

## Internet Financial Reporting and Corporate Governance in Malaysia

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**Abstract:** This paper examined the association between corporate governance mechanisms, ownership structures, Internet visibility and Internet financial reporting. This paper argues that the adoption of technological-based innovation may involve more complex factors than considered by agency theory. Institutional theory was used to generate hypotheses about factors specific to Malaysia context, since the companies may adopt technological-based innovation when seeking for legitimacy during the increasing institutionalization process. The researcher examined the contents of listed companies' Web sites by adapting the richer and more comprehensive disclosures/attributes index from FASB (2000). The results in the regression model show Internet financial reporting is positively significantly related to independent non-executive directors, directors with accounting and business qualification, board size and shareholders numbers. Audit committee with financial and accounting qualification is also positively significantly associated with Internet visibility. These findings show that competent directors and accounting professional are establishing good reporting practices to create homogeneous organizational practices in response to uncertainty in technology. This process is in line with the argument of mimetic isomorphisms under the institutional theory. Following the corporate governance reforms, the companies are facing pressure and almost obliging them to disseminate information by Internet in seeking organizational legitimacy, so that capital market does not interpret the absence of information as a sign of lack of accountability and transparency. In addition, Malaysia is an emerging economy nation, which, on the global state, is under coercive pressure, normative and mimetic, institutionalizing expectation from the global capital markets. All these pressures can be identified as determinants that have affected the adoption of Internet reporting. The level of adoption for Internet reporting at the organizational level will be affected by the regulatory system's effectiveness and organizations' willingness to make a positive response to institutional pressure. This paper highlights important policy implications by showing the applicability of institutional theory in the contexts that have limited studies previously.

**Key words:** Corporate Governance, Institutional Theory, Internet Visibility, Internet Financial Reporting, Transparency.

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## INTRODUCTION

Internet Financial Reporting (IFR) means corporations use Internet technologies such as the World Wide Web to disseminate financial information (FASB, 2000; Lymer *et al.*, 1999). Following high-profile accounting frauds in many countries, supervisory bodies tried to increase the transparency level by requesting their corporations to use the Internet to communicate information. The development of Internet reporting is also one institutional manifestation, as it is described as a new but rapidly growing phenomenon. Companies from different parts of the world are presenting their corporate financial information via their Web sites. Companies from emerging and developing countries have no choice but to follow this reporting trend. This reporting process is interpreted as a universal process of institutionalization. Under the institutional mimetic view, "organizations modeled after other similar organizations that are perceived to be more successful and legitimate" (DiMaggio and Powell, 1983, p.152), especially during the crisis and time of uncertainty.

The Malaysian government has initiated major corporate governance reforms to promote disclosure transparency. They introduced the Malaysian Code of Corporate Governance (2000), (Revised, 2007), the Bursa Malaysia Revamped Listing Requirement (2001), Best Practices in Corporate Disclosure (2004) and the Investor Relations (IR) Put Into Practice (2006). These measures highlighted the importance of transparency and corporate governance requirements. These recommendations aim to increase the confidence of investors, strengthen capital market and improve the accountability and credibility of financial information provided by listed companies. This study focuses on the corporate governance mechanisms introduced by Securities Commission (MCCG, Revised, 2007) such as the effective board compositions and audit committees characteristics are effective in improving companies' disclosure transparency by the Internet. It is important to examine the association between Internet financial reporting and corporate governance characteristics, so that

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the regulators can further assess and improve the board effectiveness. Gul and Leung (2004) argue mixed findings of prior disclosure studies may be because of failure to consider corporate governance variables. This study adds to the existing evidence of developed capital market to find out whether their findings can be generalized in Malaysia.

There are institutional differences exist between developed capital market and developing countries such as Malaysia. These include a weak market for corporate control (Zhuang, 1999; Lins, 2003; Gibson, 2003) and concentrated ownership (Shleifer and Vishny, 1997; Claessens *et al.*, 2000). These differences may influence how the directors and managers govern their companies locally. Even though, the Internet financial reporting is quite developed in U.S. and European countries, there are limited prior studies examined the relationship between corporate governance structures and Internet financial reporting in emerging market such as Malaysia. It is important to study Malaysia, as the corporate governance mechanisms practiced by the listed companies is likely to be different from those used in developed economies in view of the unique institutional differences.

According to Yatim *et al.*, (2006), there are clearly identifiable ethnic groups in capital segments of Malaysian corporate environment. Such division can be clearly seen in the listed companies of whom share ownership and board membership are predominantly controlled by the Bumiputra Malays and the Malaysian Chinese. Because of this unique corporate structure, this paper extends the voluntary disclosure via Internet and corporate governance literature by examining this favoritism in politic and ethnicity (Gomez and Jomo, 1997) and its influence on Internet financial reporting.

Prior studies of IFR placed strong emphasis on the economic aspects of the determinants of IFR. Many studies examined the relationship between IFR and firms' characteristics such as firm size, profitability, and leverage. Several studies investigated limited governance factors as determinants of IFR, such as ownership concentration and CEO characteristics. This study addresses the effect of the unique ownership structure and impact of corporate governance mechanisms specific to the Malaysian context, including certain board and audit committee characteristics adopted by the Securities Commission. The influence of audit committee characteristics on the IFR is a new governance variable adds to Malaysian Internet financial reporting studies. In addition to the economic-based theories, this study uses institutional theory to examine companies' Internet financial reporting practices. It could help to explain companies' reporting practices, especially via the Internet, the most current advanced stages of reporting. From the institutional sociological perspective, Malaysian organizations exist immersed in a unique ownership structure and relationship-based capitalism institutional environment, thus, their Internet reporting practices tend to reflect models or forms originating from the environment that are different from other developed economies. Main research questions of this study are:

- What are the factors that influence the Internet financial reporting practices of Malaysian listed companies?
- Does institutional theory explain the Internet financial reporting practices of Malaysian listed companies?

This study also included another important variable which is Internet visibility. It attempts to capture the importance of a company on the Net. With the development of electronic transactions, Internet visibility is becoming an important intangible asset for corporations. In this Internet age, online users will pressure companies with a high Internet visibility to increase disclosure and disseminate better information. This study uses multiple regression analysis to test the relationship of the variables.

Key results from the regression model show independent non-executive directors, directors with accounting and business qualification, board size and shareholders numbers are positively significantly related to Internet financial reporting. Internet visibility is also positively significantly associated with audit committee with financial and accounting qualification. These findings show the competent directors and accounting professional are establishing good reporting practices to create homogeneous organizational practices in response to uncertainty surrounding technology. This process is in line with the argument of mimetic isomorphisms under the institutional theory.

The rest of this paper is organized as follows. Section 2 presents previous Internet financial reporting literature. The theoretical framework and hypotheses development are discussed in Section 3. Section 4 explains the research design. The data analysis and findings are presented in Section 5 and 6, while Section 7 summarizes and discusses results.

### **Literature Review:**

Several studies tried to identify factors that influenced Internet reporting practices in developed countries. One of the earliest studies by Lymer (1997) analyzed the Internet utilization by the top 50 U.K. listed companies, and found although 92% had a Web site, only 52% presented reports or accounts on their Web page. Craven and Marston (1999) found 74% of the Top 206 U.K. companies had Web sites.

Ismail and Tayib (2000) found only 11.5% of the Malaysian companies disclosed their full annual reports on their Web sites. Further examination shows financial disclosure related to industry and listing status, larger companies are more likely to disclose annual reports on the company Web sites. They only included two variables, the listing status and industry type to explain the financial reporting practices.

Another Malaysian study by Abdul Hamid (2004) revealed industry type and company size is positively significantly associated with the existence of investor information in the corporate Web site. The result confirms Malaysian companies rely on traditional investor relations (IR) distribution channels to communicate with institutional investors and fund managers. Because of the Internet's nature, the results only represent a snapshot of Malaysian companies using the Internet for IR activities at a certain period of time.

Abdelsalam *et al.*, (2007) found the comprehensiveness of CIR is associated with CEO duality; director independence, director holding and analyst followings. However, the results of the random sample of 110 companies selected from the top quartile listed companies of London Stock Exchange may not generalize to smaller listed companies.

Another finding by Kelton and Yang (2008) show U.S. firms with weak shareholder rights, a lower proportion of block holder ownership, a higher proportion of independent directors, a more diligent audit committee and a higher proportion of audit committee members with financial expertise are more likely to have Internet financial reporting. The findings may not be generalized to listed companies from other stock exchanges.

Since late 1990s, many studies tried to identify the factors associated with the Internet reporting in developed economies (Lymer, 1999; Gowthorpe and Amat, 1999; FASB, 2000; Debreceeny *et al.*, 2002; Marston and Polei, 2004; Abdelsalam and Street, 2007; Kelton and Yang, 2008). It can be concluded that certain specific firm characteristics such as firm size appear to be statistically associated with the extent of Internet corporate reporting. Major problem to integrate and interpret the early studies (between 1999 and 2000) is that they provide little theoretical arguments for their findings and analysis. There are limited studies associating IFR with important determinants such as ownership structures and corporate governance mechanisms except for Abdelsalam *et al.*, (2007) and Kelton and Yang (2008). However, both studies examined corporations in developed economies including the U.K. and U.S.

Many international comparative studies concentrated on the similarities and differences of Internet reporting practices in developed countries only (Bonson and Escobar, 2006). Findings for the research also vary by exchange listing or country, clearly indicating that IFR varies according to the institutional environment. Institutional differences in corporate control and ownership concentration are likely to influence the board and managers' decision in disclosing information via the Internet. In addition, Malaysian companies are known to have culture of relatively secrecy prior to the financial crisis (Ghazali and Weetman, 2006). The results of studies from developed economies cannot be generalized to developing countries, as the stage of economic development is likely to be an important determinant influencing Internet reporting practices. Also, other differences in nation and culture are likely to influence accounting practices (Gray, 1988).

Majority of prior IFR studies used agency theory to examine the determinants of IFR. These studies mainly focused on the descriptive nature of Internet reporting and examined limited factors (mainly firms' characteristics and limited ownership structures) affected the Internet reporting. This study addresses the effect of the concentrated ownership structure and impact of corporate governance mechanisms specific to the Malaysian context, including certain board and audit committee characteristics adopted by the Securities Commission.

#### ***Theoretical Framework and Hypotheses Development:***

Disclosure is a complex function of several factors proved by the empirical evidence. Both internal firm characteristics and external environmental factors influence the disclosure. The factors include regulatory framework, cultural and institutional background.

One of the dominant theoretical perspectives in organization theory is institutional theory. Accounting researchers are increasingly using it to study the accounting practices in the organizations (Deegan and Unerman, 2006). This is because of the empirical failure of economics-based theories to provide reasons for developing accounting techniques and systems (Richardson, 1987). Institutional theory is mainly concerned with interaction of an organization with the institutional environment, the effects of social expectations and inclusion of regulative processes in organizational practices (Martinez, 1999). To survive, organizations must interact with their environment in a manner that is perceived as being acceptable to the various constituents of their environment (Dillard *et al.*, 2004).

Institutional theory is relevant to accounting researchers who study voluntary disclosure, as it gives a better understanding of how organizations respond to changing institutional, social, pressures and expectations. Isomorphic is the processes by which voluntary disclosure reporting changes and adapts in organization. As for voluntary disclosure, normative isomorphic pressures (DiMaggio and Powell, 1983) could arise through the influences of both formal and informal groups to which accountants are attached (Deegan and Unerman, 2006). These could produce accountants' views for or against the need or desirability of providing investors with financial information through the Internet, to comply with Bursa Malaysia's Investor Relations Put Into Practice (2006) and Best Practices in Corporate Disclosure (2004).

The argument for this paper is theories that are widely applied to developed economies may not fully explained Internet financial reporting practices in Malaysia. Since the institutional features of Malaysian companies is characterized by concentration of ownership and relationship-based capitalism, as opposed to the diverse shareholding and the arms-length market-based systems in the developed economies (Tsui and Shieh, 2002).

Malaysia provides an ideal institutional setting to examine the influence of board composition and ownership concentration on Internet financial reporting. In Malaysia, concentrated owned firms are prevalent; as Malaysia listed companies are rank the second largest proportion of family ownership after Indonesia in the region (Jaggi, Leung and Gul, 2009). This view is also supported by Claessens, Djankov and Lang (1999), World Bank (2001) and Liew (2007) that Malaysian companies are owned by a dominant group of shareholders. These substantial shareholders could influence the board's decision to appoint family members to the board (Darus, Arshad and Taylor, 2008). They may also appoint independent directors who are affiliated members to the board, because they feel affiliated directors rather than independent directors are better serving them (Wan-Hussin, 2009). The affiliated director is usually a professional or an ex-employee or related to the family controlling shareholders (Klein, 1998). In addition to the significant financial or business bond to the company, they also have good knowledge and prior association with the company and industry (Wan-Hussin, 2009).

Based on the empirical research previously described and the theoretical considerations discussed above, the researchers develop several hypotheses that relate corporate governance mechanisms, ownership structures to Internet visibility and Internet financial reporting practices in Malaysia. Thus, the regression models can be shown as follows:

**Model 1:**

$$AllAtt_{it} = \beta_0 + \beta_1 Duality_{it} + \beta_2 IndD_{it} + \beta_3 DirAccB_{it} + \beta_4 BSize_{it} + \beta_5 BODMeet_{it} + \beta_6 AcInd_{it} + \beta_7 AcFinEx_{it} + \beta_8 AcSize_{it} + \beta_9 AcMeet_{it} + \beta_{10} Top5_{it} + \beta_{11} BumiO_{it} + \beta_{12} SHNo5_{it} + \beta_{13} FactorIntVis_{it} + \square$$

**Model 2:**

$$FactorIntVis_{it} = \beta_0 + \beta_1 Duality_{it} + \beta_2 IndD_{it} + \beta_3 DirAccB_{it} + \beta_4 BSize_{it} + \beta_5 BODMeet_{it} + \beta_6 AcInd_{it} + \beta_7 AcFinEx_{it} + \beta_8 AcSize_{it} + \beta_9 AcMeet_{it} + \beta_{10} Top5_{it} + \beta_{11} BumiO_{it} + \beta_{12} SHNo5_{it} + \square$$

**Board Composition:**

As prescribed by the existing empirical literature, there are various recommendations and rules for governance reforms (MCCG, Revised, 2007). This paper argues the internal corporate governance structures are characterized as strong when a company adopts best governance practices. Strong governance practices considered in this study include separation of the board chair and the CEO, higher proportion of independent non-executive board of directors, directors with an academic in accounting and business, smaller board size and board that meet frequently.

**Board Independence:**

The empirical literature and corporate governance guidelines show when the CEO is also the board chair, the board's ability to perform its governance role is likely to be weak (Fama and Jensen, 1983a, b) from the point of view of agency theory (Blackburn, 1994). The 'dominant personality' phenomenon has attracted increasing attention on the aspect of corporate governance, and it has been associated with poorer disclosure (Forker, 1992). Cheung, Jiang and Tan (2010) argue companies with a separate CEO and board chair tend to have higher voluntary disclosure. In addition, the board's effectiveness in carrying out its governing function may be affected when the CEO is also the chairman because he/she will be able to control the board (Haniffa and Cooke, 2002). Argenti (1976) and Blackburn (1994) advocate the need for a clear division of the two roles.

The independent non-executive directors' existence would limit managerial opportunism and result in more effective board monitoring (Fama and Jensen, 1983a). Therefore, it would lead to an expectation of higher disclosure. The study by Chau and Gray, (2010) prove the appointment of an independent chairman is positively related to the voluntary disclosure for 273 Hong Kong listed companies. However, Leftwich *et al.*, (1981) point out such a relationship is not clear. A complementary relationship would mean a higher percentage of independent directors on the board, which would lead to a higher disclosure level by companies (Ghazali and Weetman, 2006).

**Board Competency:**

The national education level or accounting profession influences accounting practice (Doupnik and Salter, 1995). Since accounting practices are formed within the education environmental constraints. Education level can be considered as an intrusion on the accounting system, and educational background can be considered as an important factor for disclosure practice. Gray (1988) identified education as an institutional outcome affecting accounting values and practices. Hambrick and Mason (1984) argue better-educated managers are more likely to

accept ambiguity and adopt innovative activities. Wallace and Cooke (1990) suggest there may be increased demand for corporate accountability and political awareness if there is an increase in the national education level. Grace *et al.*, (1995) find the education level should be investigated as a crude measure for professional status. Xiao *et al.*, (2004) argue to increase organizational legitimacy; professional establishes standards to create homogeneous organizational practices such as Internet reporting. This process is called mimetic isomorphism under the mechanisms of institutional changes (DiMaggio and Powell, 1983).

The MCCG (Revised, 2007) recommends candidates for all directorships should have the skill, knowledge, expertise, experience, professionalism and integrity to carry out such responsibilities or roles as expected. Consistent with the argument of Haniffa and Cooke (2002), if a board of directors consists of individuals having an academic background in accounting and business, they may choose to increase voluntary disclosure to prove accountability and credibility of the management team to promote the corporate image.

#### **Board Size:**

Board size may play an important role in directors' ability to control and oversee managers. Gandia (2008) considered board size would increase the disclosure because higher level of disclosure gives positive impression as it is of the board members' decision (Raheja, 2005; Chiang, 2005). Many researchers imply while the capacity of the board to control and oversee increases with a larger group of board members, this benefit may be contra off by poorer communication and the additional cost of inefficiencies in decision-making are often related to a higher number of board members (Lipton and Lorsch, 1992; Jensen, 1993; John and Senbet, 1998). Therefore, with non-cohesiveness in viewpoints and dispersed opinions, a bigger board size may reduce the controlling and monitoring capacities. Empirically, Yermack (1996) found the board size is inversely associated with firm value. The finding by Haniffa and Hudaib (2006) suggests a large board is seen as less effective in monitoring performance. As such, the researchers argue board size is likely to affect the Internet financial reporting practices.

#### **Board Diligence:**

Board meeting frequency is often used as a proxy for board diligence (Yatim *et al.*, 2006). The intensity of board activities is likely to contribute to the effectiveness of oversight functions, especially relating to financial reporting. Lipton and Lorsch (1992) and Byrne (1996) argue boards that meet frequently are beneficial to shareholders and are more likely to undertake their jobs diligently. Conger *et al.*, (1998) and Vafeas (1999) argue board's effectiveness can be improved by duration of board meeting. It is expected Internet financial reporting is positively related to more diligent boards measured by the board meetings number held during the financial year.

In summary, the above discussion argues more independent, competent and diligent boards, smaller boards are likely to enhance internal governance and extent of financial reporting via Internet. Therefore,

**H1:** Higher Internet visibility and financial reporting are associated with board of directors that are more independent and competent, have a smaller number of members and meet more frequently.

#### **Audit Committee:**

Indeed, PriceWaterhouseCooper (1999) indicated the primary role of an audit committee is to ensure "high quality of financial reporting". According to the Blue Ribbon Committee (1999, p.7), "the audit committee is the ultimate monitor of the financial reporting process". Past studies have proven key characteristics of the audit committee, rather than the existence of the audit committee have a powerful effect on the ability of the audit committee to execute its duties effectively (Abbott *et al.*, 2003; Carcello and Neal, 2003; Kelton and Yang, 2008). While most past studies on audit committees focus on the expertise and diligence of committee members, this study also examines two aspects that are emphasized in the MCCG (Revised, 2007) - audit committee independence and the extent of their oversight mandate.

#### **Audit Committee Independence:**

To protect the shareholders' interest and to fulfill its oversight role, the audit committee must be independent of the company's management. MCCG (Revised, 2007) requires the board to establish an audit committee consisting of a minimum of three members; majority of them must be independent. Only non-executive directors should be appointed as audit committee members. Patelli and Prencipe (2007) argue for co-existence of independent directors and voluntary disclosure to reduce agency cost. The presence of independent directors will limit the agent's opportunistic behavior, such that to reduce agent's gain from withholding such information. Past studies suggest two reasons to greater overseeing to audit committee director independence. First, and most importantly, independent directors may interfere with their ability to question management, since they do not have economic or psychological ties to the management (Baysinger and Butler, 1985; Carcello and Neal, 2000, 2003). Second, independent audit committee members have unique motivation for better overseeing

of reputational capital development and preservation. In addition, Abbott and Parker (2000) propose independent directors may increase their reputation as a financial check through audit committee service. Bliss, Muniandy and Majid (2007) prove that independent audit committee provides an important monitor to moderate CEO dominance. Empirical findings suggest independent audit committees can increase the quality of financial reporting and strengthen the company internal control (Abbott and Parker, 2000; Klein 2002; Abbott and Peter, 2004; Bliss *et al.*, 2007).

#### ***Audit Committee Financial Expert:***

MCCG (Revised, 2007) requires all audit committee members should be financially literate and at least one should be a member of an accounting association or body. Empirical evidence proves the financial expertise of audit committee increases the quality of financial reporting. The financial and governance expertise of the audit committee is positively related to perceived financial quality (Felo *et al.*, 2003) and Internet financial reporting (Kelton and Yang, 2008). Therefore, the researchers suggest audit committee financial expertise is related to disclosure transparency measured by Internet financial reporting.

#### ***Audit Committee Activity:***

Unless an audit committee is active, the independence and expertise will unlikely to result in effectiveness. This paper examined two aspects of its level of activity: the frequency of its meetings and its size. The importance of audit committee meeting frequency is supported by recent research (Kelton and Yang, 2008). Beasley *et al.*, (2000) found audit committees of non-fraud firms meet more often than audit committees of a fraud industry. Abbott *et al.*, (2003) found when firms have a minimum of four audit committee meetings yearly, they are less likely to restate the audited annual reports. Bronson *et al.*, (2006) found the number of audit committee meetings is positively related to voluntary disclosure on internal controls in management reports. Firms with a larger and more independent audit committee that met more often are less likely to engage in fraudulent financial reporting (Persons, 2009). These findings suggest when audit committees meet frequently, they are more diligent in performing their duties.

The researchers expect committee structures that are consistent with the MCCG (Revised, 2007) recommendations help to strengthen the effectiveness of audit committee in their oversight functions. The following hypothesis is, therefore, tested:

**H2:** Higher Internet visibility and financial reporting are associated with audit committee that are more independent, have greater accounting and finance expertise, have more members and meet more frequently.

#### ***Ownership:***

Two extreme types of ownership structure, namely concentrated ownership and diffused ownership give rise to two types of agency problems (Wan-Hussin, 2009), such that Type I the misalignment effect or manager opportunism and Type II the entrenchment effect or owner opportunism (Villalonga and Amit, 2006; Gilson, 2006). Fan and Wong (2002) argue concentrated ownership result in low information of accounting earnings under the entrenchment effect and proprietary-information effect. In contrast, Wang (2006) argues concentrated ownership firm is "less likely to engage in opportunistic behavior in reporting accounting earnings because it potentially could damage the firm's reputation" under the alignment effect (p.622). Therefore, concentrated ownership firm tends to report high quality financial information when the alignment effect overwhelms entrenchment effect. This study contributes to the current debate on effect of ownership concentration on Internet financial reporting. This paper represents ownership variables by the ownership concentration, number of shareholders and Bumiputra-controlled companies.

#### ***Ownership Concentration - Top 5 Shareholding:***

High ownership concentration is a distinct feature of Malaysian public limited companies (Ghazali and Weetman, 2006). Abdul Samad (2004) found the top 5 largest shareholders owned around 58.8% of Malaysia's total corporate equity. The top 5 largest shareholders held 92.3% of the outstanding shares in an extreme case. There are five shareholders owning approximately 60.4% of the outstanding shares in 50% of the publicly listed companies. Consistent with Haniffa and Hudaib (2006), this paper uses the top 5 largest shareholders to measure the Malaysian companies' ownership concentration. Abdul Samad (2002) found the average values are about 30% and 60% for the largest shareholder and the five largest shareholders, respectively. This shows Bursa Malaysia listed companies are less widely held and controlled by companies with large shareholders who are family and government-owned or linked institutions (OECD, 1999). Thus, the researchers expect the concentrated companies to be less likely to disclose voluntary information on the Web.

Based on the above discussion, companies with higher ownership concentration may be expected to disclose less voluntary information on Internet. The following hypothesis is therefore tested:

**H3:** Lower Internet visibility and financial reporting are associated with higher concentrated ownership of Top 5 shareholding.

***Bumiputra-Controlled:***

The impacts of differences in culture and various aspects of culture (ethnicity) have been proved to influence organizations, accounting disclosure and business practices (Hofstede, 1980, 1991; Eichenseher, 1995; CheAhmad and Houghton, 2001; Haniffa and Cooke, 2002; Yatim *et al.*, 2006). The capital market of Malaysia exhibits a unique corporate environment where its economy offers clearly identifiable ethnic lines capital segments, namely the Bumiputra or Malay shareholders and local Chinese shareholding. This ownership presence is likely to provide evidence of differences in Internet financial reporting practices that may exist in these companies.

Based on Hofstede's (1983) (individualism, power distance, uncertainty avoidance and masculinity) dimensions on the country's cultural values, Abdullah (1992) gives evidence the Malays are rated low on individualism, which is partly because of great emphasis places on the societies rather than the individuals in Islam (Baydoun and Walle, 1995). In contrast, the Chinese are considered more individualistic and secretive (Haniffa and Cooke, 2002), which may partly be attributed to the ethnic polarization in the socio-economic structures (Tan, 1984). Haniffa and Cooke (2002) found Malaysian companies dominated by Malay directors voluntarily disclosed more information. The result is consistent with the argument with the Islamic practices that encourages higher transparency. Therefore, companies with the Bumiputra-controlled may be expected to disclose more voluntary information on Internet. The following hypothesis is tested:

**H4:** Higher Internet visibility and financial reporting are associated with Bumi-controlled companies.

***Number of Shareholdings:***

This paper included number of shareholders as a measure of shareholder control dispersion. Schipper (1981) proposes by issuing the public accounting reports to increased owners to solve the overseeing problems. As the shareholders number increases, one would expect disclosure to increase. Companies with a larger shareholders number are more likely to voluntarily disclose more information to satisfy the information needs of diverse shareholders (Cooke, 1989). Consistent with the argument by Ghazali and Weetman (2005), the researchers expect companies with a larger shareholders number to disclose more voluntary information on Internet.

**H5:** Higher Internet visibility and financial reporting are associated with larger shareholders number.

***Internet Visibility:***

When the companies have made strategic decisions to preserve a successful existence on the Web, they will gain greater visibility as well as disclose better and more information (Serrano-Cinca *et al.*, 2007). One of the most important determinants of online reporting is technology (Debreceeny *et al.*, 2002). Xiao *et al.*, (2004) found companies in information technology are more likely to adopt online corporate reporting practices because they have the resources to be the leader in these new technologies. However, late adoption of Internet reporting tends to be driven by seeking legitimacy to increase institutionalization (Xiao *et al.*, 2004).

Legitimacy theory states an entity is more visible when it discloses more information because of the pressure it receives (Patten, 2002; Tilling, 2004). For listed companies that get funds from investors and financial markets, all stakeholders want to know whether the company is well managed and successfully carrying out its operations.

During this Internet age, online users and bloggers are expected to pressure high Internet visibility companies to disclose better and more information. Thus, the researchers hypothesize:

**H6:** Internet visibility has a positive effect on Internet financial reporting.

***Research Design:***

This section describes the sample's main characteristics, data collecting process, and the proxies for the independent variables, how an Internet financial reporting index is constructed to measure the dependent variable.

***Sampling Design:***

The sample examined contains the Malaysian public companies listed on Bursa Malaysia as at 15th May, 2008. First, to gain a general review about the Internet reporting of this sample, the Top 100 Malaysian companies' ranked by WAI (Wealth Added Index) were examined (The Method, 2008). Extra 18 government-linked companies, 56 firms owned by the 40 richest Malaysians, 2008, and 132 companies with a market

capitalization above RM150 million are included to the sample. All sample initially comprised 306 companies. The homepages of all the above companies were searched for on the Internet through Bursa Malaysia's links and different search engines. In September 2008, we could not locate Web sites for 52 companies. Thus, the final sample comprised only 254 companies. The idea behind the chosen sample is because these companies could be assumed to have greater resources, and a greater investors number that display a more sophisticated Internet usage as an investor relations tool. Changes in reporting practice through company homepage by Bursa Malaysia will most likely led by these larger companies. Also, these companies are expected to be closely scrutinized by investors. Table 1 presents the 254 sample companies that had accessible corporate Web sites.

**Table 1:** Distribution of the sample companies by sectors.

	Sample companies	% of sample companies
	in sector with	in sector with
	websites	websites
Consumer	28	11%
Construction/Property	49	19%
Trading and Services	80	32%
Plantations/Mining	24	9%
Industrial	47	19%
Finance	26	10%
Total	254	

#### **Data Collection Procedure:**

Two approaches were used to determine the Internet presence or otherwise of the companies. First, check links to Bursa Malaysia and Osiris Database to establish and obtain the Web addresses of sample companies. Second, searches using various search engines were carried out on the companies that were unavailable from the above two Web sites. The researchers consulted the hard copies of the company's annual reports and accounts, where these two sources failed to yield the company's Web address.

#### **Description of Internet Financial Reporting - Dependent Variable:**

Past studies show disclosure transparency can be improved through the content and presentation format of Internet disclosure. Internet financial reporting allows alternative disclosures above the mandatory requirement by regulators (Ettredge *et al.*, 2002). In addition, transparency level may be improved by Internet-based technologies that allow extensive financial information to be presented dynamically (Hodge *et al.*, 2004).

A comprehensive checklist is used to measure the financial and business-reporting practices identified by the FASB (2000). There are two basic groups of attributes: (1) those attributes related to a company's general Web site/home page and (2) attributes related to investor relations and financial and business reporting. The checklist included 261 items in total. All these items can be measured on a simple yes encoded as 1 or no encoded as 0 respectively. We used the checklist to develop a total score, which assesses the financial and business reporting practices on the Web site.

In addition, the timeliness dimensions (Abdelsalam and Street, 2007) are also included in the study, it satisfies at least one of the following criteria: (1) affect perception of users on the timeliness of the Web site content and (2) users use technology to access information without delay. The checklist included 9 items in total. For each company, the total score is measured as the percentage of the actual score awarded to the maximum possible score. The final checklist consists of 270 items.

#### **Measurement of Independent Variables:**

The purpose of the study is to test whether the number of independent variables is associated with the total score achieved by a company. Table 2 shows the measurement of the variables.

#### **Data Analysis and Findings:**

##### **Descriptive Results for Independent Variables:**

Table 3 provides the descriptive statistics for the full sample. On average, 42.53% of our sample companies' boards of directors are made up of independent non-executive directors, which are above the requirement of one-third by the MCCG (Revised, 2007). The number of directors on Malaysian boards is between 4 and 15 with an average board size of 8.16. The majority of Malaysian directors on the board (55.51%) possess an accounting and business qualification. The average board meeting frequency is 6.5 with a maximum of 102.

The MCCG (Revised, 2007) requires all listed companies to have a clearly separation of responsibilities at the company head to ensure a balance of authority and power. 90.16% of our sample companies separate the positions of the chairman and CEO (Table 4). Only 9.84% of the CEOs in our sample companies are also the chairman of the board.



**Table 2:** Variables, operationalization and sources.

Variables	Operationalization	Data Source
Board Composition	[Duality] 1 if the firm's CEO is an independent chairman of the board of director, and 0 otherwise	Company annual report
Audit Committee	[IndD] Ratio of independent non-executive directors to total directors	
	[DirAccB] Ratio of directors qualified in accounting or business to total director	
	[BSize] Total number of directors on board	
	[BODMeet] Frequency of BOD meeting held during the financial year	
	[AcInd] Ratio of independent audit committee members to total audit committee members	
	[AcFinEx] Ratio of audit committee members with accounting and finance qualifications	
Ownership Structure	[AcSize] Number of directors on the audit committee	OSIRIS Database and company annual report
	[AcMeet] Frequency of audit committee meeting held during the financial year	
	[Top5] Ratio of shares owned by 5 largest shareholders to total number of shares issued	
Internet Visibility (Serrano-Cinca <i>et al.</i> , 2007)	[BumiO] Ratio of shares held by Bumiputra	Typing "link" follow by the address of Web page. This action is performed in all search engines
	[SHNo] No of shareholders	
	[Yahoo] Number of incoming links in Yahoo to the institution's Web site	
	[MSN] Number of incoming links in MSN to the institution's Web site	
	[Ask] Number of incoming links in Ask to the institution's Web site	
	[Google] Number of incoming links in Google to the institution's Web site	
	[AltaVista] Number of incoming links in AltaVista to the institution's Web site	
Internet financial reporting index: 1 <sup>st</sup> - Web-based reporting (FASB, 2000)	[AllTheWeb] Number of incoming links in AllTheWeb to the institution's Web site	Company Web site
	[FactorIntVis] Factor extraction of [Yahoo], [MSN], [Ask], [Google], [AltaVista] and [AllTheWeb]	
	[GenAtt] General attributes on web	
	[FinInfo] Financial information attributes	
	[OAR] Annual report attributes	
	[OWeb] Other attributes on Web	
	[Time] Information available without delay	
2 <sup>nd</sup> - Timeliness (Abdelsalam and Street, 2007)	[AllAtt] Total Internet financial reporting	

On average, 76.82% of our sample companies audit committee members are independent, and 36.9% of the audit committee members are accounting and financial experts, which is above the requirement of one-third by the MCCG (Revised, 2007). The size of audit committees ranges from 2 to 8, with a mean of 3.61. Further, the maximum audit committee meeting frequency is 50 times with a mean of 5.22.

The Top 5 shareholders' average holding is 57.5% and highest holding at 100%, which provide evidence that corporate ownership is highly concentrated in Malaysia. The average Bumiputra-controlled is 27.83% and highest holding at 93.26%.

**Table 3:** Descriptive statistics for independent (continuous) variables.

	Minimum	Maximum	Mean	Std. Deviation
% of Independent Directors	8.33%	100.00%	42.53%	12.53%
% of director (Accounting and Finance)	11.11%	100.00%	55.51%	19.70%
Board size	4	15	8.16	2.07
BOD meeting frequency	0	102	6.50	6.90
% of Audit Com (AC) Independency	14.29%	100.00%	76.82%	15.77%
% of AC financial expert	0.00%	100.00%	36.90%	19.96%
AC size	2	8	3.61	0.84
AC meeting frequency	0	50	5.22	3.41
% Top 5 Shareholding	2.28%	100.00%	57.50%	18.21%
% Bumiputra-controlled	0.00%	93.26%	27.83%	28.22%
No of shareholders	1	80	21.76	17.39

**Table 4:** Descriptive statistics for independent (categorical) variables.

	Frequency	%
Duality		
CEO is not Chairman	229	90.16%
CEO = Chairman	25	9.84%

### Descriptive Results for Dependent Variable:

Table 5 provides the descriptive statistics for the overall Internet financial reporting index and the sub-categories of information. The mean scores for all types of attributes vary between the lowest of 21.18% for financial information to the highest of 38.49% for annual report attributes. Of a total number of attributes of 270 items, the highest score is 52.59% (142 items) and the lowest is 1.11% (3 items). The mean is 23.73% (64

items), indicating our sample's Internet financial reporting extent tends to be limited. Table 5 also shows the data is normal as the standard skewness values is within  $\pm 1.96$  and standard kurtosis of  $\pm 2$  (Keller and Warrack, 2003).

**Table 5:** The Internet financial reporting index.

	Min (%)	Max (%)	Mean (%)	Std. Deviation	Skewness	Kurtosis
General attributes	0.00	80.77	34.25	0.1292	0.2431	0.5433
Financial Information	0.00	47.87	21.18	0.0642	-0.1041	1.8631
Annual Report (AR) attributes	0.00	77.78	38.49	0.1713	-0.3795	-0.0351
Others not on AR	0.00	93.33	28.11	0.1906	0.7440	0.6294
Timeliness	0.00	100.00	30.84	0.2434	0.6145	-0.4171
Total attributes	1.11	52.59	23.73	0.0700	0.0106	1.6588

### Correlations for all Variables:

Correlation coefficients among all the variables computed using Pearson's Product Moment correlations are presented in Table 6. Directors with accounting and business qualification [DirAccB], audit committee with financial and accounting qualification [AcFinEx], audit committee meeting frequency [AcMeet] and number of shareholders [SHNo] are positively significantly correlated with Internet visibility [FactorIntVis]. Independent non-executive directors [IndD], board size [BSize], Bumiputra-controlled firms [BumiO] and number of shareholders [SHNo] are positively significantly correlated with Internet financial reporting [AllAtt].

**Table 6:** Correlations.

	Duality	IndD	DirAccB	BSize	BODMeet	ACInd	AcFinEx	AcSize	AcMeet	Top5	BumiO	SHNo	FactorIntVis	AllAtt
Duality	1													
IndD	0.010	1												
DirAccB	-0.071	0.126*	1											
BSize	-0.025	-0.266**	-0.075	1										
BODMeet	0.087	0.093	0.169**	0.073	1									
ACInd	0.038	0.333**	0.081	0.089	0.034	1								
AcFinEx	0.045	-0.034	0.245**	-0.035	0.065	0.119	1							
AcSize	0.034	0.086	0.044	0.287**	0.190**	-0.169**	-0.235**	1						
AcMeet	0.048	0.065	0.079	0.100	0.395**	-0.106	0.049	0.310**	1					
Top5	0.006	-0.050	0.078	-0.026	-0.073	-0.095	0.038	0.031	-0.003	1				
BumiO	0.057	0.161*	0.237**	0.066	0.132*	-0.053	-0.092	0.130*	0.107	0.285**	1			
SHNo	-0.033	-0.078	0.165**	0.245**	0.224**	0.055	-0.128*	0.208**	0.188**	-0.086	0.019	1		
FactorIntVis	-0.052	0.035	0.166**	0.042	0.059	0.031	0.143*	0.028	0.124*	-0.067	0.027	0.254**	1	
AllAtt	0.062	0.161*	0.132	0.182**	0.094	0.119	-0.091	0.122	0.021	-0.036	0.153*	0.190**	0.029	1

\*Correlation is significant at the 0.05 level (2-tailed).

\*\*Correlation is significant at the 0.01 level (2-tailed).

## RESULTS AND DISCUSSIONS

### Results of the Internal Consistency Testing:

The study used multiple regression analysis to test the theoretical framework presented in Section 3. The internal consistency testing is based on the calculation of Principal Components Analysis (PCA). The researchers began by proposing the variables' indicators; those that failed to fulfill specific attributes were later rejected, such as unidimensionality, reliability and convergent validity.

The researchers performed PCA analysis on all indicators for two variables in testing unidimensionality. The two PCA analysis performed are Internet visibility [FactorIntVis] and financial reporting [AllAtt]. According to Hair *et al.*, (2010), the first principal component's eigenvalue must be greater than 1. Table 7 shows the first two principal components' eigenvalues. One would expect that most of the variance would account for the first principal components. Indeed this is true, since the range is between 60% and 75%.

Consistency of the indicators in the variable is assessed by reliability. The researchers calculated the Cronbach's Alpha, the indicators ranking from 0 (absence of homogeneity) to 1 (maximum homogeneity) (Hair *et al.*, 2010). Each indicator in the variable is presupposed by Cronbach's Alpha to have the same weight. The index values of 0.6 to 0.7 are considered as the lower limit of acceptability based on the usual reliability criterion (Hair *et al.*, 2010). Table 7 shows that both variables surpass the recommended Cronbach's Alpha values of 0.6 to 0.7.

The degree to which the indicators reflect the variable (whether or not the variable measures what it purports to measure) is assessed by convergent validity. In order to assess if the variable's variance can be explained from the chosen indicators, the researchers calculated the Total Variance Explained (TVE) (Fornell and Larcker, 1981). The minimum recommended value is 0.5 (Bagozzi and Yi, 1988), which means that the

indicators account for more than 50% of the variance. These values satisfy the requirement for all of the variables, as presented in Table 7.

Convergent validity was the second criterion used to analyze and verify all of the factorial loadings in the principal components matrix, each variable was more than 0.5 (Joreskog and Sorbom, 2001; Hair *et al.*, 2010), showing that each measure accounts for 50% or more of the variance of the underlying variable. All of the chosen indicators comfortably fulfill the criterion, as presented in Table 7.

**Table 7:** Results for the internal consistency testing.

Variables and Indicators	Unidimensionality				Reliability Cronbach's Alpha	Convergent Validity	
	Eigenvalue		Variance Explained 1st and 2 <sup>nd</sup> Component			Average Variance Explained	Loading
Internet Visibility	4.508	0.79	75.131%	13.168%	0.769	0.75131	
Links to							
Yahoo							0.963
MSN							0.577
Ask							0.843
Google							0.837
Alta Vista							0.960
AllTheWeb							0.957
Internet Financial Reporting	3.593	0.813	59.883%	13.544%	0.782	0.59833	
General Attributes							0.717
Financial Information							0.809
Annual Report Attributes							0.604
Other Annual Report							0.783
Timeliness							0.726
All Attributes							0.959

### Results of the Regression Model:

Table 8 reports the results of the regression model.  $R^2$  measures the variable variance explained by the model. The  $R^2$  for Internet visibility [FactorIntVis] and Internet financial reporting [AllAtt] is 0.118 and 0.138 respectively.

H1 predicts higher Internet visibility [FactorIntVis] and Internet financial reporting [AllAtt] are associated with board of directors that are more independent [Duality], [IndD] and competent [DirAccB], have a smaller number of members [BSize] and meet more frequently [BODMeet]. The results in regression model show the independent non-executive directors [IndD], directors with accounting and business qualification [DirAccB], board size [BSize] are positively significantly related to the Internet financial reporting [AllAtt]. The finding is similar to those of Abdelsalam *et al.*, (2007); Kelton and Yang (2008) that Internet financial reporting is positively related to the proportion of independent members. These suggest independent board is effective in improving disclosure transparency through Internet reporting.

According to Ahmed and Nicholls (1994), the professional accounting and finance training will also help an officer to be more aware of disclosure issues, are likely to prefer greater disclosure to demonstrate accountability and to enhance company image. This is because the companies want to acquire legitimacy from their environment as suggested by institutional theory. In addition, larger board members enhance a wider information range and different viewpoints between the members, which will increase experience and knowledge sharing (Yermack, 1996, Singh *et al.*, 2004). This may increase the voluntary disclosures via the companies' Web pages. This finding is consistent with Abdel-Fattah (2007); Ezat and El-Masry (2008) proving that larger board size increases the timeliness of Internet financial reporting.

The regression model results show only audit committee with financial and accounting qualification [AcFinEx] for H2 is positively significantly associated with Internet visibility [FactorIntVis]. In order to fulfill their responsibilities for financial reporting and monitoring internal control, directors should possess the necessary expertise. Several authors suggest the managerial labor market for outside directorships provides an incentive to monitor effectively by rewarding effective outside directors with additional positions as directors and disciplining those who have a record of poor monitoring performance (Fama and Jensen, 1983a; Milgrom and Roberts, 1992). For example, outsider directors charged with violations in disclosure and accounting by the SEC, are more likely than others to lose their other directorships (Gerety and Lehn, 1997). Additionally, directorships not only signal the competence of outside directors to the managerial labor market, but also help them to acquire governance expertise and to gain knowledge of best board practices (Bedrad *et al.*, 2004). The outside directors' experience on the board enables them to gain their overseeing competencies, as well as gaining certain firm-specific expertise such as understanding its executive directors and company's operations. Thus, they can monitor the process of the company financial reporting effectively, as their experience

accumulates. As suggested by institutional theory, IFR practices established by professions can create homogeneous organizational practices to enhance organizational legitimacy (Xiao *et al.*, 2004).

The extent of Internet visibility [FactorIntVis] and Internet financial reporting [AllAtt] is positively associated with larger number of shareholders [SHNo] providing support for H5. The finding is similar to Malone *et al.*, (1993) that found a significant positive relationship between the shareholders number and the level of financial disclosure in the annual reports of Japanese and Swedish companies respectively. Companies with a greater shareholders number were found to provide more information in the annual report, because one would expect the dispersion in ownership can provide a solution to the additional monitoring by larger number of shareholders (Ghazali and Weetman, 2006).

The results in Table 8 show neither board independence (CEO duality and audit committee independence) nor audit committee size nor board diligence (board meeting and audit committee meeting) explain the Internet visibility and Internet financial reporting of Malaysian listed companies. This result is consistent with the findings of Ghazali and Weetman, (2006) and Kelton and Yang (2008). The Malaysian economy has been described as relationship-based capitalism which is not known to be transparent (Gomez and Jomo, 2002; Johnson and Mitton, 2003). In addition, Malaysia has good corporate governance standards on paper, but weak implementation of these practices, in view of the poor score in the corporate governance rating (Hee, 2009). Therefore, the corporate governance variables are not statistically significant in the regression model. Perhaps there are other corporate governance variables that can explain the result (Gandia, 2008). Consistent with the result of Haniffa and Cooke (2002); and Wan-Hussin (2009), the ownership concentration (top 5 shareholding and Bumiputra-controlled) variable is not significant in the regression model. Perhaps this result show the ownership does not influenced Internet financial reporting because the Malaysian government acquires equity stakes on behalf of the Bumiputra under the government's new economic policy, and these companies are not known to be active monitor (Wan-Hussin, 2009).

**Table 8:** Regression results

Hypotheses		Model 1 DV = AllAtt			Model 2 DV = FactorIntVis		
		Coef.	Sig.		Coef.	Sig.	
H1	Intercept	0.115	0.003		-0.764	0.166	
	Duality	-0.018	0.210		0.151	0.465	
	IndD	0.104	0.011	**	0.417	0.474	
	DirAccB	0.038	0.100	*	0.385	0.268	
	BSize	0.007	0.005	***	0.000	0.991	
H2	BODMeet	0.000	0.770		-0.009	0.356	
	AcInd	0.011	0.724		-0.135	0.762	
	AcExFin	-0.028	0.229		0.838	0.014	**
	AcSize	0.000	0.971		-0.015	0.857	
	AcMeet	-0.001	0.377		0.024	0.236	
H3	Top5	-0.014	0.575		-0.384	0.280	
H4	BumiO	0.021	0.207		0.119	0.623	
H5	SHNo	0.001	0.036	**	0.015	0.000	***
H6	FactorIntVis	-0.002	0.676		-	-	
	R <sup>2</sup>	0.138			0.118		
	Adjusted R <sup>2</sup>	0.096			0.074		
	F-Statistic	3.228			2.687		
	Significance	0.000			0.002		

\*\*\*significant at the 0.01 level; \*\*significant at the 0.05 and \* significant at the 0.1.

### Summary and Discussion:

This paper analyzed the factors behind Malaysian listed companies voluntarily adopting the Internet financial reporting practices. In addition to relevant factors proposed to voluntary disclosures in the developed economies, this paper also included factors (Top5/ownership concentration and Bumiputra-controlled firms) unique to the Malaysian environment. This paper argues institutional theory can broaden and deepen the scope of analysis, since the majority of prior voluntary disclosures are dominated by economic-based theories. Key results from the regression model show Internet financial reporting is positively significantly related to independent non-executive directors, directors with accounting and business qualification, board size and shareholders numbers. Audit committee with financial and accounting qualification is also positively significantly associated with Internet visibility. These findings show the competent directors and accounting professional are establishing good reporting practices to create homogeneous organizational practices in response to uncertainty surrounding technology. This process is in line with the argument of mimetic isomorphisms under the institutional theory. Following the corporate governance reforms, the companies are facing pressure and almost obliging them to disseminate information by Internet in seeking organizational legitimacy, so that capital market does not interpret the absence of information as a sign of lack of accountability and transparency.

During the corporate governance reforms, listed companies in Malaysia needed to adjust to a new environment of reporting, incorporate its rules, normative systems and institutionalized beliefs, as they were required to adopt reporting practices in accordance to the stipulations laid down by regulators, that is Bursa Malaysia's Investor Relations: Put Into Practice (2006) and Best Practices in Corporate Disclosure (2004). Even though many are using the Internet more effectively in disclosing voluntary information, there are still great differences between companies in information content via Internet as shown in Table 5.

The organizational fields and individual organizations exist in a political and economic context to provide the institutional practice foundation (Dillard *et al.*, 2004). This view suggests during the institutionalization process, actors at different levels exert a strong influence on the institutions. An acceptable institutional practice, such as Internet reporting, which is formed at the country level is later transferred through to certain organizational fields and finally to the organizations individually.

Malaysia is an emerging economy nation, which, on the global state, is under coercive pressure, normative and mimetic, institutionalizing expectation from the global capital markets. All these pressures can be identified as determinants that have affected the adoption of Internet reporting. For example, companies listed on the Bursa are required to follow new regulatory systems developed for certain fields in organizations. Furthermore, new reporting regimes that have been adopted at a country level will be forced on organizations individually and on others who trade in the same environment under formal or informal coercive pressure. Subsequently, through normative and mimetic pressure that constitutes acceptable new practices for financial reporting. The level of adoption for Internet reporting at the organizational level will be affected by the regulatory system's effectiveness and organizations' willingness to make a positive response to institutional pressure.

Internet reporting also has implication to the management of reporting companies. Since Internet reporting is becoming an important channel of communication with the stakeholders, the management has to safeguard the interest of the stakeholders by ensuring all information disseminated via the Internet is reliable. Web site security and its underlying database access is an area which the management need to monitor, as there are loopholes in the security net that the hackers and hostile intruders can and do find to change data without the company's knowledge.

There are four limitations in this study that are worth considering. First, the present research is a cross-sectional study and, therefore, cannot establish causal relationships but only unearth correlations. Future studies need to adopt a longitudinal approach, which can help to shed further light on the evolving process of Internet-based disclosure practices and its adoption. Second, the context in Malaysia is unique; the significant factors in this study may be insignificant in other settings. The generalization of findings to other countries is not possible, because of this uniqueness, even for countries in the same stage of economic development. Replications in other national settings are required to identify the interactive and individual effects of relevant factors to develop more universal theories about Internet-based disclosures. Third, even though this study only focuses on the context of Malaysia, the regression analysis's  $R^2$  ranging between 0.118 and 0.139 suggests other potential factors of companies' choices of IFR exist. Finally, the researchers believe the adoption of hypothesis development for Internet financial reporting study is value adding and relevant to the capital market functioning. Future research needs to test the efficacy of this hypothesis directly, such as by examining the increasing effects of Internet financial reporting on the trading volumes or share prices of companies.

Despite the above limitations, this study reveals a very interesting relationship between the unique features of Malaysian Listed Companies and their Internet financial reporting practices. This study highlights important policy implications by showing the applicability of institutional theory in contexts that have not been previously studied in the developing economies.

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