CHAPTER 6: DISCUSSION OF CONTENT ANALYSIS RESULTS: PHASE 1

6.1 Introduction

This chapter discusses the data analysis using statistical techniques to test the hypotheses developed in Chapter 4 and elaborates on the descriptive analysis and multivariate analysis. The analysis is divided into descriptive statistics (Section 6.2), Web-based reporting practices (Section 6.3) and the multivariate analysis results (Section 6.4).

The results from data analysis provide evidence to support or reject the hypotheses (Section 6.4). It indicates which variables are significant or otherwise. This chapter discusses the application of disclosure theories on the significant variables in Section 6.5. Finally, this chapter ends with the conclusion in Section 6.6

6.2 Descriptive Statistics

6.2.1 Descriptive Results for Samples

Four groups of samples are analysed in this study, including the Top 100 Malaysian companies, government-linked companies, listed companies owned by the Top 40 richest Malaysians, and listed companies' market capitalisation above RM150 million. All samples originally contained 306 companies. In September 2008, the researcher was unable to locate 52 companies' Web sites, thus, the final sample included 254 Web sites. Table 6.1 presents the 254 sample companies that had accessible corporate Web sites.

Table 6.1 Distribution of the Sample Companies by Sector

	Sample co. in sector with Web sites	% of sample co. in sector with Web sites
Consumer	28	11
Construction/Property	49	19
Trading & Services	80	32
Plantations/Mining	24	9
Industrial	47	19
Finance	26	10
Total	254	

The sample consists of 170 low technology firms and 84 medium to high technology companies. This follows the OECD (1999) framework where low technology firms include 28 consumer sector; 49 construction/property, and 69 trading and services firms and 24 plantation/mining. Medium to high technology firms include companies from 11 trading and services firms (i.e. infrastructure project companies and technology), 47 industrial sector and 26 finance sector.

6.2.2 Descriptive Results for Independent Variables

Table 6.2 provides the full samples' descriptive statistics. The mean value of asset size, market capitalisation and turnover are RM7,379,440,260, RM2,207,694,843 and RM1,850,206,315, respectively. The highest loss on shareholders' fund and assets suffered by the sample companies is 66.12% and 23.65% respectively. There are 49 sample companies (19.29%) that use non Big-4 auditors (Table 6.4).

Table 6.2 Descriptive Statistics for Firm Characteristics (Control Variables)

	Minimum	Maximum	Mean	Std. Deviation
Total Assets (RM million)	69.863	269.101	7.379	25.945
Market Cap (RM million)	19.300	35.155	2.208	5.133
Turnover (RM million)	11.310	29.605	1.850	3.570
Return on S. Fund	-66.12%	289.93%	19.34%	24.40%
Return on Assets	-23.65%	69.31%	9.23%	8.90%
Beta	-0.08	2.26	0.85	0.49

Corporate governance variables are of particular interest to this study. On average, 68.31% and 42.53% of board members made up of non-executive directors and independent directors respectively (Table 6.3), which is 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. 55.51% of Malaysian directors on the board possess an accounting and business qualification. The average proportion of family directors and multiple directorships is 18.49% and 80.42%, respectively.

Table 6.3 Descriptive Statistics for Board Composition

	Minimum	Maximum	Mean	Std. Deviation
Non-Executive Director	16.67%	100.00%	68.31%	18.83%
Independent Director	8.33%	100.00%	42.53%	12.53%
Board size	4	15	8.16	2.07
Director (Acc & Biz)	11.11%	100.00%	55.51%	19.70%
Family directors	0.00%	70.00%	18.49%	21.46%
Multiple directorship	0.00%	100.00%	80.42%	21.30%

The MCCG (Revised, 2007) requires all listed companies to have a clear separation of responsibilities at the company head to ensure a balance of authority and power. 90.16% of listed companies in the sample also separate the positions of the chairman and CEO (Table 6.4). Only 9.84% of our sample companies' CEOs are also the board's chairman.

Table 6.4 Descriptive Statistics for Categorical Variables

	Frequency	%
Auditor type		
Non Big-4 auditor	49	19.29
Big 4 auditor	205	80.71
Duality		
CEO is not Chairman	229	90.16
CEO = Chairman	25	9.84

The size of audit committees ranges from 2 to 8, with an average size of 3.61 (Table 6.5). All public listed companies must have an audit committee with a minimum of 3 members, a majority of who must be independent (MCCG, Revised 2007). All members should have financial knowledge and at least 1 should be a member of an accounting association or body. On average, 76.82% of our sample companies audit committee members are independent, and 36.9% of the members of audit committee are accounting and financial experts, which is above the requirement of one-third by the MCCG (Revised, 2007). Further, the maximum meeting frequency is 50 times with a mean of 5.22.

Table 6.5 Descriptive Statistics for Audit Committee

	Minimum	Maximum	Mean	Std. Deviation
Audit Committee (AC) size	2	8	3.61	0.84
AC independency	14.29%	100.00%	76.82%	15.77%
AC financial expert	0.00%	100.00%	36.90%	19.96%
AC meeting frequency	0	50	5.22	3.41

The average family holding is 33.15% and maximum holding is 90.29%. The maximum level of institutional ownership is 85.65%, government owned 92.83%, foreign owned 87.13% and director owned as high as 78.43%. The top 5 shareholders' average holding is 57.5% and maximum shareholding is 100%, which provide evidence that ownership of Malaysian companies is highly concentrated.

Table 6.6 Descriptive Statistics for Ownership Structures

	Minimum	Maximum	Mean	Std. Deviation
No of shareholders > 5%	0	8	2.94	1.45
Top 5 shareholding	2.28%	100.00%	57.50%	18.21%
Family owned	0.00%	90.29%	33.15%	25.54%
Institutional owned	0.00%	85.65%	21.62%	20.28%
Government owned	0.00%	92.83%	14.68%	21.38%
Foreign owned	0.00%	87.13%	14.66%	19.08%
Director owned	0.00%	78.43%	17.11%	23.42%

6.2.3 Descriptive Results for Internet Visibility

The results in Table 6.7 show that "Link to Google" is the most popular link with the highest number of links being 538,000,000, and the least popular link is to MSN with the highest number of links being 35,600. This variable calculated the Internet visibility of the sample companies (Serrano-Cinca et al., 2007). The result shows that the sample companies have the highest visibility through Google search engine, and lowest visibility through MSN search engine.

Table 6.7 Descriptive Statistics for Internet Visibility

	Minimum	Maximum	Mean	Std. Deviation
Link to Yahoo	1	336,000,000	1,589,820.24	21,104,878.15
Link to MSN	1	35,600	458.30	2,777.21
Link to Ask	1	405,000,000	4,669,774.40	32,417,431.03
Link to Google	29	538,000,000	7,428,779.00	45,150,529.64
Link to AltaVista	1	337,000,000	1,595,010.67	21,167,466.87
Link to AllTheWeb	1	319,000,000	1,506,340.28	20,035,832.48

6.2.4 Descriptive Results for Internet Disclosure

The descriptive statistics for the overall Internet disclosure index and the sub-categories of information are presented in Table 6.8. The range of overall Internet disclosures level varied widely. Of a total of 270 attributes, the highest score is 142 items (52.59%) and the lowest is 3 items (1.11%). 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. The overall mean is 64 items (23.73%), indicating that the samples' Internet disclosure level tends to be limited. Table 6.8 also shows that the data is normal as the standard kurtosis of $\pm$ 2 and standard skewness is within $\pm$1.96 (Keller and Warrack, 2003).

Table 6.8 The Internet Disclosure 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
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

Total item number for: general attributes = 26, financial information = 18, AR attributes = 202, others not on AR = 15 and timeliness = 9.

Table 6.9 shows that only one company disclosed more than 50% (135) of the 270 attributes included in the overall index/all attributes. These findings reveal that even among Bursa Malaysia's active traded stocks there is a degree of variability in the quantity of information voluntarily disclosed via company homepage and only one company can be considered as 'good disclosers' based on Wallace's classification (1988).[1]

Table 6.9 Detailed Internet Disclosure Index

Internet Disclosure Score (%)	General		Financial Info.		AR		Other AR		Timeliness		All Attributes	
	N	%	N	%	N	%	N	%	N	%	N	%
90-100	0	0	0	0	0	0	2	1	2	1	0	0
80-89.9	1	0	0	0	0	0	1	0	5	2	0	0
70-79.9	1	0	0	0	5	2	6	2	9	4	0	0
60-69.9	6	3	0	0	11	4	12	5	16	6	0	0
50-59.9	26	10	0	0	43	17	5	2	27	11	1	0
40-49.9	44	17	1	0	84	33	46	18	32	13	2	1
30-39.9	92	36	20	8	51	20	38	15	29	11	38	15
20-29.9	45	18	120	48	28	11	69	27	43	17	148	58
10-19.9	32	13	102	40	19	8	32	13	52	20	55	22
.01-9.9	5	2	10	4	0	0	19	8	0	0	10	4
0	2	1	1	0	13	5	24	9	39	15	0	0
Total	254	100	254	100	254	100	254	100	254	100	254	100

N = Number of companies

[1] Wallace (1988) considers indices above 50% to be good; however, it is acknowledged that such rating is judgemental.

6.2.5 Correlations for All Variables

Correlation coefficients among all the variables computed using Pearson's Product Moment correlations are presented in Table 6.10. Size, non-executive directors, directors with accounting and business qualification, multiple directorship, audit committee with financial and accounting qualification, audit committee meeting frequency and institutional owned are positively significantly correlated with Internet visibility. Family directors and family owned are negatively significantly correlated with Internet visibility.

Size, non-executive directors, independent directors, directors with accounting and business qualification, board size, audit committee independency and government owned are positively significantly correlated with Internet disclosure. Family directors, family owned and directors owned are negatively significantly correlated with Internet disclosure.

The correlation matrix in Table 6.10 confirms that there is no multicollinearity among variables since none of the variables correlate above 0.8 or 0.9.

Table 6.10 Correlation

	Ind/Tech	Size	Fin. Perf.	Beta	Auditor	NED	IndD	CEO=Chair	DirAccB	BSize	FamDir	MultiDir
Ind/Tech	1											
Size	-0.064	1										
Fin. Perf.	0.114	0.065	1									
Beta	-0.003	0.145 *	-0.169 **	1								
Auditor	-0.110	0.191 **	-0.016	0.098	1							
NED	-0.052	0.153 *	-0.137 *	0.034	0.161 *	1						
IndD	0.083	-0.032	-0.112	0.079	0.070	0.300 **	1					
CEO=Chair	0.008	-0.042	-0.018	-0.006	-0.173 **	-0.049	-0.010	1				
DirAccB	0.023	0.254 **	-0.126 *	0.056	0.089	0.283 **	0.126 *	0.071	1			
BSize	-0.022	0.308 **	0.075	0.035	0.058	-0.078	-0.266 **	0.025	-0.075	1		
FamDir	-0.128 *	-0.226 **	-0.024	-0.013	-0.108	-0.439 **	-0.221 **	-0.005	-0.346 **	-0.028	1	
MultiDir	-0.112	0.217 **	-0.134 *	0.027	0.232 **	0.350 **	0.118	-0.142 *	0.160 *	0.034	-0.146 *	1
AcSize	-0.001	0.289 **	0.165 **	-0.002	0.199 **	0.126 *	0.086	-0.034	0.044	0.287 **	-0.166 **	0.050
AcInd	0.008	0.058	-0.143	0.031	-0.010	-0.012	0.333 *	-0.038	0.081	0.089	-0.049	0.150
AcFinEx	0.086	-0.061	-0.112	0.008	0.039	0.022	-0.034	-0.045	0.245 **	-0.035	-0.088	-0.035
AcMeet	-0.027	0.287 **	-0.124 *	0.098	0.072	0.101	0.065	-0.048	0.079	0.100	-0.091	0.115
SHNo>5%	-0.036	0.016	-0.039	0.039	-0.042	-0.008	-0.084	0.033	0.087	-0.085	0.039	-0.191 **
Top 5	-0.001	0.078	0.019	-0.228 **	0.155 *	0.174 **	-0.050	-0.006	0.078	-0.026	-0.184 **	0.101
FamO	-0.005	-0.358 **	-0.080	-0.024	-0.183 **	-0.321 **	0.007	0.009	-0.209 **	-0.170 **	0.442 **	-0.130 *
InstO	-0.184 **	0.486 **	-0.052	-0.013	0.099	0.177 **	-0.084	-0.045	0.110	0.111	-0.193 **	0.077
GovtO	0.035	0.415 **	-0.039	-0.007	0.175 **	0.316 **	0.043	-0.048	0.211 **	0.168 **	-0.354 **	0.212 **
ForO	-0.166 **	0.128 *	0.091	-0.074	0.144 *	0.192 **	-0.058	-0.098	0.050	0.007	-0.156 *	0.066
DirO	0.026	-0.383 **	-0.015	-0.028	-0.181 **	-0.261 **	0.014	0.030	-0.193 **	-0.144 *	0.399 **	-0.153 *
Internet Vis.	0.089	0.215 **	-0.011	0.040	0.070	0.125 *	0.035	0.052	0.166 **	0.042	-0.133 *	0.137 *
Internet Dis.	0.093	0.206 **	0.051	0.083	0.089	0.169 **	0.161 *	-0.062	0.132 *	0.182 **	-0.191 **	0.104

Table 6.10 Correlation

	AcSize	AcInd	AcFinEx	AcMeet	SHNo>5%	Top 5	FamO	InstO	GovtO	ForO	DirO	Internet Vis.	Internet Dis.
Ind/Tech													
Size													
Fin. Perf.													
Beta													
Auditor													
NED													
IndD													
CEO≠Chair													
DirAccB													
BSize													
FamDir													
MultiDir													
AcSize	1												
AcInd	-0.169 **	1											
AcFinEx	-0.235 **	0.012	1										
AcMeet	0.310 **	-0.106	0.049	1									
SHNo>5%	-0.046	-0.025	0.101	-0.040	1								
Top 5	0.031	-0.095	0.038	-0.003	-0.011	1							
FamO	-0.195 **	0.031	-0.020	-0.155 *	0.072	0.074	1						
InstO	0.091	0.030	-0.080	0.163 **	0.174 **	0.014	-0.382 **	1					
GovtO	0.160 *	0.036	0.001	0.159 *	-0.131 *	0.216 **	-0.582 **	0.350 **	1				
ForO	0.046	0.025	0.027	-0.028	0.057	0.094	-0.293 **	0.309 **	-0.108	1			
DirO	-0.164 **	0.054	0.041	-0.124 *	0.163 **	-0.151 *	0.486 **	-0.228 **	-0.319 **	-0.158 *	1		
Internet Vis.	0.028	0.031	0.143 *	0.124 *	-0.014	-0.067	-0.148 *	0.162 **	0.107	0.067	-0.097	1	
Internet Dis.	0.122	0.124 *	-0.091	0.021	-0.105	-0.036	-0.160 *	-0.013	0.169 **	0.003	-0.233 **	0.029	1

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

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

6.3 Web-Based Financial and Business Reporting

The first objective of this study is to examine Malaysian listed companies' use of the Internet to present financial and investor-related information. Of the 306 sample companies, 254 had Web sites. Among these 254 companies with Web sites, 171 (67.32%) of them included links to investor relations/financial information Web pages. Attributes related to those pages also varied widely as discussed below.

6.3.1 General Attributes [GenAtt]

This study examined 26 general attributes. Table 6.11 shows that table of contents is the highest number of general attributes [GenAtt], followed by links to product and sales information and companies' news summaries.

To help users navigate the Web sites, 80.71% (205) of the Web sites had tables of contents to help locate specific information. Regarding the general relationships between the home pages and financial and business reporting, 75.2% (191) had links to product and sales information, and 74.02% (188) to the companies' news summaries.

Table 6.11 Ten (10) Most Frequently Disclosed General Attributes

Attributes	Frequency	%
Table of contents/site index	205	80.71
Links to product & sales information	191	75.20
Companies' news summaries	188	74.02
Links to news summaries/press releases	182	71.65
Animated graphics	171	67.32
Link to investor relations	171	67.32
Advertisements for their own products/services	168	66.14
Page divided into frames	166	65.35
Direct link to annual report on home page	136	53.54
Search box/link to search page	103	40.55

6.3.2 Investor Relations/Financial Information [FinInfo]

This study examined 18 investor relations attributes. Results from Table 6.12 shows that the use of PDF and HTML file formats are the most popular design in financial reporting through Web pages. Adobe Corporation developed PDF, which is a special file format to create new documents that look and print exactly as the original documents. For the viewing of PDF files, user needs to install an Adobe Acrobat PDF Reader plug-in on the computer. More than 91.73% (233) of the sample included exclusive PDF files for their annual reports. This means that their users need to have the Adobe Acrobat Reader plug-in to view the statements.

HTML is the most important language used in Web development, because the users can view a HTML document directly from the browser; 82.68% (210) of the companies provided the financial reporting in HTML, recognising the importance of disseminating the financial statement in HTML format.

A total of 83.46% (212) companies included links in the tables of contents to enable the users to go directly to the section they are looking for.

Table 6.12 Ten (10) Most Frequently Disclosed Attributes in Investor Relations Web Pages

Attributes	Frequency	%
PDF (requires Adobe Acrobat)	233	91.73
Table of contents	212	83.46
HTML (a normal Web page)	210	82.68
Site map	157	61.81
Postal address to investor relations	148	58.27
Phone number to investor relations	146	57.48
E-mail address to investor relations	139	54.72
Graphic images - animated graphics	116	45.67
Proxy statement in investor relations area	114	44.88
Latest stock price	108	42.52

This study examined 193 annual report attributes. In terms of the annual report on Web pages, the balance sheet is the most popular item (Table 6.13), which was included on 96.46% (245) of those Web sites. This was followed closely by 96.06% (244) of sites including notes to financial statements, and 95.67% (243) of sites including the profit and loss account and cash flow statement.

Table 6.13 Ten (10) Most Frequently Disclosed Annual Report Attributes

Attributes	Frequency	%
Balance sheet	245	96.46
Notes to financial statements/accounts	244	96.06
Profit & Loss account	243	95.67
Cash Flows statement	243	95.67
Balance sheet - with number of years shown	237	93.31
Shareholders' equity statement	235	92.52
Auditor's report	235	92.52
Cash Flows statement - with number of years shown	234	92.13
Profit & Loss account - with number of years shown	233	91.73
Chairman's message to shareholders	228	89.76

6.3.3 Other Annual Report Attributes [OAR]

Navigation techniques are used to indicate whether the users are inside or outside the financial statement. The hard copy of the annual report is a stand-alone document, with everything between the front cover and back cover. However, the soft version of the annual report is embedded in the much larger corporate Web site. Therefore, the user may be unclear whether they are inside or outside the annual report. To help the users to have a sense of place, 82.68% (210) of the financial statements used some technique to let the users know whether they were inside or outside the financial statements, including 63.78% (162) used a specific colour or graphical borders (Table 6.14).

Table 6.14 Most Frequently Disclosed Other Annual Report Attributes

Attributes	Frequency	%
No of years available for annual report	227	89.37
Techniques to let users know they are inside annual report as they move from page to page	210	82.68
Techniques to let users know they are inside annual report as they move from page to page - with coloured/graphic borders	162	63.78
Techniques to let users know they are inside annual report as they move from page to page - with background colours/graphics	129	50.79
Search box	79	31.10
Separate area where financial statements can be downloaded in spreadsheet format	35	13.78
Link to Bursa Malaysia database in the annual report	28	11.02
Link to Securities Commission database in the annual report	6	2.36
Dialogue box that pops up to indicate that the user is leaving the annual report	4	1.57

6.3.4 Other Elements on Web Pages not in AR [OWEB]

Regarding the other elements on Web pages, Table 6.15 shows that 66.54% (169) provided press releases, 50.79% (129) provided quarterly reports and 41.34% (105) provided downloadable quarterly reports files. This study examined 15 other elements on Web pages not in annual report.

Table 6.15 Ten (10) Most Frequently Disclosed Other Elements

Attributes	Frequency	%
Press releases	169	66.54
Quarterly reports	129	50.79
Quarterly reports downloadable	105	41.34
Links to data on a third-party's Web site	100	39.37
Cautionary disclaimers language/warnings	97	38.19
Other information supplied to analysts	94	37.01
Financial ratios, key statistics or other information presented apart from the annual report	90	35.43
Link to Bursa Malaysia database	73	28.74
Proxy statements	53	20.87
Industry statistics/data	40	15.75

6.3.5 Timeliness Attributes [Time]

Table 6.16 shows the best-performed companies in terms of the timeliness dimensions. A total of 54.72% (139) of the sample companies provide an e-mail response and online requests indicating when they will provide a response. Less than half of the sample companies (105 or 41.34%) provided the latest quarterly data and latest share price (92 or 36.22%).

Table 6.16 Most Frequently Disclosed Timeliness Attributes

Attributes	Frequency	%
Response provided to e-mail & online requests indicating when a response will be provided	139	54.72
Latest quarterly data provided	105	41.34
Latest share price	92	36.22
Share price update time	75	29.53
Feature provided to request e-mail alerts for press releases, newsletter etc	65	25.59
Statement indicating frequency of updates to financial information provided on Web site	64	25.20
Latest interim report provided	58	22.83
Date of last Web site update	56	22.05
Calendar of future financial events	51	20.08

As a summary, for the 254 sample companies with IFR, the most frequently disclosed items are the element of financial statements, which is included in more than 90% of the Web sites (Table 6.13). This is closely followed by 89.76% (228) that included the chairman's message to shareholders.

Approximately 82.68% (210) of Web sites included techniques that let users know whether they are inside the financial statement as they move from one page to another (Table 6.14). To supplement the financial statements, only 11.02% (28) of the Web pages' financial

statement had direct hyperlinks to the Bursa Malaysia database and about 2.36% (6) to the Securities Commission database (Table 6.14).

6.4 Multivariate Analysis

The second objective of this study is to identify the factors that influenced Internet visibility and disclosure. Multiple regression model was the technique chosen to test the theoretical models proposed in Chapter 4. It is a scientific method of hypothesis testing that provides valuable insights into the relationship amongst variables. Firstly, the testing for internal consistency states how well the observed variables are measured, and secondly the regression model focuses on the variables' relationships.

6.4.1 Testing the Internal Consistency

Internal consistency testing is based on the calculation of Principal Components Analysis (PCA). The researcher began by proposing the variables' indicators; specific attributes such as undimensionality, reliability and convergent validity were later rejected when these failed to fulfil the indicators (Table 6.17).

The researcher used factor analysis to identify the component of firm size and financial performance. This reduces the variables to a smaller number of composite variables (Hair et al., 2010). The first principal component's eigenvalue is greater than 1 for both firm size and financial performance (Hair et al., 2010). Figures 6.1 and 6.2 show the scree plots which graphically display the eigenvalues for both factors, the figures suggest that there is one predominant factor for firm size and financial performance respectively.

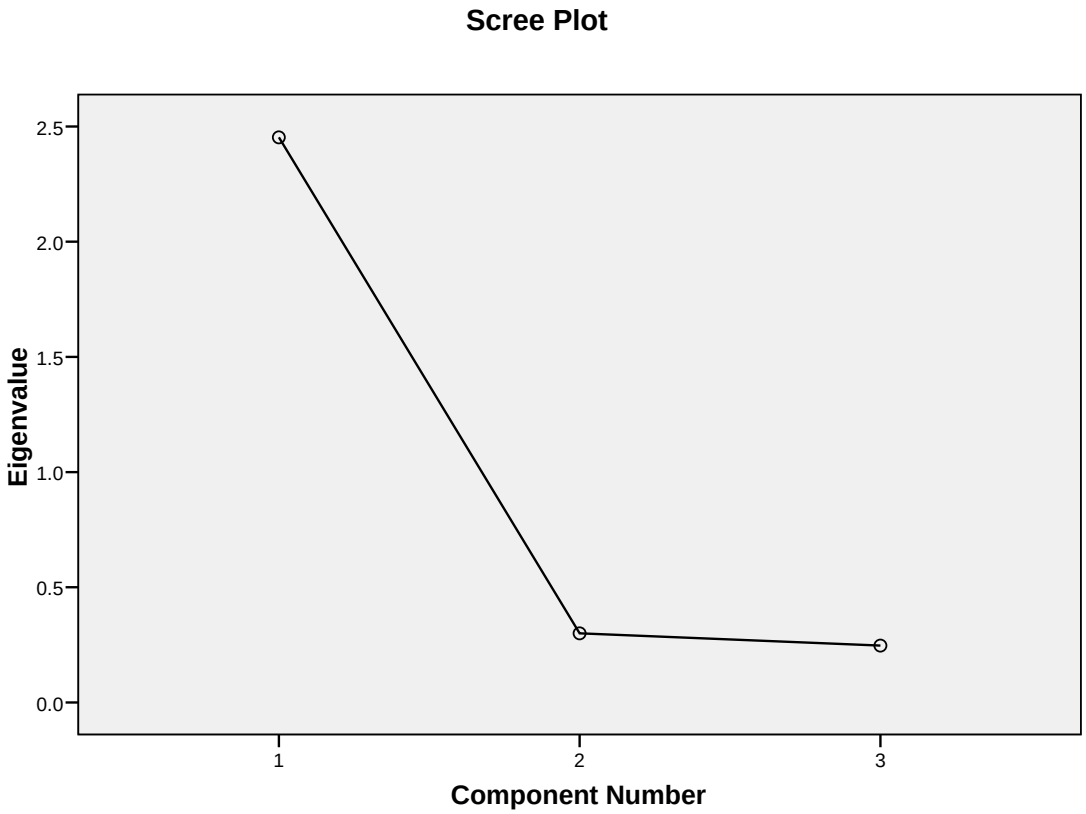

Figure 6.1 Scree Plot for Firm Size

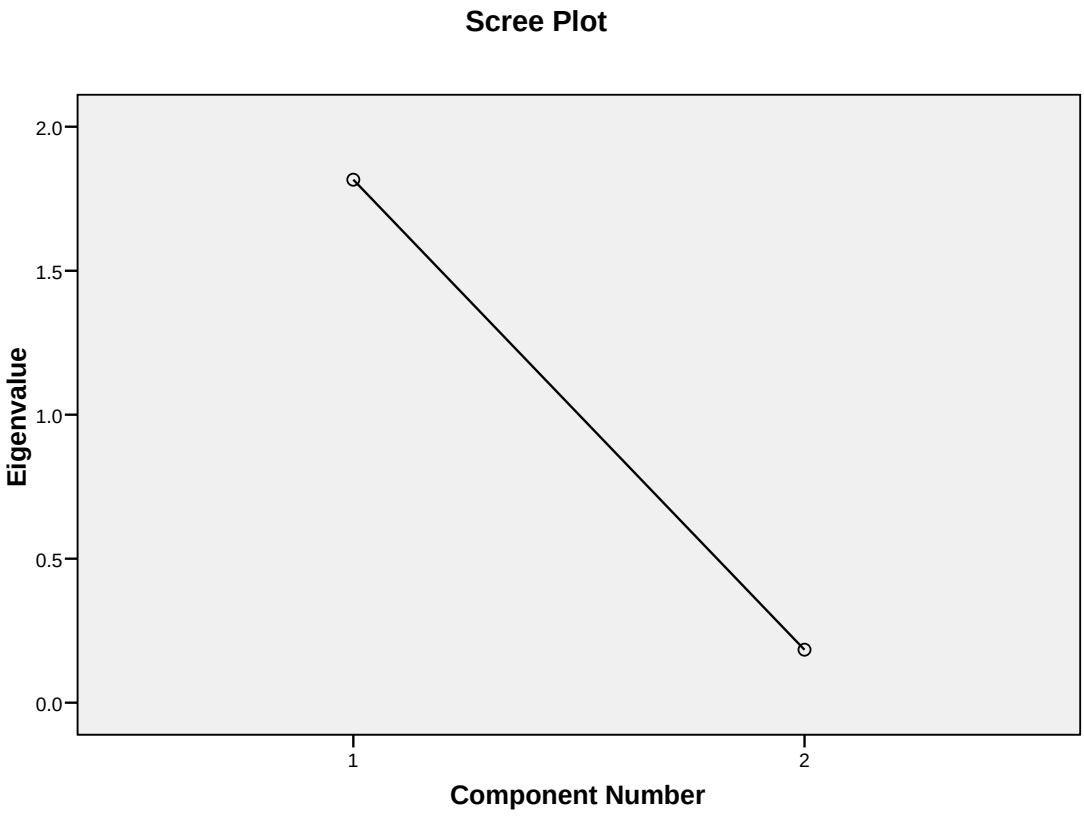

Figure 6.1 Scree Plot for Financial Performance

The researcher performed PCA analysis on all indicators for two variables in testing unidimensionality. The two PCA analysis performed are Internet visibility and disclosure. According to Hair et al. (2010), the first principal component's eigenvalue must be greater than 1. Table 6.17 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 researcher 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 6.17 shows that all variables surpass the recommended Cronbach's Alpha values of 0.6 to 0.7.

Convergent validity assesses the degree to which the indicators reflect the variable, meaning whether or not the variable measures what it purports to measure. The researcher calculated the Total Variance Explained (TVE) (Fornell and Larcker, 1981) to assess if the variable's variance can be explained from the chosen indicators. 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 the variables, as presented in Table 6.17.

Convergent validity was the second criterion used to analyse 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 fulfil the criterion, as presented in Table 6.17.

Table 6.17 Results for the Internal Consistency

Variables	Unidimensionality Eigenvalue 1st & 2nd component		Variance Explained 1st & 2nd component		Reliability Cronbach's Alpha	Convergent Validity 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 Disclosure	3.593	0.813	59.883%	13.544%	0.782	0.59833	
General Att.							0.717
Fin. Info.							0.809
AR Attributes							0.604
Other AR							0.783
Timeliness							0.726
All Attributes							0.959

6.4.2 Regression Results

Table 6.18 shows the estimates and *p*-value for the regression model. R^2 measures the variance explained by the model. The R^2 for "Internet disclosure" and "Internet visibility" is 0.188 and 0.13, respectively.

6.4.2.1 Hypothesis 1: Non-Executive Directors [NED]

Hypothesis 1 and 1a predicts that companies with boards dominated by non-executive directors are related to greater Internet disclosure level and Internet visibility. As shown in

Table 6.18, estimates of [NED] are not statistically significant. Therefore, H1 and H1a are not supported.

6.4.2.2 Hypothesis 2: Independent Non-Executive Directors [IndD]

Result for the extent of Internet disclosure is positively associated with the proportion of independent non-executive directors on the board which provides support for Hypothesis 2. As shown in Table 6.18, the estimate for proportion of independent non-executive directors is positive and statistically significant for total Internet disclosure [AllAtt] (p-value < 0.1). Consistent with the finding by Abdelsalam et al. (2007), Kelton and Yang (2008) – Internet financial disclosure is positively associated with the proportion of independent members.

6.4.2.3 Hypothesis 3: Duality of Chairman and CEO [Duality]

Hypothesis 3 and 3a predict that the duality of CEO and chairman on the board is negatively related to Internet disclosure level and Internet visibility. As shown in Table 6.18, estimates of [Duality] are not statistically significant. Therefore, H3 and H3a are not supported.

6.4.2.4 Hypothesis 4: Education of the Directors [DirAccB]

Hypothesis 4 and 4a predict that the percentage of directors on the board trained in business and/or accounting is positively related to Internet disclosure level and Internet visibility. As shown in Table 6.18, estimates of [DirAccB] are not statistically significant. Therefore, H4 and H4a are not supported.

6.4.2.5 Hypothesis 5: Board Size [BSize]

The data do support Hypothesis 5 that board size has an effect on Internet disclosure. Table 6.18 provides support for H5 since Internet disclosure [AllAtt] (*p*-value = 0.014) is positive and statistically significant for larger board size. Consistent with the finding of Zahra et al. (2000) and Akhtaruddin et al. (2009) that a greater number of directors on the board increase the Internet disclosure level of Malaysian companies Web sites.

6.4.2.6 Hypothesis 6: Family Members on the Board [FamDir]

Hypothesis 6 and 6a predict that the percentage of family board members is negatively associated with the extent of Internet disclosure and visibility. As shown in Table 6.18, estimates of [FamDir] are not statistically significant. Therefore, H6 and H6a are not supported.

6.4.2.7 Hypothesis 7: Multiple Directorships [MultiDir]

Hypothesis 7 and 7a predict that companies with multiple directorships are expected to engage in a higher level of Internet disclosure and visibility. As shown in Table 6.18, estimates of [MultiDir] are not statistically significant. Therefore, H7 and H7a are not supported.

6.4.2.8 Hypothesis 8: Audit Committee Size [AcSize]

Hypothesis 8 and 8a predict that the audit committee size is positively related to the Internet disclosure level and Internet visibility. As shown in Table 6.18, estimates of [AcSize] are not statistically significant. Therefore, H8 and H8a are not supported.

6.4.2.9 Hypothesis 9: Audit Committee Independence [AcInd]

Hypothesis 9 and 9a predict that Audit committee independence is positively related to the level of Internet-based disclosure and visibility. As shown in Table 6.18, estimates of [AcInd] are not statistically significant. Therefore, H9 and H9a are not supported.

6.4.2.10 Hypothesis 10: Audit Committee Financial Expertise [AcFinEx]

Hypothesis 10 and 10a predict that Internet disclosure and visibility is positively associated with audit committee financial expertise. As shown in Table 6.18, the estimate of [AcFinEx] is positive and statistically significant for Internet visibility [FactorIntVis] (p-value < 0.05) providing support for H10a. Consistent with the finding by Kelton and Yang (2008), those firms with a greater proportion of audit committee financial experts are more likely to pursue transparency through Internet. The estimate for [AcFinEx] is negatively significantly (p-value < 0.1) related to Internet disclosure [AllAtt], this result reflects companies with a higher percentage of audit committee financial experts are less likely to engage in Internet disclosure. This finding is consistent with the argument of managerial hegemony theory – that the management dominance over audit committee affair causes audit members to discharge their overseeing responsibilities ineffectively (Abdul Rahman and Mohd Ali, 2006).

6.4.2.11 Hypothesis 11: Audit Committee Meeting Frequency [AcMeet]

Hypothesis 11 and 11a predict that audit committee meeting frequency is positively related to Internet-based disclosure level and Internet visibility. As shown in Table 6.18, estimates of [AcMeet] are not statistically significant. Therefore, H11 and H11a are not supported.

6.4.2.12 Hypothesis 12: Shareholdings > 5% [SHNo5]

Hypothesis 12 and 12a predict that shareholders holding more than 5% are negatively related to the Internet disclosure level and Internet visibility. As shown in Table 6.18, estimates of [SHNo5] are not statistically significant. Therefore, H12 and H12a are not supported.

6.4.2.13 Hypothesis 13: Top 5 Shareholders [Top5]

Hypothesis 13a predicts that the extent of Internet visibility is negatively associated with the Top 5 shareholders. The results show that the Top 5 shareholders are negatively statistically significant at 10% for Internet visibility [FactorIntVis]. This is consistent with an earlier study on Malaysian companies by Hossain et al. (1994). Companies with higher ownership concentration tend to disclose less voluntary information since the majority of the largest shareholders are "insiders" (Ghazali and Weetman, 2006).

6.4.2.14 Hypothesis 14: Family Ownership [FamO]

Hypothesis 14 and 14a predict that family ownership is negatively related to the Internet disclosure level and visibility. As shown in Table 6.18, estimates of [FamO] are not statistically significant. Therefore, H14 and H14a are not supported.

6.4.2.15 Hypothesis 15: Institutional Ownership [InstO]

The variable institutional ownership (H15) is negatively significantly (p-value < 0.1) related to Internet disclosure [AllAtt]. The result is consistent with the argument by Wan-

Hussin (2009) that institutional ownership in Malaysia does not positively influence the transparency level, because the institutional shareholders are government linked investors that are not known to be active monitors. Shleifer and Vishny (1997) argue that higher equity ownership by large shareholder block, e.g. institutional shareholdings may have control rights through board membership. This kind of ownership does not require high public disclosure because they have direct private monitoring rights.

6.4.2.16 Hypothesis 16: Government Ownership [GovtO]

Hypothesis 16 and 16a predict that government ownership is negatively related to the Internet disclosure level and Internet visibility. As shown in Table 6.18, estimates of [GovtO] are not statistically significant. Therefore, H16 and H16a are not supported.

6.4.2.17 Hypothesis 17: Foreign Ownership [ForO]

Hypothesis 17 and 17a predict that a higher percentage of shares owned by foreign investors are positively related to the Internet disclosure level and Internet visibility. As shown in Table 6.18, estimates of [ForO] are not statistically significant. Therefore, H17 and H17a are not supported.

6.4.2.18 Hypothesis 18: Director Ownership [DirO]

Hypothesis 18 and 18a predict that the extent of Internet disclosure is negatively associated with the proportion of shares held by directors. The results in Table 6.18 show that director ownership is negatively statistically significant (p-value < 0.05) with the extent of Internet disclosure [AllAtt]. The finding is consistent with those of Eng and Mak (2003) and Ghazali and Weetman (2006). Both of these studies indicate that within the context of

smaller emerging markets, director ownership is significant negatively related to the level of voluntary disclosure. Results also suggest the substitutive effect of director ownership, such that the need for disclosure transparency via Internet reporting is reduced by a higher percentage of director ownership (Abdelsalam et al., 2007).

The result of three ownership variables – Top 5 is negatively significant associated with Internet visibility; institutional ownership and director ownership are negatively significant associated with Internet disclosure. These investors with large equity control in a company do not rely solely on published information, as they can obtain internal information about the company easily. Therefore, it can be concluded that more concentrated owned companies would disclose less Web information because their large investors can access information from internal sources.

6.4.2.19 Hypothesis 19: Internet Visibility [FactorIntVis]

Hypothesis 19 predicts that Internet disclosure is positively influenced by Internet visibility. As shown in Table 6.18, estimate of [FactorIntVis] is not statistically significant. Therefore, H19 is not supported.

6.4.2.20 Control Variables: Industry [Industry (Tech)]

Internet visibility is related to level of technology, it is supported by the results (p-value < 0.1) (Table 6.18), which shows that level of technology is positively related to the visibility level [FactorIntVis]. This result is consistent with the study of Debreceny et al. (2002) who found a significant relationship between IFR and level of technology of the firm. Others

such as Trueman et al. (2003), Dreze and Zulfryden (2004) found that online visibility has a significant impact on financial growth.

6.4.2.21 Control Variable: Firm Size [FactorSize]

Larger companies are expected to have higher levels of Internet visibility than smaller companies. Table 6.18 shows a p-value < 0.1, which is positively statistically significant to Internet visibility [FactorIntVis], this shows larger companies have greater Internet visibility. This is consistent with the study of Serrano-Cinca et al. (2007) who found that size has a positive effect on Internet visibility. Many studies found a positive significant relationship between Internet disclosure and size, among those are Marston and Leow (1998); Craven and Marston (1999); Ettredge et al. (2001); Debreceny et al. (2002); Marston (2003) and Xiao et al. (2004).

6.4.2.22 Control Variable: Financial Performance [FactorProfit]

Profitability is not related to the Internet disclosure level and Internet visibility. As shown in Table 6.18, estimates of [FactorProfit] are not statistically significant.

6.4.2.23 Control Variable: Systematic Risk [Beta]

Systematic risk (beta) is not associated with the Internet disclosure level and Internet visibility. As shown in Table 6.18, the estimates of [Beta] are not statistically significant.

6.4.2.24 Control Variable: Auditor [Auditor]

Auditors are not associated with the Internet disclosure level and Internet visibility. As shown in Table 6.18, estimates of [Auditor] are not statistically significant.

Table 6.18 Regression Results

Hypotheses		Model 1 DV = AllAtt Coef.	Sig.		Model 2 DV = FactorIntVis Coef.	Sig.	
	Intercept	0.151	0.005		-0.181	0.296	
H1 & H1a	NED	0.035	0.223		0.302	0.476	
H2 & H2a	IndD	0.069	**0.100**	*	-0.014	0.982	
H3 & H3a	Duality	-0.014	0.352		0.310	0.151	
H4 & H4a	DirAccB	0.030	0.226		0.256	0.486	
H5 & H5a	BSize	0.006	**0.014**	**	-0.003	0.939	
H6 & H6a	FamDir	-0.014	0.594		-0.107	0.775	
H7 & H7a	MultiDir	-0.003	0.912		0.462	0.168	
H8 & H8a	AcSize	-0.003	0.666		-0.032	0.728	
H9 & H9a	AcInd	0.024	0.435		-0.045	0.923	
H10 & H10a	AcFinEx	-0.040	**0.095**	*	0.714	**0.040**	**
H11 & H11a	AcMeet	-0.001	0.634		0.017	0.408	
H12 & H12a	SHNo5	-0.001	0.803		-0.025	0.586	
H13 & H13a	Top5	-0.038	0.176		-0.663	**0.100**	*
H14 & H14a	FamO	0.013	0.628		0.049	0.903	
H15 & H15a	InstO	-0.051	**0.067**	*	0.531	0.191	
H16 & H16a	GovtO	0.026	0.401		-0.119	0.797	
H17 & H17a	ForO	0.009	0.753		0.135	0.745	
H18 & H18a	DirO	-0.045	**0.047**	**	0.033	0.922	
H19	FactorIntVis	-0.002	0.684		-	-	
	Industry (Tech)	0.011	0.249		0.259	**0.065**	*
	FactorSize	0.008	0.169		0.146	**0.097**	*
	FactorProfit	0.004	0.421		0.023	0.734	
	Beta	0.004	0.674		-0.034	0.802	
	Auditor	0.005	0.687		0.106	0.540	
	R^2	0.188			0.130		
	Adjusted R^2	0.103			0.043		
	F-Statistic	2.212			1.494		
	Significance	0.001			0.073		

**significant at the 0.05 and * significant at the 0.1.

In summary, the results support H2, H5, H10, H10a, H13, H15 and H18. This study found that audit committee members with financial and accounting qualification, Top 5 shareholdings, industry and firm size determine the degree of Internet visibility [FactorIntVis]. Independent directors, board size and audit committee members with financial and accounting qualification, institutional ownership and director ownership determine the degree of Internet disclosure [AllAtt].

Corporate governance variables such as non-executive directors (H1), CEO duality (H3), directors with accounting and business qualification (H4), family directors (H6) and multiple directorships (H7) are not statistically significant. Estimates of Audit committee size (H8), audit committee independency (H9) and audit committee meeting frequency (H11) are also not statistically significant. Ownership structures such as shareholding more than 5% (H12), family ownership (H14), government ownership (H16) and foreign ownership (H17) have no influence on Internet disclosure and visibility. In addition, Internet visibility (H19) does not have any influence on Internet disclosure. The results do not support the influence of control variables, the firm's characteristics – namely, the financial performance, systematic risk and Auditor.

6.5 Discussion on Disclosure Theories

The third objective of this study is to examine the application of relevant theories of disclosure and accounting choice on the significant factors identified in the second research objective (Section 6.4).

6.5.1 Proportion of Independent Directors [IndD]

In Malaysia, the 1997/8 Asian financial crisis exposed critical weaknesses in the financial structure, over-leveraging by companies, weak practices of corporate governance, lack of accountability, transparency and disclosure. The government introduced the Malaysian Code of Corporate Governance (MCCG, 2000); the Bursa Malaysia Revamped Listing Requirements (2001); Best Practices in Corporate Disclosure (2004) and Investor Relations: Put Into Practice (2006) to highlight the great value of corporate governance and disclosure requirements, especially with regard to appointing a majority of independent directors to the board, and the forming of an audit committee consisting of a minimum of three independent directors to increase the confidence of investors and to strengthen the capital market. It also promotes the accountability and credibility of the financial report generated by listed companies.

For corporate governance variables, the percentage of independent directors on the board is positively significant in the regression model. The result of this study suggests that the MCCG corporate governance rules requiring that a minimum of one-third of the board members should be independent non-executive directors is a good response to the call for improving corporate transparency and financial reporting.

The finding is consistent with the result of Abdelsalam et al. (2007), Kelton and Yang (2008). It implies that an independent board is crucial to increase disclosure transparency through Internet reporting. Past research found that higher disclosures are associated with boards comprising a higher percentage of outside directors (Adam and Hossain, 1998; Chen and Jaggi, 2000; Williams, 2002; Leung and Horwitz, 2004; Ajinkya et al., 2005)

The purpose of introducing the corporate governance mechanisms is to minimise the agency problems. It also ensures that managers act in the best interests of owners (Jensen and Meckling, 1976). The internal governance mechanisms may impact the corporate disclosures "complementary" or "substitutive" in agency theory. The relationship is complementary if disclosures increase, as the adoption of more governance mechanisms strengthens the companies' internal control. These supply an "intensive monitoring package" for a company to minimise information asymmetry and opportunistic behaviours (Leftwich, Watts and Zimmerman, 1981; Welker, 1995). Under such intensive-monitoring environment, managers are not likely to keep the information for their self-interest. Hence, this leads to an increase in the quality of financial statements and comprehensiveness in disclosure. In contrast, if it is substitutive, more governance mechanisms will not cause the companies to voluntarily disclose more information, as one may substitute another corporate governance mechanism. The desire to introduce an additional governance device is lower if opportunistic behaviours and information asymmetry decrease as the result of the existing packages for internal monitoring. Hill (1999) suggests that it is necessary to have the overlapping checks and balances system. He argues that no mechanism is a governance panacea even with this theoretical ambiguity. The result of this study supports a complementary relationship between the internal governance mechanisms and corporate disclosure, since the percentage of independent directors on the board is positively significantly related to Internet disclosure.

The transaction cost framework by Williamson (1984) argues that the main function of the board is to protect the shareholders. The board's voting representation should include those

exposed residual claim constituencies that cannot be protected by either bilateral arrangement (i.e. loan covenants) or arms-length market transactions. Therefore, as the risk beneficiaries, the shareholders need an independent board representation to safeguard expropriation of their poorly defined assets. Williamson (1984) suggests that information asymmetries may be created and mitigated by disclosure for the specific asset transactions. The investors can improve the valuation of future transactions, because such disclosure increases the level of transparency. As it is a selective disclosure, independent directors on the board become instrumental in constructing more checks against distortion and concealment by management. The result of this study supports the Williamson transaction cost framework, which implies that the effectiveness of the board's monitoring is associated with its composition, and the firm transparency level should be able to reflect it.

6.5.2 Board Size [BSize]

The size of the board of directors should play an important role in strategic decision-making and board monitoring. The result of this study indicates that board size is positively related to the level of Internet disclosure. A large board size enhances the wide information range and different viewpoints between the board 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 disclosure.

6.5.3 Audit Committee Finance Expert [AcFinEx]

The finding supports the requirement of MCCG (Revised, 2007) that (i) directors on the board should have skill, knowledge and experience to discharge their responsibilities and functions; (ii) audit committees should consist of a minimum of three members, with independent directors as the majority. All the audit committee members should be non-executive directors; and (iii) all the audit committee members should be financially literate and at least one should be a member of an accounting body or association. This study found that audit committees with a greater proportion of finance/accounting qualifications are more likely to be Internet visible.

Directors should possess the necessary expertise in order to fulfil their financial reporting and internal control monitoring responsibilities. Several authors suggest outside directorships from the managerial labour market provide an incentive to monitor firms effectively. As directors are disciplining those who have a record of poor monitoring performance, firms reward effective outside directors with additional positions (Fama and Jensen, 1983; Milgrom and Roberts, 1992). For example, outside directors are more likely than others to lose their other directorships when the firms charged with accounting and disclosure violations by the SEC (Gerety and Lehn, 1997). Additionally, directorships not only signal the competence of outside directors to the managerial labour market, but also help them to gain knowledge of best board practices and to acquire governance expertise (Bedrad et al., 2004). In contrast, if the number of multiple directorships is too large, it may reduce the director's time devoted to a particular firm, thus, decreasing the committee's governing effectiveness (Morck et al., 1988; Beasley, 1996). Consequently,

additional directorships may improve effectiveness up to a point, but beyond that point the committee may be penalised because of the time and effort absorbed by other directorships.

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. In contrast, the audit committee members may become more complacent, offsetting the knowledge effect over time. Past research results support the knowledge effect. Kosnik (1987) found that the longer the appointment of outside directors, the more likely a company will have higher resistance to greenmail payments.[2] Beasley (1996) argues that the average tenure of outside directors is likely to reduce financial reporting fraud.

This study found that audit committees with a higher proportion of finance/accounting experts tend to disclose less on the Internet. For this inverse relationship, a plausible explanation may be: (1) due to board quality; (2) due to appointment of affiliated independent directors; and (3) explained by managerial hegemony theory. 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). A former European advisor to the Organisation for Economic Cooperation and Development task force on corporate governance, Rushton, said that there were concerns of board quality in Malaysian organisations. Good people who could be coming on the board are worried about the risk to their reputation.

[2] Greenmail payments – a company's private re-purchase of a block of stock from minority stockholders at a premium above the market price. This transaction discriminates other corporate stockholders who were not part of the deal.

Criticisms have nonetheless been levelled against the audit committee, because it is established for window-dressing purposes (Menon and Williams, 1994). The evidence in Malaysia by Abdullah (2002) shows that audit committee formation is primarily to satisfy the Bursa Malaysia Listing requirements, which support criticism of the window-dressing purposes stressed by Menon and Williams (1994).

There is a special breed of independent and/or non-independent non-executive directors who are not truly independent (Carter and Lorsch, 2004). They are often known as affiliated or 'grey' directors. The affiliated director may be a professional or an ex-employee 'intimately tied' to the company (Klein, 1998). Since, they have in-depth knowledge about the company's affairs; the shareholders feel that the affiliated directors rather than independent directors can serve them effectively (Wan-Hussin, 2009). However, these affiliated directors may compromise their loyalty and objectivity, thus failed to behave independently (The Economist, 2004). Additionally, SC chairman Tan Sri Zarinah Anwar said that the current composition of Malaysian public listed companies boards naturally gives rise to a situation where boards are generally passive and unquestioning (Sidhu, 2010). It opens the opportunity for domination by owners and top management without adequate checks and balances. She said there were instances when this kind of affiliated directors had not acted as stewards of the interests of the ordinary shareholder as they should have.

In contrast to the agency theory, managerial hegemony theory argues that the management dominance over board affairs caused the board members to discharge their overseeing

responsibilities ineffectively. The absolute control by management over the choice of outside board members (Kosnik, 1987), and the board's relative lack of knowledge in company's matters has caused this deficiency. It is common that most independent directors develop such understanding as a by-product of their appointment and service. In view of their heavy responsibilities in other companies, they depend heavily on management to gather information. Even though most companies comply with the Bursa Malaysia Listing Requirements and the MCCG (Revised, 2007), if the board of directors lack the required knowledge, skills and experience, the corporate governance mechanisms in place may not fulfil the intended goals. The fact that audit committees have an ineffective role in pursuing disclosure transparency through the Internet shows that the establishment of an audit committee in listed companies has yet to attain its ultimate objective. Even though the MCCG (Revised, 2007) stipulates that the audit committee's main task is to monitor the process of financial reporting, the finding of this study provide evidence that in actual fact the audit committees have yet to perform their jobs effectively.

6.5.4 Top 5 Shareholding, Institutional Ownership and Director Ownership

The result of three ownership variables – Top 5 shareholding is negatively significant associated with Internet visibility. Institutional ownership and director ownership are negatively significant associated with Internet disclosure. This shows that small equity investors have restricted information access to the companies. It is more likely that these investors gather certain company data through the company Web pages, as there is difficulty in gathering information from other channels. As a result, it can be assumed that widely held companies would have more voluntary disclosure via the Internet to communicate with their shareholders. In contrast, large equity investors can depend on

internal sources to gather company information, rather than depending on published information. The majority of institutional owners in Malaysia are government-linked companies; these investors are known to be inactive monitors (Wan-Hussin, 2009). It is evidenced that ownership concentrated companies will have less voluntary disclosure via the Internet, as their major shareholders can access information through internal sources.

Agency theory argues that potential conflicts of interest between shareholders and management are larger in dispersed ownership companies, than in highly concentrated ownership companies, because small equity investors do not have influence on management's decisions. As a result, the widely held companies are more likely to disclose information via the Internet, to enable the investors to supervise the management, while the management wants to prove that they are acting in the shareholders' best interests (Hossain et al., 1994).

6.5.5 Industry [Industry (Tech)]

This study found a positive significant relationship between level of technology and Internet visibility. This finding is consistent with Debreceny et al. (2002) who found that firm technology level was significantly related to IFR. Many academics have studied the relationship of various Internet indicators since the e-business development. Trueman et al. (2003) found that income growth is significantly related to Web metrics growth. The sample companies attract visitors who eventually become clients with strong Internet visibility. Dreze and Zufryden (2004) argue that online visibility is needed to create Web traffic. Additionally, the study provide evidence that higher and significant Internet visibility affected firms financially more than advertising or brand awareness. In order to

create more traffic to companies' Web pages, companies will continuously try to attain higher Internet visibility, which will lead to better services provided to existing clients and an increase in new clients.

In accordance with institutional theory, different industries could have their own information practices to project a good company image. These practices could have a major impact on companies' choice of voluntary disclosure practices. The companies need to seek legitimacy from their environment; they are pushed to adopt the same Internet reporting practices as those in the same industry (Bonson and Escobar, 2006).

Giner-Inchausti (1997) suggests signalling theory and political process theory but not agency theory, the industry membership may influence a firm's political vulnerability when a firm adopts a certain disclosure practice, in that others in the industry will tend to follow. If not, they may send a negative signal to the market (Craven and Marston, 1999).

6.5.6 Firm Size [FactorSize]

This study found that size is positively significantly related to Internet visibility, which is consistent with the result of Serrano-Cinca et al. (2007). The researchers argue that larger companies are smarter and more diligent to achieve greater visibility. These companies stand out in disclosing information via the Internet. They also display true financial portals that offer excellent services to their stakeholders.

Another empirical study provides evidence that firm size is positively related to Internet disclosure (Bonson and Escobar, 2006). A greater number of Internet financial users exert

pressure on the largest companies to disseminate more information via the Internet; as such dissemination lowers the relative cost associated with maintaining their information via the Internet. Therefore, larger firms are more likely to disseminate financial reports via the Internet than smaller firms (Ashbaugh et al., 1999).

Agency theory and signalling theory suggest that size is positively related to disclosure. According to agency theory, larger companies incur higher agency costs (Watts and Zimmerman, 1978) and the voluntary disclosure can lead to a decrease in these higher costs. Under such circumstances, the better-informed investors do not need to introduce more measures to monitor the management and result in a cost saving.

A higher level of visibility and disclosure is needed to enable existing and potential investors to make investment decisions effectively as larger firms are more complex. In addition, larger firms tend to be more visible in the business environment (Ku Ismail and Ibrahim, 2008/2009), which is likely to pressure other companies to increase voluntary disclosure. Moreover, larger companies may incur higher political costs, because they are more likely to attract the regulatory attention. In order to reduce political costs, they will try to increase the voluntary disclosure (Watts and Zimmermann, 1978). Lower relative information production costs can be assumed for large firms in comparison with smaller firms, because they have the resources to collect and present more Internet disclosures. Therefore, the result of this study confirmed the argument of agency theory that sample companies reduce the agency costs by increasing voluntary disclosure through the Internet.

6.6 Conclusion

This chapter presented the data analysis through descriptive analysis, factor analysis and the regression analysis. Descriptive analysis shows that the range of overall Internet disclosure level varied widely between 1.11% and 52.29%. The researcher used factor analysis to analyse the structure of the interrelationships among size, financial performance, Internet visibility and disclosure variables. All these variables' first principal components range between 60% and 70%, which surpass the recommended values.

In order to see the relationship of variables, regression models were developed. Audit committee members with accounting and financial qualification, industry (technology level) and size are positively significantly related to Internet visibility. Top 5 shareholdings are negatively significantly related to Internet visibility. Boards dominated by independent non-executive directors and board size are positively significantly related to Internet disclosure. However, audit committee members with an accounting or financial qualification, institutional ownership and director ownership are negatively significantly related to Internet disclosure. These findings provide evidence that the government's effort in pursuing disclosure transparency via the Internet has yet to achieve its intended goals, as the few substantial shareholders who tend to disclose less information are the owners of a majority companies in Malaysia. In the next chapter, phase 2 of this study seeks the views of the preparers regarding IFR.