment (Cheng and Courtenay, 2006). Market power can constitute another example of external corporate governance mechanisms. Therefore, the type and power of the external or internal mechanisms are relatively contextual and need to be considered in alignment with other economic, legal and social aspects when studying The current study basically focuses former mechanisms related to board size, management size, board independence and duality.

8.2.2.1 Size of the board and management team

Board size is one of the fundamental aspects of corporate governance that recently caught an increasing attention by academia and practitioners. Boone et al (2007) provide empirical evidence that board size accounts for some economic considerations including the firm's competitive environment and managerial team and still more unrevealed aspects related to the idiosyncratic features related to the characteristics of the board. Usually large boards enjoy the privilege of combining many experts with different views and experience (Abdelsalam et al., 2007). Therefore, it is expected that companies with large and heterogeneous boards would have more advanced and professional websites. Nevertheless, in reality, as revealed from the case studies, the board of directors has a very limited role in the CIR process, just setting the general disclosure strategy and leaving the departmental managers to carry out all the detailed tasks. These tasks should comply at the end with the main strategy that has already been set by the board members or CEO. Moreover, it was noticed that the managers are closely involved in the CIR process, working with the website developers to structure and present the corporate website, notably the IR section, in a legitimate form. Besides, it has been realized that in Egypt some CEOs may operate in different companies simultaneously, which possess websites with varying quality levels of online disclosure. Because of this contradiction between what is in the disclosure literature and what has been noticed in the case studies, the researcher proposed the following non-directional hypothesis:

H2a: Bard size will have a positive impact on the CIR disclosure indices

Though, management size impact on the corporate disclosure practices is not covered in many studies, findings from the case studies revealed that departmental managers are fundamental participants in the CIR process which necessitates studying their impact on the CIR practices. Thus, larger management teams would incorporate a variety of management experience and knowledge. Therefore, it is expected that companies with large management team are willing to perform high quality CIR practices. This also would enable companies to offer a range of information covering different corporate activities. Thus, it can be hypothesised that :

H2b: Management size will have a positive impact on the CIR disclosure indices

8.2.2.2 Board independence

Board independence is an internal corporate governance mechanism that is measured as the proportion of non-executive directors to internal directors on the Board. It is suggested that a larger proportion of independent directors on the board will help in maintaining the interests of minority rights in large listed companies. A recent study in the UK illustrate that listed companies have increasingly complied with the Combined Code in respect of their board structure to the extent that the percentage of non-executive directors has risen from 45% to 50%; which more than what is required by the Code itself. Nevertheless, this incremental percentage did not really bring any clear benefits to shareholders in the form of lower agency costs (McKnight and Weir, 2009). In contrast Beasley (1996) found out that inclusion of more outside directors significantly reduces the likelihood fraud of the financial statements (Beasley, 1996). Other scholars revealed that firms with a higher proportion of independent directors on the board are associated with higher levels of voluntary disclosure (Babío Arcay and Muiño Vázquez, 2005; Cheng and Courtenay, 2006). Similarly, Abdelsalam et al. (2007) noticed a significant and positive relationship between the comprehensiveness CIR score and general content of websites of UK companies and the independence of the board. Yet, (Abdelsalam and Street, 2007) reported that board independence is negatively associated with timeliness of CIR practices. The lack of consistency in the previous literature entails formulating a non-directional hypothesis as follows:

H2c: Independence of the board of directors will have an impact on the CIR disclosure indices

8.2.2.3 Duality role

Board duality represent the situation where position of Chief Executive Officer (CEO) and position of the chairman of the board are held simultaneously by the same person. A six year longitudinal study found that companies separating the CEO and chairman positions outperform those with duality (Rechner and Dalton, 1991). Likewise, Sharma (2004) found a positive association between duality and likelihood of fraud.

However, Felo (2010) argues that separating CEO and chairman positions will not necessarily assure more transparency. Quite the same, Brickley et al. (1997) argue that segregation between the CEO and chairman positions is not an easy task and holds both benefits and costs. Thus, the company needs to compromise between the prospective benefits and the expected incurred costs due to this segregation. Other scholar take a neutral position like Cheng and Courtenay (2006) who noticed that CEO duality is not associated with voluntary disclosure. In respect of CIR practices, Kelton and Yang (2008) did not find an association between board duality and corporate disclosure over the Internet. Similarly, Abdelsalam et al. (2007) found out that duality has a significant impact on the credibility of online corporate disclosure, but no supporting evidence was provided for other disclosure indices. Due to this inconsistency, the researcher proposes a non-directional impact between duality role and CIR practices, as stated below

H2d: Duality role of the CEO will have an impact on CIR disclosure indices

8.2.3 Impact of the institutional pressures

The relevance of institutional theory to CIR context will be addressed by identifying which type of the institutional pressures as suggested by DiMaggio and Powell (1983) could exert more impact on the CIR practices. These potential types of institutional pressures are regulative, normative and cognitive. The regulative institutions are imposed primarily by state and governmental legislations (Burton et al., 2010). Kondra and Hinings (1998) mention that governement, reguatory agencies and accreditation bodies enforce varying degrees of isomorphism on some industries. As a result, organizations' potential outcomes could be constrained by these pressures. Audit firms and domestic or foreign stock exchanges could impose this type of pressure in some countries on CIR practices as explained in Chapter Two. Thus, the impact of the audit firm and cross listing on the CIR practices will be tested in this chapter.

The second type of the institutional pressures is the normative pressures They represent behaviour model based on obligatory dimensions of social, professional and organizational interaction (Burton et al., 2010). Likewise, Hasselbladh and Kallinikos (2000) contrast the differences between the functionalist view and instituionalist view of organizational behaviour. They prounnced that these views shift from emphasing resource acquisitions emphasing normative conformity. They also articulate that normative systems are typically composed of values (what is considered proper) and norms (how things are to be done). These values and norms are only valid for certain types of actors or positions (Scott, 2008). Therefore, the researcher will use industry sector as a proxy of this normative pressures.

The third type of the instituional pressures are cognitive pressures. These pressures represent models of meaning that limit approperiate beliefs and actions (Burton et al., 2010). They are more related to social and cultural factors such as religion, language, rituals, and traditions. In this study, the researcher used the international exposure variables as a proxy for such institutional pressures. Therefore, the presence of foreign managers or foreign directors in a company, or even the presence of foreign investors as a major shareholder could encourage companies to improve their CIR pratices by imitating similar parctices implemented on international basis. Indeed, impact has been observed in the descriptive study in Chapter Seven. It was realized that (110) 95% of Egptian listed companies provid their websites in English. Smaller number of companies 56 (48%) provid their websites in Arabic. This implies that most of Egyptian listed companies are internationally oriented, thus they keen to provide their websites in the most popular language i.e. English. Essentailly, some companies might be engaged in international trading affairs which entails considering language barriers and culture attributes of the potential users of these websites. Yet, providing a mono language website would deprive some users from using such a website.

8.2.3.1 Impact of industry type

A number of CIR related studies report mixed results regarding the impact of industry type on the corporate voluntary disclosure in general and the CIR practices in particular. Baically, industry field represent the domain of the professional and regulative pressures. Organizational field has been defined by Scott (1991:56) as “ a community of organizations that partakes of a common meaning system and whose participants interact more frequently and fatefully with one another than with actors outside the field”. Similarly, Hinings (2012:99) defined field as “ a set of structured relationships between organizational actors, bound together by a common meaning system”. In the previous definition of field, the researchers described the embraced institutional logic as “ a common meaning system” that is pervasive across certain industry. Hence, different industries may follow different logics, thus their CIR practices could vary in response. Botosan (1997); Nagar et al. (2003); Debreceny and Rahman (2005) contend that different disclosure levels could be noticed across different industries due to their varying disclosure needs. Bonson and Escobar (2006) stated that being a company in the financial sector has a significant impact on the extent of CIR. Similarly, Abdelsalam et al. (2007) reported a positive significant relationship between companies in the manufacturing industries and the comprehensiveness of corporate websites or UK listed companies. Xiao et al (2004:202) suggest three reasons for IT companies to have higher potentiality to be engaged in CIR. First, they are more expert with the Internet. Second, they have an incentive to demonstrate that they are technology leaders. Third, they are more likely than other firms to follow early adopters from in their industry field. In contrast, Craven and Marston (1999) did not find any relationship between industry type and the extent of CIR practices (2003).

Nevertheless, the descriptive study in Chapter Seven, the researcher observed a distinctive variations in the quality and quantity level of 115 Egyptian listed companies operating in three industrial sectors: banks and financial sector, service sector and industry sector. The findings show that industry sector attained the lowest disclosure level in most of the disclosure indices. On the other hand, Banks and financial sector as well as service sector (i.e. Telecom and communication companies) provided higher disclosure levels. This indicates that professionalism of some industries may compel some companies to provide more information on the Internet or to use more advanced technical features in their websites. Therefore, it can be hypothesized that industry type has a significant impact on CIR, yet the direction may vary according to the nature of the industry. Therefore, this hypothesis will also be non-directional.

H3: Industry type will have a significant impact on CIR disclosure indices

8.2.3.2 Impact of international exposure

International exposure implies the possibility of being involved in international relationships. International impact was not consistent in the CIR research. According to the neo-institutional theory perspective, organizational behaviours can be diffused and structured via three possible pressure groups. Firstly, the social group, whereby the organization gains its legitimacy from the surrounding social environment. Secondly, the professional group which sets business techniques, rules and routines and the legitimate standards to be followed by the members in the same profession. Thirdly, the regulative group is a powerful authority which entitles to set the proper penalties and rewards for those who comply or not with a given set of rules. For instance, Dahawy (2007) suggests that transferring accounting skills from developed countries to developing countries is unlikely to be successful, as the latter will lack an adequate professional sub-culture to set standard accounting skills. Governments are responsible for setting the accounting principles and assigning a legal authority to ensure the reliability of published financial information in such countries. In this sense, foreign directors and managers may try to transfer their views, culture and knowledge to other Egyptian directors and managers. Thus, it is possible that companies hiring foreign directors or managers are will exercise better CIR practices than their counterparts with domestic managers lacking the appropriate skills. Therefore, the proposed hypotheses can be as follows:

H4a: Foreign directors on the board will have a positive impact on CIR disclosure indices. Similarly,

H4b: Foreign managers will have a positive impact on CIR disclosure indices

International exposure could also be realized by incorporating foreign investors (i.e. partners) as a part of major shareholder. Still, if the company's shares are traded on the national stock market only, the company should be committed to this type of investors. Foreign investors may require disclosing company's financial reports in English or other foreign languages or even to use International accounting standards or to translate the domestic currency in their own currencies. Furthermore, countries may not benefit from the same Internet facilities or infrastructure, thus managers need to be familiar with this technical inequality when designing their websites. It is expected that that foreign investors may exert a direct and robust impact on companies' managers to improve their business reporting process, in general, and online reporting, in particular. We can therefore hypothesize:

H4c: Existence of foreign investors as major shareholders will have a positive impact on CIR disclosure indices

Furthermore, International exposure may not only reflect a culture impact, but also may implicitly expose companies to conform with certain intentional regulation. Bollen et al. (2006) suggest internationalization can influence CIR practices, either through being listed on foreign markets or by having subsidiaries operating internationally. Being listed on other foreign stock exchanges has an influential impact on the amount and format of business reports (Ettredge et al., 2001; Debreceny et al., 2002; Geerings et al., 2003; Barton and Waymire, 2004; Marston, 2003; Bollen et al., 2006; Marston and Polei, 2004). Some researcher found that internationalization does explain the choice to use the Internet as a medium for corporate financial reporting (Bollen et al., 2006). Similarly, the interviews in the current study with IR managers illustrate that large Egyptian companies that are involved in international relations with other foreign countries tend to concern more about the foreign investors' needs of information. Thus, one can expect that Egyptian companies that are listed on foreign stock exchanges are more likely to have better disclosure practices compared to those listed only on the Egyptian stock markets. Hence, it can be anticipated that:

H4d:There is a positive association between trading on foreign stock exchanges and main CIR indices and sub-indices

8.2.3.3 Impact of audit firm

The impact of audit firm on the quality of the disclosure and presentation of financial reports is persistently acknowledged by both practitioners and academics. A number of researchers have highlighted the importance of the audit profession in enhancing the credibility of online disclosure practices or CIR (Khadaroo, 2005; Lymer and Debreceny, 2003). Yet, it seems that the audit profession's involvement in this process is still contingent on the power of the regulatory environment. Debreceny and Gray (1999) conducted a survey to investigate how the auditor's report is presented online. They also examined whether any of the disclosed financial statements were hyperlinked to the auditor's firm website. They pinpointed that the extensive use of web hyperlinked resources, dominance of companies over the presentation of the financial statements, potential blending between audited and non-audited information, and security issues are all factors that contributed to losing control over the disclosure environment which may escalate the auditors' legal responsibility (Debreceny and Gray, 1999). BonsÓn and Escobar (2006) concluded that employing one of the Big Four audit firms has a significant effect on the extent of IFR. The semi-structured interviews with some auditors indicated that auditors in Egypt are not yet involved in this process, and are only involved in the traditional audit process. Therefore, we do not expect to find a robust impact of the audit firm on the extent or quality attributes of the corporate websites. Therefore, a non-directional hypothesis can be proposed:

H5a: There is an association between audit firm size and main CIR indices and sub-indices

Using the second measure of the audit firm influence on CIR practices, it can be hypothesized that:

H5b: There is a positive association between the number of audit firms auditing the company and main CIR disclosure indices and sub-indices

8.3 Types and measures of collected data

The dependent variables represent the different disclosure indices that have been measured and described in details in Chapter Seven. In addition, the independent variables have also been used in the previous chapter to describe the characteristics of the companies owned the investigated websites. In this section, further details about how each dependent and independent variable has been coded and measured is provided in table [8-2] below.

Table 8-2: Variables, codes and measures of the explanatory variables

Independent Variables:	Code	Measurement	Symbol
Ownership Structure (X1)			
Endogenous ownership	MANGRATIO	Management and employee ownership (%)	X11
Exogenous ownership structure	MAJORATIO	Major individual shareholders ownership (%)	X12
	INSTITRATIO	Institutional ownership (%)	X13
	GOVERATIO	Government ownership (%)	X14
Ownership dispersion	FLOATRATIO	Free float rate (%)	X15
Governance mechanism factors (X2)			
Board Size	BOARDSIZE	Total number of board members	X21
Management size	MANGESIZE	Total number of managers in headquarters and subsidiaries or local branches	X22
Board independence	INDEPEND1	Independent directors to board size (%)	X23
Duality Role	DUALITY	1= CEO and chairmanship held by one person, 0= two positions are held separately	X24
Industry type (X3)			
	BANK_FINANCE SECTOR	1= a company operate in Banking and financial sector, 0= other wise	X31
	SERVICE SECTOR	1= a company operate in the service sector, 0= other wise	X32
	INDUSTRY SECTOR	1= a company operate industry sector, 0= other wise	X33
International Exposure (X4):			
Foreign listing	FOREIGNLIST	1= listed on foreign or Arabic stock exchanges,0=other wise	X41
Foreign directors on board	FOREIGNDIRB	Foreign directors to the board size (%)	X42
Foreign managers	FOREIGNDIRM	Foreign managers to the management size (%)	X43
Foreign investors	FOREIGN INVESTOR	Existence of foreign investors	X44
Audit firm impact (X5)			
Audit Firm SIZE	AUDIT FIRM SIZE	1= audited by one of BIG4, 0= other wise	X51
No. of auditor firms	AUDIT FIRM NO	No. of audit firms auditing the company	X52

8.3.1 Measurements of continuous data

First of all, the dependent variables represent the disclosure indices scores which are calculated as a percentage of the observed items to the total relevant disclosure items. These variables will be treated contentious (i.e. scale) variables in the SPSS. In respect of the independent variables, they are measures as follows:

- Shareholders dispersion is proxied by the percentage of the free float.
- Endogenous ownership represents the management ownership and employee share.
- Exogenous ownership represents external ownership and is calculated as a percentage of a group of major investors ownership, the percentage of institutional ownership, and the percentage of government ownership.
- Board size and management size is measured by total number of board members, and total number of management staff in headquarters and other branches, respectively.
- Board independence is measured by total number of independent directors (i.e. non-executive directors) on the board to the board size.
- International exposure is proxied by three variables: Percentage of foreign directors, percentage of foreign managers, and presence of foreign investors as a part of major shareholders. The former measures of the percentage of foreign directors and foreign managers are calculated by dividing total foreign directors or foreign managers by the total board size and total management size, respectively.
- One indicator of the audit firm's impact is measured by the absolute number of audit firms responsible for auditing the company.
- Firm size is measured by the value of the company's total assets[1].
- Profitability is measured by the Return on Equity (ROE).
- Leverage is measured by the percentage of net debt to equity.
- Growth is measured by the percentage of the ratio of market price to book value.
- Liquidity is proxied by quick ratio.
- The level of competition[2] is proxied by the percentage of revenue growth.

[1] Firm size can be measured in several ways: total assets, total sales or number of employees. In this study the researcher will use total assets only as the other variables are not provided for all companies.
[2] The researcher used the ratio of revenue growth instead of other pertinent variables like market share or number of competitors as these variables were missing on Zawya and were not attainable on other resources.

8.3.1 Measurements of categorical data

- The dual role is measured by dichotomous variables: 1 = CEO and chairman are the same person, 0= otherwise.
- Industry type is measured by dichotomous variables: 1 = banks and financial sector, and 0 = otherwise;1 = industry sector and 0 = otherwise; and 1 = service sector and 0 = otherwise.
- International exposure is measured by the existence of foreign investors either individual or institutions, among major shareholders. This is measured by dichotomous variables: 1 = existence of foreign investors (excluding Arabic investors) 0 = otherwise.
- Foreign listing is measured as dichotomous variables: 1 = if the company is listed on one or more foreign or Arabic stock exchanges, 0 = otherwise.
- The impact of audit firm is measured by the presence of one or more audit firms affiliating one of the big four audit firms.

8.3.2 Control variables

Majority of CIR research concentrate mainly on the firm characteristics while investigating the quantity and quality aspects of the voluntary online disclosure. In this study, the firm characteristics will represent the companies' financial performance indicators only such as firm size, profitability, leverage, liquidity, grow and even competition. Accordingly, industry sector, foreign listing and audit firm variables will not be treated as a part of these characteristics but rather they represent forms of potential institutional pressures that are imposed by some industries or financial and accounting institutions. The control variables, in this study, are measured as continuous variables and directly downloaded from Zawya database. These variables are presented in Table [8-3].

Table 8-3: Variables, codes and measures of the control variables

Variables	Proxies & Codes	Measures	Symbol
Competition	REVENUE GROWTH	the percentage of growth in revenue	X61
Firm size	TOTAL ASSETS	The absolute value of the total assets measured in dollars	X62
Growth	MARKET PRICE /BOOK	Market price to book ratio (continuous)	X63
Profitability	ROE	Return on equity (ROE) (continuous)	X64
Leverage	LEVERAGE	Ratio of the net Debts to the equity value(continuous)	X65
Liquidity	QUICKRATIO	Quick ratio(continuous)	X66

8.4 Examining the associations between the independent variables and CIR indices

In the following section, the researcher will examine the relationship between each of the disclosure indices and sub-indices and each independent variable individually. This statistical analysis will help in determining the significance and direction of the association through using one of the bivariate tests of correlations such as Pearson, Spearman test or Kendall's tau (Field, 2009). As we have collected categorical (i.e. nominal) data, then Pearson test will not be an appropriate test as it is parametric test and only used with continuous variables. Moreover, the normality test should determine which test needs to be used. Both graphical methods (i.e. Histogram) and numerical methods will be used as the numerical method is more accurate than the visual methods. Hence, the researcher will run Kolmogorov-Simrnov (or K-S) and Shapiro-Wilk tests on SPSS to test the normality of the dependent and independent variables. The results are provided in Appendices [A8-1] and [A8-2]. This table illustrates that most of the dependent and independent variables have failed the normality test. Accordingly, the Spearman correlation coefficient will be the most appropriate test to investigate the association between the CIR main and sub-disclosure indices and independent variable. Kendall's tau is also not appropriate as it is normally used for small size samples and most of the scores have the same ranks (Field, 2009: 181). The association between main CIR disclosure indices and sub-indices and the different independent variables will be illustrated in the following.

8.4.1 The association between ownership structure and CIR indices

The following table illustrates the significance of association between five types of ownership representing endogenous and exogenous resources of capital.

Table 8-4: The correlation between ownership variables and the disclosure indices

Spearman's rho	**MANG RATIO (X11)**	**MAJO RATIO (X12)**	**INSTIT RATIO (X13)**	**GOVE RATIO (X14)**	**FLOA TRATIO (X15)**
TOTALCIR	0.069	-0.079	0.176	-0.182	**.202***
USABILITY	0.06	-0.096	0.184	**-0.196***	0.184
TIMELINESS	0.116	-0.004	0.151	-0.165	0.123
GENERAL CONTENT	0.037	-0.068	0.127	**-0.188***	0.182
CRIDIBILITY	0.044	-0.073	0.17	-0.134	0.171
G.WEB CHARCTERISTICS	-0.012	-0.112	0.068	0.066	-0.067
G.FINANCIAL/IR	0.009	-0.09	0.097	-0.075	0.**298****

CHARACTERISTICS					
TOTALIR INFORMATION	0.053	-0.091	0.173	-0.158	0.172
INTERNET USAGE	0.147	0.002	0.136	**-.318****	0.123
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

Notes: X11 denotes the management ownership ratio, X12 denotes the major shareholders ratio, this ratio also reflects part of the blocked ownership owned by individual investors, X13 denotes the institutional ownership ratio which owned by independent corporations, insurance companies or even banks, X14 denotes the ownership ratio owned by the government, X15 denotes the float ration which is used as a proxy of the shareholders dispersion.

As shown in the table [8-4] above, the government ownership ratio has a negative association with most of the disclosure indices, but only significant for Usability, General content and Internet usage. This illustrates that websites of companies mostly owned by government tend to disclose less and out of date information. Part of these websites may not be user friendly. Thus, they put minimal effort in advancing and developing their websites. In Chapter Six, an Internet expert elaborated that government owned companies are unusually managed by staff with low calibres and sometimes lack the required ICT skills. This may explain this negative association. The other types of ownership have no significant association except investor dispersion which was significant only with both Total CIR and General characteristics of IR/Financial section indices.

8.4.2 The association between corporate governance mechanisms and CIR indices

In this study, corporate governance mechanisms are expressed by four key variables: Board size, Board independency, Duality Role and Management size. The first three variables are related to agency theory and constantly measured in voluntary disclosure research ,in general, and CIR or IFR in particular. However, the last variable has been tested according to the results of the conducted interviews with the managers involved in the website development process. The researcher noticed that some managers are involved in the development of the website and its subsequent updating and modification. However, board members are not directly involved and only dictate the general strategy of the website, leaving the details for the managers in charge. It was also revealed that none of the participating companies devoted a single department to be responsible for the corporate website. The management participation is entirely relying on the companies' capabilities, the overall website strategy and the perceived benefits. Few of the participating companies, appointed only one manager to act as a link between the company and website developing firms. Thus, the researcher decided to examine the impact of management size on the main and sub-disclosure indices for the entire sample of the Egyptian companies. Table [8-5] demonstrates that both board size and management size are significantly and positively associated with all main and sub-disclosure indices except for General characteristics of the website whereby neither variables did have a significant association with this index. This was expected as this index is more related to the technical features which are provided by the website developing firms as illustrated in Chapter Six. Thus, management or board's control over this variable seems to be insignificant. The table also shows that the degree of correlation between the management size and most of the CIR disclosure indices are relatively higher than those of the Board size. This indicates that the management size is more related to the online disclosure practices as realized in the case studies and interviews with the involved participants. This finding is supported by another study in Jordan. This study reveals that the top management is the dominant party in the CIR practices held in eight Jordanian companies (AbuGhazaleh et al.2012).

Table 8-5: The correlation between corporate governance and CIR indices

Disclosure indices	BOARDSIZE (X21)	MANGESIZE (X22)	INDEPND1 (X23)	DUALITY (X24)
TOTALCIR	**0.300****	**0.402****	-0.008	-0.038
USABILITY	**0.309****	**0.407****	-0.032	-0.056
TIMELINESS	**0.229***	**0.351****	-0.01	0.011
GENERAL CONTENT	**0.252****	**0.411****	-0.013	-0.081
CRIDIBILITY	**0.312****	**0.378****	0.005	-0.049
G.WEB CHARCTERISTICS	0.085	0.164	0.185	-0.087
G.FINANCIAL/IR CHARACTERISTICS	**0.252****	**0.422****	-0.06	-0.023
TOTALIR INFORMATION	**0.290****	**0.374****	0.006	-0.069
INTERNET USAGE	**0.279****	**0.339****	-0.106	0.031
**. Correlation is significant at the 0.01 level (2-tailed).				
*. Correlation is significant at the 0.05 level (2-tailed).				

Note: X21 denotes the board size,X22 denotes the management team size, X23 denotes the presence of independent directors on the board, X24 denotes a presence of duality case on the board. This means that the CEO and board chairman positions are held by the same director.

In the same table above, it could be realized that neither board independence nor duality role has a significant association with the nine disclosure indices. This result is consistent partially with results obtained by Abdelsalam et al. (2007), however, it disagrees with respect of the board independence as the researchers found out that board independence is significantly correlated with Comprehensiveness of CIR and the General content provided on the corporate websites for UK companies listed on London stock exchange. Also, Kelton and Yang (2008) reported similar results for US companies. This inconsistency in the findings between the current study and UK and US studies indicates, to some extent, the weakness of the corporate governance mechanisms in Egypt compared to UK or US. This will be further tested by analysing the impact of these variable collectively with the independent and control variables.

8.4.3 The association between the industry type and CIR indices

In Chapter Seven, the differences in the quantity and quality attributes across the industrial sectors was proved using Kruskal Wallis Test. Further analysis will be carried out to get more vigorous results. Table [8-6] supports previous results in chapter Seven and illustrates that the industry sector has a significant and negative correlation with the nine disclosure indices, except for the General characteristics of the financial/IR section. This is oppositely true for banking and financial sector. Meanwhile, service sector has no significant association with all of the disclosure indices. These results confirms Xiao et al. (2004); Garcia-Borbolla et al. (2005); Abdelsalam et. al.(2007), but contradicts with other studies such as Craven and Marston,(1999) and Oyelere et al (2003) which did not report any significant association between industry type and CIR practices.

Table 8-6: The correlation between industry type and CIR indies

Disclosure indices	Banking and financial sector (X31)	Service sector (X32)	Industry sector (X33)
TOTALCIR	**.304****	0.059	**-.297****
USABILITY	**.273****	0.068	**-.278****
TIMELINESS	**.281****	0.024	**-.252****
GENERAL CONTENT	**.279****	0.046	**-.267****
CRIDIBILITY	**.337****	0.055	**-.321****
G.WEB CHARCTERISTICS	**.316****	-0.027	**-.242****
G.FINANCIAL/IR CHARACTERISTICS	0.131	0.07	-0.162
TOTALIR INFORMATION	**.310****	0.056	**-.300****
INTERNET USAGE	**.210***	0.091	**-.243****
****. Correlation is significant at the 0.01 level (2-tailed).**			
***. Correlation is significant at the 0.05 level (2-tailed).**			

Note: X31 denotes banking and financial sector, X32 denotes service industry, and X33 denotes industry sector.

8.4.4 The association between the international exposure and CIR indices

In this study the international exposure has been presented by four key variables: Foreign listing, proportion of foreign directors on the board, proportion of foreign managers and Existence of foreign investors as major shareholders. These variables reflect the extent to which the Egyptian companies have been influenced by the international environment. Table [8-7] demonstrates that all the international exposure variables are positively and significantly associated with CIR disclosure indices except for General characteristics of the website or for IR/Financial section. This may also support our suggestion that general features of the website and its structure are largely related to technical reasons not financial reasons.

Table 8-7: The correlation between International exposure and CIR indices

Disclosure indices	Foreign listing (X41)	Foreign directors on the board (X42)	Foreign management (X43)	Foreign investors (X44)
TOTALCIR	**.313****	**.353****	**.256****	**.292****
USABILITY	**.314****	**.320****	**.241***	**.287****
TIMELINESS	**.255****	**.338****	**.226***	**.276****
GENERAL CONTENT	**.329****	**.350****	**.253****	**.256****
CRIDIBILITY	**.322****	**.406****	**.289****	**.276****
G.WEB CHARCTERISTICS	0.1	0.084	0.022	0.132
G.FINANCIAL/IR CHARACTERISTICS	**.297****	**.194***	**.194***	0.18
TOTALIR INFORMATION	**.323****	**.369****	**.260****	**.291****
INTERNET USAGE	**.262****	**.380****	**.272****	**.259****
**. Correlation is significant at the 0.01 level (2-tailed).				
*. Correlation is significant at the 0.05 level (2-tailed).				

Note: **X41** denotes if a company is listed on foreign stock exchange, **X42** denotes presence of foreign directors among the board members. **X43** denotes presence of foreign managers and **X44** denotes presence of foreign investors as part of the blocked ownership. These foreign investors are mostly institutional rather individuals.

8.4.5 The association between audit firm and CIR indices

Audit firm impact has been pervasively studied in many studies on CIR context whereby some researchers spotted a significant impact of this variable on the CIR practices. However, in the case studies and during the Interviews with some auditors in Egypt. It was revealed that they are not quite involved in the corporate online disclosure practices and they still only participate in delivering their conventional auditing services. Hence, the researcher expect that this variable may not have a significant association with most of the underscored indices. The results provided in Table [8-8] concur with our prior expectations and results obtained from the interviews in Chapter Six.

The audit impact was measured as the number of audit firms or if the company is audited by one of BIG4 audit firms. It was shown that there is no association with the CIR main and sub-disclosure indices except for General content score. It is shown that there is a significant and positive association between the number of audit firms and the General Content. Still this correlation is relatively weak (ρ = 0.19). Therefore, this result will be further investigated later.

Table 8-8: The correlation between the audit firm and the disclosure indices

Disclosure indices	No. Audit firm (X52)	Audit firm size (X51)
TOTALCIR	0.148	0.028
USABILITY	0.151	0.02
TIMELINESS	0.162	0.061
GENERAL CONTENT	**0.190***	0.03
CRIDIBILITY	0.158	0.067
G.WEB CHARCTERISTICS	0.052	0.024
G.FINANCIAL/IR CHARACTERISTICS	0.155	0.011
TOTALIR INFORMATION	0.163	0.07
INTERNET USAGE	0.156	-0.043
**. Correlation is significant at the 0.01 level (2-tailed).		
*. Correlation is significant at the 0.05 level (2-tailed).		

Note: X51 denotes numbers of auditing firms collaborating together in auditing the company, X52 denotes the audit firms size that audits the company which indicate presence of one of the BIG4 among the audit group.

8.4.6 The association between control variables and CIR disclosure indices

The following table illustrates the associations between six of firm characteristics which will be employed as control variables in the regression model.

Table 8-9: The correlation between the control variables and the disclosure indices

Disclosure indices	Competition (X61)	Firm Size (X62)	Growth (X63)	Profitability (X64)	Leverage (X65)	Liquidity (X66)
TOTALCIR	-0.151	**.481****	-0.099	-0.169	**.377****	**-.351****
USABILITY	-0.1	**.482****	-0.098	-0.121	**.370****	**-.365****
TIMELINESS	-0.111	**.462****	-0.078	-0.071	**.388****	**-.286****
GENERAL CONTENT	-0.179	**.480****	-0.11	-0.143	**.381****	**-.354****
CRIDIBILITY	**-0.191***	**.463****	-0.079	-0.178	**.313****	**-.313****
G.WEB CHARCTERISTICS	0.186	**.283****	**-.199***	0.095	0.133	-0.128
G.FINANCIAL/IR CHARACTERISTICS	-0.126	**.432****	0.02	-0.098	**.319****	**-.260***
TOTAL IR INFORMATION	-0.182	**.489****	-0.102	**-0.186**	**.370****	**-.335****
INTERNET USAGE	-0.123	**.320****	-0.009	-0.022	**0.184****	**-0.215****
***Correlation is significant at the 0.01 level (2-tailed).						
** Correlation is significant at the 0.05 level (2-tailed).						

Note: X61:The annual growth in revenue, X62: The absolute value of the firm total assets, X63: The firm growth in firm market value and measured by Market/book ratio, X64 denotes the returns on owners' equity, X65:The net amount of debts to equity, X66:The liquidity of the firm is measured by the quick ratio. As some of the control variables were messing for some companies, size of the pertinent companies ranges between (N= 79 -112).

Table [8-9] demonstrates that the competition measured by the revenue growth rate has no significant association with all of disclosure indices. Yet, this association is significant only for credibility. This contradicts with Debreceny and Rahman (2005) and Gracia-Borbolla (2005) found a significant and positive relationship between competition and CIR practices. Also, a recent study shows that Indian firms increase their disclosures related to ownership and board when their interactions with international product markets grow. However, the researcher observed that financial disclosure was not influenced by the international interactions in the products market (Subramanian and Reddy, 2012). Nevertheless, the current results agree with the arguments provoked by some IR managers that to compete well specially in new penetrated markets they need to disclose more. Another possible interpreation is that companies confronting little competition (yielding more revenues) may not need to disclose more information as they can earn more of revenues by disclosing their information on traditional or private communication means.

In respect of the firm size, it is measured by the absolute value of the total assets. As appears on the table it is noticeable that this variable is significantly and positively correlated with all of CIR disclosure indices. This is largely consistent with most of prior studies (Ashbaugh et al., 1999; Craven and Marston, 1999; Deller et al., 1999; Ettredge et al., 2002; Oyelere et al., 2003; Marston and Polei, 2004; Bonsón and Escobar, 2006; Abdelsalam et al., 2007; Abdelsalam and Street, 2007; Oyelere et al., 2000).

Regarding company's Growth, it is realized from Table [8-9] that most of the association between the growth value and the disclosure indices are negative and insignificant, except for the general website characteristics which is significant but still negative. This is consistent with Kelton and Yang (2005) found negative impact on the corporate governance disclosure on the website in large US companies rather than in small companies. However, the current results contradict with Matherly and Burton (2005) who reported a positive impact.

Profitability is another imperative performance indicator which is measured by the return on Equity. According to Oyelere et al. (2003) profitability represents a proxy of information asymmetries between investors and managers. The results in Table [8-9] illustrates that profitability is negatively and insignificantly correlated with all of the disclosure indices except for the total IR information index which reflects the extent of the IR information on the website. This result contradicts with some studies that spotted a positive relationship between profitability and CIR or IFR such as Isamil (2002), Xiao et al (2004), Debreceny and

Rahman (2005), El Desoky (2009), Aly et al. (2010). However, it agrees with the results in Ashbaugh et al 1999, Marston and Polei (2004) who prounced that profitability is not associated with Internet financial reporting. Likewise, Oyelere et al (2003) pointed out that profitability do not explain the usage of the Internet for disseminating business reports. More studies agree with our findings such as Larrán and Giner, (2002); Sariram and Indrarini (2006); Momany and Al-Shorman;(2006); Kelton and Yang (2008). In respect of leverage ratio, it is measured by dividing net debts to equity. The results in Table [8-9] prove that there is a positive and significant association with all of the disclosure indices except for the general website characterises. This in a line with Isamil (2002) and Momany and Al-Shorman (2006) who reported a positive impact. Yet, it does not correspond with Larrán and Giner (2002), Oyelere et al. (2003) and Aly et al. (2010) who reported no significant relationship between leverage and CIR practices. Collett and Hrasky (2005) argue that voluntary disclosure of corporate governance information is positively associated with the intention to raise equity capital more than the intention to raise debt capital

Regarding the liquidity, as much as competition, growth and profitability Table [8-9] reveals a negative association between liquidity of the company and all of the disclosure indices. It is worth mentioning that liquidity values were obtained from Zawya database and proxied by the quick ratio. The results indicate that less liquid companies are more likely to disclose more on the Internet in order to enhance their image. However, the current results contradict with Momany and Al-Shorman (2006) and Aly et al. (2010) who found no relationship between liquidity and CIR practices.

8.5 Multivariate regression analysis

A Multivariate Regression Analysis using Ordinary Least Squares (OLS) method was conducted to develop predictable models that show the significant explanatory variables which explain the changes in the total CIR disclosure as well as the quality aspects. This analysis takes into account the interrelationship between the independent variables. Using the SPSS software package the researcher examined the relationships between the independent variables and control variables and the nine dependent variables representing CIR main and sub-disclosure indices. The regression formula is presented as follows.

$$Y = \beta_0 + \beta_j X_j + \varepsilon_j$$

Where:

Y = the dependent variables (i.e. CIR disclosure indices)

$\boldsymbol{\beta}_0$ = constant value (intersect point)

X_j = quantity of independent variable number j

ε_j = the residual error

The following is the regression equation representing the variables examined in this study :

Y_i (CIR indices)= constant+ $\boldsymbol{\beta}_1$ (ownership structure)+ $\boldsymbol{\beta}_2$(corporate Governance mechanisms)+$\boldsymbol{\beta}_3$ (industry type) + $\boldsymbol{\beta}_4$ (international exposure) + $\boldsymbol{\beta}_5$ (audit firm)+$\boldsymbol{\beta}_6$ (control variables)+ε_i

$\boldsymbol{\beta}_j$ represents the coefficients of each independent variable (j).

$\boldsymbol{\beta}_6$ denotes the control variables which consist in its turn of four firm characteristics: firm size (total assets), competition (growth in revenue), growth (market to book ratio) and profitability (ROE).

8.5.1 Prerequisite conditions of the multivariate analysis

To apply this regression, some assumptions need to be considered first. Incompatibility with these assumptions may lead to erroneous or misleading results (Berry, 1993). The Ordinal Least squares (OLS) regression is based on the following assumptions:

- All predictor variables must be quantitative or categorical (i.e. with two categories), and the outcome variable must be quantitative as well, continuous and unbounded or constrained.
- Non-zero variance: the predictors should have some variation in value.
- Absence of perfect multi-collinearity, meaning that there is no perfect linear relationship between two or more of the predictors.
- Predictors are uncorrelated with external variables. These variables are not contained in the regression, but may influence the outcome variable.
- Homoscedasticity, meaning that at each level of predictor variables, the variance of the residual terms should be constant. Thus, when the variances are very unequal, heteroscedasticity is more likely to be attained.
- Normal distribution errors. It is assumed that the residuals in the models are random, normally distributed variables with means of zero. Yet this does not mean that the predictors need to be normally distributed.

- All the values of the outcome variable are independent. The mean values of the outcome variables for each predictor can be presented in a straight line.

The researcher previously conducted the normality test to determine the appropriate bivariate test to examine the association between the dependent and independent variables. In the following sections two more tests will be carried out: the homogeneity test and collinearity test.

8.5.1.1 Test of homogeneity

The homogeneity test examines how far the variances of the investigated variables are stable or the same. The researcher investigated the homogeneity of variance by conducting Levene's test for the untransformed data of all continuous variables using SPSS. As illustrated in Appendices [A8-4],[A8-5] most of the dependent and independent variables failed the homogeneity test. Therefore, the data needs to be transformed first to resolve normality and homogeneity failures.

8.5.1.2 Test of collinearity

Using Spearman correlation coefficients allows for detecting any potential collinearity between the independent variables. Mason and Perreault (1991) suggest that presence of one or more large bivariate correlations 0.8 and 0.9 are commonly used as cut offs which indicates strong linear associations. In such case, collinearity may be a problem. Thus, the pair that will have a significant correlation should be split before running the regression to avoid reporting biased results. In this study, the researcher will examine the correlation between independent and dependent variables using a non-parametric test which is Spearman correlation, as explained earlier. The independent variables that are highly correlated with other explanatory or control variables need to be tested individually. The control variables that have insignificant associations with the disclosure indices (dependent variables) will not enter the regression or highly correlated with other control variables will not be included in the regression. Another suggested way to detect any potential collinearity suggests that collinearity is a problem if any of the ${}_{adj}R^2$ exceed the R^2 of the overall model. A related approach relies on the variance inflation factors (VIF). A maximum VIF greater than 10 is thought to signal harmful collinearity (Mason and Perreault, 1991) .

8.5.2 Transformation of non-normal distribution

The investigated data failed the test of normality, whereby some variables are slightly skewed. Polvin and Roff (1993) emphasized that the 'normality' condition is "a myth" and rarely met in many cases, even in biology. They suggested several reasons for the violation of the normality assumptions, such as the distribution under observation is not normal (existence of skewness), and the appearance of outliers. In addition, outliers may lead to false positives and hence increase the mean squares and consequently decrease the chances of detecting real effect. Therefore, disregarding the normality tests may lead to distortion of the significance level, stripping the robustness of the used methods, and this also can end up with misleading conclusions or interpretations. There are alternative methods in SPSS to deal with non-normality problem. In this study the researcher followed Cheng et al. (1992), Lang and Lundholm (1993, 1996), Wallace and Naser (1995) and Abdelsalam, et al. (2007), and used transformation by ranks and normal scores. This transforming method assorts continuous variables into ranks instead of scores. The SPSS generates two types of outputs: ranks and normal scores. The researcher will only use normal scores. Both normal scores and rank transformation are acceptable approaches and they yield similar results, as explained by Abdelsalam, et al. (2007). Similarly, Cook (1998:214) announced that "...ranks are being substituted by scores on the normal distribution and so the normal scores approach may be considered to represent an extension of the rank method".

8.6 Results of the regression analysis

The multivariate regression model has been carried out using SPSS to analyse the relationship between the independent and dependent variables for 112 companies[1]. The researcher developed two models for each dependent variable (i.e. disclosure index), the full model which contains all tested variables and the reduced models which is refined to enhance the values of adjusted R^2 and *F* statistical ratio. It was noticed that leverage ratio and liquidity ratio are highly correlated with total asset and contribute very little to the model.

In respect of the industry type variables, the researcher found out that there are two significantly and negatively correlated variables which are banking and financial sector and

[1] Though the total investigated websites are 115, three were eliminated because most of their independent variables were missing. Thus the final sample consisted of 112 companies.

industry sector. Therefore, the researcher entered only the variable of industry sector to avoid collinearity. This variable classifies the sample into (1= industry firms, 0= other non-industry firms). Hence, non-industry firms will contain both banks, financial firms and service firms.

As most of full regression models yield insignificant results, the researcher refined the independent variables by reducing the full regression model by incorporating the most significant factors with higher contribution value as indicated by t values and with lower collinearity using the following parameters as guideline: Tolerance > 0.6 or VIF < 2. Therefore, variables with T > 0.6 or VIF more than 2 are more vulnerable to yield unreliable results. This refinement method was followed in a number of research such as Haniffa and Cooke (2002), Debreceny et al (2002) and Abdelsalam et al. (2007).

8.6.1 Regression models of Total CIR

The results of the full regression model using transformed normal values for all variables as in table [8-10] reveal that neither ownership structure nor corporate governance variables do have any association with the total CIR disclosure. Therefore, the main H1 and H2 hypotheses with all sub-hypotheses are not supported. However, in the full model, the audit firm size has a negative marginal significant relationship (-0.36, p =0.079). Similarly, industry sector has a significant negative relationship with total CIR disclosure (-0.57, p < 0.01) with the total CIR disclosure. Oppositely, existence of foreign investors in the major shareholders is positively significant (0.521, p =0.079). The full model has low explanatory power whereas adjusted R^2 = 0.294 and F = 2.875. On the other hand the reduced model shows that there are five highly significant variables affecting the total CIR. Foreign listing and existence of foreign investors as major shareholders (dummy) have significant and positive relationships with coefficients (0.62, 0.538) and significance (p = 0.074, 0.026) respectively. Also, industry sector has similar negative and significant relationship with total CIR disclosure. (-0.609, p <0.001), firm size (0.312, p < 0.001), and competition (-0.141, p = 0.08). These are consistent with the findings of the qualitative study.

8.6.2 Regression models of Internet usage

The Internet usage score reflect the ability of the companies to employ their Internet available technology properly. The quality of the embedded technical features used in the corporate website is usually considered as a management or a board decision more as a technical decision. This was clearly revealed in the interviews with the involved website developers in chapter six. Therefore, initially it is not expected to find many variables related to the corporate disclosure theory are regressed with this index. Table [8-11] shows that the results of the full regression model are consistent with our prior expectations as the values that reflect explanatory power ${}_{adj}R^2$ (0.088) and goodness of fit indicated by F statistics (1.434) are considerably lower than they are in all other regression models. This is also applied to the reduced model, ${}_{adj}R^2$ (0.154) and F- ratio (4.74). In the full model only growth ratio has a significant negative relationship (- 0.223, $p < 0.05$) with the Internet usage and industry sector has a significant negative relationship (-0.398, $p = 0.072$). However, the reduced model includes other significant variables which are firm size (-0.303, $p < 0.01$), competition or revenue growth (- 0.486, $p < 0.05$), growth ratio (0.237, $p < 0.015$). It is realized that all these variables are negatively significant for the Internet usage which indicates that these variables do not have a robust explanation to the changes in the Internet technologies embedded in the Egyptian corporate websites.

8.6.3 Regression models of General characteristics of the website

General characteristics of the website score demonstrates general feature that are commonly provided but are not related to the Internet usage or to any specific business information item. These features reflect the language and operational condition of the websites. In addition, it reflects whether the website has been frequently updated. Table [8-12] illustrates that the full regression model has a low explanatory power ${}_{adj}R^2 = 0.074$ and goodness of fit $F = 1.36$. This model illustrates that only industry sector has a significant negative relationship (-0.436, $p < 0.045$). however, the reduced model provides better results. The explanatory power and goodness of fit of this model are higher as denoted by ${}_{adj}R^2 = 0.114$ and $F = 4.391$, respectively. The reduced model demonstrates that only firm size (0.222, $p < 0.05$) has a significant positive impact but industry (-0.430, $p < 0.05$) sector produces significant negative impact on the General Characteristics of the website.

8.6.4 Regression models of General characteristics of the IR/financial section

Score of the general characteristics of IR/Financial section on the website reflects the structure and organizational features that distinguish either IR section or other section that is devoted mainly for presenting all accounting and financial information. The full regression model in Table [8-13], in the following pages, presents the most significant variables that contribute in the changes in the discourse of these information items after controlling for size, profitability, growth and competition. The highly significant variables with positive relationships are float ratio (0.023, $p < 0.05$), management size (0.251, $p < 0.25$). Besides, there are other variables show marginal positive significant relationships and they are number of audit firms (0.271, $p = 0.063$), and firm size (0.246, $p = 0.73$). Meanwhile industry sector has a negative and significant marginal relationship with the IR related information (-0.324, $p = 0.62$). The VIF and Tolerance values indicate that there still some collinearity between several variables which result in reducing the $_{adj}R^2$ (0.237) and F (2.397) values. Consequently, the researcher eliminated those variables, which have values more than 2 in VIF column and less than 0.06 in Tolerance column and which contribute less into the model as they are not very significant. These trials have done gradually after checking the $_{adj}R^2$ and F-ratio. The reduced model provided better values for $_{adj}R^2$ (0.272) and low F (7.593). This model also show that float ratio (0.23, $p < 0.05$), management size (0.251, $p < 0.05$), and firm size (0.202, $p < 0.05$). Despite the fact that industry sector have a significant impact in all the investigated models, in this model it has not provide any impact. This implies that the disclosure level of this type of information is not sensitive to specific industry type as it may be regarded reasons related to the website designing process and potentialities of the website developers.

8.6.5 Regression models of the investor relations information

Total investor relations information index reflects the disclosure level of six types of financial and non-financial information frequently provided by the investor relations department and which constitute an interest to most of the stock and stakeholders. The full regression model in Table [8-14] illustrates that there are two significant variables affecting the IR related information which are industry sector (-0.535, $p < 0.001$) and existence of foreign investors in the major shareholders (0.543, $p < 0.05$). Besides, there are other two variables that have marginal significant relationships, which are number of audit firms (0.258, $p = 0.078$), and firm size (0.245, $p=0.075$).These results are explaining 32.2% of the changes in the IR related information as denoted by. However, the reduced model has provided higher explanatory power and better goodness of fit whereby $_{adj}R^2 = 0.371$ and $F = 11.515$. According to this model, industry type (- 0.493, $p < 0.01$) and profitability (-0.171, $p < 0.05$) have a significant but negative relationship. On the other side, firm size (0.355, $p < 0.0001$) and existence of foreign investors in the major shareholders (0.481, $p < 0.05$) have highly significant positive relationship. Foreign listing (0.319, $p = 0.06$) has shown marginal positive relationship.

8.6.6 Regression models of the quality attributes

The following sections are designed to demonstrate the most significant factors that best explain the changes in each of the quality attribute index which previously investigated in chapter seven. The researcher carried out a regression analysis for each of these attributes to determine the group of variables that have a significant impact on each of them.

8.6.6.1 Regression models of Timeliness

Timeliness score is developed to measure to what extent the website provided an up-to-date information to the users. It also measures whether there is any clear signs (e.g. dates on the website home page or attached with news or information items) of renovation. The full model in table [8-15] illustrates that there are only two variables have significant impact on Timeliness firm size (0.267, $p = 0.59$) and industry sector (-0.455,$p <0.05$). There results explain 24.5 % of changes as denoted by $_{adj}R^2$ in timeliness with $F = 2.493$. The reduced model confirmed these results and added more variables into the regression. Accordingly, both Existence of foreign investors as a major shareholders (0.488, $p < 0.05$) and firms size (0.311, $p =0.001$) produce significant and positive impact on Timeliness of the corporate website. On the other side, there are two variables generate negative impact which are Industry sector (-0.448, $p< 0.01$) and Competition (- 0.166, $p = 0.055$). There are other two variables included in the model but generated no significant impact which are foreign listing and profitability.

8.6.6.2 Regression models of Usability

Usability score measures how much the website has been designed to facilitate the users' interactivity and searching processes. The higher the usability level, the more beneficial the website will be for the users especially the investors and customers. As shown in the Table [8-14]. The full model with $_{adj}R^2 = 0.253$ and $F = 2.524$ shows that industry sector (-.555, $p <0.05$) and audit firm size (-.388, $p = 0.069$) have significant but negative impact on Usability. The reduced model shows that existence of foreign investors as a major shareholder (0.49, $p = 0.05$), firm size (0.269, $p <0.05$) has a significant positive impact. Again, industry sector generates significant but negative impact (-0.486, $p <0.01$) on Usability of the website. These results can be explained by $_{adj}$ $R^2 = 0.320$ and $F = 9.328$.

8.6.6.3 Regression models of Credibility

Credibility score measures to what extent the included information have been reviewed and verified by an independent body. Hence, it reflects to what extent the users can rely on such information to take an appropriate decisions. The fill regression model in table [8-17] illustrates that there are only two variables have significant impact on Credibility. Number of audit firms generated positive and significant impact (0.287, $p < 0.05$). However, Industry sector generates significant but negative impact (-.0568, $p < 0.01$). These results explain $_{adj}R^2$ =33.9% of the changes in Credibility, with F = 3.311. The reduced model provided different set of significant variables. To elaborate, management size (0.21, $p < 0.05$), Foreign listing (0.93, $p < 0.01$) and Existence of foreign investors as major shareholders (0.513, $p <0.05$) all provide a significant positive impact on Credibility of the website. the other hand, industry sector (-.0541, p =.001) generates significant, but negative impact on Credibility. These results explain $_{adj}R^2$ =30.3% of changes in Credibility with F= 10.409.

8.6.6.4 Regression models of General content

General Content index measures the amount of information which generally disclosed on the corporate website related to the financial information, corporate governance, shareholders, stock price or other technical contents such as e-mails or contact details. The regression results of the full model are provided in Table [8-18] which shows that the number of audit firms (0.358, $p < 0.05$) has a significant and positive impact on the general content. Whereas, audit firm size (-0.434, $p < 0.05$) and industry sector (-0.455, $p <0.05$) provided significant but negative impact. These results are attainable at explanatory power $_{adj}R^2$ = 0.335 and F= 3.271. The contradicting results of the audit firm impact required modifying the full model by eliminating the insignificant variables and which provide least contribution as indicated by the absolute value in t column.

The reduced model yield different results, albeit more consistent with the case studies findings. The reduced model has also enhanced the values of explanatory power $_{adj}R^2$ = .366 and F=9.489. It also illustrates that both foreign listing (0.711, $p < 0.05$) and firm size (0.264, $p <0.05$) provide significant and positive impact on the general content. This agrees with mainstream of CIR and voluntary disclosure research. Meanwhile, industry sector (-0.429, $p < 0.01$) and competition (-0.177, $p < 0.05$) provide significant negative impact on the disclosure of general contents. In addition, the reduced model demonstrates that management size has a marginal significant and positive impact (0.164, $p = 0.076$) on the General contents.

Table 8-10: Full and reduced regression models for the Total CIR disclosure index

Dependent Variable:	Full model							Reduced Model						
Total CIR	**B**	**SE**	**Beta**	**t**	***p-value***	**Tolerance**	**VIF**	**B**	**SE**	**Beta**	**t**	***p-value***	**Tolerance**	**VIF**
Constant	0.334	0.231		1.446	0.152			0.29	0.141		2.063	**0.042****	-	-
Government ownership	0.009	0.181	0.008	0.049	0.961	0.277	3.611	-	-	-	-	-	-	-
Institutional ownership	0.061	0.169	0.056	0.363	0.718	0.298	3.352	-	-	-	-	-	-	-
Management ownership	0.066	0.166	0.056	0.398	0.692	0.359	2.788	-	-	-	-	-	-	-
Major investors ownership	0.056	0.151	0.036	0.374	0.709	0.786	1.272	-	-	-	-	-	-	-
Shareholders dispersion	0.125	0.112	0.126	1.119	0.267	0.565	1.769	0.132	0.081	0.132	1.624	0.108	0.91	1.099
Board size	-0.119	0.123	-0.115	-0.967	0.337	0.503	1.987	-	-	-	-	-	-	-
Management size	0.177	0.119	0.17	1.483	0.142	0.545	1.833	-	-	-	-	-	-	-
Duality	0.163	0.194	0.082	0.836	0.405	0.747	1.339	-	-	-	-	-	-	-
Independence (%)	0.134	0.109	0.132	1.23	0.222	0.616	1.623	-	-	-	-	-	-	-
Foreign listing	0.609	0.421	0.159	1.447	0.152	0.591	1.691	**0.62***	0.344	0.157	1.803	**0.074**	0.802	1.248
Foreign investors	**0.521***	0.292	0.185	1.783	**0.079**	0.665	1.503	**0.538****	0.238	0.185	2.257	**0.026**	0.897	1.115
foreign directors (%)	0.086	0.227	0.058	0.38	0.705	0.311	3.219	-	-	-	-	-	-	-
foreign managers	0.049	0.232	0.033	0.211	0.833	0.3	3.333	-	-	-	-	-	-	-
Number of auditing firms	0.219	0.156	0.143	1.398	0.166	0.681	1.468	-	-	-	-	-	-	-
Audit firm size	**-0.36***	0.202	-0.184	-1.779	**0.079**	0.669	1.495	-	-	-	-	-	-	-
Industry sector	**-0.57*****	0.197	-0.278	-2.895	**0.005**	0.774	1.292	**-0.609*****	0.165	-0.294	-3.685	**0.000**	0.952	1.051
Competition	-0.041	0.102	-0.041	-0.404	0.687	0.684	1.462	**-0.141***	0.08	-0.142	-1.761	**0.081**	0.925	1.081
Firm size	0.177	0.147	0.171	1.201	0.233	0.352	2.841	**0.312*****	0.093	0.307	3.364	**0.001**	0.725	1.38
Growth	0.054	0.1	0.056	0.541	0.59	0.675	1.481	-	-	-	-	-	-	-
Profitability	-0.08	0.114	-0.08	-0.706	0.483	0.551	1.816	-	-	-	-	-	-	-
Adjusted R^2					**0.294**							**0.358**		
F- statistics					**2.875**							**10.871**		
P- value					**0.000**							**0.000**		

Notes: Significance has been identified at four levels and highlighted in bold; *****Significant at 0.10 level, ******Significant at 0.05 level, ******* Significant at 0.01
T column denotes "Tolerance" and *VIF* denotes the Variance Inflation Factor. These two variables signify the potentiality of multicollinearity. The table above shows that there are some independent variables, in the Full model, are more likely to have multicollinearity as VIF is more than(2) and tolerance value is closer to(0).This has been avoided in the reduced model whereby the potentiality for multicollinearity is nearly absent as the tolerance and VIF values are in the acceptable range.
Investor dispersion is denoted by the free float rate, Competition is denoted by revenue growth rate. Firm size is denoted by total assets value. Growth is denoted by price to book ratio. Profitability is denoted by ROE.

Table 8-11: Full and reduced regression models for the Internet usage index

Dependent Variable: Internet usage	**Full model**							**Reduced model**						
	B	**SE**	**Beta**	**t**	***p-value***	**T**	**VIF**	**B**	**SE**	**Beta**	**t**	***p-value***	**T**	**VIF**
Constant	**0.384**	**0.255**		**1.506**	**0.136**			**0.325**	**0.152**		**2.143**	**0.035**		
Government ownership	0.058	0.201	0.053	0.288	0.774	0.277	3.611	-	-	-	-	-	-	-
Institutional ownership	0.061	0.187	0.057	0.324	0.747	0.298	3.352	-	-	-	-	-	-	-
Management ownership	0.036	0.184	0.032	0.198	0.844	0.359	2.788	-	-	-	-	-	-	-
Major investors ownership	0.183	0.167	0.119	1.099	0.275	0.786	1.272	-	-	-	-	-	-	-
Shareholders dispersion	0.083	0.124	0.085	0.667	0.507	0.565	1.769	-	-	-	-	-	-	-
Board size	-0.019	0.136	-0.019	-0.137	0.892	0.503	1.987	-	-	-	-	-	-	-
Management size	0.043	0.132	0.042	0.324	0.747	0.545	1.833	-	-	-	-	-	-	-
Duality	-0.121	0.215	-0.063	-0.564	0.575	0.747	1.339	-	-	-	-	-	-	-
Independence (%)	-0.153	0.121	-0.155	-1.268	0.209	0.616	1.623	-	-	-	-	-	-	-
Foreign listing	0.014	0.466	0.004	0.031	0.975	0.591	1.691	-	-	-	-	-	-	-
Foreign investors	-0.32	0.323	-0.116	-0.989	0.326	0.665	1.503	-	-	-	-	-	-	-
foreign directors (%)	0.359	0.251	0.247	1.433	0.156	0.311	3.219	-	-	-	-	-	-	-
foreign managers	**-0.44***	0.257	-0.3	-1.713	**0.091**	0.3	3.333	-	-	-	-	-	-	-
Number of auditing firms	0.008	0.173	0.005	0.046	0.963	0.681	1.468	-	-	-	-	-	-	-
Audit firm size	-0.013	0.224	-0.007	-0.06	0.953	0.669	1.495	-	-	-	-	-	-	-
Industry sector	**-0.398***	0.218	-0.199	-1.826	**0.072**	0.774	1.292	**-0.486*** **	0.189	-0.245	-2.574	**0.012**	0.906	1.104
Competition	0.134	0.113	0.138	1.192	0.237	0.684	1.462	0.143	0.1	0.148	1.432	0.155	0.773	1.294
Firm size	-0.239	0.163	-0.238	-1.468	0.146	0.352	2.841	**-0.303*** **	0.097	-0.308	-3.125	**0.002**	0.845	1.183
Growth	**-0.223***	0.111	-0.234	-2.006	**0.048**	0.675	1.481	**-0.237*** **	0.096	-0.25	-2.469	**0.015**	0.805	1.243
Profitability	-0.05	0.126	-0.051	-0.397	0.692	0.551	1.816	0.002	0.107	0.002	0.018	0.986	0.676	1.48
Adjusted R^2					**0.088**							**0.154**		
F- statistics					**1.434**							**4.740**		
P- value					**0.126**							**0.001**		

Notes: Significance lveles: *****Significant at 0.10 level, ******Significant at 0.05 level, ******* Significant at 0.01
T column denotes "Tolerance" and *VIF* denotes the Variance Inflation Factor. These two variables signify the potentiality of multicollinearity. The table above shows that there are some independent variables, in the Full model, are more likely to have multicollinearity as VIF is more than 2 and tolerance value is closer to 0.This has been avoided in the reduced model whereby the potentiality for multicollinearity is nearly absent as the tolerance and VIF values are in the acceptable range.
Investor dispersion is denoted by the free float rate, Competition is denoted by revenue growth rate. Firm size is denoted by total assets value. Growth is denoted by price to book ratio. Profitability is denoted by ROE Investor dispersion is denoted by the free float rate, Competition is denoted by revenue growth rate. Firm size is denoted by total assets value. Growth is denoted by price to book ratio. Profitability is denoted by ROE.

Table 8-12: Full and reduced regression models for the General characteristics of the website index

Dependent Variable: General website characteristics	Full Model							Reduce Model						
	B	SE	Beta	t	p-value	Tolerance	VIF	B	SE	Beta	t	p-value	Tolerance	VIF
(Constant)	0.236	0.255		0.924	0.359			0.301	0.152		1.987	0.05		
Government ownership	0.139	0.201	0.127	0.693	0.491	0.277	3.611	-	-	-	-	-	-	-
Institutional ownership	0.028	0.187	0.026	0.147	0.883	0.298	3.352	-	-	-	-	-	-	-
Management ownership	0.026	0.184	0.023	0.14	0.889	0.359	2.788	-	-	-	-	-	-	-
Major investors ownership	0.059	0.167	0.039	0.353	0.725	0.786	1.272	-	-	-	-	-	-	-
Shareholders dispersion	-0.055	0.124	-0.057	-0.441	0.661	0.565	1.769	-	-	-	-	-	-	-
Board size	-0.081	0.136	-0.081	-0.593	0.555	0.503	1.987	-	-	-	-	-	-	-
Management size	0.109	0.132	0.108	0.825	0.412	0.545	1.833	-	-	-	-	-	-	-
Duality	0.065	0.215	0.034	0.3	0.765	0.747	1.339	-	-	-	-	-	-	-
Independence (%)	0.188	0.121	0.192	1.557	0.124	0.616	1.623	-	-	-	-	-	-	-
Foreign listing	0.587	0.466	0.158	1.259	0.212	0.591	1.691	-	-	-	-	-	-	-
Foreign investors	0.414	0.323	0.152	1.279	0.205	0.665	1.503	-	-	-	-	-	-	-
foreign directors (%)	-0.091	0.251	-0.063	-0.363	0.718	0.311	3.219	-	-	-	-	-	-	-
foreign managers	0.127	0.257	0.087	0.495	0.622	0.3	3.333	-	-	-	-	-	-	-
Number of auditing firms	0.024	0.173	0.017	0.141	0.888	0.681	1.468	-	-	-	-	-	-	-
Audit firm size	-0.122	0.224	-0.065	-0.546	0.586	0.669	1.495	-	-	-	-	-	-	-
Industry sector	**-0.436****	0.218	-0.22	-2.001	**0.049**	0.774	1.292	**-0.439****	0.188	-0.219	-2.334	**0.022**	0.961	1.041
Competition	0.145	0.113	0.15	1.282	0.204	0.684	1.462	0.145	0.1	0.15	1.448	0.151	0.786	1.272
Firm size	-0.069	0.163	-0.069	-0.423	0.674	0.352	2.841	**0.222****	0.094	0.225	2.362	**0.02**	0.927	1.079
Growth	-0.16	0.111	-0.169	-1.437	0.155	0.675	1.481	0.014	0.101	0.015	0.141	0.889	0.769	1.3
Profitability	0.151	0.126	0.156	1.2	0.234	0.551	1.816	-	-	-	-	-	-	-
Adjusted R^2					**0.074**							**0.114**		
F -statistics					**1.36**							**4.391**		
P- value					**0.163**							**0.003**		

Notes: Significance has been identified at four levels and highlighted in bold; *****Significant at 0.10 level, ******Significant at 0.05 level, ******* Significant at 0.01
T column denotes "Tolerance" and *VIF* denotes the Variance Inflation Factor. These two variables signify the potentiality of multicollinearity. The table above shows that there are some independent variables, in the Full model, are more likely to have multicollinearity as VIF is more than 2 and tolerance value is closer to 0.This has been avoided in the reduced model whereby the potentiality for multicollinearity is nearly absent as the tolerance and VIF values are in the acceptable range.
Investor dispersion is denoted by the free float rate, Competition is denoted by revenue growth rate. Firm size is denoted by total assets value. Growth is denoted by price to book ratio. Profitability is denoted by ROE by ROE.

Table 8-13: Full and reduced regression models for the General characteristics of the IR/Financial section index

Dependent Variable: Characteristics of IR/Financial section	**Full Model**							**Reduced Model**						
	B	**SE**	**Beta**	**t**	***p-value***	**Tolerance**	**VIF**	**B**	**SE**	**Beta**	**t**	***p-value***	**Tolerance**	**VIF**
(Constant)	0.226	0.212		1.065	0.29			0.178	0.124		1.434	0.155		
Government ownership	0.142	0.167	0.142	0.852	0.397	0.277	3.611	-	-	-	-	-	-	-
Institutional ownership	0.156	0.155	0.161	1.001	0.32	0.298	3.352	-	-	-	-	-	-	-
Management ownership	0.085	0.153	0.082	0.556	0.58	0.359	2.788	-	-	-	-	-	-	-
Major investors ownership	0.024	0.138	0.017	0.177	0.86	0.786	1.272	-	-	-	-	-	-	-
Shareholders dispersion	**0.23****	0.103	0.261	2.234	**0.028**	0.565	1.769	**0.175****	0.075	0.202	2.324	**0.022**	0.908	1.102
Board size	**-0.193***	0.113	-0.211	-1.705	**0.092**	0.503	1.987							
Management size	**0.251****	0.11	0.272	2.292	**0.025**	0.545	1.833	**0.205****	0.088	0.233	2.328	**0.022**	0.683	1.464
Duality	0.168	0.179	0.096	0.942	0.349	0.747	1.339	-	-	-	-	-	-	-
Independence (%)	0.004	0.1	0.004	0.036	0.971	0.616	1.623	-	-	-	-	-	-	-
Foreign listing	0.434	0.387	0.128	1.121	0.266	0.591	1.691	0.309	0.315	0.089	0.98	0.33	0.823	1.214
Foreign investors	0.212	0.268	0.085	0.791	0.431	0.665	1.503	-	-	-	-	-	-	-
foreign directors (%)	-0.165	0.208	-0.125	-0.795	0.429	0.311	3.219	-	-	-	-	-	-	-
foreign managers	0.083	0.213	0.062	0.389	0.698	0.3	3.333	-	-	-	-	-	-	-
Number of auditing firms	**0.271***	0.144	0.2	1.885	**0.063**	0.681	1.468	-	-	-	-	-	-	-
Audit firm size	**-0.315***	0.186	-0.182	-1.693	**0.094**	0.669	1.495	-	-	-	-	-	-	-
Industry sector	**-0.324***	0.181	-0.189	-1.892	**0.062**	0.774	1.292	-0.244	0.152	-0.136	-1.605	0.112	0.957	1.045
Competition	-0.1	0.094	-0.113	-1.063	0.291	0.684	1.462	-	-	-	-	-	-	-
Firm size	**0.246***	0.135	0.269	1.818	**0.073**	0.352	2.841	**0.202****	0.092	0.228	2.189	**0.031**	0.632	1.583
Growth	**0.166***	0.092	0.192	1.801	**0.076**	0.675	1.481	-	-	-	-	-	-	-
Profitability	-0.086	0.104	-0.098	-0.828	0.41	0.551	1.816	-0.111	0.073	-0.13	-1.519	0.132	0.943	1.061
Adjust R^2					**0.237**							**0.272**		
F-statistics					**2.397**							**7.593**		
P- value					**0.003**							**0.000**		

Notes: Significance has been identified at four levels and highlighted in bold; *****Significant at 0.10 level, ******Significant at 0.05 level, ******* Significant at 0.01
T column denotes "Tolerance" and *VIF* denotes the Variance Inflation Factor. These two variables signify the potentiality of multicollinearity. The table above shows that there are some independent variables, in the Full model, are more likely to have multicollinearity as VIF is more than 2 and tolerance value is closer to 0.This has been avoided in the reduced model whereby the potentiality for multicollinearity is nearly absent as the tolerance and VIF values are in the acceptable range
Investor dispersion is denoted by the free float rate, Competition is denoted by revenue growth rate. Firm size is denoted by total assets value. Growth is denoted by price to book ratio. Profitability is denoted by ROE.

Table 8-14: Full and reduced regression models for Total investor relations information index

Dependent Variable: Total IRs information	Full Model							Reduced Model						
	B	SE	Beta	t	p-value	Tolerance	VIF	B	SE	Beta	t	p-value	Tolerance	VIF
(Constant)	0.279	0.213		1.314	0.193	-		0.262	0.13	-	2.013	0.047	-	
Government ownership	0.055	0.167	0.051	0.326	0.745	0.277	3.611	-	-	-	-	-	-	-
Institutional ownership	0.092	0.156	0.089	0.59	0.557	0.298	3.352	-	-	-	-	-	-	-
Management ownership	0.098	0.153	0.089	0.643	0.522	0.359	2.788	-	-	-	-	-	-	-
Major investors ownership	0.044	0.139	0.03	0.319	0.751	0.786	1.272	-	-	-	-	-	-	-
Shareholders dispersion	0.08	0.103	0.085	0.775	0.44	0.565	1.769	0.076	0.076	0.08	0.999	0.32	0.917	1.091
Board size	-0.14	0.114	-0.144	-1.23	0.222	0.503	1.987	-	-	-	-	-	-	-
Management size	0.126	0.11	0.128	1.146	0.255	0.545	1.833	-	-	-	-	-	-	-
Duality	0.125	0.179	0.067	0.696	0.489	0.747	1.339	-	-	-	-	-	-	-
Independence (%)	0.118	0.1	0.124	1.179	0.242	0.616	1.623	-	-	-	-	-	-	-
Foreign listing	0.632	0.388	0.175	1.627	0.108	0.591	1.691	0.606	0.319	0.16	1.897	0.061	0.825	1.213
Foreign investors	**0.543****	0.269	0.205	2.017	**0.047**	0.665	1.503	**0.481****	0.224	0.173	2.148	**0.034**	0.904	1.107
foreign directors (%)	0.144	0.209	0.102	0.69	0.492	0.311	3.219	-	-	-	-	-	-	-
foreign managers	0.02	0.214	0.014	0.091	0.928	0.3	3.333	-	-	-	-	-	-	-
Number of auditing firms	0.258	0.144	0.18	1.792	0.077	0.681	1.468	-	-	-	-	-	-	-
Audit firm size	-0.246	0.186	-0.133	-1.318	0.191	0.669	1.495	-	-	-	-	-	-	-
Industry sector	**-0.535*****	0.181	-0.277	-2.946	**0.004**	0.774	1.292	**-0.493*****	0.154	-0.251	-3.2	**0.002**	0.956	1.047
Competition	-0.127	0.094	-0.135	-1.348	0.182	0.684	1.462	-	-	-	-	-	-	-
Firm size	0.245	0.136	0.252	1.803	0.075	0.352	2.841	**0.355*****	0.085	0.369	4.166	**0.000**	0.748	1.337
Growth	0.081	0.092	0.088	0.878	0.383	0.675	1.481	-	-	-	-	-	-	-
Profitability	-0.088	0.105	-0.094	-0.843	0.402	0.551	1.816	**-0.171****	0.075	-0.182	-2.288	**0.024**	0.934	1.071
Adjusted R^2					**0.322**							**0.371**		
F -statistics					**3.136**							**11.515**		
P- value					**0.000**							**0.000**		

Notes: Significance has been identified at four levels and highlighted in bold; *****Significant at 0.10 level, ******Significant at 0.05 level, ******* Significant at 0.01
T column denotes "Tolerance" and *VIF* denotes the Variance Inflation Factor. These two variables signify the potentiality of multicollinearity. The table above shows that there are some independent variables, in the Full model, are more likely to have multicollinearity as VIF is more than (2)and tolerance value is closer to (0).This has been avoided in the reduced model whereby the potentiality for multicollinearity is nearly absent as the tolerance and VIF values are in the acceptable range.

Investor dispersion is denoted by the free float rate, Competition is denoted by revenue growth rate. Firm size is denoted by total assets value. Growth is denoted by price to book ratio. Profitability is denoted by ROE.

Table 8-15: Full and reduced regression models for the Timeliness index

Dependent Variable: Timeliness score	**Full model**							**Reduced model**						
	B	**SE**	**Beta**	**t**	**p-value**	**T**	**VIF**	**B**	**SE**	**Beta**	**t**	**p-value**	**T**	**VIF**
(Constant)	.226	.218		1.035	.304			0.234	0.135		1.735	**0.086**		
Government ownership	.035	.172	.034	.205	.838	.277	3.611	-	-	-	-	-	-	-
Institutional ownership	.076	.160	.076	.474	.637	.298	3.352	-	-	-	-	-	-	-
Management ownership	.117	.157	.109	.747	.457	.359	2.788	-	-	-	-	-	-	-
Major investors ownership	.174	.143	.120	1.220	.226	.786	1.272	-	-	-	-	-	-	-
Shareholders dispersion	.076	.106	.083	.721	.473	.565	1.769	-	-	-	-	-	-	-
Board size	-.177	.117	-.186	-1.517	.133	.503	1.987	-	-	-	-	-	-	-
Management size	.166	.113	.174	1.473	.145	.545	1.833	-	-	-	-	-	-	-
Duality	.224	.184	.123	1.218	.227	.747	1.339	-	-	-	-	-	-	-
Independence (%)	.129	.103	.139	1.254	.214	.616	1.623	-	-	-	-	-	-	-
Foreign listing	.424	.399	.121	1.064	.290	.591	1.691	0.458	0.327	0.127	1.399	0.165	0.833	1.201
Foreign investors	**.465***	.276	.180	1.682	**.097**	.665	1.503	**0.488***	0.233	0.184	2.101	**0.038**	0.888	1.126
foreign directors (%)	.202	.214	.147	.942	.349	.311	3.219	-	-	-	-	-	-	-
foreign managers	-.025	.220	-.018	-.115	.909	.300	3.333	-	-	-	-	-	-	-
Number of auditing firms	.233	.148	.166	1.578	.119	.681	1.468	-	-	-	-	-	-	-
Audit firm size	-.289	.191	-.161	-1.512	.135	.669	1.495	-	-	-	-	-	-	-
Industry sector	**-.455****	.186	-.242	-2.441	**.017**	.774	1.292	**-0.448****	0.16	-0.236	-2.8	**0.006**	0.962	1.039
Competition	-.118	.097	-.129	-1.228	.223	.684	1.462	**-0.166***	0.086	-0.182	-1.944	**0.055**	0.777	1.287
Firm size	**.267***	.140	.281	1.916	**.059**	.352	2.841	**0.311****	0.092	0.332	3.383	**0.001**	0.707	1.413
Growth	.089	.095	.100	.939	.351	.675	1.481	-	-	-	-	-	-	-
Profitability	-.017	.108	-.018	-.157	.876	.551	1.816	0.013	0.087	0.014	0.152	0.879	0.76	1.316
Adjusted R^2					.249					0.292				
F -statistics					2.493					8.138				
P- value					**.002**					0.000				

Notes: P-value indicate the significance in full and reduced models.
T column denotes "Tolerance" and *VIF* denotes the Variance Inflation Factor. These two variables signify the potentiality of multicollinearity. The table above shows that there are some independent variables, in the Full model, are more likely to have multicollinearity as VIF is more than 2 and tolerance value is closer to 0.This has been avoided in the reduced model whereby the potentiality for multicollinearity is nearly absent as the tolerance and VIF values are in the acceptable range.
Investor dispersion is denoted by the free float rate, Competition is denoted by revenue growth rate. Firm size is denoted by total assets value. Growth is denoted by price to book ratio. Profitability is denoted by ROE.

Table 8-16: Full and reduced regression models for the Usability index

Dependent Variable: Usability score	Full Model B	SE	Beta	t	p-value	T	VIF
(Constant)	.394	.240		1.643	.104		
Government ownership	-.027	.188	-.024	-.145	.885	.277	3.611
Institutional ownership	.072	.176	.065	.410	.683	.298	3.352
Management ownership	.066	.173	.056	.383	.703	.359	2.788
Major investors ownership	-.013	.157	-.008	-.085	.932	.786	1.272
Shareholders dispersion	.104	.116	.103	.895	.373	.565	1.769
Board size	-.068	.128	-.065	-.532	.596	.503	1.987
Management size	.168	.124	.160	1.358	.179	.545	1.833
Duality	.102	.202	.051	.505	.615	.747	1.339
Independence (%)	.074	.113	.072	.655	.514	.616	1.623
Foreign listing	.507	.438	.131	1.158	.250	.591	1.691
Foreign investors	.493	.304	.173	1.624	.108	.665	1.503
foreign directors (%)	.049	.236	.032	.208	.836	.311	3.219
foreign managers	.086	.241	.057	.358	.721	.300	3.333
Number of auditing firms	.190	.162	.123	1.167	.247	.681	1.468
Audit firm size	-.388	.210	-.196	-1.844	.069	.669	1.495
Industry sector	-.554	.205	-.267	-2.706	.008	.774	1.292
Competition	.019	.106	.019	.183	.856	.684	1.462
Firm size	.141	.153	.135	.921	.360	.352	2.841
Growth	.026	.104	.027	.253	.801	.675	1.481
Profitability	-.056	.118	-.055	-.472	.638	.551	1.816
Adjusted R^2					**0.253**		
F -statistics					**2.524**		
P- value					**0.002**		

Dependent Variable: Usability score	Reduced Model B	SE	Beta	t	p-value	T	VIF
(Constant)	.233	.142		1.642	.104		
Government ownership	-	-	-	-	-	-	-
Institutional ownership	-	-	-	-	-	-	-
Management ownership	-	-	-	-	-	-	-
Major investors ownership	-	-	-	-	-	-	-
Shareholders dispersion	-	-	-	-	-	-	-
Board size	-	-	-	-	-	-	-
Management size	.163	.098	.161	1.665	.099	.688	1.453
Duality	-	-	-	-	-	-	-
Independence (%)	-	-	-	-	-	-	-
Foreign listing	.568	.348	.142	1.633	.106	.842	1.188
Foreign investors	**.490**	.247	.167	1.987	**.050**	.902	1.108
foreign directors (%)	-	-	-	-	-	-	-
foreign managers	-	-	-	-	-	-	-
Number of auditing firms	-	-	-	-	-	-	-
Audit firm size	-	-	-	-	-	-	-
Industry sector	**-.486**	.168	-.234	-2.891	**.005**	.976	1.025
Competition	-	-	-	-	-	-	-
Firm size	**.269**	.106	.263	2.534	**.013**	.595	1.680
Growth	-	-	-	-	-	-	-
Profitability	-.135	.082	-.136	-1.652	.102	.946	1.057
Adjusted R^2					**0.32**		
F -statistics					**9.328**		
P- value					**.000**		

Notes: Significance levels: *Significant at 0.10 level, **Significant at 0.05 level,*** Significant at 0.01
T column denotes "Tolerance" and *VIF* denotes the Variance Inflation Factor. These two variables signify the potentiality of multicollinearity. The table above shows that there are some independent variables, in the Full model, are more likely to have multicollinearity as VIF is more than 2 and tolerance value is closer to 0.This has been avoided in the reduced model whereby the potentiality for multicollinearity is nearly absent as the tolerance and VIF values are in the acceptable range.
Investor dispersion is denoted by the free float rate, Competition is denoted by revenue growth rate. Firm size is denoted by total assets value. Growth is denoted by price to book ratio. Profitability is denoted by ROE.

Table 8-17: Full and reduced regression models for the Credibility index

Dependent Variable: Credibility	**Full Model**							**Reduced Model**						
	B	**SE**	**Beta**	**t**	**p-value**	**T**	**VIF**	**B**	**SE**	**Beta**	**t**	**p-value**	**T**	**VIF**
(Constant)	0.31	0.208		1.491	0.14			0.26	0.133		1.951	0.054		
Government ownership	0.1	0.164	0.095	0.614	0.541	0.277	3.611	-	-	-	-	-	-	-
Institutional ownership	0.113	0.153	0.111	0.742	0.46	0.298	3.352	-	-	-	-	-	-	-
Management ownership	0.129	0.15	0.117	0.859	0.393	0.359	2.788	-	-	-	-	-	-	-
Major investors ownership	0.072	0.136	0.049	0.533	0.595	0.786	1.272	-	-	-	-	-	-	-
Shareholders dispersion	0.09	0.101	0.097	0.888	0.377	0.565	1.769	-	-	-	-	-	-	-
Board size	-0.129	0.111	-0.134	-1.16	0.249	0.503	1.987	-	-	-	-	-	-	-
Management size	0.165	0.108	0.169	1.529	0.13	0.545	1.833	**0.21**	0.083	0.22	2.516	**0.013**	0.846	1.182
Duality	0.128	0.176	0.069	0.728	0.469	0.747	1.339	-	-	-	-	-	-	-
Independence (%)	0.098	0.098	0.104	1	0.32	0.616	1.623	-	-	-	-	-	-	-
Foreign listing	**0.665***	0.38	0.186	1.749	**0.084**	0.591	1.691	**0.93*****	0.314	0.251	2.961	**0.004**	0.898	1.113
Foreign investors	0.424	0.264	0.161	1.61	0.111	0.665	1.503	**0.513****	0.215	0.194	2.388	**0.019**	0.974	1.027
foreign directors (%)	0.211	0.204	0.152	1.034	0.304	0.311	3.219	-	-	-	-	-	-	-
foreign managers	0.026	0.21	0.019	0.125	0.901	0.3	3.333	-	-	-	-	-	-	-
Number of auditing firms	**0.287****	0.141	0.202	2.038	**0.045**	0.681	1.468	-	-	-	-	-	-	-
Audit firm size	-0.267	0.182	-0.146	-1.465	0.147	0.669	1.495	-	-	-	-	-	-	-
Industry sector	**-0.568**	0.178	-0.297	-3.196	**0.002**	0.774	1.292	**-0.541*****	0.155	-0.284	-3.494	**0.001**	0.978	1.022
Competition	-0.124	0.092	-0.133	-1.35	0.181	0.684	1.462	-	-	-	-	-	-	-
Firm size	0.219	0.133	0.227	1.646	0.104	0.352	2.841	-	-	-	-	-	-	-
Growth	0.107	0.091	0.118	1.187	0.239	0.675	1.481	-	-	-	-	-	-	-
Profitability	-0.072	0.103	-0.077	-0.698	0.487	0.551	1.816	-	-	-	-	-	-	-
Adjusted R^2					0.339							0.303		
F-statistics					3.311							10.409		
P- value					**0.000**							**0.000**		

Notes: Significance levels: *Significant at 0.10 level, **Significant at 0.05 level,, *** Significant at 0.01
T column denotes “Tolerance” and *VIF* denotes the Variance Inflation Factor. These two variables signify the potentiality of multicollinearity. The table above shows that there are some independent variables, in the Full model, are more likely to have multicollinearity as VIF is more than 2 and tolerance value is closer to 0.This has been avoided in the reduced model whereby the potentiality for multicollinearity is nearly absent as the tolerance and VIF values are in the acceptable range.
Investor dispersion is denoted by the free float rate, Competition is denoted by revenue growth rate. Firm size is denoted by total assets value. Growth is denoted by price to book ratio. Profitability is denoted by ROE.

Table 8-18: Full and reduced regression models for the General content index

Dependent Variable: General content	**Full Model**							**Reduced model**						
	B	**SE**	**Beta**	**t**	**p-value**	**T**	**VIF**	**B**	**SE**	**Beta**	**t**	**p-value**	**T**	**VIF**
(Constant)	0.413	0.215		1.92	0.059			0.21	0.133		1.577	0.118		
Government ownership	-0.074	0.169	-0.068	-0.437	0.663	0.277	3.611	-	-	-	-	-	-	-
Institutional ownership	-0.044	0.158	-0.041	-0.276	0.783	0.298	3.352	-	-	-	-	-	-	-
Management ownership	-0.066	0.155	-0.058	-0.426	0.672	0.359	2.788	-	-	-	-	-	-	-
Major investors ownership	-0.007	0.141	-0.005	-0.052	0.958	0.786	1.272	-	-	-	-	-	-	-
Shareholders dispersion	0.05	0.104	0.052	0.479	0.633	0.565	1.769	-	-	-	-	-	-	-
Board size	-0.16	0.115	-0.16	-1.388	0.169	0.503	1.987	-	-	-	-	-	-	-
Management size	0.168	0.111	0.168	1.513	0.134	0.545	1.833	0.164	0.092	0.17	1.794	0.076	0.687	1.455
Duality	0.025	0.181	0.013	0.135	0.893	0.747	1.339	-	-	-	-	-	-	-
Independence (%)	0.097	0.102	0.1	0.956	0.342	0.616	1.623	-	-	-	-	-	-	-
Foreign listing	0.566	0.393	0.153	1.439	0.154	0.591	1.691	0.711	0.326	0.189	2.184		0.82	1.22
Foreign investors	0.481	0.272	0.177	1.764	0.082	0.665	1.503	0.386	0.23	0.14	1.679	0.096	0.888	1.126
foreign directors (%)	-0.027	0.211	-0.019	-0.128	0.899	0.311	3.219	-	-	-	-	-	-	-
foreign managers	0.163	0.217	0.112	0.751	0.455	0.3	3.333	-	-	-	-	-	-	-
Number of auditing firms	**0.358**	0.146	0.244	2.455	**0.016**	0.681	1.468	-	-	-	-	-	-	-
Audit firm size	**-0.434**	0.189	-0.23	-2.3	**0.024**	0.669	1.495	-	-	-	-	-	-	-
Industry sector	**-0.455**	0.184	-0.231	-2.477	**0.015**	0.774	1.292	**-0.429**	0.158	-0.217	-2.71	**0.008**	0.964	1.037
Competition	-0.116	0.095	-0.121	-1.223	0.225	0.684	1.462	**-0.177**	0.085	-0.186	-2.091	**0.039**	0.775	1.291
Firm size	0.181	0.138	0.182	1.317	0.192	0.352	2.841	**0.264**	0.103	0.269	2.577	**0.011**	0.564	1.774
Growth	0.044	0.094	0.047	0.472	0.638	0.675	1.481	-	-	-	-	-	-	-
Profitability	-0.031	0.106	-0.032	-0.292	0.771	0.551	1.816	-0.067	0.085	-0.071	-0.789	0.432	0.76	1.316
Adjusted R^2					0.335							0.366		
F -statistics					3.271							9.489		
P- value					0.000							0.000		

Notes: Significance levels: *****Significant at 0.10 level, ******Significant at 0.05 level, ******* Significant at 0.01
T column denotes "Tolerance" and *VIF* denotes the Variance Inflation Factor. These two variables signify the potentiality of multicollinearity. The table above shows that there are some independent variables, in the Full model, are more likely to have multicollinearity as VIF is more than 2 and tolerance value is closer to 0.This has been avoided in the reduced model whereby the potentiality for multicollinearity is nearly absent as the tolerance and VIF values are in the acceptable range.
Investor dispersion is denoted by the free float rate, Competition is denoted by revenue growth rate. Firm size is denoted by total assets value. Growth is denoted by price to book ratio. Profitability is denoted by ROE.

8.7 Discussion of the results and verification of research hypotheses

The researcher has tested the association and impact of each group of the independent variables on the nine CIR disclosure indices individually and in aggregation. The dependent variables represent the total CIR index and the four sub-indices of the quality attributes, in addition to four indices representing a variety of information types.

Generally, it has been noticed that most of the ownership and governance variables have disappeared from the regression results. At the same time, industry sector, existence of foreign investors as major shareholders and firm size have persistently appeared in most of the regression models. Hence, in the following paragraphs, the researcher will discuss the generated results of both the bivariate and multivariate analyses in alignment with the prior literature and the pertinent findings of the interviews and case studies.

8.7.1 Ownership impact

The researcher has studied the impact of ownership on the CIR as a total, and on each of the quality attributes; Timeliness, Usability, Credibility and General content. Also, this impact was studied for each type of investor relations related information. In this study, the ownership impact was presented by exogenous ownership (i.e. government, major shareholders and institutional), endogenous ownership (management, including family and employee shares), and shareholder dispersion (i.e. free float). The bivariate analysis (Spearman coefficients) provided in Table [8-3] show that government ownership was negatively correlated with most of the CIR indices. This indicates that Egyptian companies with higher proportion of government ownership are found to disclose a lower amount of information at a lower quality level. Meanwhile, institutional ownership has a significant correlation. This result is relatively consistent with Sriram and Laksmana (2006), who found a negative but insignificant correlation. In respect of the shareholders dispersion is positively and significantly correlated with most of the CIR indices.

However, the multivariate regression models provided in Tables [8-10] to [8-18] provided an evidence that ownership structure, in total, has no significant impact on the nine disclosure indices. This agree with Xiao et al. (2004) who found that state owned shares have significant negative impact on the Content of the website, and also individual investors ownership was not significant in their study. Also, Desoky's (2009) results revealed that the legal form of Egyptian companies has a significant negative impact on the Content of the website only and has no impact on the Total CIR or Format indices. The results for management ownership also agrees with Abdelsalam et al. (2007) study which reports that major shareholding ownership has a marginal impact on Total CIR. Additionally, they found that director's ownership had no significant association with the Credibility of the website. In contrast, Kelton and Yang (2008) reported opposite results for US companies. They found that companies with higher proportion of government ownership are more inclined to disclose more information, especially corporate governance information. The shareholder dispersion, which is measured by float ratio, was significantly and positively associated with the Total CIR disclose index only. This observation is also supported by the ownership statistics in Chapter Seven which show that on average 70% of the Egyptian companies have blocked ownership. This result also may prove that the external stakeholders have very little impact on the CIR practices in Egyptian companies. The interviews with the IR managers also support this evidence, as all the managers admitted that they have never held a survey to identify the website users' information needs. Similarly, Sriram and Laksmana (2006) found that firms' disclosure decisions are more influenced by the needs of the corporation than by what is relevant and useful for investors. The current results also partially match Marston and Polei (2004), as they spotted significant and positive association betwen free float ratio and Total CIR, format and presentation for German companies. However, multiple regression analysis provided no support. Abdelsalam and Street (2007) also provided no significant impact for ownership, measured by the number of shareholders, and timeliness of the CIR for UK companies.

In brief, it was found that ownership structure has no significant or direct impact on the quantity and quality aspects of CIR practices exercised by Egyptian companies. However, there is some evidence that companies that are owned or managed by the state are more expected to possess less informative, lower quality and less advanced websites. Also, the low explanatory power of all models related to ownership indicate that other factors not related to the economic or agency problem may have a more important effect. Accordingly, all hypotheses related to the impact of the ownership on the CIR main and sub-disclosure indices are not supported in this study.

8.7.2 Corporate governance mechanisms impact

The researcher examined four of the common internal corporate governance mechanisms that companies normally employ to improve their transparency and raise their disclosure level: Board size, Management size, Duality and Independence. Akin to ownership, all these mechanisms yield very little supporting evidence. The correlation results appear on Table [8-5] reveal that there is a positive and significant association between CIR disclosure indices and Board size and Management size only. Nevertheless, the regression results of both the full and reduced models in the tables from [8-10] to [8-18] provided mixed results. Management size is positive and significant to General characteristics of the IR/Financial section and Credibility at (P = 5%) and marginally significant to Usability and General content at (P= 10%). Management size has no impact on the remaining disclosure indices. disclosure indices. These results partially agree with Kelton and Yang (2008) as they reported significant and positive impact for Board independence but no impact for Duality. Also, Abdelsalam and Street (2007) reported significant positive impact for Board independence on Timeliness of CIR. Therefore, the researcher can conclude that hypotheses H2a, H2b, H2c and H2d are not supported.

8.7.3 Industry type impact

The influence of industry type on CIR practices has been thoroughly addressed in this study. In Chapter Seven, for instance, the researcher examined the significance of differences in the CIR indices at industry level. The Kruskal Wallis test results showed that there is an evident difference in most of the disclosure indices within and in between the suggested sectors. Further analysis (i.e. Jonckheere-Terpstra) was also used to identify the direction of this variation. It was illustrated that companies operating in the industrial field (manufacturing, basic resources or utilities) are more inclined to disclose less information. These companies were more concern with disclosing more general knowledge about their products, their plants' location or capacity and other general information related to their mission and history. On the other hand, companies in the banking and financial or service sectors, especially telecoms services, tend to possess more informative, usable and well presented websites. This result has also been supported by other research on Egyptian companies such as Aly et al. (2010), who pointed out that the communication and financial sectors provided higher levels of CIR disclosure. Similarly, Debreceny et al. (2002), Xiao et al. (2004), Bollen et al. (2006), Bonson and Escobar (2006), Sriram and Laksmana (2006) and Gandı'a (2008) noted that companies operating in the financial, high-tech, and communication industries tend to disclose higher level of CIR. However, Desokey (2009) and Uyar (2012) failed to capture the impact of industry on CIR disclosure. In our study, the industry sector has a pervasive impact on most of the CIR main and sub-disclosure indices. Industry type impact on CIR could be attributed to Bonson and Escobar's (2006) contention that some industry sectors (such as manufacturing and utilities companies) may need to disclose specific types of information in order to improve their image in front of the domestic community.

Alternatively, some firms may follow similar disclosure practices as their counterparts to avoid being misinterpreted by their market. Given the absence of any regulation or rules related to CIR practices in Egypt, it can be argued that the CIR practices are more exercised for creating a better image or fixing a current negative image about the company. This is also done within the framework of the general competition strategy. Therefore, it is realized that large companies, which earn higher revenues (proxy of competition), tend to disclose less. This is also supported by the responses of some IR managers in Chapter Seven. They articulate that they will never publicly disclose any information that could prejudice their competitive position. This may be extended to most Egyptian companies in general. However, for those operating in Telecoms and High-tech, one possible justification for their unique disclosure pattern may due to the fact that their industry is based on specific knowledge, hence the agency cost in such companies is usually high (Debreceny et al., 2002). Therefore, they are expected to disclose more to decrease this cost. However, in Egypt's case, the researcher would suggest that the evident difference in the disclosure level across the investigated websites could be attributed to the nature of the produced product. Companies in the banking and financial sector tend to possess better experience and knowledge about the required information and how it should be presented, as the information is the key product of such companies. Besides this, such companies are exposed to more rules and restrictions in general. However, manufacturing companies or even companies in the health and tourism fields lack this experience and knowledge and regulation. Consequently, most websites of such companies did not contain even an IR or financial section. According to the results of both bivariate and multivariate analysis, hypothesis H4a is supported.

8.7.4 International exposure impact

International exposure reflects how much the exposure to the international environment can affect disclosure by domestic countries. Despite the fact that the majority of CIR research has focused on the relationship between foreign stock exchanges and corporate disclosure online, a few researchers such as Oyelere et al. (2003) and Bollen et al. (2006) have examined other measures of international exposure. International exposure can be measured in different ways. In this study, the researcher used four measures: existence of foreign investors as major shareholders, recruiting foreign directors on the board or in management, and having the company's stock traded on other foreign stock exchanges. The researcher could not measure the international trading impact as the overseas revenues or market share was not available for the companies under investigation. The bivariate results provided significant and positive association between all four measures and most of the CIR indices. However, the multivariate regression models (full and reduced models) showed positive and significant impact for only foreign listing and foreign investors. These results were consistent with a number of related studies like Xiao et al. (2004) and Marston and Polei (2004). Consequently hypotheses H5a and H5b are not supported, meanwhile H5c and H5d are supported.

8.7.5 Audit firm impact

Audit firm impact has been measured in this study by two variables: Number of auditing firms auditing the company and Being audited by one of BIG4 audit firms. Actually, audit firm impact has been directly investigated in the interviews in an attempt to understand how professional institutional pressure has affected the CIR practices of the Egyptian companies. Indeed, the interviews with two auditors from a local audit firm that is affiliated to one of the BIG4 audit firms, found that auditors in Egypt are not so far incorporated in reviewing the CIR. They have not even been engaged in such a process for any client. This finding is further supported by the results of the bivariate analysis whereby Audit firm size has no significant association with any of the CIR disclosure indices, as shown in Table [8-7]. On the other hand, a marginal negative impact was realized for Audit firm size on Total CIR in the full regression model as appears in Table [8-8]. Equally, Number of auditing firms provided significant positive association only with the General content index as in Table [8-7]. Also, Table [8-11] demonstrates a positive marginal impact for Number of auditing firms on the General characteristic of IR/Financial section. Because of these inconsistent results, hypotheses H6a and H6b are not supported.

8.7.6 Impact of control variables

The researcher controlled for four firm characteristics variables that indicate financial performance of the investigated companies: Firm size measured by total assets, competition measured by the growth in revenue, profitability measured by Return on Equity (ROE) and growth measured by price to book ratio[1]. Examining all the regression tables

[1] Other control values have been studied which are liquidity, leverage, growth in profit and quick ratio. After testing the correlation between independent and dependent variables , including control variables, it was realized

show that, as in the mainstream of CIR research (Debreceny and Gray, 1999; Ashbaugh et al, 1999; Craven and Marston, 1999; Ettredge et al., 2001; Debreceny et al., 2002; Larrán and Giner, 2002; Marston, 2003; Marston and Polei, 2004; Xiao et al., 2004; Bonson and Escobar, 2006; Kelton and Yang, 2008; Aly et al., 2010; Uyar, 2012), firm size vigorously appeared in most of the regression models, especially in the reduced regression models. However, Profitability (ROE) provided a negative but insignificant impact in respect of Total CIR, Internet usage main indices and general IR/Financial section characteristics, timeliness, usability credibility and general content. In contrast, it showed positive but insignificant impact on General website characteristics. However, it showed significant and negative impact on the investor relation information index. These results imply that profitability has no fundamental impact on CIR in Egyptian companies. On the contrary, increases in profitability may induce some companies to reduce their disclosure, as indicated by the negative relationship between profitability and Investor relations information. Similar to profitability, growth ratio (price/book) showed an insignificant impact on most of the CIR main and sub-disclosure indices, except that this impact was positive. However, revenue growth, which was considered as a proxy for corporate competition, expressed marginal and significant impact in most of the regression models. For instance, the reduced regression models in Tables [8-8], [8-13] and [8-16] reveal that competition has a significant negative impact on the Total CIR(-0.141, $p < 0.10$), and on timeliness (-0.166, $p<0.055$) and General content (-0.177, $p <0.05$) indices. This result supports our theory that competition has an impact on corporate disclosure on the Internet. Therefore, companies that generate more revenues and more profits tend to disclose less. This observation can be explained by profitable companies or companies in a strong competitive position not needing to disclose more information to the public. However, other companies in critical competitive positions or confronting strong competitive pressures will try to disclose more information to increase their publicity and improve their image in the domestic community. This interpretation is consistent with the response of the e-business manager in Company G as elaborated in Chapter Six who explained that the severe competition that this company suffered from in the recent years compel them to look for an effective means to enhance their revenue collection process. This was also part of their marketing strategy which aims to provide better service to their customers through providing e-payment facilities on their websites. That was the key motive for this company to update their original website. The updating process was not limited to the customers services but also addressed the IR section. This section contained very little financial information in

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that these variables either insignificantly associated with the dependent variables or they are highly correlated with other independent variables. As a result they have been excluded from the regression.

2005, but in 2010 this company was awarded as the best IR website. It was the same with Company C, the IR declared that the company decided to open new markets in other regions and that is why they thought of replacing their old website with a new one to be able to compete in these new markets.

8.8 Discussion of the empirical results in light of the institutional logic

Since the institutional logic is intangible and tacit in nature, it was difficult to directly measure its impact on the extent of CIR practices. Thus, the researcher has decided to assess its impact on CIR practices and on other quality and quantity aspects. In this chapter, the researcher continues examining the nature of the embraced logic by identifying the factors that are associated or exert a substantial impact on the CIR practices. the researcher examined the impact of ownership and corporate governance mechanisms on the CIR main and sub-disclosure indices.

The researcher found that most of these variables were not significantly associated with these indices. Moreover, the explanatory power of the generated regression models is relatively low. This proposes that other social, cultural or professional variables may be more relevant for explaining the changes in CIR practice in Egypt. To test this proposition, the researcher incorporated other variables to test the impact of some professional groups such as auditors. The regression results also revealed no significant impact on CIR practices. Complying with professional pressures should induce companies to follow specific patterns that are pervasively embraced by their counterparts. However, this was not found in Egypt case. On the contrary, the results of the Kruskal Wallis test illustrate that industry sectors were quite different from each other, and even that companies in the same industry sector were unlike each other, especially in respect of the content. This noticeable ‘individuality’ seems to characterize most of the investigated companies and reflects the companies’ tendency towards making themselves unique from other domestic companies. This discrimination represents a fundamental part of their marketing strategy. This is further confirmed by the results of revenue growth, as explained above. Hence, it seems that CIR disclosure practices are more driven by a very conservative marketing based logic. Thus, in some companies, the legitimate CIR practices are determined internally on an individual basis. No external professional party or investors, either individual or institutional, has an impact on the content of the corporate website. This is also supported by the interviews and from the observed weak associations between individual and institutional ownership and audit firm variables and most of the CIR disclosure indices. The variables of international exposure also show that companies possessing international relationships with other foreign countries, by having their stocks traded in such countries or by having individual foreign investors as a part of its blocked ownership, will seek to follow more advanced CIR practices in order to be equivalent to their counterparts abroad. Given the low level of Total CIR and Timeliness and Credibility levels for the entire sample in Chapter Seven, this indicates that even those companies which are internationally exposed are not fully imitating the CIR practices in other developed countries. This may also be attributed culture impact, i.e. secrecy, which distinguishes the Egyptian community. Secrecy may stimulate companies to disclose less (Haniffa and Cooke, 2002).

In conclusion, in a weak institutional environment in Egypt which lacks most of the coercive pressures (i.e. regulation, constitutions, laws) and professional pressures (e.g. professional standards, principles, guidelines, codes of conduct) at the moment. Thus, companies will have greater propensity to be directed by the cognition pressures instead. They will adhere to the prevalent social and cultural norms in their fields while performing their activities. Leading companies (i.e. large, monopolistic, possessing international relationships) would attempt to advance these pervasive social and culture pressures by creating more a complicated institutional logic that compromises between the social and economic aspects, especially if the firm is operating in a less bureaucratic environment.

Taking the results of Chapters Seven and Eight together, it can be realized that many Egyptian companies are following a marketing based logic supported by a technical based logic that is enforced by IT and website developing firms. No specific trends in the CIR practices at the level of the entire sample of industry sectors have been spotted; this indicates that companies are not following a legitimated behaviour, but on the contrary, variations and dissimilarities in most of the quantity and quality aspect were quite evident. Accordingly, we can conclude that Egyptian companies are embracing marketing based logic supported and complemented by technical based logic and this contributes to the evident diversity and incomparability in the content and features of their corporate websites. Also, marketing based logic is based on social and cultural institutions that are pervasive in the Egyptian community. Meanwhile, the technical based logic is driven more by the professional ICT guidelines followed by the IT and Internet experts (i.e. website developers). The accounting and auditing profession has no considerable role as yet.

8.9 Summary

This chapter has demonstrated the explanatory study. Indeed, this part of the quantitative study complements and confirms the findings produced in the previous two studies. The generated results of the explanatory study would indicate whether the efficiency based logic is the one which dominates the decisions related to the CIR practices in the Egyptian companies, as it routinely occurs in the developed countries. The associations measured by the non-parametric bivariate Spearman correlation tests reveal that some independent variables such as government ownership, and industry sector have a significant but negative association with most of the CIR main and sub-disclosure indices. This indicates that companies with a higher proportion of government ownership or operating in the industrial sector tend to have poor websites in terms of quantity, timeliness, credibility and usability. However, other variables such as foreign listing, existence of foreign investors as major shareholders, existence of foreign directors and managers in the company are significantly and positively associated with most of the CIR indices. The bivariate tests do explain the changes in the dependent variable in respect of changes in the independent variables. The researcher run linear multiple regression for nine of the CIR disclosure indices using SPSS. This method is helpful in testing the research hypotheses and determining the robust variables that have a significant relationship with the CIR indices.

After controlling for firm size, profitability, growth and competition, there was evidence that industry sector, foreign listing and existence of foreign investors as major shareholders have the most significant impact. The explanatory power of most of the generated models was too low, which indicates that these variables which are based on economic theory and which support the efficiency based logic are not explaining the changes in the CIR level. Specifically, it was realized that the explanatory power and even the number of independent variables that influence the Internet usage level were even lower than the rest. This implies that other factors are having an impact on the abilities of companies to employ Internet facilities on their websites. These variables are not necessary related to corporate governance or ownership. Therefore, this chapter confirms that Egyptian companies, notably the large ones, are not following efficiency based logic, nor do they follow legitimacy based logic.

Chapter 9: Summary and conclusion

9.1 Introduction

The Corporate Internet Reporting practices depend essentially on the fascination of Internet technology. Thus, many companies worldwide design their own websites as a dynamic and interactive interface to disclosure various business news and information in an attractive and enjoyable fashion. Reviewing CIR literature demonstrates that the pervasiveness and advancements in the CIR practices in terms of content, presentation and communication are not equally realized across countries. Even in the same country, CIR practices are evidently diversified from one company to another as discussed throughout this study. This observation instigated the intention to identify the nature of the potential institutional logic that is commonly followed by publicly listed Egyptian companies as an exemplary case for an Arabic and developing country which has accommodated the Internet technology since its inception. Understanding the institutional environment in such a country and the institutional logic that is pervasively embraced by the majority of companies as well as identifying the main participants inside or outside the company who contribute to this process is highly imperative to interpret the observed diversity in the magnitude of the disclosed information as well as quality attributes of created websites by Egyptian companies which are exposed to same institutional pressures.

Accordingly, the current chapter summarizes the overall study and concludes with some suggestions that would extend the research on CIR. First of all, section 9.2 summarizes the research purposes for the qualitative and quantitative studies separately. Section 9.3 summaries the findings of the qualitative study. These findings covered the perceptions of internal and external participants in the CIR process, the implemented procedures that lead to disclose the corporate financial and non-financial information online and the induced logics. Meanwhile, section 9.4 summaries the findings of the quantitative studies (i.e. the descriptive and explanatory). Section 9.5 discusses the applicability of the different disclosure theories to the CIR practices in the Egyptian listed companies. Section 9.6 demonstrates the various implication of the empirical findings. Section 9.7 provides several recommendations to the professional institutions and Egyptian companies. Section 9.8 highlights the contribution of this study.. Finally section 9.9 presents the limitations of the current study and the suggested future research.

9.2 Summary of the study purposes

As illustrated throughout this study, the main purpose is to explore the nature of potential institutional logic(s) which pervasively dominate the CIR practices in the Egyptian listed companies. Despite the rapid growth in numbers of Egyptian corporate websites, the CIR practices per se had not witnessed great improvements. This observation has cast doubts about the logic underpinning these practices and whether Egyptian listed companies are really following the same logic that is largely embraced by a number of Western and developed countries. As argued in Chapter Two, most of these countries are primarily using the Internet in improving their business reporting practices and to raise their transparency and governance potentialities. On the other hand, they increase their online disclosures to reduce their capital and agency costs. The issue that made some people believe that the Internet would replace the conventional means of distributing the corporate financial reports (Fisher et al. 2004). Therefore, some researchers in Western countries describe the Internet as an “investor relations vehicle” (Hedlin, 1999). Departing from that point, the main purpose that the researcher seeks to attain is to find out whether the Western logic that is based more on economic and financial logic is also followed by Egyptian listed companies while developing and maintaining their websites. In an effort to collect sufficient evidence, the researcher used a mixed methods approach. Therefore, different studies (i.e. qualitative and quantitative) with different purposes and methods have been sequentially conducted.

The qualitative study was implemented first to reveal the nature of the Institutional logic that is commonly followed by large listed Egyptian companies which possessed a website and have already exercised the CIR practices for several years, as explained in Chapters Five and Six. Thus, the purpose of this stage of the study is to identify the logic that drive Egyptian companies to utilize the Internet for disclosing their business information.

Afterwards, the descriptive study was carried out by analysing the information content of 115 corporate websites representing almost half of publicly Egyptian companies 220 listed on the Egyptian stock Exchange during the period December 2010- February 2011. Indeed, this part of the study seeks to attain two purposes. First, to determine to what extent the induced logics generated from previous stage has also been followed by the rest of Egyptian listed companies. Secondly, to specify how the embraced logics have also affected the extent of CIR in total as well as each information type. The qualitative attributes of corporate website (i.e. timeliness, usability, credibility and general contents) have also been examined and assessed this was provided in Chapter Seven.

Finally, the quantitative study aims primarily to specify which factors and theories are more pertinent to predict the changes in the extent of CIR or the changes in the other sub-indices as demonstrated in Chapter Eight. Essentially, outcomes of this study would assert whether the CIR practices in Egypt are following the same efficient logic that that seems more pervasive across Western and developed countries by scrutinizing the influence of agency and corporate governance factors compared to other international and institutional pressures. The following sections summarize the outcomes of each of the aforementioned studies.

9.3 The qualitative study: The logics underpinning the CIR practices

In Chapter Four, the researcher developed a framework that suggests four main types of institutional logics that is envisaged to govern the CIR practices at a certain institutional level. The researcher argue that it is possible that one or more of these logics could lead the companies to construct their websites and presents their information in a specific manner. This manner could also be copied at wider scale to represent an institutionalized pattern. The abundant literature on CIR enabled to identify four common types of logics raised that have been commonly followed by most companies and countries and they are efficiency or economic based logic, legitimacy based logic, marketing based logic and technical based logic. Each logic is formulated and imposed by certain group of individuals (inside or outside the company) who foster certain perceptions about the Internet and its importance to the corporate reporting process. The researcher also incorporated the powers and interests of those individuals in the analysis.

Various qualitative methods such as multiple case studies, semi-structured interviews in addition to qualitative content analysis of the websites of the companies covered in case studies have been exploited. The conducted seven cases represent a sample of large listed companies operating in different industry fields and which possess websites albeit at different levels of quality. In order to identify the nature of the Institutional logic, it was imperative to know who really participate in developing and maintaining those websites, specially CIR practices. Therefore, the interviews incorporated a wide range of users specifically individual investors , financial analysts and auditors. Further interviews have been conducted with some IT experts, and website developers as well as with regulators (i.e. EGX disclosure department)all this in an effort to understand the perception, attitude and role of these participants regarding the CIR process. The professional and education background of these participants (or social actors as usually described in the institutional theory) are fundamental to understand the implicit institutional logic.

9.3.1 Internal and external perceptions of the CIR practices

Key research question that is repeatedly illustrated in Chapter One, Five and Six is anchored around understanding the adopted institutional logic at organizational level. This was attained by investigating the perceptions and role of the external and internal participants. As discussed in Chapter Six, some IR managers perceived the corporate website as a "store" for frequently required information or for the information that is important to a wide range of users. Most of the interviewed companies have been involved in the CIR practices because it was useful in many ways:

- It saves them a lot of time and effort which usually consumed in disseminating the corporate financials to the interested investors.
- It reduced the time needed to fax corporate financials to the institutional investors and other investors abroad.
- It minimizes routine tasks that are used to be carried out by the IR managers to handle the investors' enquiries through long phone calls or face to face meetings. The disclosure over the Internet provided more opportunities to concentrate on more substantial and sophisticated issues.
- In some cases, disclosing the corporate information online does not only enable some companies to confront a severe competition, but also it enables them to improve their image/reputation within their local communities(at least).
- It allows them to penetrate new markets by launching new websites that correspond to these markets.

The Internet online disclosure does not only bring opportunities to the companies, but also it creates many challenges that managers badly concern. For instance, some competitors may take the advantage of the information disclosed on the company's websites. Another potential weakness is that the level of technology available at a domestic level may confine the managers' ability to upload sufficient information or to display the information in more advanced way and competent. Moreover, most of the interviewed IR managers admitted that they are not using a systematic or formal way to identify the website users' needs of information. In response, they mainly rely their former experience or on some direct contacts with a few stakeholders or stockholders. This was also realized by Gowthorpe (2004) in small size UK companies who described this process as haphazard.

Briefly, the Egyptian managers are convinced that the Internet is a promising instrument to improve their disclosure activities. Yet, their conservativeness and competition concerns impel them to manage their CIR practices within the marketing or public relation strategy. Lymer (1999) mentioned that the Internet extends the possibilities for management of business information both within and in between businesses. More importantly, some companies intend to design their websites in a way that provides a comprehensive overview of the company by all its activities and departments without focusing on financial and accounting information. Indeed, most of the interviewed managers explained that their financial disclosure practices are organized as a part of the overall marketing strategy. Hence, it is highly governed by marketing and technical perspective.

In respect of the external participants, they indicated that Egyptian companies' usage of the Internet is gradually improving and that some companies are taking serious steps towards improving their online disclosure. The individual investors and few financial analysts expressed that few websites offer useful information to assess the companies' investments and to construct a general background about the company. However, they mentioned several drawbacks that Egyptian corporate websites may suffer from such as:

- Some companies developing their websites mainly to promote better image about itself irrespective of the real needs of the website users.
- Lack of credibility and insufficient information content that made the website users to pursue other resources.
- Lack of communication between the company and the individual investors and financial analysts which make them struggle even to get the corporate basic information such as financial statements, in some cases.
- Inconsistency and incomparability in both structure and content of many of Egyptian websites increase website users confusion and obstruct the website research process.
- Providing most of the websites in English made it difficult for some website users to understand the information provided on the website.
- In some case, providing the companies information on the corporate website in English language only prevents many native Egyptian investors from using such as website or a document. Therefore, the website users may perceive such a website is less useful or at least it did not designed for the domestic users.

In a nutshell, the interviewed shareholders and other stakeholders believe that the Internet is a powerful instrument to obtain any piece of information in their work or daily life. However, they perceive that the current Egyptian corporate websites still need more improvements especially in respect of credibility and communication which make these website unreliable and insufficient source of information. They suggest that the corporate websites still do not provide effective communication facilities between the company and the website users including the individual investors. They also believe that the website contents are prepared according to the companies' view which is not necessarily match the users' needs of information. Furthermore, the interviewed users of some corporate websites expressed that they did not find get any opportunity to proclaim their needs of information to the companies. Thus, they used to consult other credible sources of information.

9.3.2 The CIR process and dominant participants

Material information that may have a direct impact on the stock prices, such information, financial or non-financial, need to be submitted first to the disclosure department to be announced equally to all current and potential investors. This procedure is undertaken in consistent with the disclosure rules imposed by the EGX. Violating this rule would expose the noncompliant company to delisting. The disclosure department in the EGX headed by the general manager is held responsible for disclosing material information on the internal terminals of the EGX's as well as on its website. After announcing this material information to the public, the company are ultimately capable to disclose it on its own website. For other less material information, it is up to the company to uploaded it directly to its website. The responsible managers could be assisted by some external website developing or alternatively they may use the "content management" facility which is directly embedded in the dynamic website nowadays.

Additionally, the interviews with internal and some external participants revealed that the CIR process is not totally held inside the organization, but rather it is usually conducted by a variety of participants including website developing firms. Essentially, the website undergoes through two main stages of updating. The first stage incorporates the process of designing the website for the first time or launching an updated one . This process is highly technical and most of the effort in this stage is attributed to the Information technology (IT) department, if there is any, or the website developing firm. These firms used to support companies or even individuals with technical service such as website developing, maintenance, emails and all alike. At this stage, the underlying issue is to establish a website that operates friendly and smoothly with little malfunctions.

After a new or an up dated website is deployed on the Internet, the second updating stage would start. At this stage, the company used to update its information content with new information items or announcements. This process used to be implemented irregularly depending on the nature and timing of the event or the document that need to be disclosed. Generally, the interviews revealed that there are three possible scenarios that may occur:

- Sending the information to the IT/website developers and they will upload them to the website.
- Sending the information to the marketing manager who acts as the internal coordinator of the website contents and who is responsible about presenting the company's information in light of the general marketing strategy in accordance with the company's image and vision.
- Instruct the internal departmental managers on how to use the "content management" software. In this case, each manager will be individually responsible for updating the website section related to his/her department.

Each scenario has particular implications on the disclosure and presentation of the business information on the Internet. For instance, the first scenario, which was pervasive in the earlier years, led to deterring the updating process of the website contents. The issue that decreased the timeliness of the information. This was occurring because:

- The IT/website developers feel that they are not responsible for updating the website information content and they are only responsible for the technical issues.
- The IT/website developers are overloaded with other technical tasks the issue obstructs them from updating the corporate website in a reasonable time. Also, they will not be penalized for this delay.

The second scenario exists in some companies and it requires the internal managers to send the information that they consider as important to the marketing department. Then, it will assemble all the information from all the departments and organize them on the website as dictated by the marketing strategy. Thus, the marketing managers used to care more for the attractiveness and technicality of the website than for the value of the disclosed investor relations information. This has been realized in some websites, whereby the product and services section constitutes the largest part of these websites compared to the financial and accounting information section. In addition, the marketing managers used to devote more Internet facilities to serve the current or potential customers rather than to fulfil the investors 'needs of information. The descriptive study showed that the variations in the Internet usage and usability of the website were relatively less than the variations in the investor relations information, credibility and timeliness. The third scenario is relatively better than the first two scenarios. It has been noticed that:

- The internal managers are dominating this process without any assistance from other staff in same department.
- There is a lack of internal network that joints the departmental managers together as they updating the contents of the corporate websites.
- There is no internal or external auditing party responsible for reviewing the contents of the corporate website.
- In some companies, the whole process of the website development and maintenance are assigned to one manager who will operate closely with a website developer. This centralization of the CIR and website development process might decrease the credibility of the corporate website and in some cases the websites may contain mistakes and incomplete data due to the lack of verification.
- The role of CEO marginal so, he/she used to plan the general disclosure strategy and dictate the main orientation leaving the details for the internal managers.

Obviously, the companies still dominating the corporate websites including the CIR practices. The website developers (i.e. expert house) are only responsible for the technical aspects unless they were asked to be more involved. Therefore, it can be expected that the technical facilities in the corporate website will be assigned to the website developers who design these facilities in alignment with their pure technical experience and educational background.

In respect of the role and perceptions of the external participants such as individual investors, financial analysts, auditors and internal accounting departments in addition to the Egyptian stock market (EGX) has no direct authority or role in the CIR process, the researcher found out that the individual investors tend to seek the information from brokerage firms or the EGX. They also used to refer to the traditional media; newspapers, TV and radio.

Financial analysts neglected the corporate websites and tend to rely on other professional websites (national or international). These websites are more preferred as they aggregate the corporate information all in one place, provide the required financials on a timely base. Moreover, many financial analysts prefer to collect the information directly from the company or from the EGX's website.

The interviewed auditors and EGX disclosure department believe that they are not enforced or entitled, at the present time at least, to be involved in this process as long as there is no law has been issued yet. Thus, they still insist to commit with their conventional role, no more no less. As a result, it seems that the current CIR practices are directed by two main logics marketing and technical based logics. Meanwhile the efficiency based logic does not seem to be a popular one in most of Egyptian companies. Therefore, many of the Egyptian corporate websites are lacking most of the required financial and accounting information and have low quality in terms of timeliness and credibility in particular. Besides, there is no direct and effective communication channel between the individual investors, in particular, and the Egyptian listed companies to support them with their information needs.

9.3.3 Institutional logics embraced by Egyptian listed companies

Given that the notion of the institutional logic has been increasingly used by many researchers nowadays to interpret the changes in the organizations' behaviour. The researcher used this notion which is grounded in the neo-institutional theory to find out if Egyptian listed companies are necessarily following the same logic which is prevalently embraced by other listed companies in the Western and developed countries.

In the case studies revealed that some of Egyptian listed companies had originally followed the legitimacy based logic in the earlier years of the Internet inception. These companies emulate other multinational companies that operate worldwide irrespective of its industry field. At this time, the main driving motive to possess a website was to reserve a place on the Internet. However, over the years these companies confronted several challenges such as restructuring their ownership, penetrating new markets and acquisition of other companies which instigated the need to modify and update their websites to reflect these changes. Thus, the embraced logic has slightly changed and became more oriented towards marketing and technical based logics. According to IR managers, neither capital cost nor information processing costs were a key issue affecting the development process of their websites as these costs are minimal to the size of the company. In contrast, the level of competition confronted in the domestic or/and international environments was a main concern for most of the interviewed companies.

It was also realized that the interviewed companies are depending on the website developers and marketing managers in outlining the overall disclosure and presentation strategy for their websites. Even the IR managers who are responsible for presenting the financial information on the Internet are equally convinced by the marketing perceptive. This perception highlights the importance of presenting the website in a unique outlook that distinguishes it from other websites even in the same industry field. Moreover, the limitation and weakness of the role of external auditors, investors and internal accountants in the CIR process imply that large number of Egyptian listed companies are still oriented mostly by marketing and technical based logics while deciding what to present and how to present their business information on the Internet. The disclosure and presentation processes are controlled by the marketing perspective rather the financial perspective. It is also controlled by the company's management not by the investors or other independent supervisory bodies.

9.4. Findings of the descriptive and explanatory studies

The quantitative study has been conducted in an effort to find out how the induced logics were reflected in the quality and quantity aspects of a wider range of Egyptian listed companies. This was performed through using quantitative content analysis method to analyse and quantify the online information of 115 websites out of 122 websites that was available online during the period Dec2010 until Feb.2011. The quantitative study is composed of two consecutive studies; the descriptive study and the explanatory study.

9.4.1 Description of the CIR practices of the Egyptian listed companies

In respect of the descriptive study, it aims to measure the current information items that frequently provided on the corporate website. The researcher applied a disclosure index that was used by Abdelsalam et al (2007) and which is originally composed of 143 disclosure items. The researcher modified this disclosure and added other relevant disclosure items to match the Egyptian websites. Hence, the final disclosure items slightly increased to 145 items covering. Then, the researcher classified these items into several indices. Each reflects a different disclosure dimension as follows:

Total CIR disclosure index; offers abroad and aggregated view about the level of CIR disclosure for the sampled websites. This index is composed of 145 items. It is further divided into four sub-indices representing different quality attributes:

- Timeliness index is composed of 15 items.
- Usability index is composed of 60items
- Credibility is composed of 49 items
- General content is composed of 21items.
- General characteristics of the website index is composed of 7 items.
- General characteristics of the IR/Financial section is composed of 7 items as well.

The investor relation index is composed of 110 items and synthesizes the various types of business information in six groups of information that are usually required by many stockholders and stockholders. These sub-indices are:

- The annual financial statements or reports is composed of 19 items.
- The interim reports is composed of 10 items
- The Auditor' s report is composed of 28 items
- The corporate governance is composed of 23 items
- Shareholders and stock price information is composed of 23 items
- Press releases and news is composed of 7 items

The Internet usage is composed of 21 items in total. It gives a detailed view about how the Internet user support and communication facilities in addition to multimedia tools are employed . This is a main index and consists of other two sub-indices:

- The multimedia index is composed of 3 items
- User support and communication facilities is composed of 18 items.

The researcher examined the extent of all of the above disclosure indices at two institutional levels:

- The EGX level, so the researcher examined whether all CIR indices are analogous or divergent across the entire sample. This sample represents the population of publicly listed Egyptian companies that possessed an operating websites during the period of research.
- The industrial level, so the researcher examined whether all CIR indices are analogous or divergent across three industry sectors namely the banking and financial service, the service sector and the industry sector.

In respect of the explanatory study, the main aim was to identify the significant factors that have a profound impact in aggregation on both the quantity and quality attributes and the CIR practices. Specifically, the researcher assessed and compared the impact of two groups of variables related to institutional and economic based losgics to see which group is more imperative in Egypt case.

The analysis has been extended further to determine the significant factors that affect the investor relations information as well as the Internet usage. In this study, the researcher counted on using basic statistical analysis which are the bivariate analysis (i.e. Spearman correlation coefficients) and Multivariate regression analysis. The bivariate analysis examines the individual association between the dependent and independent variables using a non-parametric test; Spearman correlation coefficients. In addition, the multivariate regression analysis has also been used to investigate the significant variables that affect the different CIR indices in aggregation.

The descriptive study seeks to assess four main dimensions of the CIR practices that carried out by publicly listed Egyptian companies. The extent of the CIR disclosures, the quality attributes of the websites, the comprehensiveness of investor relations information, and the usage of the Internet facilities and multimedia.

This study showed that from 220 publicly listed Egyptian companies, 122 possessed a website address (i.e. URL) during the period (December2010- February 2011). Nearly half of these companies 115 (52%) possessed well operating websites that could be analysed. The final sample was further classified according to three main industry sectors; 22 (19%) belong to banks and financial, 17 (15%) belong to the service sector and 76 (66%) belong to the industry sectors. These three industry sectors represents various companies operating in 12 different industries according to the EGX coding scheme. Segregating these industries may lead to insignificant results especially when using Kruskal Wallis Test as realized in (Craven and Marston 1999, Marston 2003). Thus, they were calssified into three groups only.

The content analysis revealed that 73 (63%) of 115 had websites with investor relations or other financial section. Yet, only 62 contained financial information. The remaining websites only provided general information related to the corporate profile, message, mission, produced products or services. Less than half the websites 52(45%) provided recent annual financial statements or annual reports on their website. Fewer websites, 25 (22%) contained corporate governance section, social responsibility section 28 (24%) and 33(29%) websites contained shareholders and stock price section In respect of the qualitative attributes of the investigated websites. On the opposite, more websites 46 (40%) contained a section for news or press releases.

In respect of the quality attributes of the Egyptian websites in the sample. The Timeliness level was relatively low whereby the websites disclosed 18% of (15 items) on average. The Usability results are slightly better than for Timeliness and the disclosure level was 24% of the Usability index (60 items). Regarding Credibility(49 items), it is recognized that the level of disclosure is low as in timeliness; (18%) on average. Eventually, General content (21 items) results average score is relatively higher (28%) than in the rest of indices. These results illustrate that Egyptian companies are performing better in respect of content and usability rather than in timeliness and credibility. Besides, these results concur with the antecedent expectations which proposed that these websites lean more towards marketing and technology based logics rather than economic logic as explained earlier.

More importantly, it was discovered that there is a manifest diversity in the CIR practices at the population level of Egyptian listed companies and at industry level. This implies that there is no unified pattern or legitimate CIR practices that largely adopted by the majority of the Egyptian companies. Hence, the legitimacy based logic is less likely to affect the CIR practices in Egypt. However, it was noticed that banks and financial service sector attained the highest scores in almost all the disclosure indices followed by service sector and industry sector at the end. This result has been confirmed in chapter eight and implies that the CIR institutional environment still weak and hence the CIR practices are loosely institutionalized in Egypt.

Besides, it seems that the pervasive social and culture institutions that affect the conventional corporate reporting practices in Egyptian companies are still influencing the Internet based reporting practices. Only the technical norms which discipline the website developers' skills and experience is the one that indirectly affects the Internet usage and the design of the entire corporate website. In the meantime, accounting and auditing professional practices only affect the traditional preparation process of the financial statements but not the presentation of these statements on the Internet.

9.4.2 Factors affecting the CIR practices by Egyptian listed companies

As illustrated in chapter eight, the explanatory study aims to determine the significant factors that have robust impact on the qualitative and quantitative attributes of the CIR in addition the usage of the Internet facilities and multimedia features in advancing the overall feature of the corporate website. Therefore, six different groups of the independent variables have been tested using the Ordinary least Square (OLS) method. This method have been applied through running the multivariate regression analysis on SPSS. The researcher studied the relationship between nine of the CIR disclosure indices and seven groups of independent variables, including the control variables. These independent variables represent alternative theories related to corporate voluntary disclosure and they also represent different institutional pressures who may impose an impact on the CIR practices such the managers, board members, individual and institutional investors, government, foreign directors and managers, in addition to auditors. These groups are:

1. Ownership structure (H1a, H1b, H1c)
2. Corporate governance mechanisms (H2a, H2b, H2c, H2d)
3. Industry type (H3a)
4. International exposure (H45a, H4b, H4c, H4d)
5. Audit firm (H5a, H5b)
6. Firm's characteristics (control variables)

The univariate and multivariate regression analyses in chapter eight examined the above hypotheses individually and in an aggregation.

9.4.2.1 Factors affecting total CIR disclosure level

According to the regression results, it seems that the total CIR disclosure is not significantly affected by ownership and corporate governance variables. In contrast, it was significantly affected by the international exposure represented by two variables; foreign listing and existence of foreign investors as part of major shareholders. Also, industry type and competition have significant but negative impact on total disclosure level. Meanwhile, firm size was the only significant control variable imposing positive impact on the total CIR disclosure. These results imply that larger companies operating in the industry sector and which enjoy better competitive position are more likely to disclose less compared to similar companies in the financial and service sectors. Meanwhile, those engaged in an international relationships through being listed on foreign stock exchanges or already have a number of foreign investors as major shareholders are more likely to disclose more information on their websites.

Considering the institutional logic impact, it is recognized that Egyptian companies involved in international relations are more inclined to imitate corporate websites of Western countries which is driven by efficiency based logic. On the other hand, companies which are operating heavily in the domestic market are more likely be driven marketing and technical based logics. These two logics are more consistent with the culture and social norms that have higher tendency towards secrecy. Likewise, the marketing logic would make these companies more apprehensive about its competitive position and that is why they will be tentative while setting their CIR strategy. This logic also encourages many companies to rely on the IT experts and website developers to establish more interactive and advanced websites to present better image for the company, especially in their customers' eyes. Most of Egyptian companies tend to be family business with large proportion of blocked ownership. They depend on using e-mails, phone calls or face to face meeting in communicating most of their information to the current investors as discussed in Chapter Six. On the opposite, those who are relying on investing abroad have more propensity to enhance their transparency by disclosing more on a timely basis to instil trust of the foreign markets and investors. These companies prefer using conference calls, Webcasts, e-mails in addition to online disclosure due to their need to adhere to foreign stock markets regulations or to save them the costs of conducting face to face meetings aboard.

9.4.2.2 Factors affecting quality of the corporate website

The researcher focused on four main quality attributes that normally considered in technology based information systems and in the accounting research which are; timeliness, credibility, usability and general content. It was found that firm size, percentage of foreign directors on the board, management size, industry sector and presence of foreign investors among the major shareholders are the most significant factors affect the timeliness of the CIR disclosure on the Egyptian websites. Bearing in mind that the industry sector had an inverse impact. In respect of credibility of the website, it was found that firm size, percentage of foreign directors on the board and in management team, management size have significant an positive impact. On the contrary, industry sector and profitability (ROE) showed negative impact on the credibility of the Egyptian websites.

In respect of the usability of the websites, the findings revealed that firm size, management size, and presence of foreign investors among the major shareholders have significant and positive impact on the usability of the website. Meanwhile, industry sector was the only significant factor that had a negative impact on the usability of the corporate websites. Finally, in respect of the general content, firm size, shareholder diversity, management size had significant and positive impact on the content of the website. However, industry sector and profitability again showed negative results.

All of the above results clearly demonstrate that larger companies which are exposed to the international environments or those in the financial and service sectors (i.e. communication and telecom industries) are more likely to embrace the efficiency based logic that requires improving the online disclosure level and the various quality aspects of the website. This result is consistent with the neo-institutional theory, as these companies are involved somehow in highly professional or regulative environments. Meanwhile, the other larger and domestic companies that mostly operating in the industry fields are more likely to embrace the marketing and technical based logics. As they face less pressures to improve their CIR practices especially if they count on the internal finance (management and family ownership) or debts in financing its operations. In addition, competition and profitability sometimes moderate the effect of firm size.

9.4.2.3 Factors affecting investor relations information

To address the accounting disclosure aspect of the corporate websites, the researcher studied the factors affecting six main categories of accounting and financial information that are highly required by both corporate stakeholders and stockholders which are; annual financial statements, interim financial statements, auditor's report, corporate governance and corporate social responsibility, shareholders and stock price information in addition to the news and press releases. In over all, it was found that firm size , management size, family ownership, presence of foreign investors among the major shareholders, board size, foreign listing, percentage of foreign directors on the board and in management team where the most pervasive factors that affect the six types of investor related information positively. Meanwhile, industry sector, profitability (ROE), government ownership, and being audited by one of big audited firms have a negative impact on the disclosure of the aforementioned items.

9.4.2.4 Factors affecting the Internet usage

Unlike prior related studies, the researcher opt to segregate between the Internet features that are mostly determined by the website developers and those determined by the management or board members. This segregation was even supported by the findings of the case studies that showed that the website developers are those who are responsible for the technical aspects of the corporate website. Meanwhile, the departmental managers are mainly in charge of the content of these websites. The regression results showed that the Internet facilities have been significantly and positively affected by only two variables firm size and management size. On the contrary, there are more variables have a negative impact on such facilities namely, audit firm size, industry sector and government ownership. These results prove that the technical features of the websites are relying on most of governance and firm characteristics variables. Thus, other technical factors need to be investigated in the future. In respect of the multimedia features such as video and audio clips were used at limited basis in the Egyptian websites and only used for advertising and promotion purposes.

9.5 Theory applicability

The applicability of the proposed corporate disclosure and neo-institutional theories may be considered in relation to:

- Whether the CIR practices are institutionalized (i.e. isomorphic) at the level of the EGX listed companies or at the industrial sectors levels.
- Whether the agency problem is an issue in the Egyptian companies and hence it has an impact on the extent and quality of corporate Internet reporting practices as well as the Internet usage.

- The impact of adopted corporate governance mechanisms and related issues may have an impact on the extent and quality attributes of the corporate Internet reporting practices in addition to the Internet usage.
- The corporate economic activity presented by industry type may exert and impact on the extent and quality attributes of the corporate Internet reporting practices in addition to the Internet usage.
- The independent auditors may have an impact on the extent and quality attributes of the corporate Internet reporting practices in addition to the Internet usage.

The univariate using Kruskal Wallis results provide an evidence that there is a significant variation across the three industrial sectors in respect of the extent of CIR disclosure, timeliness, usability, credibility, and general content, the investors relation information as well as the usage of the Internet facilities but not for the usage of multimedia. This also doubtlessly prove that the isomorphism postulation is not pertinent to the findings of this study. The investigated companies are operating in the same institutional environment, same country and stock exchange, and same industry, are exercising different CIR practices. The researcher argue that given the lack rules and regulations at the present time, this diversity in the CIR practices can only be regarded to the type of the product that companies are entitled to produce. In elaboration, banks, financial firms, and communication companies are more experts in producing and presenting information as it is their main product. Besides, embracing marketing and technical based logics encourage companies to be more distinguish and unique apart from their rivals. Therefore, Banks and financial companies and service companies are found to have the best disclose level and best quality attributes compared to industrial companies since the "information" is the main product the former sectors produce. Meanwhile, industrial companies produce other physical products, which make them focusing more on promoting these products via their websites. The empirical results prove that industry type imposed the most impact on all of CIR indices, except for the Internet usage. The regression results show that industrial companies tend to lack most of required information, with lower timeliness and credibility level. In addition the usability level of these websites was comparatively lower than in the banking and financial sector or in the service sector. On the other hand, the researcher realized that ownership variables did not have a serious impact on most of the CIR indices. Thus, none of government, institutional, management and major shareholders ownership has an impact on the Total CIR, quality attributes, investor relations information and the Internet usage. Yet, management size provided marginal impact on some of the CIR indices.

Even, the international exposure did not have a significant impact on the usage of the Internet technology or usability of the website but it has a significant influence on the financial and accounting information.

In respect of the audit firm size, there is no significant impact on many of the disclosure indices. However, it had a negative impact on the Internet usage. Particularly, the usage of the Internet facilities and the disclosure of shareholder and stock price information. The number of audit firm has no impact on any of the disclosure indices. This result is consistent with the results of the field study, which illustrates that auditors are not involved yet in the CIR practices.

In respect of the impact of firm characteristics, company size is the only significant factor that has a positive impact on all of the disclosure indices. In other words, larger companies are supposed to have more disclosure level of CIR and better quality attributes. Nevertheless, profitability and competition have negative impact on the disclosure. This imply that more profitable organizations or ones in a stronger competitive position are more inclined to reduce their disclosure levels, specifically related to auditor’s report, corporate governance and shareholder and stock information. This indicate that companies with more internal sources of finance are disclosing less than companies relying on external source of finance. This may not be applicable to companies in the developed countries.

In conclusion, theories such as agency theory, capital need theory, signalling theory are too simplistic to describe the logic that drives the CIR practices and do not cover all factors which can affect disclosure in developing countries. For instance, the rise of the impact of management size on the magnitude of the information provided on the Internet indicate that stewardship theory seems to be more pertinent instead of agency theory. As a result, it could be argued that there are many factors (e.g. managerial, social and political) that may interweave together when determining the companies’ disclosure strategies and priorities. Additionally, in deregulated and weak institutionalized environments, as in Egypt, voluntary disclosure theories may not provide proper justification for corporate online disclosure. Hence, it may be affected by other disciplines, beside accounting and auditing.

Moreover, it was realized that the Internet usage had the least predictive power with most of the independent variables which suggest incorporating new variables related to the communication theory for example instead of corporate disclosure theories. Also, it can be studied by incorporating other social and culture related variables.

9.5 Implications of the research findings

The findings of this study, in total, demonstrate that the CIR practices are loosely institutionalized in Egypt. These practices are largely governed by marketing and technical based logics which imposed by both the involved managers and the website developers or internal IT managers who possess adequate technical experience and education to enable the company to possess most attractive and advanced website.

9.6.1 Implications to CIR research

The findings of the case studies and interviews with several website users imply that the CIR practices that are exercised until February 2011 are not considered as a legitimate source of corporate business information for the following reasons.

- Most of Egyptian listed companies are possessing website that do not satisfy the information needs of the individual investors in terms of language, clarity, credibility, timeliness, comparability and comprehensiveness of the disclosed information. As the companies are not considering those investors as their targeted users.
- The Egyptian stock exchange and other external auditors are still reluctant to participate in verifying the information content included on the websites that are owned by Egyptian listed companies as long as they are not legally entitled. Also, they believe that contributing in the CIR process will unnecessary raise their auditing fees as they will rely on other experts to verify these websites.
- The Internet technology is mostly used for social and entertainment purposes either by Egyptian society of the Egyptian companies. Therefore, rarely Egyptian companies use their websites for trading their products online or for disseminating their financial information online.
- Lack of regulative and professional accounting and auditing guidelines curbs the progress in the CIR practices and increase the inconsistency.
- Most of the Egyptian companies pay more attention to the institutional investors (e.g. Banks and insurance companies) and other foreign investors compared to the Egyptian and individual investors. The managers mentioned two key reasons to justify this obvious negligence. First, the individual investors lack the adequate financial background that would enable them to understand the corporate financial information presented on the Internet. They also may consult other financial experts before making their investment decision. Secondly, the institutional investors

constitute large part of the companies' ownership compared to individual or national investors. In addition, foreign investors and institutional investors are more keen to obtain an up-to-date flow of the information. Thus, companies used the Internet to save the time and efforts that were normally consumed to support these investors with the required information.

9.6.2 Implications to voluntary disclosure and institutional theories

Comparing the results of CIR and IFR research in some western countries or developed countries to the findings of this study, one can realize that most of economic theories such as agency, capital need and signalling theories are not quite applicable to Egypt. This may due to the fact that most of private companies are funded and managed by the original founders or families (Abdel Shahid, 2003). Most of companies investigated tend to finance their activities by applying for loans rather than seeking equity funds and very few of them invest in foreign stock exchanges (i.e. seven companies). This implies that agency problem in most of Egyptian listed companies is limited and hence stewardship and stakeholder theories are more pertinent to interpret the CIR disclosure behaviour in Egypt. Consequently, more involving more managers in the CIR process would increase the informativeness of the corporate websites.

It was also realized that social, managerial, and technical factors were more predictive compared to economic variables such as ownership structure, and governance mechanisms such as duality and independence. Though, nationality of the ownership may overlap with agency variables, it indicates presence of culture effect. This effect is more evident in these companies which deals with foreign individuals either investors or managers and directors. We do not know for sure whether those foreign individuals contribute directly to the CIR process, but it is evident that the Egyptian companies is vigilant more about the information needs of those foreign users compared to domestic ones. This has been clearly reflected by the great tendency by most of Egyptian companies to establish their websites in English, also in providing their financials in English language rather than Arabic though they are required by the disclosure rules to submit their financials in Arabic and English.

In conjunction, it was noticed that Egyptian companies are managed by Egyptian directors and managers a long with these having only Egyptian investors are more likely to disclose little amount of information or to disclose at lower levels of quality. This might be attributed to the mentality (i.e. open-mindedness) of some mangers and the lack external and independent supervision on the CIR practices. This has also been expressed by some financial analysts, investors and auditors who believe that they were not asked to contribute in this process. Thus, they do not take Egyptian corporate website as a legitimate source of information as they are poor in security, credibility and timeliness. Understanding the needs of domestic shareholders and stakeholders is pivotal especially when large proportion of the companies' capital is possessed by those investors.

The empirical findings also revealed that companies with better performance indicated by growth rate, profitability and competition level used to disclose less than other companies. This provides two possible implications. Either these companies tend to rely mostly on well established traditional or informal disclosure means, where they diffuse most of their business information through or it is possibly that these companies tend to use internal funds more to finance its operations rather than acquiring external funds. Therefore, the agency problem in such companies is expected to be at lowest level, the issue that makes these companies reluctant to disclose more on their websites. More importantly, it was realized that some companies have a lot of concerns about their competitive position and hence they would only disclose general or frequently required information without putting much details that could benefit their competitors. Thus, it is worthy to examine the impact of competition on the CIR disclosure practices of all Egyptian listed companies in the future.

In conclusion, in countries that lack rules or regulations to legalize and regulate the online disclosure practices, as in Egypt. In such free regulation environments, social, and culture norms deems to be more imperative and more meaningful than economic factors such as firm characteristics or ownership structure. Besides, competition between companies tend to increase variations in the disclosure practices and may enforce some companies to act conservatively and disclose less to retain its competitive position.

9.7 Recommendations of the study

There are implication of the research findings for the EGX, particularly the disclosure department, and other related institutions such as the Egyptian Institute of Directors and the Egyptian Financial Supervisory Authority (EFSA) as follows.

9.7.1 The Egyptian Institute of Directors (EIoD)

The Egyptian Institute of Directors (EIoD) was established in 2003. It is the first institute focused on Corporate Governance in the Arab Region. The key objective of this institution is spreading awareness, knowledge, and best practices of corporate governance in Egypt, the Middle East and North Africa (MENA) region in a way that meets the legitimate expectations and best interests of various stakeholders. The activities of the Institute are targeted at directors, key executives, shareholders, and other stakeholders of such organizations http://www.eiod.org/WhoWeAre.aspx. The EIoD is required to pay more attention to the online disclosure practices of the Egyptian listed companies especially to those sections related to corporate governance, corporate social responsibility, shareholders and stock price information as well as press releases and news which are a complementary part of the overall investors' knowledge. They need to encourage Egyptian companies to enhance their online disclosure in terms of quantity and quality. They need to stress issues related to timeliness, credibility and security. Such issues are highly important to increase the company's transparency either for the traditional reporting system or the Internet based reporting system. More importantly, this institutions need to set sort of guidelines for the Egyptian companies in order to increase the consistency and comparability across the different corporate websites in order to enable the users, particularly, institutional investors to obtain the required information easily and increase the trust in the corporate online disclosures.

9.7.2 The Egyptian Stock Exchange (EGX)

Egyptian stock exchange specially the disclosure department is responsible to disclose all price sensitive and material financial and non-financial information equally to all investors either though hard copy formats of through the internal electronic terminals or on the EGX website. It needs to issue regulatory rules that enforce the companies to disclose their financial statements, at least, in both languages Arabic and English to benefit all investors equally. They also need to decide on a penalty scheme that provides different grades of sanctions on the Egyptian listed companies ranges from monetary fines to delisting, in case company did not commit with the issued rules. The disclosure department need to collaborate with companies, especially newly listed of small ones in specifying the appropriate set of information that are commonly required by majority of stakeholders as well as stockholders.

9.7.3 Egyptian Financial Supervisory Authority (EFSA)

This is a public authority was established according to law number 10 of year 2009. The Authority is responsible for supervising and regulating non-banking financial markets and instruments, including the Capital Market, the Exchange, all activities related to Insurance Services, Mortgage Finance, Financial Leasing, Factoring and Securitization. The key task of this authority is to regulate the market and ensure its stability and competitiveness to attract more local and foreign investments It replaced the Egyptian Insurance Supervisory Authority, the Capital Market Authority (CMA), and the Mortgage Finance Authority in application of the provisions of the supervision and regulation of Insurance law no. 10 of 1981, the Capital Market law no. 95 of 1992, the Depository and Central registry law no. 93 of 2000, the

Mortgage Finance law No. 148 of 2001, as well as other related laws and decrees that are part of the mandates of the above authorities. This authority needs to issue guidelines or disciplinary rules for the companies on the Egyptian stock exchange if they opt to disclose their financial and non-financial information on the Internet in their own websites.

They need to set a rule to protect the investors, notably the individual investors. They also need to cooperate with the Egyptian stock market by creating an authorized free online information channel that supports the investors with all relevant information that companies may refuse to submit. This channel may partially substitute the corporate website, since it will provide the investors with credible, timely and sufficient information to enable them to evaluate their investments and allocate their funds properly. This authority is also may produce several rules and sanctions to penalize the Egyptian listed companies, if their online disclosers did not cover a certain amount or types of business information.

9.7.4 Egyptian listed companies

The Egyptian companies, at least those listed on the EGX and possess a website that partially or fully designed to disclose the financial and non-financial information are recommended to do the following. Delegate the authority of the corporate website development and maintenance to an standalone alone department that is composed from a group of skilful staff from all relevant disciplines. This department will be responsible for developing, updating and maintaining the website in an effective condition. It is also responsible to collect all the information from other internal department and decide what are the more important and required information to disclose and how to present. In case, if any disclosure or listing rules have been issued in the future, this department need to make sure that the information are disclosed and presented according to the regulations. This department will also be responsible to update the corporate website will any prompting information taking into consideration the existing disclosure rules issued by the EGX. This department should also conduct an online survey on an interval basis to identify the required information or any changes in the investors and website users preferences. It also, should set rule of conducts that determine roles, responsibilities and procedures that each involved department need to perform and the penalties should be applied in case of incompliance.

In addition, the Egyptian companies need to get the internal accountant and auditors more involved in this process rather than marketing or IT managers who may not be familiar with the accounting and auditing standards that govern the preparation and presentation of the financial information. Besides, they may not be aware about the information needs of various stakeholders and stockholders. More importantly, they need to raise their IT skills in order to be able to utilize the Internet facilities to its full potentiality while disseminating the corporate information online. Moreover, there should be an independent party such as an external auditor to review the financial information displayed on the corporate websites and indicate that this information is reviewed and it identical to the hard copy format. This may increase the credibility of the corporate website. The auditor and even financial analysts need to consulted by the company's managers in order to produce more legitimate websites that are useful to many of users.

9.8 Contribution of the study

The researcher attempt to contribute to both the CIR research and theories of corporate disclosure and institutionalization of companies activities.

9.8.1 contribution to CIR literature

This study is the first one that tackled the entire system of the CIR practices. In other words, the majority in the developed and developing countries focused exclusively on analysing the online disclosure of a sample of listed companies. Following the systems approach during conducting the qualitative study enabled to discover more aspects that were not discovered in prior CIR and IFR studies such as, the involvement of an external IT experts who provide the technical opinion and which in few cases may also be involved in conducting the CIR process. This might be occurred in some companies, which lack the capabilities to establish an internal department to manage its website. This scenario contributed in decreasing the quality of the CIR in these companies, especially the timeliness. This is also pertinent to the companies which count on the marketing or public relation managers in managing their websites. In addition, this is the first study conducted on the Egyptian companies and attempted to grasp the views and identify the roles of different parties such as the owners of the website, professional users, novice users (i.e. individual investors) and supervisory bodies (i.e. disclosure department in the EGX).

9.8.2 Contribution to corporate disclosure theories

This study illustrated that management size, industry sector as well as international exposure are the most significant variables that affect the CIR practices of the Egyptian companies after controlling for the firm characteristics. Besides, the competition proved to have a negative impact on some disclosure indices. These factors have been supported further by the findings of the qualitative study. The researcher also showed that stewardship theory is more pertinent to Egypt case whereby the companies' financial sources are more based on debts as well as managerial (including family) ownership.

Besides, it was striking that corporate governance mechanisms based on the segregation between the CEO and chairman positions, or presence of independent directors on the board were related the CIR practices, in this study. This may be due to the weakness of agency problem from one side. On the other side, the case studies showed that board of directors play a marginal role in this process by only outline the main aspects of the corporate website. Therefore, these findings indicate that the conventional disclosure theories need to account for other institutional, social, cultural, and technical aspects that are highly related to the CIR. These aspects may not only affect the presentation of the accounting information, but also may affect its value and relevancy to the decision maker.

9.8.3 Contribution to institutional theory

Using noting of the institutional logic contributes a lot in identifying the main reasons behind the weaknesses of the CIR practices undertaken by some Egyptian listed companies. It was shown that the managers mentality, perceptions and aims of disclosing the corporate information on the Internet differ from those possessed by managers in Western and other developed countries. The latter countries perceive the Internet as investor vehicle for enhancing the external monitory and to decrease the agency problem and costs. Therefore, the stock markets, accounting and auditing institutions in these countries have more powerful authority on the CIR practices which led to more harmonization in these practices. Thus, this strong institutional environment decreased the diversity in the CIR practices and made them more professional , comparable and isomorphic in return.

Meanwhile, in Egypt case, the Internet is normally used as a social communication facility and an entertainment medium. This has been clearly demonstrated in January revolution, whereby the face-book communication was the triggering factor that fuelled this revolution all over Egypt. The case studies also show that some managers perceive the Internet only as a storage for frequently required information. They also believe that the website should only provide very basic information to general users. They the interested users should contact the company directly for further information. More importantly, the absence of independent verification and review from the Egyptian stock market, auditors or other authorized party decreased the public trust in these websites. Accordingly, the CIR practices confront weak institutional pressures that are mostly social and culture based. Thus, the Egyptian corporate websites are subject to the marketing and technical based logics instead of efficiency or economic based logic that is popularly realized in many Western and developed countries.

The marketing based logic is embraced by the internal managers, meanwhile the technical based logic is embraced by the website developers or IT managers who in charge of designing and maintaining the website is smooth and usable condition. It was also shown that the quality of technical features of the Egyptian corporate websites exceeded the quality and quantity of the accounting and financial information content.

The above argument contributes to the institutional theory by suggesting that the postulation of isomorphism is not be pertinent to the situation where different logics exist and competing in the same context. Earlier institutionalists constantly presume that companies which are exposed to the external institutional pressures will passively act in favour of the external institutional pressures to appear legitimate and to assure its survival on the long run. In our case, the results show that not acting passively against the external institutional pressures. They choose the practices that fit their own perception and position in the domestic and international markets. Larger companies may also attempt to dictate their own legitimate practices. This adaptation ability is highly based on the power, size, and competitive position of each company and the personal and demographic characteristics of the key actors who are in charge of the underlying practices.

9.9 Limitations and suggestions for future research

In the following paragraphs the researcher will elaborate the limitations of this study which may confine its applicability. Besides, some suggestions for future research will be proposed in order to extend the research in this domain and to tackle the issues that have not been addressed in this study.

9.9.1 Limitations of the study

This study primarily studied the nature of the institutional logic exclusively in publicly listed Egyptian companies. These companies are required by the disclosure rules of the EGX and the Capital Market Law No. 95 of 1992 to disclose their annual and semi-annual financial statements to the public through submitting these statements to the EGX first. They also recommended by the corporate governance rules of 2005 and those amended in November 2011 to disclose their financial and corporate governance information using either the conventional media (e.g. daily news papers) or on the corporate website. Therefore, privately owned Egyptian companies have been ignored as they are not obliged to disclose their financials to the public. Also, none Egyptian listed companies on EGX were not counted as well as they belong to other countries and cultures. Thus, the researcher focused only on the Egyptian companies to control for country impact.

By nature, the qualitative interviews as other qualitative methods are more susceptible to subjectivity and may be exposed to misleading impressions or subjective justifications provided by the interviewees. Nevertheless, considering other types of evidence such as reviewing previous corporate websites or incorporating different participants relatively confirmed some of the induced expectations. In the future the outcomes of this study can be further examined using the questionnaire surveys.

Identifying the nature of the implicit institutional logic is not an easy task especially that it is tacit and complicated. Hence, the researcher strived to collect more evidence such as observations and the visual and oral evidence that indicates the type of this logic by either analysing the qualitative interviews or analysing the contents of a several websites. Still, the inability to meet all the participating managers inside the companies may affect the concluded results.

The interviews with the investors relation managers as well as the empirical finding reveal that the internationalization through appointing foreign directors or managers, being involved in foreign listing or through obtaining foreign investors as part of their blocked ownership inherently convey a culture impact. As the current study is considered an exploratory it was not design to specifically assess the culture impact. This could be addressed by studies in the future through distributing a survey that measures the impact of culture factors such as those suggested by Hofested (1980) (i.e. gender, distance power, uncertainty and individualism/ collectivism) on the extent of CIR practices.

9.9.2 Suggestions for future research

The lack in studies in the developing countries and the findings of this study raise the need to extend the CIR practices, particularly, to other developing and Arabic countries in order to capture the culture and social effects. All it is important to investigate how the different disclosure rules in some emerging markets in such countries could either confine or promote the progress in CIR practices. As a result, more qualitative studies are required to identify which group of investors (individual or institutional) the companies listed on these markets prefer to contact most and how usually these investors obtain the information.

The findings of the current study also revealed that the companies with higher proportion of governmental ownership provide lower levels of CIR disclosure in terms of quantity and quality and they also provide insufficient amount of financial information. Thus, it will be important to conduct interviews with such companies to determine the logic and perception of the managers in such companies. The sample may contain those are publicly listed or closely listed governmental companies.

Moreover, as the study indicates, the IT experts or website developers exert a substantial impact on the extent and quality aspects. This findings need further investigation. There is a real need to understand to what extent these experts are involved in the CIR process and how far their technical logic could affect the disclosure decision.

In relation to the previous suggestion, it was realized throughout this study that the technical features of the corporate website such as user support tools as well as multimedia and communication facilities had surpassed the informativeness of the Egyptian companies' websites. However, in reality, these technical features are not handled by the corporate managers who are involved in the preparation of the dissemination of the corporate financial and accounting information. Therefore, it is crucial to investigate the factors that are more related to these technical features and treat them separately from other economic and governance variables that normally affect the mandatory and voluntary disclosure decisions.

Though competition was considered as a part of firm characteristic, marketing and competition influence on the CIR practices manifestly appeared in this study. The researcher also noticed that competition may exert a positive impact on the CIR practices in some companies and may exert a negative impact in others simultaneously. Hence, further research is required to measure the impact of competition by using different proxies such as market share, revenue growth rate or sales growth rate. Also, the researchers need to find out the potential factors that could mediate the competition impact on the amount of the online disclosure and quality of the presentation on the Internet.

Additionally, more studies are needed to evaluate the usefulness of the CIR as an Internet based-information system from both professional and novice website users and by counting for both social and culture aspects. This will generate more in depth and non-economic aspects which have not addressed yet.

List of references

ABDELSALAM, O. H. & STREET, D. L. 2007. Corporate governance and the timeliness of corporate internet reporting by U.K. listed companies. *Journal of International Accounting, Auditing and Taxation,* 16**, (2),** 111-130.

ABDELSALAM, O. H., & EL-MASRY, A. 2008.The impact of board independence and ownership structure on the timeliness of corporate internet reporting of Irish-listed companies, Managerial Finance, 34**, (12),** 907 – 918.

ABDELSALAM, O. H., BRYANT, S. M. & STREET, D. L. 2007. An Examination of the Comprehensiveness of Corporate Internet Reporting Provided by London-Listed Companies. *Journal of International Accounting Research,* 6 **(2),** 1-33.

ABDELSHAHID, S. F. 2003. Does ownership structure affect firm value? Evidence from the Egyptian stock market.Working paper. Avaiable at: SSRN-eLibrary: http://ssrn.com/abstract.

ABELL, W. & LIM, L. 1996. Business use of the internet in New Zealand: an exploratory study. Research Report. No:96/03. Lincoln University. 1-11.

ABOWITZ, D. A. & TOOLE, T. M. 2010. Mixed method research: fundamental issues of design, validity, and reliability in construction research. *Journal of Construction Engineering & Management,* 136 **(1),** 108-116.

ABUGHAZALEH, N. M., QASIM, A., EL HADDAD, A. 2012. Perceptions and attitudes toward corporate website presence and its use in investor relations in the Jordanian context. *Advances in Accountin*g, **In Press,** 1-10 .

ABUGHAZALEH, N., QASIM, A. & ROBERTS, C. 2012, The determinants of Web-based investor relations activities by companies operating in emerging economies: The case of Jordan, *Journal of applied Business Research,* 28**(2),** 209-226.

ADAMS, C. A. & FROST, G. 2004. *The developement of corporate websites and implications for ethical, social and environmental reporting through these media.* Research report.The instituion of Chartered Accounttants of Scotland.1-98.

AGUILERA, R. V. & JACKSON, G. 2003. The cross-national diversity of corporate governance: dimensions and determinants. *The Academy of Management Review,* 28 **(3),** 447-465.

AHRENS, T. & CHAPMAN, C. S. 2006. Doing qualitative field research in management accounting: Positioning data to contribute to theory. *Accounting, Organizations and Society,* 31**(1),** 819-841.

ALFORD, A., JONES, J., LEFTWICH, R. & ZMIJEWSKI, M. 1993. The relative informativeness of accounting disclosures in different countries. *Journal of Accounting Research,* 31**(supplement),**183-223.

AL-HTAYBAT, K. 2011. Corporate online reporting in 2010: a case study of Jordan, *Journal of Financial Reporting and Accounting,* 9 **(1),** 5-26.

AL-HTAYBAT, K. AL-HTAYBAT, L & ABED HUTAIBAT,K. 2011. Users' perceptions on Internet reporting practices in emerging markets: Evidence from Jordan, *International Journal of business and Management,* 6 **(9),** 170-182.

ALLAM, A. & LYMER, A. 2003. Developments in internet financial reporting: review and analysis across five developed countries. *The International Journal of Digital Accounting Research,* 3**(6),**165-199.

ALLEN, M., TITSWORTH, S. & HUNT, S. K. 2009. *Quantitative Research in Communication,* United states of America, SAGE.

ALMILIA, L. S. 2009. Determining factors of internet financial reporting in Indonesia. *Accounting & Taxation,*1**(1),** 87-99.

AL-SHAMMARI, B. 2007. Determinants of internet financial reporting by listed companies on the kuwait stock exchange. *Journal of International Business and Economics,* 7**(1),[..]**

ALTHEIDE & JOHNSON. 1994, as in CRESWELL, J. W. & MILLER, D. L. 2000. Determining validity in qualitative inquiry. *Theory Into Practice,* 39**(3),** 124-130.

ALY, D., SIMON, J. & HUSSAINEY, K. 2010. Determinants of corporate internet reporting: evidence from Egypt. *Managerial Auditing Journal*, 25**(2),** 182-202.

AMARATUNGA, R., BALDRY, D., SARSHAR, M. & NEWTON, R. 2002. Qualitative and quantitative research in the built environment: application of mixed research approach: a conceptual framework to measure FM performance. *Work Study (renamed International Journal of Productivity and Performance Management),* 20**,** 17-31.

ANDERSON, S. W. & WIDENER, S. K. 2006. Doing quantitative field research in management accounting. *Handbook of management accounting research,*1, 319-341.

ARCHAMBAULT, J. J. & ARCHAMBAULT, M. E. 2003. A multinational test of determinants of corporate disclosure. *The International Journal of Accounting,* 38**(2),** 173-194.

ARRUTHERS, B. G. 1995. Accounting, ambiguity, and the new institutionalism. *Accounting, Organizations and Society,* 20**(4),** 313-328.

ASHBAUGH H, JOHNSTONE K M & D, W. T. 1999. Corporate reporting on the Internet. *Accounting Horizons* 13**(3),** 241-257.

BABER, 1983 as in LASWAD, F., FISHER, R. & OYELERE, P. 2005. Determinants of voluntary Internet financial reporting by local government authorities. *Journal of Accounting and Public Policy,* 24**(2),** 101-121.

BABÍO ARCAY, M. R. & MUIÑO VÁZQUEZ, M. F. 2005. Corporate characteristics, governance rules and the extent of voluntary disclosure in Spain. *Advances in Accounting,* 21**,** 299-331.

BAKER, C. R. & WALLAGE, P. 2000. The future of financial reporting in Europe: Its role in corporate governance. *The International Journal of Accounting,* 35**(2),** 173-187.

BALL, R., ROBIN, A. & WU, J. S. 2003. Incentives versus standards: properties of accounting income in four East Asian countries. *Journal of Accounting and Economics,* 36 **(1-3),** 235-270.

BARRY, C. A. 1997. The research activity timeline: A qualitative tool for information research. *Library & Information Science Research,* 19**,** 153-179.

BARTON, J. & WAYMIRE, G. 2004. Investor protection under unregulated financial reporting. *Journal of Accounting and Economics,* 38**,** 65-116.

BATTILANA, J. 2006. Agency and Institutions: The enabling role of individuals' social position. *Organization,* 13**(5),** 653-676.

BAUM, J. A. C. & OLIVER, C. 1992. Institutional embeddedness and the dynamics of organizational populations. *American Sociological Review,* 57**,** 540-559.

BAUM, J. A. C. & OLIVER, C. 1996. Toward an institutional ecology of organizational founding. *The Academy of Management Journal,* 39**(5),** 1378-1427.

BEASLEY, M. S. 1996. An Empirical analysis of the relation between the board of director composition and financial statement fraud. *The Accounting Review,* 71**(4),** 443-465.

BEATTIE, V. & PRATT, K. 2003. Issues concerning web-based business reporting: an analysis of the views of interested parties. *The British Accounting Review,* 35**(2),**155-187.

BEATTY, R. C., SHIM, J. P. & JONES, M. C. 2001. Factors influencing corporate website adoption: a time-based assessment. *Information & Management,* 38**(6)**, 337-354.

BECKERT, J. 1999. Agency, entrepreneurs, and institutional change: The role of strategic choice and institutionalized practices in organizations. *Organization Studies,* 20**(5),** 777-799.

BENBASAT, I., GOLDSTEIN, D. K. & MEAD, M. 1987. The case research strategy in studies of information systems. *MIS Quarterly,* 11 **(September),** 369-386.

BEYNON-DAVIES, P. 2002. Information systems: An introduction to informatics in organizations, United States of America, PALGRAVE.

BHUIYAN, M. H. U., BISWAS, P. K. & CHOWDHURY, S. P. 2007. Corporate Internet reporting practice in developing economies:evidence from Bangladesh. *Cost & Management,*35**(5),**1-17.

BLATCHFORD, C. 1997. Business networking and the Internet. *Computer Audit Update,* 1997, 11-19.

BOCIJ, P., GREASLEY, A. & HICHIE, S. 2008. *Business information systems,* England, Pearson Education limited.

BOLBOL, A. A., FATHELDIN, A. & OMRAN, M. M. 2005. Financial development, structure, and economic growth: the case of Egypt, 1974-2002. *Research in International Business and Finance,* 19 **(1),** 171-194.

BOLLEN, L., HASSINK, H. & BOZIC, G. 2006. Measuring and explaining the quality of Internet investor relations activities: a multinational empirical analysis. *International Journal of Accounting Information Systems,* 7**(4),** 273-298.

BONSÓN, E. & ESCOBAR, T. 2002. A Survey on Voluntary Disclosure on the Internet. Empirical Evidence from 300 European Union Companies. *The International Journal of Digital Accounting Research,* 2**(3),** 27-51.

BONSÓN, E. & ESCOBAR, T. 2006. Digital reporting in Eastern Europe: An empirical study. *International Journal of Accounting Information Systems,* 7**(4),** 299-318.

BONSÓN, E., CORTIJO, V. & ESCOBAR, T. 2009. Towards the global adoption of XBRL using International Financial Reporting Standards (IFRS). *International Journal of Accounting Information Systems,* 10**(1),** 46-60.

BOONE, A. L., CASARES FIELD, L., KARPOFF, J. M. & RAHEJA, C. G. 2007. The determinants of corporate board size and composition: An empirical analysis. *Journal of Financial Economics,* 85**(1),** 66-101.

BOURDIEU, 1990. As in SUDDABY, R. & ROYSTON, G. 2005. Rhetorical strategies of legitimacy. *Administrative Science Quarterly,* 50**(1),** 35-67.

BRENNAN, N. & HOURIGAN, D. 2000. Corporate reporting on the Internet by Irish companies. *Irish Accounting Review,* 7**(1)**, 37-68.

BRICKLEY, J. A., COLES, J. L. & JARRELL, G. 1997. Leadership structure: Separating the CEO and chairman of the board. *Journal of Corporate Finance,* 3**,** 189-220.

BROWN, A. M. 2007. Bridging the divides of online reporting. *Accounting Forum,* 31**(1),** 27-45.

BUDISUSETYO, S. & ALMILIA, L. S. 2008. The practice of financial disclosure on corporate website: Case Study in Indonesia. Accessable at *SSRN eLibrary*. http://papers.ssrn.com.

BUSHMAN, R. M. AND A. J. SMITH. 2001. Financial accounting information and corporate governance. Journal of Accounting and Economics, 32, **(1–3)**: 237-333.

CARLSON, K. D. & HERDMAN, A. O. 2012. Understanding the Impact of Convergent Validity on Research Results. *Organizational Research Methods,* 15**(1),** 17-32.

CARRUTHERS, B. G. 1995. Accounting, ambiguity, and the new institutionalism. *Accounting, Organizations and Society*, 20**(4),** 313-328.

CARTER, D. A., SIMKINS, B. J. & SIMPSON, W. G. 2002. Corporate governance, board diversity, and firm performance. *SSRN eLibrary*. Accessable at http://papers.ssrn.com/

CÉSPEDES, J., GONZÁLEZ, M. & MOLINA, C. A. 2010. Ownership and capital structure in Latin America. *Journal of Business Research,* 63**(3),** 248-254.

CHAU, G. & GRAY, S. J. 2010. Family ownership, board independence and voluntary disclosure: Evidence from Hong Kong. *Journal of International Accounting, Auditing and Taxation,* 19**(2),** 93-109.

CHEN, G., FIRTH, M., GAO, D. N. & RUI, O. M. 2006. Ownership structure, corporate governance, and fraud: Evidence from China. *Journal of Corporate Finance,* 12**(3),** 424-448.

CHEN, K.C.W, CHEN,.Z, WEI, K.C., (2009), Legal protection of investors, corporate governance, and the cost of equity capital, *Journal of Corporate Finance*, 15**(3),** 273-289.

CHENG, E. C. M. & COURTENAY, S. M. 2006. Board composition, regulatory regime and voluntary disclosure. *The International Journal of Accounting,* 41**(3),** 262-289.

CHI-NIEN, C. & XIAOWEI, L. 2008. Institutional logics or agency costs: the influence of corporate governance models on business group restructuring in emerging economies. *Organization Science,* 19**(5),** 766-784.

CHO, C. H. & ROBERTS, R. W. 2010. Environmental reporting on the Internet by America's Toxic 100: Legitimacy and self-presentation. *International Journal of Accounting Information Systems,* 11**(1),** 1-16.

CHOW, C. W., HARRISON, G. L., MCKINNON, J. L. & WU, A. 2002. The organizational culture of public accounting firms: evidence from Taiwanese local and US affiliated firms. *Accounting, Organizations and Society,* 27**(4-5),** 347-360.

COLLETT, P. & HRASKY, S. 2005. Voluntary Disclosure of Corporate Governance Practices by Listed Australian Companies. *Corporate Governance: An International Review,* 13**(2),** 188-196.

COLOMY, P. 1998. Neofunctionalism and neoinstitutionalism: Human agency and interest in institutional change. *Sociological Forum,* 13**(2),** 265-300.

CONOVER, C. M., MILLER, R. E. & SZAKMARY, A. 2008. The timeliness of accounting disclosures in international security markets. *International Review of Financial Analysis,* 17**(5),** 849-869.

CONOVER, W. J. & IMAN, R. L. 1981. Rank transformations as a bridge between parametric and nonparametric statistics. *The American Statistician,* 35**(3),** 124-129.

COOK, J. & FINLAYSON, M. 2005. The Impact of Cultural Diversity on Web Site Design. *SAM Advanced Management Journal*,70**,** 15-45.

COOPER, K. & KEIM, G. D. 1983. The economic rationale for the nature and extent of corporate financial disclosure regulation: A critical assessment. *Journal of Accounting and Public Policy,* 2**(3),** 189-205.

CORMIER, D., AERTS, W., LEDOUX, M.-J. & MAGNAN, M. 2010. Web-based disclosure about value creation processes: a monitoring perspective. *Abacus,* 46**(3),** 320-347.

CORMIER, D., LEDOUX, M.-J. & MAGNAN, M. 2009. The use of websites as a disclosure platform for corporate performance. *International Journal of Accounting Information Systems,* 10**(1)**, 1-24.

CORRITORE, C. L., KRACHER, B. & WIEDENBECK, S. 2003. On-line trust: Concepts, evolving themes, a model. *International Journal of Human-Computer Studies,* 58**(6),** 737-758.

CRAVEN, B. M. & MARSTON, C. L. 1999. Financial reporting on the Internet by leading UK companies. *European Accounting Review,* 8 **(2),** 321 - 333.

CRESWELL, J. W. & MILLER, D. L. 2000. determining validity in qualitative inquiry. special issue: Getting good qualitative data to improve educational parctice. *Theory Into Practice,* 39**(3),** 124.

CRESWELL, J. W. 2003. *Research design: Qualitative, quantitative and mixed methods approaches,* United States of America, SAGE.

DACIN, M. T., GOODSTEIN, J. & SCOTT, W. R. 2002. Institutional theory and institutional change: Introduction to the special research forum. *The Academy of Management Journal,* 45**(1),** 43-56.

DAHAWY, K. 2009. Company characteristics and disclosure level, the Egyptian story. *International Research Journal of Finance and Economics*, 34,194-208.

DAHAWY, K & SAMAHA, K., 2010. An investigation of the views and perceptions of external users of corporate annual reports in emerging economies: he case of Egypt, *International Journal of Accounting and Finance*, 2**(3),** 331-367.

DALY, J. A. & MILLER, R. R. 1998. *Corporations' use of the internet in developing countries*. *In:* BANK, W. (ed.). International Finance Corporation.

DAVID, S. G. & JOYCE, A. S. 2001. Corporate social responsibility and financial disclosures: An alternative explanation for increased disclosure. *Journal of Business Ethics,* 33**(1)**, 1-13.

DAVIS, F. D. 1993. User acceptance of information technology: System characteristics, user perceptions and behavioural impacts. *International Journal of Man-Machine Studies,* 38**(3),** 475-487.

DEBRECENY, R. & GRAY, G. L. 1999. Financial reporting on the Internet and the external audit. *European Accounting Review,* 8**(2),** 335 - 350.

DEBRECENY, R. & GRAY, G. L. 2001. The production and use of semantically rich accounting reports on the Internet: XML and XBRL. *International Journal of Accounting Information Systems,* 2**(1),** 47-74.

DEBRECENY, R. & RAHMAN, A. 2005. Firm-specific determinants of continuous corporate disclosures. *The International Journal of Accounting,* 40**,(3),** 249-278.

DEBRECENY, R., GRAY, G. L. & MOCK, T. J. 2001. Financial reporting web sites: What users want in terms of form and content. *The International Journal of Digital Accounting Research,* 1, **(1),** 1-23.

DEBRECENY, R., GRAY, G. L. & RAHMAN, A. 2002. The determinants of Internet financial reporting. *Journal of Accounting and Public Policy,* 21, **(4-5),** 371-394.

DEDMAN, E. & LENNOX, C. 2009. Perceived competition, profitability and the withholding of information about sales and the cost of sales. *Journal of Accounting and Economics,* 48**, (2-3)**, 210-230.

DEEPHOUSE, D. L. 1996. Does isomorphism legitimate? *The Academy of Management Journal,* 39**, (4),** 1024-1039.

DELLER, D., STUBENRATH, M. & WEBER, C. 1999. A survey on the use of the Internet for investor relations in the USA, the UK and Germany. *European Accounting Review*, 8, **(2),** 351 - 364.

DENIS, D. J., DENIS, D. K. & SARIN, A. 1999. Agency theory and the influence of equity ownership structure on corporate diversification strategies. *Strategic Management Journal*, 20**,** 1071-1076.

DESOKY, A. M. 2009. Company characteristics as determinants of Internet financial reporting in emerging markets: the case of Egypt. *Research in Accounting in Emerging Economies,* 9, 31-71.

DIMAGGIO, P. J. & POWELL, W. W. 1983. The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review,* 48**, (2),**147-160.

DOHERTY, N., ELLIS-CHADWICK, F. & HART, C. 2003. An analysis of the factors affecting the adoption of the Internet in the UK retail sector. *Journal of Business Research,* 56,**(11),** 887-897.

DONALDSON, L. & DAVIS, J. H. 1991. stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of Management,* 16**, (1)**, 49-64.

DOWLING, J., & PFEFFER, J. 1975. Organizational legitimacy: Social values and organizational behaviour. *Pacific Sociological Review*, 18**(1),** 122-136.

DULL, R. B., GRAHAM, A. W. & BALDWIN, A. A. 2003. Web-based financial statements: hypertext links to footnotes and their effect on decisions. *International Journal of Accounting Information Systems,* 4**(3),** 185-203.

EGUBA, E. & LINCOLN, Y. 1994. Competing paradigms in qualitative research as in: DENZIN, N. & LINCOLN, Y. (eds.) *The Handbook of Qualitative Research.* Sage.

EISENHARDT, K. M. 1989. Building theories from case study research. *The Academy of Management Review,* 14**(4),** 532-550.

ELSAYED, A. N, ELBELTAGI, I. M. & EL-MASRY, A. A. 2010. Online disclosure: An analysis of Egyptian listed companies. *Corporate Ownership and Control Journal*, 8 **(1),** 552– 568.

ESROCK, S. L. & LEICHTY, G. B. 1998. Social responsibility and corporate web pages: Self-presentation or agenda-setting? *Public Relations Review,* 24**(3),** 305-319.

ETTREDGE, M., RICHARDSON, V. J. & SCHOLZ, S. 2001. The presentation of financial information at corporate websites. *International Journal of Accounting Information Systems,* 2**(3),** 149-168.

ETTREDGE, M., RICHARDSON, V. J. & SCHOLZ, S. 2002. Dissemination of information for investors at corporate websites. *Journal of Accounting and Public Policy,* 21 **(4-5),** 357-369.

ETTREDGE, M., RICHARDSON, V. J. & SCHOLZ, S. 2002. Timely financial reporting at corporate websites? *Communications of the ACM,* 45**(6),** 67-71.

EZAT, A. & EL-MASRY, A. 2008. The impact of corporate governance on the timeliness of corporate Internet reporting by Egyptian listed companies, *Managerial Finance*, 34 **(12),** 848-867.

FAWZY, S. 2004. How does corporate governance in Egypt compare with selected MENA and Emerging Markets? *The Egyptian Center for Educational Studies, Cairo University.*

FELO, A. J. 2010. Corporate reporting transparency, board independence and expertise, and CEO duality. 1-36. Available at SSRN: http://dx.doi.org/10.2139/ssrn.1373942,

FIELD, A. 2009. *Discovering statistics using SPSS. Third edition,* London, SAGE.

FISHER, R. & LASWAD, F. 2000. Financial Reporting on the Internet. The *Chartered Accountants Journal,* 68-72.

FISHER, R., OYELERE, P. & LASWAD, F. 2004. Corporate reporting on the Internet Audit issues and content analysis of practices. *Managerial Auditing Journal*, 19**(3),** 412-439.

FLEMING, G., HEANEY, R. & MCCOSKER, R. 2005. Agency costs and ownership structure in Australia. *Pacific-Basin Finance Journal*, 13**(1),** 29-52.

FLOWERDAY, S. & VON SOLMS, R. 2005. Continuous auditing: verifying information integrity and providing assurances for financial reports. *Computer Fraud & Security,* 2005**(7),** 12-16.

FOX, M. A. & HAMILTON, R. T. 1994. Ownership and diversification: agency theory or stewardship theory. *Journal of Management Studies,* 31**(1),** 69-81.

FRANCOEUR, C., LABELLE, R. & SINCLAIR-DESGAGNE, B. 2008. Gender diversity in corporate governance and top management. *Journal of Business Ethics,* 81**(1),** 2008.

FRIEDLAND, R. & ALFORD, R. 1991. Bringing Society Back In: Symbols, practices and institutional contradictions. As in*:* POWELL, W. & DIMAGGIO, P. (eds.) *The New Institutionalism in Organizational Analysis.* University Of Chicago Press

GANDı´A, J. L. 2008. Determinants of internet-based corporate governance disclosure by Spanish listed companies. *Online Information Review,* 32**(6),**791-817.

GARCÍA-BORBOLLA, A., LARRÁN, M. & LÓPEZ, R. 2005. Empirical evidence concerning Smes´ corporate websites: Explaining factors, strategies and reporting, *The International Journal of digital Accounting Research*, 5**(10),** 171-202**.**

GEERINGS, J., BOLLEN, L. H. H. & HASSINK, H. F. D. 2003. Investor relations on the Internet: a survey of the Euronext zone. *European Accounting Review,* 12**(3),** 567 - 579.

GIGLER, F. B. & HEMMER, T. 2001. Conservatism, Optimal Disclosure Policy, and the Timeliness of Financial Reports. *The Accounting Review,* 76**(4),** 471-493.

GORTON, G. & SCHMID, F. 1999. Corporate governance, ownership dispersion and efficiency: Empirical evidence from Austrian cooperative banking. *Journal of Corporate Finance,* 5**(2),** 119-140.

GOWTHORPE, C. & AMAT, O. 1999. External reporting of accounting and financial information via the Internet in Spain. *European Accounting Review,* 8**(2)**, 365-371.

GOWTHORPE, C. 2004. Asymmetrical dialogue: Corporate financial reporting via the Internet. *Corporate Communications: An International Journal,* 9**(4),** 283-293.

GRAY, M. 1998. Economic Reform, privatization and tourism in Egypt, *Middle Eastern Studies,* 34**(2),** 91-112.

GUILLÉN, M. F. & SUÁREZ, S. L. 2005. Explaining the global digital divide: Economic, political and sociological drivers of cross-national Internet use. *Social Forces,* 84**(2),** 681-708.

GULER, I., GUILLÉN, M. F. & MACPHERSON, J. M. 2002. Global competition, institutions, and the diffusion of organizational practices: The international spread of ISO 9000 quality certificates. *Administrative Science Quarterly,* 47**(2),** 207-232.

HALPERN, J. W. 1988. Getting in deep: Using qualitative research in business and technical communication. *Journal of Business and Technical Communication,* 2**(2)** 22-43.

HAMID, F. Z. A. 2005. Malaysian companies' use of the internet for investor relations. *Corporate Governance*, 5**(1):** 5-14

HANIFFA, R. M. & COOKE, T. E. 2005. The impact of culture and governance on corporate social reporting. *Journal of Accounting and Public Policy,* 24 **(5),** 391-430.

HART, O. 1995. Corporate Governance: Some Theory and Implications. *The Economic Journal*, 105**(430),** 678-689.

HASHEM, S. 1999. Technology access community centres in Egypt: A mission for community empowerment, *Proceedings of the Internet Society Conference, available at http://www.isoc.org/inet99/proceedings/3c/3c_1.htm.*

HASSABELNABY, H. R., EPPS, R. W. & SAID, A. A. 2003. The impact of environmental factors on accounting development: an Egyptian longitudinal study. *Critical Perspectives on Accounting,* 14**(3),** 273-292.

HASSAN, O. A. G., ROMILLY, P., GIORGIONI, G. & POWER, D. 2009. The value relevance of disclosure: Evidence from the emerging capital market of Egypt. *The International Journal of Accounting,* 44**(1),** 79-102.

HASSELBLADH, H. & BEJEROT, E. 2007. Webs of knowledge and circuits of communication: Constructing rationalized agency in swedish health care. *Organization*, 14**(2),** 175-200.

HASSELBLADH, H. & KALLINIKOS, J. 2000. The project of rationalization: A critique and reappraisal of neo-institutionalism in Organization Studies. *Organization Studies,* 21 **(4),** 697-720.

HAVEMAN, H. A. 1993. Follow the leader: Mimetic isomorphism and entry into new markets. *Administrative Science Quarterly,* 38**(4),** 593-627.

HEALY, P. M. & PALEPU, K. G. 2001. Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics,* 31**(1-3),** 405-440.

HEDLIN, P. 1999. The Internet as a vehicle for investor relations: the Swedish case. *European Accounting Review,* 8**(2),** 373-381.

HENRY, D. 2010. Agency costs, ownership structure and corporate governance compliance: A private contracting perspective. *Pacific-Basin Finance Journal*, 18**(1)**, 24-46.

HINDI, N. M. & RICH, J. 2010. Financial reporting on the Internet: Evidence from the Fortune 100. *Management Accounting Quarterly,* 11**,** 11-21.

HO, S. S. M. & SHUN WONG, K. 2001. A study of the relationship between corporate governance structures and the extent of voluntary disclosure. *Journal of International Accounting, Auditing and Taxation,* 10**(2),** 139-156.

HODGE, F. D. 2001. Hyperlinking unaudited information to audited financial statements: effects on investor judgments. *The Accounting Review,* 76(4)**,** 675-691.

HOFSTEDE, G. 1980. Motivation, leadership, and organization: Do American theories apply abroad? *Organizational Dynamics,* 9**,** 42-63.

HOFSTEDE, G. 1984. Cultural dimensions in management and planning. *Asia Pacific Journal of Management,* 1**(2),** 81-99.

HOLTHAUSEN, R. W. 2003. Testing the relative power of accounting standards versus incentives and other institutional features to influence the outcome of financial reporting in an international setting. *Journal of Accounting and Economics,* 36**(1-3),** 271-283.

HOQUE, Z. 2006. *Methodological issues in accounting research: Theories and methods,* London, Spiramus.

HUAFANG, X. & JIANGUO, Y. 2007. Ownership structure, board composition and corporate voluntary disclosure: Evidence from listed companies in China. *Managerial Auditing Journal,* 22 **(6),** 604 - 619.

HUNG, M. 2000. Accounting standards and value relevance of financial statements: An international analysis. *Journal of Accounting and Economics,* 30 **(3),** 401-420.

HURTT, D. N., KREUZE, J. G. & LANGSAM, S. A. 2001. Using the internet for financial reporting. *Journal of Corporate Accounting & Finance,* 12**(3),** 67-76.

HUSSAINEY, K. & AL-NODEL, A. 2009. Corporate governance online reporting by Saudi listed companies. *in Mathew Tsamenyi, Shahzad Uddin (ed.) Corporate Governance in Less Developed and Emerging Economies, Research in Accounting in Emerging Economies,*8, 39-64.

ISENMANN, R. & LENZ, C. 2001. Customized corporate environmental reporting by internet-based push and pull technologies. *Eco-Management and Auditing,* 8 **(2),** 100-110.

ISMAIL, T. H. & SOBHY, N. M. 2009. Determinants of auditors' perceptions of the work needed in the audit of internet-based financial reports in Egypt. *Journal of Applied Accounting Research,* 10 **(2)**,132 - 150.

ISMAIL, T. H. 2002. An Empirical Investigation of Factors Influencing Voluntary Disclosure of Financial Information on the Internet in the GCC Countries. *SSRN eLibrary*. Available at http://ssrn.com/abstract=420700 or http://dx.doi.org/10.2139/ssrn.420700.

JACKALL, R.,1988. *Moral Mazes: The World of Corporate Managers*. New York: Oxford University Press.

JACKSON, R. & QUOTES, P. 2002. Environmental, Social and Sustainability Reporting on the Web: Best Practices. *Corporate Environmental Strategy,* 9, 193-202.

JACOB M, R. 2001. The effects of multimedia-induced affective states on recall and decision-making by individual investors. *International Journal of Accounting Information Systems,* 2**(1),** 22-40.

JAGGI, B. & LEUNG, S. 2007. Impact of family dominance on monitoring of earnings management by audit committees: Evidence from Hong Kong. *Journal of International Accounting, Auditing and Taxation,* 16**(1),** 27-50.

JAGGI, B. & LOW, P. Y. 2000. Impact of culture, market forces, and legal system on financial disclosures. *The International Journal of Accounting,* 35**(4),** 495-519.

JENSEN, M. C. & MECKLING, W. H. 1976. Theory of the Firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics,* 3**(4)**, 305-360.

JEREMIAH, S. 1999. What are the functions of corporate home pages? *Journal of World Business,* 34**(2),** 193-210.

JOHN, K., SENBET,L.W. 1998. Corporate governance and board effectiveness, *Journal of Banking & Finance,* 22**(4),** 371-403.

JOHN, K. & SENBET, L. W. 1998. Corporate governance and board effectiveness. *Journal of Banking & Finance,* 22**(4),** 371-403.

JONES, M. J. & XIAO, J. Z. 2004. Financial reporting on the Internet by 2010: a consensus view. *Accounting Forum,* 28 **(3),** 237-263.

KAMEL, S. & Hussein, M. 2002. The emergence of e-commerce in a developing nation: Case of Egypt. *Benchmarking,* 9 **(2),** 146-153.

KAMEL, S. & M. HUSSEIN 2001. The developement of e-commerce: the emerging vitual context within Egypt. *Logistics Information Management,*14**(1-2),**119-127.

KELTON, A. S. & YANG, Y.-W. 2008. The impact of corporate governance on Internet financial reporting, *Journal of Accounting and Public Policy,* 27**(1),**62-87.

KENT, M. L., TAYLOR, M. & WHITE, W. J. 2003. The relationship between website design and organizational responsiveness to stakeholders. *Public Relations Review,* 29 **(1),** 63-77.

KHADAROO, I. 2005. Corporate reporting on the Internet: some implications for the auditing profession. *Managerial Auditing Journal,* 20**(6),** 578-591.

KHAN, T. 2002. Internet financial reporting: Ahead of its time? *Australian CPA,* 72**,** 74.

KHAN, T. 2007. Internet Financial Reporting: Disclosure about companies on websites. *Journal of Business Systems, Governance and Ethics,* 2, 37-46.

KIM, S., PARK, J.-H. & WERTZ, E. K. 2010. Expectation gaps between stakeholders and web-based corporate public relations efforts: Focusing on Fortune 500 corporate web sites. *Public Relations Review,* 36**(3),** 215-221

KIRK, H. 2001. Improving public relations web sites through usability research. *Public Relations Review,* 27**(2),** 223-239.

KLEIN, H. K. & MYERS, M. D. 1999. A set of principles for conducting and evaluating interpretive field studies in Information Systems. *MIS Quarterly,* 23**(1),** 67-93.

KOLBE, R. H. & BURNETT, M. S. 1991. Content-analysis Research: An examination of applications with directives for improving research reliability and objectivity. *Journal of Consumer Research,* 18**(2),** 243-250.

KONDRA, A. Z. & HININGS, C. R. 1998. Organizational diversity and change in institutional theory. *Organization Studies,* 19 **(5),** 743-767.

KOSTOVA, T. & ZAHEER, S. 1999. Organizational legitimacy under conditions of complexity: The case of the multinational enterprise. *The Academy of Management Review,* 24**(1),** 64-81.

KWOK, C. C. Y. & SOLOMON, T. 2006. National culture and financial systems. *Journal of International Business Studies,* 37**,** 227-247.

LARRÁN, M. & GINER, B. 2002. The use of the Internet for corporate reporting by Spanish companies. *The International journal of digital accounting research,* 2**(1),** 53-82.

LEE, A. S. 1991. Integrating positivist and interpretive approaches to organizational research. *Organization Science,* 2 **(4),** 342-365.

LEE, Y. W., STRONG, D. M., KAHN, B. K. & WANG, R. Y. 2002. AIMQ: A methodology for information quality assessment. *Information & Management,* 40**(2),** 133-146.

LEGRIS, P., INGHAM, J. & COLLERETTE, P. 2003. Why do people use information technology? A critical review of the technology acceptance model. *Information & Management,* 40**,** 191-204.

LEIDNER, D. E., SVEN CARLSSON & ELAM, A. J. J. 1995. A cross-cultural study of executive Information Systems. *Proceedings of the 28th Annual Hawaii International Conference System on Sciences*.

LIAO, C., TO, P.-L. & SHIH, M.-L. 2006. Website practices: A comparison between the top 1000 companies in the US and Taiwan. *International Journal of Information Management,* 26**,** 196-211.

LIU, C., ARNETT, K. P., CAPELLA, L. M. & BEATTY, R. C. 1997. Websites of the Fortune 500 companies: Facing customers through home pages. *Information & Management,* 31**(6),** 335-345.

LOCH, K. D., STRAUB, D. W. & KAMEL, S. 2003. Diffusing the Internet in the Arab world: the role of social norms and technological culturation. *IEEE Transactions On Engineering Management,* 50.

LONT, D. 2003. Financial reporting on the internet. The *Chartered Accountants Journal,* 82**,** 64-66.

LOUNSBURY, M. 2008. Institutional rationality and practice variation: New directions in the institutional analysis of practice. *Accounting ,Organization and Society,* 33 **(4-5),** 349-361.

LYBAERT, N. 2002. On-Line Financial Reporting. An Analysis of the Dutch Listed Firms. *The International Journal of Digital Accounting Research,* 2**(4),** 195-234, 2, 195-234.

LYMER, A. & DEBRECENY, R. 2003. The Auditor and Corporate Reporting on the Internet: Challenges and Institutional Responses. *International Journal of Auditing,* 7, 103-120.

LYMER, A. & TALLBERG, A. 1997. Corporate reporting and the Internet - a survey and commentary on the use of the WWW in corporate reporting in the UK and Finland. *Paper presented at EAA'97, Graz. Austria April 23-25th.*

LYMER, A. 1998, The use of the Internet for corporate reporting. A discussion of the issues and survey of current usage in the UK, *Paper presented at the 21st Annual Congress of the European Accounting Association,* Belgium.

LYMER, A. 1999. Internet and the future of reporting in Europe. *European Accounting Review,* 8 **(2),** 289-301.

MARSTON, C. & POLEI, A. 2004. Corporate reporting on the Internet by German companies. *International Journal of Accounting Information Systems,* 5**(3),** 285-311.

MARSTON, C. 1996. The organization of the investor relations function by large UK Quoted companies. *Omega,* 24**(4),** 477-488.

MARSTON, C. 2003. Financial reporting on the Internet by leading Japanese companies. *Corporate Communications: An International Journal,* 8 **(1),** 23-34.

MARSTON, C. L. & SHRIVES, P. J. 1991. The use of disclosure indices in accounting research: A review article. *The British Accounting Review,* 23**(3),** 195-210.

MARTINEZ, R. J. & DACIN, M. T. 1999. Efficiency Motives and Normative Forces: Combining Transactions Costs and Institutional Logic. *Journal of Management,* 25 **(1),** 75-96.

MARY L. TUCKER, P., KAREN STERKEL, & MEYER, G. D. 1995. Qualitative research in business communication: A Review and analysis. *The Journal of Business Communication,* 32 **(4)**, 383-399.

MASON, C. H. & PERREAULT JR, W. D. 1991. Collinearity, power, and interpretation of Multiple regression analysis. *Journal of Marketing Research (JMR),* 28**,** 268-280.

MASON, J. 2002. *Qualitative Researching*, SAGE.

MASON, J. 2006. Mixing methods in a qualitatively driven way. *Qualitative Research,* 6 **(1),** 9-25.

MATHERLY, C. M. & BURTON, H. A. 2005. An analysis of corporate website disclosures. *Management Accounting Research,* 6**(2),** 26-33.

MCKNIGHT, P. J. & WEIR, C. 2009. Agency costs, corporate governance mechanisms and ownership structure in large UK publicly quoted companies: A panel data analysis. *The Quarterly Review of Economics and Finance,* 49**(2),** 139-158.

McKnight, P. J. and C. Weir (2009). "Agency costs, corporate governance mechanisms and ownership structure in large UK publicly quoted companies: A panel data analysis." The Quarterly Review of Economics and Finance **49**(2): 139-158.

MEYER, J. W. & ROWAN, B. 1977. Institutionalized Organizations: Formal Structure as myth and ceremony. *The American Journal of Sociology,* 83**(2),** 340-363.

MEYER, J. W., & ROWAN, B. 1991. Institutionalized organizations: Formal structure as myth and ceremony. As in W. W. Powell & P. J. DiMaggio (Eds.), *The new institutionalism in organizational analysis*: Chicago: University of Chicago Press.

MEYER, J. W., & SCOTT, W. R. (Eds.). 1983. *Organizational environments: Ritual and rationality*. Beverly Hills, CA: Sage.

MILLER, D. & LE BRETON-MILLER, I. 2006. Family governance and firm performance: agency, stewardship, and capabilities. *Family Business Review,* 19**(1),** 73-87.

MILNER, H. V. 2003. The global spread of the internet: the role of international diffusion pressures in technology adoption. A *working paper*.

MIZRUCHI, M. S. & FEIN, L. C. 1999. The social construction of organizational knowledge: A study of the uses of coercive, mimetic, and normative isomorphism. *Administrative Science Quarterly,* 44**(4),** 653-683.

MODELL, S. 2005. Triangulation between case study and survey methods in management accounting research: An assessment of validity implications. *Management Accounting Research*, 16**(2),** 231-254.

MOHAMED, E. & OYELERE, P. 2008. A Survey of Internet Financial Reporting in Bahrain. *Studies of Business and Economics,* 14 **(1),** 31-49.

MOHAMED, E. K. A., 2010, Internet Financial Reporting (IFR) in the GCC: extent and practices *International Journal of Accounting and Finance*,2**(1),**113-127

MOHAMED, E. K. A., PETER OYELERE & AL-BUSAIDI, M. 2009 survey of internet financial reporting in Oman. *International Journal of Emerging Markets,* 4, 56-71.

MOMANY, M. T. & AL-SHORMAN, S. A.-D. 2006. Web-Based Voluntary Financial Reporting of Jordanian Companies. *International Review of Business Research Papers* 2**(2),** 127-139.

MONTEALEGER, R. 1999. A case for more case study research in the implementation of information technology in less-developed countries. *Information Technology for Development,* 8 **(4),** 199-207.

MORAN-ELLIS, J., ALEXANDER, V. D., CRONIN, A., DICKINSON, M., FIELDING, J., SLENEY, J. & THOMAS, H. 2006. Triangulation and integration: processes, claims and implications. *Qualitative Research*, 6**(1),** 45-59.

NANTEL, J. & GLASER, E. 2008, The impact of language and culture on perceived website usability. *Journal of Engineering and Technology Management,* 25 **(1-2),** 112-122.

NIDUMOLU, S. R., GOODMAN, S. E., VOGEL, D. R. & DANOWITZ, A. K. 1996. Information technology for local administration support: The governorates project in Egypt. *MIS Quarterly,* 20 **(2),** 197-224.

NORDBERG, D. 1998. *Online investor relations: how technology is reshaping shareholder communications.* Net Profit Publications.

NORDBERG, D. 2009. Politics in Corporate Governance: How Power Shapes the Board's Agenda. Centre for International Business and Sustainability (CIBS) Working Paper No. 3. Available at SSRN eLibrary. http://papers.ssrn.com/sol3/papers.cfm?

NURUNNABI, M., HOSSAIN, M. A. 2012, The voluntary disclosure of Internet financial reporting (IFR) in an emerging economy: a case of digital Bangladesh. Journal of Asia Business Studies, 6 **(1),**17-42.

OLIVER, C. 1991. Strategic Responses to Institutional Processes. *The Academy of Management Review*, 16, **(1),** 145-179.

OLIVER, C. 1993. Organizational boundaries: Definitions, functions, and properties. *Canadian Journal of Administrative Sciences / Revue Canadienne des Sciences de l'Administration*, 10**, (1),** 1-17.

OLIVER, C. 1997. Sustainable competitive advantage: Combining institutional and resource-based views. *Strategic Management Journal*, 18**,** 697-713.

OLIVER, C. 1997. The Influence of institutional and task environment relationships on organizational performance: The Canadian construction industry. *Journal of Management Studies*, 34**,(1),** 99-124.

ORLIKOWSKI, W. J. & BAROUDI, J. J. 1991. Studying information technology in organizations: Research approaches and assumptions. *Information Systems Research,* 2**,** 1-28.

OYELERE, P. B., LASWAD, F. & FISHER, R. 2000. Corporate financial reporting: firm characteristics and the use of the internet as a medium of communication. *Discussion Paper.* Commerce Division PO Box 84, Lincoln University, CANTERBURY.

OYELERE, P., LASWAD, F. & FISHER, R. 2003. Determinants of Internet financial reporting by New Zealand companies. *Journal of International Financial Management & Accounting*, 14**,(1),** 26-63.

PETERSEN, B. K. & MARTIN, H. J. 1996. CEO Perceptions of Investor relations as a public relations function: An exploratory study. *Journal of Public Relations Research*, 8, **(3)**, 173 - 209.

PFEFFER, J., & SALANCIK, G. 1978. The external control of organizations: A resource dependence perspective. New York: Harper & Row.

PIRCHEGGER, B. & WAGENHOFER, A. 1999. Financial information on the Internet: a survey of the homepages of Austrian companies. *European Accounting Review*, 8, **(2),** 383 - 395.

POWELL, W. W. & DIMAGGIO, P. J. 1991. *The new instituionalism in organizational analysis,* United States of America, The university of Chicago

PRATT, J. & BEAULIEU, P. 1992. Organizational culture in public accounting: Size, technology, rank, and functional area. *Accounting, Organizations and Society,* 17,**(7),** 667-684.

PRATT, J., MOHRWEIS, L. C. & BEAULIEU, P. 1993. The interaction between national and organizational culture in accounting firms: An extension. *Accounting, Organizations and Society,* 18,**(7-8),** 621-628.

PROTOGEROS, N. 2002. A comparative study of business practices of North American and European on-line companies. *Information & Management,* 39**,(7),** 525-538.

PUCK, J. F., MOHR, A. T. & HOLTBRÜGGE, D. 2006. Cultural convergence through web-based management techniques: The case of corporate website recruiting. *Journal of International Management,* 12,**(2),** 181-195.

PURDY, J. M. & GRAY, B. 2009. Conflicting logics, mechanisms of diffusion, and multilevel dynamics in emerging institutional fields. *Academy of Management Journal,* 52, **(2),** 355-380.

Qu,W. & Leung, P., 2006. Cultural impact on Chinese corporate disclosure: A corporate governance perspective, Managerial Auditing Journal, 21, **(3),** 241 –264.

REAY, T. & HININGS, C. R. 2009. Managing the rivalry of competing institutional logics. *Organization Studies,* 30**, (6),** 629-652.

RECHNER, P. L. & DALTON, D. R. 1991. CEO duality and organizational performance: A longitudinal analysis. *Strategic Management Journal,* 12**(2),** 155-160.

REICHELSTEIN, S. 1992. Constructing incentive schemes for government contracts: An application of agency theory. *The Accounting Review,* 67**(4),** 712-731.

RICHARDS, L. 1999. Data alive! The thinking behind NVivo. *Qualitative Health Research,* 9**,** 412-428.

ROBBINS, S. S. & STYLIANOU, A. C. 2003. Global corporate web sites: an empirical investigation of content and design. *Information & Management,* 40**(3),** 205-212.

ROBERT K, Y. 2003. *Case study research : Design and Methods,* London, SAGE.

ROBERTS, C., WEETMAN, P. & GORDON, P., 2005, *International financial accounting: A comparative approach* (2nd ed.), London: Financial Times Prentice Hall, Chapter 17.

ROWLANDS, B. H. 2005. Grounded in practice: Using interpretive research to build theory. *The Electronic Journal of Business Research Methodology* 3**(1),** 81-92.

ROY, O. C. D. 1997. The African challenge: Internet, networking and connectivity activities in a developing environment. *Third World Quarterly,* 18**(5),** 883-898.

ROYSTON, G. & HININGS, C. R. 1996. Understanding Radical Organizational Change: Bringing together the Old and the New Institutionalism. *The Academy of Management Review,* 21**(4),** 1022-1054.

ROYSTON, G., SUDDABY, R. & HININGS, C. R. 2002. Theorizing change: The role of professional associations in the transformation of institutionalized fields. *The Academy of Management Journal,* 45**(1),** 58-80.

SALE, J. E. M., LOHFELD, L. H. & BRAZIL, K. 2002. Revisiting the quantitative-qualitative debate: Implications for mixed-methods research. *Quality and Quantity,* 36**(1),** 43-53.

SALMERON, J. L. & BUENO, S. 2006. An information technologies and information systems industry-based classification in small and medium-sized enterprises: An institutional view. *European Journal of Operational Research,* 173**(3),** 1012-1025.

SALTER, S. B. & NISWANDER, F. 1995. Cultural influence on the development of accounting systems internationally: A test of Gray's [1988] theory. *Journal of International Business Studies,* 26**(2),** 379-397.

SAMAHA, K. & DAHAWY K. 2010. Factors Influencing Corporate Disclosure Transparency in the Active Share Trading Firms: An Explanatory study, as *in Mathew Tsamenyi, Shahzad Uddin (ed.)* Research in Accounting in Emerging Economies, 10, 87-118

SAMAHA, K. & DAHAWY, K. 2011. An empirical analysis of corporate governance structures and voluntary corporate disclosure in volatile capital markets: The Egyptian experience, *International Journal of Accounting, Auditing and Performance evaluation,* 7 **(1-2),** 61-93.

SAMAHA, K., ABDEL-MEGUID, & ABDALLA,S., 2012. Propensity and comprehensiveness of corporate Internet reporting in Egypt: Do board composition and ownership structure matter?, *International Journal of Accounting and Information Management,* 20 **(2),** 142-170.

SARIRAM, R. S. & INDRARINI, L. 2006. Corporate Web Site Reports: Some Evidence on Relevances and Usefulness. *Information Resources Management Journal.* 1**(3),** 1-17.

SCHULZE, W. S., LUBATKIN, M. H., DINO, R. N. & BUCHHOLTZ, A. K. 2001. Agency relationships in family firms: Theory and evidence. *Organization Science,* 12**(2),** 99-116.

SCOTT, W. R. & MEYER, J. W. 1983. *The organization of societal sectors as in John W. Meyer and W. Richard Scott, Organizational Environments: Ritual and Rationality*, Beverty Hills. CA: Sage.

SCOTT, W. R. 1987. The adoloscence of institutional theory. *Administrative Science Quarterly,* 32**(4),** 493-511.

SCOTT, W. R. 2003. Institutional carriers: reviewing modes of transporting ideas over time and space and considering their consequences. *Industrial and Corporate Change,* 12**(4),** 879-894.

SCOTT, W. R. 2008. *Institutions and Organizations,* United States of America, SAGE.

SEO, M.-G. & CREED, W. E. D. 2002. Institutional Contradictions, Praxis, and Institutional Change: A Dialectical Perspective. *The Academy of Management Review,* 27**(2),** 222-247.

SHARMA, V. D. 2004. Board of Director characteristics, institutional ownership, and fraud: evidence from Australia. *Auditing: A Journal of Practice & Theory,* 23**,** 105-117.

SHEPHERD, K., ABKOWITZ, M. & COHEN, M. A. 2001. Online corporate environmental reporting: improvements and innovation to enhance stakeholder value. *Corporate Environmental Strategy,* 8**(4),** 307-315.

SHI, W., SHAMBARE, N. & WANG, J. 2008. The adoption of Internet banking: An institutional theory perspective. *Journal of Financial Services Marketing,* 12**,** 272-286.

SHIPILOV, A. V., GREVE, H. R. & ROWLEY, T. J. 2010. When do interlocks matter? Institutional logics and the diffusion of multiple corporate governance practices. *Academy of Management Journal,* 53**(4),** 846-864.

SINGH, M. & DAVIDSON III, W. N. 2003. Agency costs, ownership structure and corporate governance mechanisms. *Journal of Banking & Finance*, 27**(5),** 793-816.

SLACK, T. & HININGS, B. 1994. Institutional Pressures and Isomorphic Change: An Empirical Test. *Organization Studies*, 15**(6),** 803-827.

SMALING, A. 1994. The pragmatic dimension. *Quality & Quantity,* 28**(3),** 233-249.

SMITH, B. & PEPPARD, D. 2005. Internet Financial Reporting Benchmarking Irish PLCs against best practice. *Accountancy Ireland,* 37, 22-24.

SOETERS, J. & SCHREUDER, H. 1988. The interaction between national and organizational cultures in accounting firms. *Accounting, Organizations and Society,* 13**(1),** 75-85.

SOLTANI, B. 2002. Timeliness of corporate and audit reports: Some empirical evidence in the French context. *The International Journal of Accounting,* 37 **(2),** 215-246.

SPANOS, L. 2006. Corporate Reporting on the Internet in a European Emerging Capital Market: The Greek Case. *SSRN eLibrary*.http://papers.ssrn.com/sol3/papers.cfm?.

SRIRAM, R. S. & LAKSMANA, I. 2006. Corporate web site reports:Some evidence on revelences and usefulness. *Information Recources Management Journal,* 19**(3),** 316-333.

STRAUB, D. W. 1989. Validating Instruments in MIS Research. *MIS Quarterly,* 13**(2),** 147-169.

STRAUSS, A. & CORBIN, J. 1998. *Basics of Qualitative Research*, Sage Publications: London.

STREET, D. L. & GRAY, S. J. 2002. Factors influencing the extent of corporate compliance with International Accounting Standards: summary of a research monograph. *Journal of International Accounting, Auditing and Taxation,* 11 **(1),** 51-76.

SUBRAMANIAN, S. & REDDY, V. N. 2012. Corporate governance disclosures and international competitiveness: A study of Indian firms*, Asian Business and Mnaagement,* 11, 195-218.

SINGH, M. AND W. N. DAVIDSON III., 2003.Agency costs, ownership structure and corporate governance mechanisms." Journal of Banking & Finance **27**(5): 793-816.

SUDDABY, R. & ROYSTON, G. 2005. Rhetorical strategies of legitimacy. *Administrative Science Quarterly,* 50**(1),** 35-67.

SULLIVAN, J. 1999. What are the functions of corporate home pages?. *Journal of World Business,* 34**(2),** 193-210.

TAYLOR, M. E. & JONES, R. A. 1999. The use of International Accounting Standards terminology, a survey of IAS compliance disclosure. *The International Journal of Accounting,* 34**(4),** 557-570.

TOLBERT, P. S. & ZUCKER, L. G. 1983. Institutional sources of change in the formal structure of organizations: The diffusion of civil service reform, 1880-1935. *Administrative Science Quarterly,* 28**(1),** 22-39.

TOWNLEY, B. 1997. The institutional logic of performance appraisal. *Organization Studies,* 18**(2),** 261-285.

TRABELSI, S., LABELLE, R. & DUMONTIER, P. 2008. Incremental Voluntary Disclosure on Corporate Websites, Determinants and Consequences. *Journal of Contemporary Accounting & Economics,* 4**(2),** 120-155.

TRABELSI, S., LABELLE, R. & LAURIN, C. 2004. CAP Forum on E-Business: The Management of Financial Disclosure on Corporate Websites: A Conceptual Model *Canadian Accounting Perspectives,* 3**(2),** 235-259.

TRITES, G. 2008. Corporate reporting on the Web. *CA Magazine,* 141, 16-17.

TUCKER, M. L., Powell, K. S. & Dale Meyer, G. 1995. Qualitative research in business communication: A review and analysis. *Journal of Business Communication,* 32**(4),** 383-399.

TUTTLE, B. & DILLARD, J. 2007. Beyond Competition: Institutional Isomorphism in U.S. Accounting Research. *Accounting Horizons,* 21**(4),** 387-409.

VAIVIO, J. 2008. Qualitative management accounting research: rationale, pitfalls and potential , *Qualitative Research in Accounting & Management.,* 5**(1),** 64-86.

VENKATESH, V. & DAVIS, F. D. 2000. A theoretical extension of the technology acceptance model: four longitudinal field Studies. *Management Science,* 46**(2),** 186-204.

WADDOCK, S. A. & GRAVES, S. B. 1997. The Corporate Social Performance-Financial Performance Link. *Strategic Management Journal,* 18**(4),** 303-319.

WALLACE, N. D., III, WORRELL, D. L. & NEMEC, C. 1998. CEO duality, succession-planning and agency theory: Research agenda. *Strategic Management Journal*, 19**(9),** 905-908.

WALLACE, R.S.O., NASER, K. & MORA, A., 1994. The relationship between the comprehensiveness of corporate annual reports and firm characteristics. *Accounting and Business Research*, 25**(97),** 41-53.

WALLSTEN, S. 2003. Regulation and Internet use in developing countries. *Policy Research.* Working Paper avaiable at http://wwww.worldbank.org/external/default/main?

WALSHAM, G. 1995. Interpretive case studies in IS research: nature and method. *Euorpean Journal of Infromation Systems,* 4**,** 74-81.

WARSCHAUER, M. 2003. Dissecting the "Digital Divide": A Case Study in Egypt. *The Information Society*, 19**(4),** 297-304.

WEIR, C., LAING, D. & MCKNIGHT, P. J. 2002. Internal and External Governance Mechanisms: Their Impact on the Performance of Large UK Public Companies. *Journal of Business Finance & Accounting*, 29**(5-6),** 579-611.

WHEELER, D. L. 2003. Egypt: Building an Information Society for International Development. *Review of African Political Economy,* 30 **(98),** 627-642.

WHITE, C. & RAMAN, N. 1999. The World Wide Web as a public relations medium: the use of research, planning, and evaluation in web site development. *Public Relations Review*, 25 **(4),** 405-419.

WHITTRED, G. P. 1980. Audit Qualification and the Timeliness of Corporate Annual Reports. *The Accounting Review,* 55 **(4),** 563-577.

WILLIAMS, S. P., SCIFLEET, P. A. & HARDY, C. A. 2006. Online business reporting: An information management perspective. *International Journal of Information Management,* 26**(2),** 91-101

XIAO, J. Z., YANG, H. & CHOW, C. W. 2004. The determinants and characteristics of voluntary Internet-based disclosures by listed Chinese companies. *Journal of Accounting and Public Policy,* 23 **(3),** 191-225.

XU, X. & WANG, Y. 1999. Ownership structure and corporate governance in Chinese stock companies. *China Economic Review,* 10 **(1),** 75-98.

ZAHRA, S. A. & PEARCE, J. A. 1989. Boards of Directors and Corporate Financial Performance: A Review and Integrative Model. *Journal of Management,* 15**(2),** 291-334.

ZEGHAL, D. 1984. Timeliness of Accounting Reports and their Information Content on the Capital Market. *Journal of Business Finance & Accounting,* 11**(3),** 367-380.

ZUCKER, L. G. 1977, The role of culture of institutionalization in culture Persistence, as in POWELL, W. W. & DIMAGGIO, P. J. 1991. *The new instituionalism in organizational analysis*, United States of America, The university of Chicago

ZUCKER, L. G. 1987. Institutional Theories of Organization. *Annual Review of Sociology,* 13**,** 443-464.

Web-logs and miscellaneous reports

U.S. Department of State: Diplomacy in action: http://www.state.gov/r/pa/ei/bgn/5309.htm. Accessed 10 July 2011. .

Encyclopaedia Britannica:http://www.britannica.com/EBchecked/topic/404045/Gamal-Abdel-NasserBBC,news. Accessed12 May,2011

BBC News Middle East: http://www.bbc.co.uk/news/world-middle-east-13371974 accessed 12 May, 2011

Internet on the Nile: A case of Egypt, ITU, 2001. http://www.efsa.gov.eg/content. Accessed. Accessed 24April, 2011.

AFRICA ICT POLICY MONITOR PROJECT: Egypt ICT Country Report. Avaialble at http://www.docstoc.com/docs/39422540/AFRICA-ICT-POLICY-MONITOR-PROJECT-Egypt-ICT-Country-Report. Accessed 10 July 2011.

Community Empowerment. *Proceedings of the INET'99, San Jose, CA, USA Available online at http://www.isoc.org/inet99/proceedings/3c/3c_1.htm.* Accessed 15 October2011.

Egypt ICT Indicators Portal: avaiable at: http://www.egyptictindicators.gov.eg/en/Pages/default33.aspx. Accessed 25 January 2012.

ITU, I. T. U. 2001. Egypt country profile -ITU-Telecommunication indicators updated indicators. Avaialble at *http://www.itu.int/ITU-D/ict/cs/egypt/egypt.html.* Accessed 16 May 2011.

MINISTRY OF COMMUNICATIONS AND INFORMATION TECHNOLOGY 2009. MCIT in Ten Years. Avaiable at http://mcit.gov.eg/Publications/Publication_Summary/70. accessed 13 August 2011.

CIB RESEARCH GROUP 2008. *Egypt Book*, CI Capital Holding- CI Capital.Avaiable at http://www.cibeg.com/en/Affiliates/CICapitalHolding/CI-Capital/Pages/default.aspx. Accessed 16 August 2011.

CMA 2002. Decree of the Capital Market Authority' Board of Directors No. 30 *In:* CMA (ed.) *No.30.* Egypt.

LIST OF APPENDICES

Appendices of chapter 2

[A2-1] Summary of the CIR descriptive and explanatory studies since 1997

Research	Country	Date of data collection	Sample size	Number of companies with websites	Number of websites with financial info.	Disclosure Index of CIR (Dependant Variable)		Independent variables
						No. Of items	Index	Sig. Variables
Studies in 1997								
1. Lymer and Tallberg, (1997)	UK & Finland	Jan-Feb1997	Top 50 UK 72 Finland	46 UK 65 Finland	30 UK 58 Finland	9	• Graphics, hyperlinks, downloading, press releases, trend data, Jurisdiction data, Dynamic data, nonfinancial measures, Miscellaneous	-------------------
2. Liu et al., (1997)	USA	Jul-96	Fortune 500	322 (64.4%)	Not specified	13	• Information content (financial / nonfinancial)	– levels of Revenues – Industry type
3. Gray and Debreceny (1997)	USA	Late 1996	50 largest industrial companies	49	34	2	• Financial Statements & Annual report. • Audit report	--------------------
Studies in 1999								
4. Debreceny and Gray (1999)	France, Germany, UK	Late 1998	15 France 15 UK 15 Germany	14 France 15 UK 15 Germany	11 France 12 UK 13 Germany	2	• Financial Statements & Annual report • Audit report	-------------
5. Ashbaugh et al. (1999)	USA	Nov1997-Jan1998	290 assessed by (AIMR)	253 (87%)	177 (70%)	3	• Comprehensive set of F.S. • Link to the annual report • Link to the US Security and EDGAR	-------------------

6. Craven and Marston, (1999)	UK	Jul-98	206	153	109 (57%)	2	• Full annual reports • Partial annual reports	– Size – Industry
7. Deller et al., (1999)	USA, UK, Germany	Jan-98	USA (100) UK (100) Germany (100)	USA (95) UK (85) Germany (76)	USA 91 UK 72 Germany71	5	• F.S and interim reports • Presentation • Press releases • Direct contact • Annual meetings	-------------------
8. Gowthorpe and Amat (1999)	Spain	Jul-98	379 listed companies on Madrid Stock Exchange	70 (19%)	34	3	• Up to date quarterly information. • Annual accounts (on PDF/others). • Current share price	------------------
9. Hedline (1999)	Sweden	Sep-98	60 listed on Stockholm stock exchange	98%	83%	7	• F.Rs • Hyperlinks • Graphics • Press releases • Downloads • Dynamics • Other languages	-------------------------
10. Pirchegger and Wagenhofer, (1999)	Australia and Germany	1997-1998	32 Australian 30 German	26 Australian 30 German	20 Australian 29 German	4	• Content (7) • Timeliness (5) • Technology (14) • User Support (12)	– Size – Free Float
Studies in 2000								
11. Esrock and Leichty (2000)	USA	Nov-97	100 of the Fortune 500	90 (1997) 88 (1999)	81% Press releases 31% provided Annual report	2	•General content. (58) •Social responsibility (13)	--------------
Studies in 2001								
12. Ettredge et al., (2001)	USA	1996	203 listed on (1996)	203	203	17	• Accounting information(6)	– financial analysts

			S&P compustat PCPlus Database				• Other financial information (11)	– Size
13. Hurtt et al., (2001), FASB (2000)	USA	2000	100 out of the Fortune 500	99	93	44	• Attributes related to general corporate home page (9) • Attributes related to general financial and IRSs website (8) • Annual report content (17) • Annual report features (2) • Other attributes related to financial and business web pages (5)	--------------
14. Ettredge et al., (2001)	USA	Feb-May 1998	490	405	402	17	• Accounting Information (6 items) • Other financial information (11)	– Size
Studies in 2002								
15. Debreceny et al. (2002)	l 22 countries listed on DowJones Global Index	Nov 1998 and Feb 1999	660 large	155 companies	--------	2	• Content • presentation	**Variables of the IFR content** – Size, – listing on US stock exchanges – Technology **variables of the presentation of IFR**: Disclosure environment
16. Ettredge et al., (2002)	USA	late 1997 to	220 listed by	193	57%	17	• Required filings (5)	disclosure reputation **required disclosure**

		early 1998	AIMR (1997)				• Voluntary disclosure (12)	**associated with**: – Size – Information asymmetry **voluntary disclosure is associated with:** – size – information asymmetry – Demand on external capital – companies traditional
17. Larrán and Giner (2002)	Spain	Oct-Nov 2000	144 companies quoted on the continuous market of Madrid Stock Exchange	107	62%	16	Such as: • Investor relations info. • Financial statements and intermediate accounting information. • Stock market information • Existence of reports of analysts • Industry information	– Size – Leverage – ROE – listed on a foreign stock exchange – industry – Book/market ratio
18. Ismail, (2002)	Gulf Companies in Qatar, Bahrain and Saudi Arabia	Oct. 2001-Feb. 2002	128 Doha (24) Bahrain (36) Saudi Arabia (68)	50, and 78 (60.93%) have no websites or publish non-financial information	50	--	• Looked at websites with financial information (no specific disclosure index or list was developed)	– Size – Leverage – Profitability – Industry – country
19. Bonsón and Escobar (2002)	15 European countries	July-Aug 2001	300 (20 from each European country)	276	86.3% disclosed full financial statements 77% with auditor report	23	• Information content of IFR section	– Size – Industry – Country of origin

Studies in 2003								
20. Oyelere et al., (2003)	New Zealand	1998	229 companies listed on NZSE	123 (44 overseas companies, 79 non-overseas companies)	90	8	• Product/service information • Corporate history • News & announcements • Financial Information • Reference information • E-Commerce • Social • Employment	– Size – Efficiency. – Ownership – Foreign affiliation, – Liquidity – Profitability – Industry
21. Geerings et al., (2003)	Belgium France Netherlands	Nov-Dec 2001	50 Belgium 50 France 50 Netherland	70% Belgium 94% France 92% Netherland	92% Belgium 96% France 98% Netherland	5	• Annual and interim report (9) • Presentation advantages (7) • Press releases & service Info. (6) • Contact using e-mail/mailing list (4) • Video/audio recording (3)	– Size – Country – Industry
22. Marston (2003)	Japan	1998	99	78 (websites in English)	68	3	• Existence of website • Existence of English website • Existence of financial information (11)	-size - Industry type
23. Allam and Lymer (2003)	USA, UK, Canada, Australia and Hong Kong	2001-2002	250	249	249	2	• General attributes (12) • Financial /annual report attributes (24)	– Size – Country effect

Studies in 2004								
24. Marston and Polei, (2004)	Germany	July 2000 Replicated in May – June 2003	DAX 100	50 (25 top of the DAX 100 & 25 last on the DAX 100)	50 (100%)	53 items (2000) 71 items (2003)	• Investor related information: • Acc & financial (16) • Corporate governance (14) • Timeliness (5) • Social and environmental disclosures (5) • Contact details (5) • Technology features (10) • Convenience and stability (16)	– Size – Profitability – Ownership structure – Systematic risk – Foreign listing status
25. Fisher et al., (2004)	New Zealand		210	188	131 Out of them 128 disclosed audit report as well	11	• Disclosures are related to the content and presentation of the audit reports that are associated with the F.S on the corporate websites	------------
26. Xiao et al., (2004)	China	Aug-02	300 listed companies	203 with accessible website	144 (71%)	82	• information content items (58): • presentation items (24)	– Size – Ownership structure – Independent directors – Auditor type – Foreign listing – Industry influence of CSRC – Profitability
27. Mendes da Silva and Alves (2004)	Latin America, Argentina, Brazil and Mexico	2002	150 companies listed on the stock markets in Argentina, Brazil, and Mexico	150 (100%) Argentina (19), Brazil (90), Mexico (41)				– Size . – Industry – Voluntary disclosure – Country of operation

								– Location of the financial information on the corporate website
Studies in 2005								
28.Matherly and Burton, (2005)	USA	2004	396 Listed on Compustat (334 Domestic & 62 foreign)	396	369 (disclosed press releases) 312 (disclosed stock price) 212 (disclosed BOD. info.	5	• Business data (8) • Forward looking data (4) • Corporate background (6) • Intangibles (8)	– Size – Industry – Future growth – Type of disclosure
29.Smith and Peppard, (2005)	UK, Ireland	2005	165 Irish Stock Exchange	123	43 (accessible and with financial info.)	3	• Website accessibility • Investor relations site navigability • Investor relations content	----------------------
30. Khadaro 2005	Malaysia and Singapore	Feb-03	145 (100 listed on Malaysian Stock Exchange,45 listed on Singapore Straits Times)	75 (75%) of Malaysian companies 39 (87%) of Singapore companies		7	• General attributes (10) • Specific attributes: • Presentation of IRS activities (8) • Information about the management and Board of directors (6) • Financial reports (12)	-----------------

31. García-Borbolla et al. 2005	Spain	Mar-04	816 SMEs from the Spanish Balance Sheet Analysis System (Miller and Le Breton-Miller) database	223	26 (11.87%)	8	• Corporate Info. (4) • Commercial Info. (6) • Financial Info. (4) • Strategic Info. (3) • Labour Info. (4) • Environmental Info. (1) • Communication (3) • Usability (4)	– Size, – Industry/sector type – Manager's education and training. -Previous contacts with clients and/or suppliers – Businesses' technological tradition – Perceived importance of product quality & commercial distribution process – Manager's ability to adapt to innovation – Competition degree – International orientation
32. Debreceny & Rahman (2005)	Europe & Asia	Jan 2001 - 31 Mar 2002	334 listed companies on stock exchanges in Europe and Asia	8 Stock Exchanges	49.6% share transaction 22.86 % Accounting disclosures	--------	Frequency of online disclosure on the designated stock exchange	– Asymmetry – Agency – Profitability – Product life cycle – Analyst coverage – Ownership – Growth prospects – Country
Studies in 2006								
33. Sriram and Laksmana, 2006)	June-July 2002	USA	212 of Fortune 100 companies	212 (100%)	37.90%	26	• Financial and non-financial data (8) • Management analysis (2) • Forward looking information (5) • Information about	– Size – Performance – Investor profile (individual investors Vs. institutional – Security offering

							directors, employee and management (3) • Other corporate information and industry structure (8)	– Industry
34. Bonsón and Escobar, (2006)	13 Eastern European countries	Mid Feb - Mid Mar 2005	1543 (in the 13 countries distributed in 10 industries)	266 out of (630 in English language)	34.50%	44	• Financial, non-financial disclosure items	– Size – Audit firms size – Industry (financial sector)
35. Spanos, (2006)	Greece	July- Aug 2005	141 listed companies on Athens Exchange	136 with 121 (had working websites)	88	6	• Accounting and financial Info. (15) • Corporate Governance Info. (9) • Corporate social responsibility and human resources (8) • IRs contact details (8) • Material formats (3) • Technological advantages (7)	--------------------
36. Momany and Al- Shorman (2006)	Jordan	Oct 2003- Sept 2005	60 (10 insurance companies, 18 service companies 32 industrial)	27 (45%)	19 (70%)	3	• Comprehensive set of financial statements (8) • Partial financial statements (6)	– Size – Profitability – Liquidity – Leverage – Ownership dilution
							• Financial highlights (4)	– Business age – Industry

37. (Bollen et al., 2006)	6 countries: Australia, Belgium, France, Netherlands, South Africa, and UK	Dec 2001-Oct 2002	270 companies; Australia (40) Belgium (50) France (50) Netherlands (50) South Africa (40) UK (40)	267 (99%)	243 (90%) had IRS section	29	• Annual and interim reports (9) • Press releases (6) • Presentation (7) • Direct contact via e-mail/mailing list (2)	– Size – Internationalization - % of individual investors – Technology/ industry – Growth rate – Disclosure Environment.
Studies in 2007								
38. Khan, (2007)	International	Jan-Mar 2005	177 large companies	69%	86% of diversified companies, 46% hotels, 79% listed on NYSE 92% listed on LSE	21	• General attributes (13) • Corporate social responsibility (2) • Corporate governance (6)	--------------------
39. Abdelsalam et al., (2007)	UK	Mid 2005	110 (80 Domestic, 30international)	110	110	143	• General content (19) • Credibility (55) • Usability (69)	– Ownership diffusion – Director experience – Audit fees – Cross-directorship – Director independence – CEO duality – Analyst following
40. Dutta and Bose, 2007	Bangladesh	Aug-Nov 2007	286 listed on DSE and CSE	104	64 (disclosed financial info.) 74 (disclosed CG info.) 40 (Disclosed Social & Environmental info.)	5	• Financial attributes (22) • Corporate governance Attributes (12) • Social and environmental attributes reports (8) • IRs attributes (8) • Presentation attributes (16)	---------------------

41. Ezzat, Amer 2007	Egypt	End of 2007	432 l listed Egyptian companies	225 (52.08%)	80 companies (35.6%)	127	85 Content (Acc.& financial information, CG., Social responsibility). 31 Presentation. 11 Timeliness	______________________
Studies in 2008								
42. Trabelsi et al., (2008)	Canada	Sep–Dec 2002	180 Listed on Toronto Stock Exchange			7	• Background information • Summary of historical results • Key non-financial statistics • MD&A • Non- MD&A information • Intangible assets	--------------------------
43. Kelton and Yang, (2008)	USA	Oct-Nov 2004	284 listed companies on NASDAQ National market and exist in IRRC dataset	284	277 (7) companies had no IRS section on their website)	36	• Content (24) • Format or presentation (12)	– CG Index (1-24 items) – % of management and directors ownership. – % of outstanding stock held by external block holder% of independent directors on the board – Duality role . – Financial experts on the audit committee – No. of audit committee meetings in year 2003
Studies in 2009								
44. El Desokey, 2009	Egypt	Feb-08	88 listed on EGX	57	47	2	• Content (26) • Format and user support (13)	– Size – Profitability – Industry type – Foreign listing – Ownership structure – Legal form

Studies in 2010								
45. Mohamed, Ehab, 2010	Bahrain and Oman	June 2006	142 listed on the Muscat Securities Market and 51 listed on the Bahrain Stock Exchange	84 Omani companies 40 Bahraini companies	31 of Omani firms 32 of Bahraini firms	4	• Company history • Products/service • Financial information • Other information	------------
46. Doaa Aly & Simon, 2010	Egypt	Oct 2005- Jan 2006	98 (excluding insurance companies)	62	35 (56 %)	2	• Content (59 items) • Presentation (31 items)	– Foreign listing – Industry – Profitability – Audit firm size – Leverage – Firm size – liquidity

Appendices of Chapter 3

A3-1: Internet activities undertaken by households in Egypt

2010				**2011**			
Male	**%**	**Female**	**%**	**Male**	**%**	**Female**	**%**
Communicating	27.58	Communicating	26.8	Communicating	20.98	Communicating	20.09
Dealing with Gov. Org.	0.93	Dealing with Gov. Org.	0.6	Dealing with Gov. Org.	12.27	Dealing with Gov. Org.	6.24
Download Songs, Video, Radio and TV	**50.16**	**Download Songs, Video, Radio and TV**	**49.17**	**Download Songs, Video, Radio and TV**	**43.77**	**Download Songs, Video, Radio and TV**	**46.98**
Education or learning activities	37.07	Education or learning activities	41.73	Download SW	2.5	Download SW	2.47
Get info. from Gov. Org.	8.98	Get info. from Gov. Org.	9.22	Education or learning activities	32.17	Education or learning activities	43.79
Info about goods or services	3.52	Info about goods or services	2.05	Get info. from Gov. Org.	12.43	Get info. from Gov. Org.	8.01
Info related to health	26.89	Info related to health	24.48	Info about goods or services	11.72	Info about goods or services	6.93
Internet banking	0.04	Internet banking	0	Health information	37.08	Health information	27.62
Other information requests	0.3	Other information requests	0.2	Information and Send Messages	40.29	**Information and Send Messages**	**53.78**
Playing Video game	24.59	Playing Video game	24.14	Internet banking	0.07	Internet banking	0.01
Purchasing goods or services	0.14	Purchasing goods or services	0.06	Playing Video game	11.16	Playing Video game	7.62
Reading e-Books	32.47	Reading e-Books	36.73	Purchasing goods or services	0.53	Purchasing goods or services	0.22
				Reading e-Books	37.81	Reading e-Books	32.38
				VOIP	**45.59**	**VOIP**	**52.75**

Table A3-2: Internet activities undertaken by government organization

2010		2011	
Activities	%	**Activities**	%
Access to International Databases	31.15	Access to International Databases	29.66
AD for Tech. & Financial offers	14.63	AD for Tech. & Financial offers	17.68
e-Banking	11.13	Downloading software & Applications	41.64
Exchange data and files	72.8	e-Banking	12.08
Others	0.9	e-Conference and e-Training	11.4
Providing e-Government services	25.22	Exchange data and files	72.85
Publishing Media about organization	44.17	Others	3.86
Purchase goods & services	5.75	Providing e-Government services	29.18
R&D and get information	73.79	Publishing Media about organization	48.21
Sending or receiving email	**84.11**	Purchase goods & services	11.59
		R&D and get information	75.07
		Send/Receive orders online	11.98
		Sending or receiving email	**87.05**

Table A3-3: Internet activities undertaken by business units in private sector

2008	%	2009	%
Customer Services	36.41	Customer Services	47.31
e-Banking	25.84	e-Banking	23.51
info about goods or services	66.11	info about goods or services	69.81
info from government	40.27	info from government	38.61
Others	2.01	Others	1.23
Providing e-Government services	13.42	Providing e-Government services	16.47
Purchase goods & services	26.34	Purchase goods & services	18.58
R&D and get information	30.03	R&D and get information	30.19
Sending or receiving email	**79.7**	**Sending or receiving email**	**82.95**

Appendices of Chapter 6

[A6-1] Summary of the analysis of cases A, B, C

Criteria	Company A	Company B	Company C
Industry sector	Basic resources	Industrial goods and Services	Personal and household products
EGX listing date	1999	2006	1995
The date of the website registration	2001	2002	2002
The date of the first website appearance	2001	2003	2002
Reasons for establishing the first website	1. To illustrate the visibility of the company from marketing perspective. 2. To disclose mandatory information that is provided to the stock market 3. To provide frequently required information by the investors	1. Just to present on the Internet and to provide general knowledge about company and its activities and products to the company's stakeholders.	1. Just to present on the Internet and to provide general knowledge about company and its activities and products to the company's stakeholders.
Outlook of the first website	General website prepared in English only. Contained corporate profile, history, links to other companies in the group. This website presented the parent company as well as other affiliated companies.	General, simple and static. Contained only photos for the company's products. No financial information was provided and management and BOD information was missing.	The first website contained information about the company's products, marketing, BOD, historical overview, and annual report section. The financials were presented in Arabic language only
Subsequent developments:	**2003-2005**	**2006-2009**	**2005-2009**
	Focused on the parent company and linked with other two websites of affiliated companies. The website still linked to two websites for companies in the group. Appearance of IR section. IR sections; calendar, Financial information, analyst presentation, market information, Archive and contact us	A new website has been released. The domain name of the website was changed. The IR section has appeared for the first time but provided only little financial information. It consists of Prospects, Financials, and Press releases. While, BOD has appeared on a separate section.	The website released a new website as two affiliated companies have been merged in the parent company. The company's name was changed and the website was updated to account for these changes. IR section appeared on the corporate website for the first time. This website was developed in 3 languages; English Arabic and French. The Annual report and Stock information were presented separately on the corporate home page.

Major changes in the subsequent renovated or modified websites	**2005-2007**		
	The company changed the logo and domain name to represent the parent company alone. The other linked websites have been separated and one of them has become a standalone website. This website does not have any financial information, as it is private and totally owned by the founder. The main website is the one that belong to the parent company and it financial information. The IR sections are: BOD, group structure, F.S.		
	2005-2006		
	Logo and website domain name have changed, URL address remains the same, IR section changed to contain BOD, Group structure, Financial statements. Also, the website contained links to Egyptian stock Exchange and London stock exchange.		
	2007-2010	**2009-2010**	**2009-2010**
	IR section has only changed to contain Chairman's message, BOD, Executive officers, corporate structure, F.S, and financial reports (only for year2006). The links to EGX remained the same though the website has changed.	The company replaced the old website with a totally dynamic and brand new website. This website is more developed in all of its sections. The IR section has changed to contain corporate overview, stock information, dividend information, Analysts coverage (list of names only), investor presentation, press releases, financial reports and contact us (IR contact details)	
The responsible departments of the CIR inside the company	IR manager	IR manager, IT general manager, IT project manager	IR manager

Management attitude and perceptions about the corporate website	**The IR manager’s perception**: The first website was general and linked to other companies in the group, one of them totally owned to the founder and chairman of the company at that time. Website should conform to the international standards, which is above the domestic standards The website should reflect the company's vision, which is based on market perspective. The website is perceived as storage room for frequently and high demanded corporate information..	**The IT manager’s perception:** the corporate website should serve the company's marketing strategy and enhance the company's competitive position. The first website was a marketing project. **The IR manager perception:** the first website is a marketing window overlooking the world. The subsequent websites are designed as storage to provide frequently required business information on a timely basis. The website is designed to present general knowledge about the company but not appropriate to build a model to predict the future performance of the company	**The IR manager perception**: The website needs to be transparent, easy to use, informative and accessible on a timely basis
Benefits of disclosing the corporate information on the corporate website	1. Saved the time consumed to send financial statements via fax machines. 2. Did not save much cost as the company still provide their financials in hard copy format. 3. Saved time and effort spent to send financial in the post	1. Help in opening new markets abroad. 2. Find new clients. 3. Promote the company's product on large scale. 4. Assist in accomplishing corporate objectives	1. Enables IR manager to spend more time on more routine issues. 2. Helps the interested investors in obtaining the required information easily and without a need to arrange a meeting with the IR. 3. Support the company's competitive position especially in the international markets
Role of participants involved in the development of the corporate website	**Overseas website developing firm:** responsible for designing the corporate website. Consult the company over matters related to best practices should be followed to disclose on the Internet and best features to incorporate **IR department**: Decide which website design match the company's image and objectives. Responsible for submitting new financials to the IT department.	**IT department:** responsible for administering, maintaining, and updating the information content. Collect the information from internal departments. Cooperate with marketing department in presenting the corporate information online according to the corporate image and objectives. **Marketing department:** decide how to present the corporate information according to the marketing	**IR Department:** Responsible for setting and implementing corporate strategic communication plan. Maintain long-term relationships with the investors. Disclosing and communicating significant actions related to corporate business. Attend investor presentation meetings. Updating the website with the latest earnings releases. Consult the management on financial matters. Updating the website with the latest

		strategy and corporate objectives **BOD and CEO:** provide general guidelines and recommendations on what to disclose and how to present the information online **Art Director**: cooperate with the marketing department to set attractive outlook of the corporate website and all its sections. Responsible for issues related to usability, interface, and graphics of the corporate website	earnings releases. Consult the management on financial matters. Maintain and update the IR section on the corporate website. **Accountants and internal Audit**: qualify the website reflect the corporate objectives. Prepares the financial statements in conventional way. Not directly involved in the disclosure or presentation of the corporate information online
	Internal IT department: Assist the marketing department to upload or delete any information item. **Marketing department:** plays a key role in developing the corporate website. It cooperates with the IR manager in setting the corporate website in a manner that reflects the corporate image and objectives. Help the IR manager in presenting the financial information in an alignment with the company's marketing strategy. **Accountants and Internal Audit** qualify the website reflect the corporate objectives. Prepares the financial statements in conventional way. Not directly involved in the disclosure or presentation of the corporate information online.	**External website developing firm:** cooperate by providing several designs (prototypes) of the corporate websites. **The IR department:** responsible for collect all relevant financial information from the accounting department and submit them to the IT department to upload them on the corporate website. The IR manager does not update the website information content directly **Accountants and Internal Audit**: qualify the website reflect the corporate objectives. Prepares financial statements in conventional way. Not directly involved in the disclosure or presentation of the corporate information online.	**Public relation department:** Cooperate with the IR department by presenting the corporate financial information according to the corporate image .This is reflected on the presentation and documentary materials on the website (e.g. commercial video clips). **Internal IT staff** Cooperate with the external website developing firm in renovating and maintaining the corporate website. Ascertaining that the website is running effectively **External website developing firm:** cooperate by providing several designs (prototypes) of the corporate websites.

Reasons for updating the website	1. This company consists of integrated set of companies operating in different industry sectors. 2. The management wanted to focus on one sector where the parent company operate	1. The company was publicly traded for the first time. 2. New IR manager was recruited. 3. The company ownership structure was changes as it acquired other companies abroad. 4. The company's activities have expanded and its competitive position has risen in the domestic and international markets. The managers wanted to present all these changes on their website.	1. Hiring a new IR manager with more financial experience and opened to ICT. 2. The company decided to expand its activity to cover other international market beside the domestic one
Methods used to identify website users needs of information	• Emails/ mailing list • Phone calls (novice investors) • No surveys have been conducted • face to face meetings with investors	• Emails/ mailing list. • Phone calls (novice investors). conference calls • face to face meetings with investors. No surveys have been conducted personal relations	• Emails/ mailing list. • Phone calls (novice investors) conference calls • Previous personal experience face to face meetings with investors • No surveys have been conducted • Enquiries from Financial analysts & brokerage firms
Targeted users	• foreign institutional investors • domestic institutional investors Financial analysts • Market players (financial professionals)	• Brokerage firms • Financial analysts • investors (private and institutional	• Press • Institutional investors (insurance companies, pension funds and banks) • foreign investors
Governing rules and principals	No specific rules related to the online disclosure and presentation on the Internet	No specific rules related to the online disclosure and presentation on the Internet	No rules related to the industry sector is imposed
	• No rules related to the industry sector is imposed. • Existing disclosure rules announced by EGX and LSE • Best practices that followed Internationally or suggested by international banks • OECD guideline	• No rules related to the industry sector is imposed. • Existing disclosure rules announced by EGX and LSE • Best practices that followed Internationally or suggested by international banks	• Existing disclosure rules announced by EGX • No specific rules related to the online disclosure and presentation on the Internet Best practices that followed Internationally

[A6-2] Summary of the analysis of cases D, E, F, G

Criteria	company D	Company E	Company F	Company G
Industry sector	Personal and household products	Real estate and construction	Financial service	Telecommunication
EGX listing date	Dec-94	Mar-98	May-97	Dec-99
The date of the website registration	Jan-00	Mar-04	Nov-99	Oct-01
Year of the first website appearance	2001	2004	2000	2003
Reasons for first website		The company was very small at that time. It was working on one project and was only interested in introducing itself to the domestic market.	1. To show that the company is transparent 2. penetrate new markets 3. Provide basic information	Give general knowledge about the company.
Outlook of the first website	Static, general contain only few information about the company's profile, activities, and products in addition to news and press releases. No financial information was provided at all at that time	The first website contained very little information about the company's product, brief notes on its history. Provided no financial data at all	The first website was presented in both Arabic and English. It contained sections related to mission of the company, main activities, scope of rendered service, BOD, financial data, news and contact details for the entire company. F.Ss were Provided in English/ Arabic in HTML format. no fundamental changes occurred until 2005.	Simple, with few pages providing general information presented in four main sections. One section contained information about company's profile, history, organizational chart. Another section provided information of the services rendered. The remaining sections provided facilities to apply for corporate services of to contact the company.
Major changes in the subsequent website	**2006-2010**	**2007-2009**	**2008-2010**	**2004-2005**
		The new website contained extra sections such as our team, market overview, our project, our associations, investor relation, media services and about us. The IR sections: only downloads which contained F.S, investor's presentations and land valuation report.	Better in look and feel aspects. It contained same section of the previous website in addition to management information, related links, FAQ .Managing section contained information about BOD (List of names), general assembly, organization chart, executives (list of names). Financial data section provided incomplete financial statements in Excel. The website provides links to other independent websites to teach	A new website was released with different background, structure and presented in two languages; English and Arabic. For the first time that the company started disclosing financial information online in "annual report section." This section contained some information such as financial highlights, BOD and executive , auditor report, marketing perspectives, five years financial summary in addition to set of F.S.

			investors and increase the investment awareness	
		2009-2010		
		The new website has different design, and structure. Contained more information such as home, our developments, investor relations , about us, media centre, downloads, associates, architects, CSR, careers and contact us. News displayed on a running ribbon goes across the website to provide an up to date news and changes in the corporate stock price during the day. IR sections contained F.S, financial analysts coverage reports		
Interviewed managers	Financial vice president and IR manager	IR manager	General financial and administrative manager	IR manager , e-marketing manager
Management attitude and perceptions about the corporate website	The financial vice president and IR manager believes that their website is used to market both shares and products of the company. The website should provide general knowledge and basic information about the company and its products and financial position.	The website is created to be an interactive instrument to join the company and its website users. The corporate website is perceived as multifunction tool that services all company's departments. The website should reflect the vision and objectives of the company. the website is designed to provide basic information		The E-marketing manager perspective: is a tool to reach the corporate investors and customers in the telecom sector. The Internet is perceived as a fast communication channel.
Benefits of disclosing the corporate information on the corporate website	Facilitate communication with International product and stock markets that the company deals with. Saved no costs but enhanced the communication speed and conveyance of the corporate information.			

Role of participants involved in the development of the corporate website	**Financial vice president and IR department:** cooperate together to update the IR section	IR department: responsible for providing all financial and investment information	**General financial and administrative manager:** responsible for disclosing and presenting corporate information online. He is also responsible of contact the external website developing firm if faced any technical problem or need to update the website.	E-marketing department:
	Internal IT department: responsible for maintaining and updating the website in a proper condition and making sure it operates effectively in addition to their technical duties.	The marketing department: works closely with the IR manager and responsible for present the corporate information according to the company's vision. It also links the internal departments in the company to the external website developer.	The external website developing firm: responsible for designing and monitoring the technical performance of the website.	
	Marketing and sales departments: responsible for submitting the information related to products and exhibitions abroad.	The website developer is an agency affiliates the company but operate separately.		
	Overseas Website developer is responsible for designing the website			
Circumstances triggered the subsequent website renewal/updatings	Restructuring of the company because of merging, swapping shares, buying minority shares by the founders, increase free float rate. Selling more shares to international investors. Being more exposed to the international market.	The company's activities increased in size. A new manage net replaced the old one. A new IR manager was recruited. The need to provide more information related to the magnitude of sales and construction work		
Reasons for updating the website	Being exposed to the international market, as the company used to produce and market its product abroad and in different regions (China, USA, UK, and Canada). The company looked for a communication channel to approach and contact these markets easily.	To be more dynamic, interactive, and to provide more information about the company and local market.		− To market the company's image and product. − To find a fast way to send phone bills to the corporate clients. − The company had its first IPO in 2005 and the appearance of IR as a part of corporate function by the mid of 2000, triggered the need to design standalone section for IR information.

Methods used to identify website users needs of information	Previous personal experience Emails and mailing list Phone calls (for more detailed information) face to face meetings with investors No surveys have been conducted	Emails and mailing list Phone calls (for more detailed information) face to face meetings with investors No surveys have been conducted	Emails and mailing list Phone calls (for more detailed information) No surveys have been conducted	Emails and mailing list Phone calls (for more detailed information) face to face meetings with investors No surveys have been conducted
Targeted users	customers, commercial sectors, interior designers, financial analysts, creditors and investors	Institutional investors. financial analysts or novice investor who possesses good financial knowledge.	Current and potential investors The clients of the company	International investors Institutional investors Financial analysts
Governing rules and guidelines	No specific rules related to the online disclosure and presentation on the Internet	No specific rules related to the online disclosure and presentation on the Internet	No specific rules related to the online disclosure and presentation on the Internet	No specific rules related to the online disclosure and presentation on the Internet
	No rules related to the industry sector is imposed	No rules related to the industry sector is imposed	No rules related to the industry sector is imposed	No rules related to the industry sector is imposed
	Existing disclosure rules announced by EGX & LSE	Existing disclosure rules announced by EGX	Existing disclosure rules announced by EGX	Existing disclosure rules announced by EGX & LSE
	Best practices followed Internationally	Best practices followed Internationally		

Appendices of Chapter 7

[A7-1] Code and measures of CIR main disclosure and quality attributes indices

Dependent Variables:	***Code***	***Measurement***
Total Disclosure and quality attributes Indices:		
Total Disclosure Score	TOTSCORE	Measures the total disclosure items of financial and non-financial information provided on the corporate website
Timeliness	TIMSCORE	Measures the timeliness of information and/or the documents uploaded to the website
Usability	USESCORE	Measures the accessibility and easiness of using the embedded website facilities when searching for a specific piece of information
Credibility	CRIDSCORE	Measures the reliability of the information provided to the users
General content	CONTSCORE	Measures the amount of financial and nonfinancial information contained in the corporate website

[A7-2] Codes and measures of CIR sub-indices

Dependent Variables:	***Code***	***Measurement***
General Website Features	GENWEBSCORE	Measures the main features of the website (e.g. language,
IR/ Financial Section Features	IR_FINSCORE	Measures the main features of the Investor relations section or if any other section is available containing corporate financial information
Investor relations main index	COMPSCORE	Measures the information richness and diversity of the corporate website
Annual Financial Statements/ Full annual Reports	ANNFINSTASCORE	Measures how many items of full financial information provided, in what electronic format/language, and whether recently disclosed
Interim Reports	INTRSCORE	Measures how many Interim reports or financials are provided, in what format/language, and whether recently disclosed.
Auditor report	AUDITSCORE	Measures how often the auditor report is provided online, in what format/language, and whether recently disclosed. Also, it measures if the audit report was disclosed under authenticity and integrity conditions.
Shareholders and Stock information	STOCKSCORE	Measures how much information is provided about the key shareholders, the ownership structure, and other stock related information.
Corporate Governance and corporate Social Responsibility	CG &CSRSCORE	Measures how much information is provided about the corporate BOD, management staff, and any corporate governance mechanisms, in addition to the corporate social responsibility.
Press releases and online news	PRESS&NEWSSCORE	Measures the quantity and quality features of the announced online corporate news. In addition to the timing and accessibility of

		such information.
Internet usage main index	INTUSESCORE	Measures how technically advanced the website is
Multimedia usage index	MULTISCORE	Measures how many video/audio features are incorporated in the corporate website
Internet facilities index	FACILITSCORE	Measures the facilities that are provided to website users to support and facilitate browsing the website and acquiring the required information.

[A7-3] Timelines disclosure score

Timeliness = 15 items	n	%
The year of the last website update provided	64	55.17%
Frequency of updates disclosed indicated from the news releases on the homepage.	43	37.39%
Recent interim financial report provided on the website	38	33.04%
Interim results provided quarterly	38	33.04%
There is an option for mailing list, subscription, email notifications.	26	22.61%
The specific update time for the stock/share price data disclosed	21	18.26%
Interim results provided semi-annually	18	15.65%
Today's share price disclosed	17	14.78%
There is a calendar of future financial events provided	17	14.78%
copy of latest (regulatory) news provided on the website	12	10.43%
There is a link to the online regulatory news service (e.g. regular/ad hoc announcements/notifications, regulatory news filter, stock exchange announcements, press releases, financial-transactions)	11	9.57%
There is a link to the share price on the EGX (or other SE)	9	7.83%
Webcasts provided	3	2.61%
There is a link to a calendar on EGX (Or other SE)	2	1.74%
The user told when to expect a response on the e-mail or online request	0	0.00%

[A7-4] Usability disclosure score

Usability = 60 items	n	%
The website is in English	110	95.65%
Consistent use of arrows such as having some arrows controlled scrolling, while others expanded and collapsed lists.	89	77.39%
The website in all languages working effectively	83	72.17%
Avoid making the user scroll to get important navigation or submit buttons.	80	69.57%
Link to IR section from home page	68	59.13%
Consistent navigational structure.	64	55.65%
The website in Arabic	56	48.70%
Have a language menu or change language option on the home page	51	44.35%
The annual report is in PDF	49	42.61%
Link to Site map / directory from home page	45	39.13%
Link to directors and executive details can be found from home page	44	38.26%
IR page (section) has the word Investor or Financials or similar.	43	37.39%
Link to press releases from Home page	42	36.52%
The annual report/FS in English	42	36.52%
Notes are Hyper-Linked or attached to the financial statements	42	36.52%
File format of the audit report in PDF	38	33.04%
Easy for users to find the audit report (e.g. is it listed in a table of contents/menu)	37	32.17%
File format of interim report in PDF	37	32.17%

Search facility inside the annual report (both HTML & PDF)	36	31.30%
Internal Search feature in the home page	33	28.70%
Chairman's message in HTML	32	27.83%
Internal Search feature in every page	32	27.83%
Social responsibility section in HTML	31	26.96%
The annual report/FS in Arabic	31	26.96%
Executives / Director experience in HTML	30	26.09%
The auditor's report in English	30	26.09%
Chairman's message in PDF	29	25.22%
Executives / Director education in HTML	29	25.22%
Link to annual report from home page	29	25.22%
The Interim FS are in English	26	22.61%
There is a link to social responsibility section from home page	25	21.74%
Auditor's report in Arabic	25	21.74%
There is a table of contents or a link page at the beginning of reports or alphabetical index.	25	21.74%
The Interim FS are in Arabic	23	20.00%
Link to Corporate governance section from home page	22	19.13%
Link to Investor Frequently Asked Questions (FAQs) from Home page or IR page	14	12.17%
There is separate print version for any long page.	13	11.30%
Link to Interactive stock chart from Home page or IR section	12	10.43%
There are different colour graph lines, for the comparison in the chart	12	10.43%
Social responsibility in PDF	8	6.96%
Transcripts should be made available of spoken audio or provide versions with subtitles. Users who are not native speaker and who have computers with no sound equipped.	7	6.09%
Website in other languages	6	5.22%
File format of annual report in HTML	6	5.22%
Policy for Remuneration of directors and executives in HTML	5	4.35%
Link to glossaries containing explanations of difficult financial terminology from Home page or IR section / page	5	4.35%
File format of annual report in downloadable spreadsheet	5	4.35%
Other disability aids such as zooming font	5	4.35%
links change colours to show visited and unvisited areas.	4	3.48%
Audio or video clips / Recorded speeches from shareholder meetings or press conferences.	4	3.48%
Executives / Director education in PDF	3	2.61%
File format of Interim reports in HTML	2	1.74%
Policy for Remuneration of directors and executives in PDF	1	0.87%
The annual report/FS in other languages	1	0.87%
The Interim FS are in other languages	1	0.87%
File format of the audit report in HTML	1	0.87%
File format of interim report in spreadsheet format	1	0.87%
There is a link to the main table of contents from each page.	1	0.87%
Spelling checker embedded in the search engine which gives list of clickable possible correct spelling	0	0.00%
Executives / Director experience in PDF	0	0.00%
Auditor's report in other language	0	0.00%

[A7-5] Credibility disclosure score

Credibility= 49 items	**n**	**%**
The most recent annual statements/report provided on the website	52	45.22%
If the annual report is a PDF file, it should open a new distinct window	47	40.87%
Audit report highlights which GAAP (Accounting standards) is used	41	35.65%
Audited financial statements accompanied by an audit report.	41	35.65%
Adopting Egyptian GAAP	40	34.78%
Audit report highlights which GAAS (Auditing standards) is used	40	34.78%
Audit report's background and /or use of borders consistent with those used in the audited financial statements	40	34.78%
Hyperlink(s) from / to the audited financial statements to external unaudited websites or sections of the company website are avoided	40	34.78%
Adopting Egyptian GAAS	39	33.91%
Auditor's signature is Printed	38	33.04%
The last audit report is Unqualified	38	33.04%
Other hyperlinks to/from the audit report are avoided	38	33.04%
Chairman's message	32	27.83%
Audit firm logo included on the audit report	29	25.22%
There is a social responsibility section	28	24.35%
The interim reports accompanied by auditor limited report	26	22.61%
Hand written format Auditor's signature	24	20.87%
Auditor's signature Exists	23	20.00%
E-mail address to investor relations	21	18.26%
Financial snapshot section in [HTML].	19	16.52%
Phone number to investor relations	18	15.65%
Postal address to investor relations	17	14.78%
If personal information is required, privacy policy is explained.	16	13.91%
Dividend history [HTML].	15	13.04%
There is a statement on the website explaining control issues related to the approval of financial information on the website and security.	15	13.04%
There are quotations of company news provided by an independent information provider	13	11.30%
52 week high/low	12	10.43%
Proxy statement about audit committee members (e.g. education & experience)	12	10.43%
There is a facility to graph share prices over long time frames (e.g. five, and ten years).	11	9.57%
Analysts' contact details are provide on the website	10	8.70%
links to the SE(s) websites	9	7.83%
Corporate governance policies, charters of the main board committees	9	7.83%
Company's code of ethics	7	6.09%
There is a facility to compare company share prices with other popular market indices.	6	5.22%
Policy for Remuneration of directors and executives	5	4.35%
There is a link to the analysts' websites and / or analyst's reports on the company	3	2.61%
IFRS standards adopted	3	2.61%
International auditing standards (IAS) adopted	1	0.87%
There is a facility to compare company share prices with peers and industry leaders	0	0.00%
There is hyperlink(s) from auditor's report to / from element of the audited financial statements.	0	0.00%
Audit report includes opinion / disclaimer or specific/general warning pertaining to any part of the Website	0	0.00%
Audit report includes a statement that it does / does not provide an opinion on any other information hyperlinked to/from the audited financial report.	0	0.00%
There is a statement in the audit report explaining control issues related to the approval of financial information on the website and security.	0	0.00%
The missing information should be clearly indicated (clearly labelled as summary report).	0	0.00%
Link to regulatory database or electronic filing	0	0.00%
Each page of the audited financial in (HTML)statements clearly labelled as "AUDITED" or Audited Financial statements.	0	0.00%
An intermediate warning message is displayed when entering / leaving the audited annual report	0	0.00%
The corporate governance guidelines / rules the company are provided	0	0.00%
Audit firm logo - is it hyperlinked to the auditor's Website	0	0.00%

[A7-6] General content disclosure score

General content = 21 items	n	%
There is an online user feedback facility or "contact us" section	112	97.39%
There is an IR section/other financial section on the company website	73	63.48%
The IR section or the other Financial section contain financial data	62	53.91%
There is a press releases / news section / page	46	40.00%
The is a Site map / directory section / page	45	39.13%
There is an Internal search feature	35	30.43%
There are shareholder information	33	28.70%
Existence of Executives / Director experience information on the website	30	26.09%
Existence of executives / Director education information on the Internet	29	25.22%
The financials disclosed in a full annual report format	29	25.22%
There are (full set of financial statements) but not in annual report format	28	24.35%
There is a corporate governance section / page	25	21.74%
The currency of financial data is disclose,	25	21.74%
Investor Frequently Asked Questions (FAQs)	17	14.78%
Today's high/low share prices are disclosed on the website or percentage of change in price.	17	14.78%
There is an interactive stock chart	14	12.17%
There is a link to Stock Exchanges where the company stocks are listed	9	7.83%
There are glossaries containing explanations of difficult financial terminology	5	4.35%
If financial information are presented in alternative currencies there is an exchange or link to a currency convertor site	2	1.74%
Only excerpts of financial statements are provided	1	0.87%
There is a segmental report	0	0.00%

[A7-7] General website characteristics score

Disclosure items = 7	n	%
The website is in English	110	95.65%
All of the websites in all languages working effectively	83	72.17%
The year of the last website update provided	64	55.65%
The website is in website in Arabic	56	48.70%
Website with a language menu or change language option on the home page	51	44.35%
The updating dates are obviously disclosed	43	37.39%
The website is in other languages	6	5.22%

[A7-8] Numbers and percentages of companies arranged according to the score of the quality attributes

Range	Timeliness		Credibility		Usability		General Content	
	N	%	N	%	N	%	N	%
0-10%	55	0.4783	66	0.5739	31	0.2696	42	0.3652
10-20%	24	0.2087	6	0.0522	30	0.2609	11	0.0957
20%30	10	0.0870	8	0.0696	15	0.1304	17	0.1478
30%-40%	8	0.0696	11	0.0957	12	0.1043	14	0.1217
40%-50%	5	0.0435	9	0.0783	16	0.1391	7	0.0609
50-60%	7	0.0609	11	0.0957	8	0.0696	12	0.1043
60%-70%	2	0.0174	4	0.0348	3	0.0261	6	0.0522
70-80%	4	0.0348	0	0.0000	0	0.0000	5	0.0435

80-90%	0	0.0000	0	0.0000	0	0.0000	1	0.0087
90%-100%	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Total	115	1	115	1	115	1	115	1

[A7-9] IR/financial section general characteristics score

Disclosure items = 7 items	n	%
There is IR section/other financial section on the company website	73	63.48%
Link to IR section from home page	68	59.13%
The IR section or the other Financial section contains information	62	84.93%
IR page (section) has the word Investor or Financials or similar.	43	37.39%
E-mail address to investor relations	21	18.26%
Phone number to investor relations	18	15.65%
Postal address to investor relations	17	14.78%

[A7-10] Annual financial statements/ report score

Disclosure items = 19 items	n	%
Recent annual financial statements/report are provided	52	45.22%
The annual report/FS is in PDF (in Arabic and English)	49	42.61%
If the annual report in a PDF file, it should be opened in a new distinct window	47	40.87%
The annual report/FS in English	42	36.52%
Notes on the financial information are hyper-Linked or attached to the financial statements	42	36.52%
There is search facility inside the annual report (HTML & PDF)	36	31.30%
The annual report/FS in Arabic	31	26.96%
The financials are disclosed in a full annual report format	29	25.22%
There is a link to annual report from home page	29	25.22%
There are (full set of financial statements) provided separately	28	24.35%
There is a table of contents or a link page has been offered at the beginning of reports (in HTML) or alphabetical index.	25	21.74%
File format of annual report in HTML	6	5.22%
File format of annual report in SPREADSHHET	5	4.35%
The annual report/FS in other languages	1	0.87%
Only excerpts of financial statements are provided	1	0.87%
There is a link to the main table of contents from each page.	1	0.87%
Missing information is clearly indicated (CLEARLY LABLED AS SUMMARY REPORT).	0	0.00%
When annual report in HTML, each page of the audited financial statements clearly labelled as "AUDITED" or Audited Financial statements	0	0.00%
There is a segmental report	0	0.00%

[A7-11] Interim reports score

Disclosure Items = 10 items	n	%
Recent interim reports provided on the website	38	33.04%
Interim results provided quarterly	38	33.04%
The interim report in [PDF]	37	32.17%
Interim reports accompanied by auditor report	26	22.61%
The Interim FS are in English	26	22.61%
The interim FS are in Arabic	23	20%
Interim results provided semi-annually	18	15.65%
The interim reports in[HTML],	2	01.74%

The Interim FS are in other languages	1	00.87%
The interim report in [Spreadsheet]	1	00.87%

[A7-12] Auditor's report score

Disclosure items =26 items	n	%
Hyperlink(s) from / to the audited financial statements to external unaudited websites or sections were avoided	41	35.65%
File format of the audit report (PDF)	41	35.65%
Audit report highlights which GAAP is used	41	35.65%
The last audit report is unqualified	40	34.78%
Adopting Egyptian GAAS	40	34.78%
Adopting Egyptian GAAP	40	34.78%
Auditor's report highlights which GAAS is used	40	34.78%
Auditor's report's background and /or use of borders consistent with those used in the audited financial statements	40	34.78%
Other hyperlinks to/from the audit report were avoided	40	34.78%
Auditor's signature is printed	38	33.04%
Easy for users to find the audit report	37	32.17%
The auditor's report in English	30	26.09%
Audit firm logo included on the audit report	29	25.22%
The auditor's report is in Arabic	25	21.74%
Presence of hand written Auditor's signature	24	20.87%
Auditor's signature exists	23	20.00%
File format of the audit report (HTML)	3	2.61%
The report shows if IFRS standards were adopted	3	2.61%
International auditing standards (IAS) are adopted	1	0.87%
An intermediate warning message is displayed when entering / leaving the audited annual report	0	0.00%
Audit firm logo - is it hyperlinked to the auditor's website	0	0.00%
There are hyperlink(s) from auditor's report to / from element of the audited financial statements.	0	0.00%
The auditor's report in other language	0	0.00%
There is a statement in the audit report explaining control issues related to the approval of financial information on the website and security.	0	0.00%
Audit report includes a statement that it does / does not provide an opinion on any other information hyperlinked to/from the audited financial report.	0	0.00%
Audit report includes opinion / disclaimer or specific/general warning pertaining to any part of the website	0	0.00%

[A7-13] Shareholders and stock price information score

Information items	n	%
Provide the facility to compare company share prices with peers and industry leaders	0	0%
Link to regulatory database or electronic filing	0	0%
If Financial information are presented in alternative currencies, the website offers an exchange or link to a currency convertor site	2	2%
Hyper-linking to the analysts' websites and / or analyst's reports on the company.	3	3%
Provide the facility to compare company share prices with other popular market indexes.	6	5%
links to the EGX or other SE websites	9	8%
If today's share price is not disclosed on the company's website, there a link to share price on the SE.	9	8%

Are there a link to Stock Exchanges where the company stocks are listed are disclosed on the website	9	8%
provide analysts' contact details	10	9%
Provide the facility to graph share prices over long time frames (e.g. one, five, and ten years).	11	10%
52 week high/low	12	10%
Link to Interactive stock chart from home page or IR section	12	10%
In the chart, there are Different coloured graph lines, for the comparison.	12	10%
Link to Investor Frequently Asked Questions (FAQs) from Home page or IR page	14	12%
There is an Interactive stock chart	14	12%
Dividend history in HTML format	15	13%
is the today's share price disclosed	17	15%
Investor Frequently Asked Questions (FAQs)	17	15%
Today's high/low share prices are disclosed on the website or percentage of change in price.	17	15%
Financial snapshot section in HTML	19	17%
There is the specific update time for the stock/share price data disclosed	21	18%
Show the currency of financial data,	25	22%
There are shareholder information	33	29%

[A7-14] Corporate governance and corporate social responsibility price

Disclosure items = 23 items	**n**	**%**
Link to directors and executive details can be found from home page	44	38.26%
Chairman's message	32	27.83%
Chairman's message in HTML format	32	27.83%
Social responsibility section in HTML	31	26.96%
Executives / Director experience in HTML format	30	26.09%
Executives / Director experience information provided	30	26.09%
Chairman's message in PDF format	29	25.22%
Executives / Director education in HTML	29	25.22%
Executives / Director education information provided	29	25.22%
There is a social responsibility section	28	24.35%
There is a Corporate governance section / page	25	21.74%
Link social responsibility section from home page	25	21.74%
Link to corporate governance section from home page	22	19.13%
Proxy statement about audit committee members (e.g. education & experience)	12	10.43%
Corporate governance policies, charters of the main board committees	9	7.83%
Social responsibility section in PDF format	8	6.96%
Company's code of ethics	7	6.09%
Policy for Remuneration of directors and executives	5	4.35%
Policy for Remuneration of directors and executives in HTML	5	4.35%
Executives / Director education in PDF format	3	2.61%
Policy for remuneration of directors and executives in PDF	1	0.87%
The different sets of corporate governance guidelines / rules the company is subject to	0	0.00%
Executives / Director experience in PDF format	0	0.00%

[A7-15] News and press releases score

Disclosure items = 7	n	%
There is a Press releases / news section / page	50	43.50%
Link to Press releases from Home page	42	36.50%
there is copy of latest regulatory news	22	19.10%
There is a calendar of future financial events	17	14.80%
There are quotations of company news released by an independent information provider	13	11.30%
There is a link to the online Regulatory News Services (RNS)	11	9.60%
The website provides a link to a calendar or news section on EGX or other SE	2	1.70%

[A7-16] Internet usage score

Disclosure items = 21 items	n	%
Usage of Multimedia		
Transcripts available for the spoken audio	7	6%
Webcasts are provided	3	3%
Audio or video clips / recorded speeches of shareholder meetings or press conferences.	4	3%
User Support facilities		
The links change colours to highlight visited and unvisited areas.	112	97%
Consistent navigational structure.	89	77%
A separate print version for any long page.	80	70%
There is an option including; RSS, register, mailing list, Email notifications	64	56%
Link to site map / directory from home page	45	39%
There is an internal search feature	45	39%
Internal search feature in the home page	35	30%
Internal search feature in every page	33	29%
Spelling checker embedded	32	28%
The user told when to expect a response on email or online requests	26	23%
There is an online user feedback facility or "contact us" section	16	14%
Disability aids (e.g. zooming in/out)	13	11%
The is a site map / directory section / page	5	4%
There are glossaries containing explanations of difficult financial terminologies	5	4%
Consistent use of arrows	5	4%
Avoid making the user scroll to get important navigation or submit buttons.	4	3%
Link to Glossaries containing explanations of difficult financial terminology from home page or IR section / page	1	1%
Privacy policy disclosed, if personal information is required.	0	0%

[A7-17] Statistics of the investor relations index

Disclosure indices	Mean	Median	Minimum	Maximum	SD
ANNFINSTASCORE	0.25	0.21	0.00	0.80	0.26
INTRSCORE	0.18	0.00	0.00	0.80	0.26
AUDIT SCORE	0.22	0.00	0.00	0.72	0.29
STOCKSCORE	0.11	0.04	0.00	0.70	0.18
CGSCORE	0.17	0.09	0.00	0.77	0.21
NEWSSCORE	0.19	0.00	0.00	1.00	0.25

Appendices of Chapter 8

[A8-1] Test of normality of the dependent variables

Tests of Normality						
	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TOTALSCORE	.173	115	.000	.883	115	.000
USESCORE	.134	115	.000	.918	115	.000
TIMESCORE	.199	115	.000	.831	115	.000
CONTSCORE	.158	115	.000	.897	115	.000
CRIDSCORE	.246	115	.000	.805	115	.000
GENWEBSCORE	.149	115	.000	.944	115	.000
IRS_FINSCORE	.226	115	.000	.850	115	.000
ANNFINSTASCORE	.285	115	.000	.812	115	.000
INTRSCORE	.388	115	.000	.697	115	.000
Auditor report SCORE	.342	115	.000	.685	115	.000
STOCKSCORE	.294	115	.000	.654	115	.000
CGSCORE	.217	115	.000	.812	115	.000
MULTIMEDIASCORE	.532	115	.000	.299	115	.000
FACILITSCORE	.190	115	.000	.927	115	.000
NEWSSCORE	.338	115	.000	.755	115	.000
COMPSCORE	.196	115	.000	.845	115	.000
INTUSESCORE	.193	115	.000	.919	115	.000

A8-2: Test of normality of the independent variables

Tests of Normality						
	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
BANKS_FINANCESECTOR	.490	109	.000	.492	109	.000
SERVICESECTOR	.513	109	.000	.422	109	.000
INDUSTRYSECTOR	.418	109	.000	.602	109	.000
BOARDSIZE	.154	109	.000	.923	109	.000
MANGESIZE	.164	109	.000	.752	109	.000
INDEPND1	.124	109	.000	.884	109	.000
FOREIGNDIRB	.481	109	.000	.410	109	.000
FOREIGNDIRM1	.462	109	.000	.408	109	.000
FOREIGNINVESTOR	.517	109	.000	.408	109	.000
DUALITY	.390	109	.000	.623	109	.000
AUDITFIRMNO	.481	109	.000	.520	109	.000
AUDITFIRMSIZE	.347	109	.000	.636	109	.000
INSTITRATIO	.198	109	.000	.824	109	.000
GOVERATION	.278	109	.000	.705	109	.000
MANGRATIO	.256	109	.000	.738	109	.000
MAJORATIO	.437	109	.000	.378	109	.000
FLOATRATIO	.087	109	.040	.936	109	.000

A8-3: Homoscedasticity test results of dependent variables

Test of Homogeneity of Variance					
		Levene Statistic	df1	df2	Sig.
TOTAL SCORE	Based on Mean	6.717	2	112	.002
	Based on Median	2.399	2	112	.095
	Based on Median and with adjusted df	2.399	2	85.512	.097
	Based on trimmed mean	6.352	2	112	.002
USE SCORE	Based on Mean	6.003	2	112	.003
	Based on Median	2.847	2	112	.062
	Based on Median and with adjusted df	2.847	2	90.370	.063
	Based on trimmed mean	5.792	2	112	.004
TIME SCORE	Based on Mean	5.170	2	112	.007
	Based on Median	2.761	2	112	.068
	Based on Median and with adjusted df	2.761	2	104.020	.068
	Based on trimmed mean	4.771	2	112	.010
CONT SCORE	Based on Mean	3.453	2	112	.035
	Based on Median	1.784	2	112	.173
	Based on Median and with adjusted df	1.784	2	95.715	.173
	Based on trimmed mean	3.055	2	112	.051
CRID SCORE	Based on Mean	7.017	2	112	.001
	Based on Median	1.873	2	112	.158
	Based on Median and with adjusted df	1.873	2	85.135	.160
	Based on trimmed mean	6.401	2	112	.002
GENWEB SCORE	Based on Mean	.391	2	112	.677
	Based on Median	.330	2	112	.720
	Based on Median and with adjusted df	.330	2	110.490	.720
	Based on trimmed mean	.386	2	112	.681
IRS_FIN SCORE	Based on Mean	1.405	2	112	.250
	Based on Median	1.365	2	112	.260
	Based on Median and with adjusted df	1.365	2	109.034	.260
	Based on trimmed mean	1.422	2	112	.245
ANNFINSTA SCORE	Based on Mean	1.353	2	112	.263
	Based on Median	.466	2	112	.628
	Based on Median and with adjusted df	.466	2	102.064	.629
	Based on trimmed mean	1.378	2	112	.256
INTR SCORE	Based on Mean	7.039	2	112	.001
	Based on Median	2.582	2	112	.080
	Based on Median and with adjusted df	2.582	2	101.240	.081
	Based on trimmed mean	6.490	2	112	.002
Auditor report SCORE	Based on Mean	4.587	2	112	.012
	Based on Median	1.536	2	112	.220
	Based on Median and with adjusted df	1.536	2	105.194	.220
	Based on trimmed mean	4.447	2	112	.014
STOCK SCORE	Based on Mean	9.508	2	112	.000
	Based on Median	2.652	2	112	.075
	Based on Median and with adjusted df	2.652	2	87.982	.076
	Based on trimmed mean	8.106	2	112	.001
CG&CSR SCORE	Based on Mean	4.062	2	112	.020
	Based on Median	1.969	2	112	.144
	Based on Median and with adjusted df	1.969	2	95.462	.145
	Based on trimmed mean	3.931	2	112	.022
Multimedia Score	Based on Mean	4.596	2	112	.012
	Based on Median	1.326	2	112	.270
	Based on Median and with adjusted df	1.326	2	90.161	.271
	Based on trimmed mean	4.510	2	112	.013
FACILIT SCORE	Based on Mean	3.585	2	112	.031
	Based on Median	1.486	2	112	.231
	Based on Median and with adjusted df	1.486	2	85.592	.232
	Based on trimmed mean	3.335	2	112	.039
NEWS SCORE	Based on Mean	4.320	2	112	.016
	Based on Median	1.998	2	112	.140
	Based on Median and with adjusted df	1.998	2	98.723	.141

	Based on trimmed mean	4.226	2	112	.017
COMP SCORE	Based on Mean	6.468	2	112	.002
	Based on Median	2.367	2	112	.098
	Based on Median and with adjusted df	2.367	2	92.491	.099
	Based on trimmed mean	6.074	2	112	.003
INTUSE SCORE	Based on Mean	4.049	2	112	.020
	Based on Median	1.599	2	112	.207
	Based on Median and with adjusted df	1.599	2	82.380	.208
	Based on trimmed mean	3.806	2	112	.025

A8-4: Homoscedasticity test results of independent variables

Test of Homogeneity of					
		Levene Statistic	df1	df2	Sig.
BOARDSIZE	Based on Mean	1.103	1	52	.298
	Based on Median	.951	1	52	.334
	Based on Median and with adjusted df	.951	1	47.963	.334
	Based on trimmed mean	1.049	1	52	.310
MANGESIZE	Based on Mean	.009	1	52	.924
	Based on Median	.007	1	52	.933
	Based on Median and with adjusted df	.007	1	51.798	.933
	Based on trimmed mean	.011	1	52	.915
INDEPND1	Based on Mean	.954	1	52	.333
	Based on Median	.902	1	52	.347
	Based on Median and with adjusted df	.902	1	48.947	.347
	Based on trimmed mean	.914	1	52	.343
FOREIGNDIRB	Based on Mean	.a			
FOREIGNDIRM	Based on Mean	.a			
INSTITRATIO	Based on Mean	6.538	1	52	.014
	Based on Median	3.264	1	52	.077
	Based on Median and with adjusted df	3.264	1	48.384	.077
	Based on trimmed mean	5.442	1	52	.024
GOVERATION	Based on Mean	.509	1	52	.479
	Based on Median	.008	1	52	.929
	Based on Median and with adjusted df	.008	1	51.763	.929
	Based on trimmed mean	.336	1	52	.565
MANGRATIO	Based on Mean	9.354	1	52	.004
	Based on Median	5.009	1	52	.030
	Based on Median and with adjusted df	5.009	1	50.390	.030
	Based on trimmed mean	8.537	1	52	.005
Free float ration	Based on Mean	.073	1	52	.787
	Based on Median	.076	1	52	.784
	Based on Median and with adjusted df	.076	1	50.204	.784
	Based on trimmed mean	.077	1	52	.782
Major shareholder Ownership	Based on Mean	.017	1	52	.897
	Based on Median	.053	1	52	.818
	Based on Median and with adjusted df	.053	1	50.989	.818
	Based on trimmed mean	.117	1	52	.733
Total revenue	Based on Mean	2.414	1	52	.126
	Based on Median	.975	1	52	.328
	Based on Median and with adjusted df	.975	1	47.024	.328
	Based on trimmed mean	1.399	1	52	.242
Revenue Growth (competition)	Based on Mean	.811	1	52	.372
	Based on Median	.651	1	52	.423
	Based on Median and with adjusted df	.651	1	47.020	.424
	Based on trimmed mean	.651	1	52	.423
Total Assets	Based on Mean	.632	1	52	.430
	Based on Median	.319	1	52	.575
	Based on Median and with adjusted df	.319	1	47.810	.575
	Based on trimmed mean	.333	1	52	.566
PRICE_BOOK	Based on Mean	.001	1	52	.982
	Based on Median	.005	1	52	.943

	Based on Median and with adjusted df	.005	1	50.734	.943
	Based on trimmed mean	.006	1	52	.937
Return on Equity	Based on Mean	1.042	1	52	.312
	Based on Median	1.011	1	52	.319
	Based on Median and with adjusted df	1.011	1	49.799	.320
	Based on trimmed mean	1.081	1	52	.303
Leverage Ratio	Based on Mean	.158	1	52	.693
	Based on Median	.085	1	52	.772
	Based on Median and with adjusted df	.085	1	50.607	.772
	Based on trimmed mean	.135	1	52	.715
Quick Ratio	Based on Mean	.056	1	52	.813
	Based on Median	.000	1	52	.986
	Based on Median and with adjusted df	.000	1	48.827	.986
	Based on trimmed mean	.004	1	52	.948

[A8-5] Summary of the impact of the significant variables on the CIR disclosure indices: Part One

Dependent variables	1. Ownership Variables					2. CG variables			
	Gov	INST	MANG	MAJ INVE	Float	BOARD SIZE	MANG SIZE	DUALITY	INDPS(%)
TOTALSCORE	NO	NO	NO	NO	NO	NO	NO	NO	NO
USESCORE	NO	NO	NO	NO	NO	NO	NO	NO	NO
TIMESCORE	NO	NO	NO	NO	NO	NO	NO	NO	NO
CONTSCORE	NO	NO	NO	NO	NO	NO	NO	NO	NO
CRIDSCORE	NO	NO	NO	NO	NO	NO	NO	NO	NO
GENWEBSCORE	NO	NO	NO	NO	NO	NO	NO	NO	NO
IRS_FINSCORE	NO	NO	NO	NO	(+) F &R	NO	(+) F& R	NO	NO
COMPSCORE	NO	NO	NO	NO	NO	NO	NO	NO	NO
INTUSESCORE	NO	NO	NO	NO	NO	NO	NO	NO	NO

Part Two:

Dependent variables	3. International exposure				4. Audit firm		5. Industry type
	FORINLIST	FORININVESTOR	FOREIGNDIR	FOREIGNMAN	AUDIT No.	AUDIT SIZE	Industry sector
TOTALSCORE	(+) mar/R	(+) F& R	NO	NO	NO	NO	(-) F& R
USESCORE	NO	NO	NO	NO	NO	(-) mar/F	(-) F& R
TIMESCORE	NO	(+) R	NO	NO	NO	NO	(-) F& R
CONTSCORE	(+) R	(+)mar/F &R	NO	NO	NO	NO	(-) F& R
CRIDSCORE	NO	NO	NO	NO	(+) F	NO	(-) F& R
GENWEBSCORE	NO	NO	NO	NO	NO	NO	(-) F& R
IRS_FINSCORE	NO	NO	NO	NO	(+) mar/F	NO	NO
COMPSCORE	NO	(+)F &R	NO	NO	(+) mar/F	NO	(-) F& R
INTUSESCORE	NO	NO	NO	NO	NO	NO	(-) F& R

[A8-6] Summary of the empirical results of the research hypotheses

Independent variable	H	Expected signal	Correlation results	Full model	Reduced Model	Assertion
1. Ownership						
Endogenous	H1a	-	insignificant	insignificant	insignificant	unsupported
Exogenous	H1b	+	GOV (-) significant INST (+) marginal	Insignificant	Insignificant	unsupported
Shareholders dispersion	H1c	+	(+) significant	insignificant	(+) significant	unsupported
2. Corporate governance						
Board size	H2a	+/-	(+) significant	Insignificant	Insignificant	unsupported
Management size	H2b	+	(+)significant	insignificant	(+) significant	unsupported
Board independence	H2c	+/-	Insignificant	Insignificant	Insignificant	unsupported
Duality Role	H2d	+/-	Insignificant	Insignificant	Insignificant	unsupported
3. Industry type						
Industry sector	**H3a**	**+/-**	**(-) significant**	**(-) Significant**	**(-) Significant**	**Negative**
4. International exposure						
Foreign directors on the board	H4a	+	(+) significant	Insignificant	Insignificant	unsupported
Foreign manager	H4b	+	(+) significant	Insignificant	Insignificant	Unsupported
Foreign investors (major owners)	H4c	**+**	**(+) significant**	**(+) significant**	**(+) significant**	**Positive**
Foreign listing	H4d	**+**	**(+) significant**	**(+) significant**	**(+) significant**	**Positive**
5. Audit firm						
Audit firm size	H5a	+/-	Insignificant	(-) marginal significant	Insignificant	Unsupported
Number of audit firms	H5b	+	(+) significant	(+) significant	Insignificant	Unsupported