

School of Accounting

Sustainability Reporting on Malaysian Local Authority Websites

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**This thesis is presented for the degree of
Doctor of Philosophy
of
Curtin University of Technology**

November 2010

DECLARATION

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgement has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Signature:.....

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ABSTRACT

This thesis examines the extent of sustainability reporting on Malaysian local authority websites. The use of websites by government in Malaysia is closely associated with the public service administrative reforms. The central underlying theme of the thesis is the importance of local authority websites in disseminating sustainability information to society. Institutional theory isomorphism is employed as a theoretical lens for both the quantitative and qualitative phases of the thesis. This is one of only a small number of studies examining local government website sustainability reporting, both in Malaysia and internationally. Thus it makes a significant contribution given this dearth of international literature on website sustainability reporting in local government.

This thesis employs two methods to measure the extent of sustainability reporting on websites, namely: the content analysis and disclosure index methods. The content analysis and disclosure index instruments were specifically developed to measure the extent of sustainability information disclosure on websites in the context of local government.

Sustainability information disclosure for the 139 councils varies significantly from 2 to 785 sentences with a mean of 106 sentences and the mean disclosure is 15 out of 57 items in the disclosure index method. Overall, the disclosure level is low despite the special features and technological capabilities of websites to contain more information compared to other mediums of reporting. In the quantitative phase, the disclosure index method was able to produce more significant results in explaining the level of sustainability information disclosure. The significant explanatory variables are: size (*logrevenue*), jurisdictions, internal goals and the LA 21 program. The justification for the differences in results from the content analysis and disclosure index methods make a contribution to the limited issue in the CSR literature.

The qualitative phase findings added meaningful insights to the explanatory variables hypothesized in the quantitative phase. The additional factors identified under normative isomorphism include motivations to receive an award, and the key

personnel in charge of the sustainable development program in councils. As well, the interview findings explained the reasons as to why jurisdiction was a significant predictor in the quantitative phase and the most noticeable variable within the institutional theory framework. The interview findings also provided evidence of copying of the sustainable development activity implementation from other councils' websites in the same organizational field under the mimetic isomorphism. The thesis found a blurring of boundaries between coercive, mimetic and normative pressures for variables such as the size of councils, LA 21 implementation and awards, in both the quantitative and qualitative phases. The use of LA 21 was a significant explanatory variable in the thesis and should be considered in future research for public sector sustainability reporting. Following Malaysia's participation in the Rio de Janeiro Earth Summit in 1992, the Ministry of Housing and Local Government implemented LA 21 in local authorities in such a way that it filtered down and encouraged more participation from the people. This situation is also expected to happen in other countries all over the world. Hence, Malaysia is a good example of success in regards to LA 21 and the implementation process could be replicated by other countries worldwide. Finally, it is put forward here that local authority websites can become a useful tool to maintain or achieve legitimacy.

Overall, the empirical findings have implications for various stakeholders with respect to improving the level of sustainability information disclosure on Malaysian local authority websites, namely: 1) policy makers; 2) communities; 3) local authorities; 4) the tertiary accounting education curriculum; 5) NGOs; and 6) universities. The findings provide an overview of the extent of sustainability information disclosure in the public sector in Malaysia. The differences highlighted between councils in urban and rural areas can serve as a basis for future studies. It is expected that the use of the website as a medium of disclosure will be increased in the future with more support from the management, clear directives from the government and a higher education level of the people. The thesis makes a significant contribution to the CSR and public sector accounting literature especially for Malaysian local authorities. Additionally, several ideas for future research could make further valuable contributions in this area.

ACKNOWLEDGEMENTS

'Commit to the Lord whatever you do, and your plans will succeed.'—Proverbs 16: 3

First and foremost, I would like to praise God the Almighty for His blessings throughout the doctoral journey. Many people deserve recognition and appreciation on the completion of this thesis.

I would like to thank my supervisors Dr Robyn Pilcher and Professor Ross Taplin for their continuous guidance and valuable feedback throughout my thesis writing. My appreciation also goes to the Chairperson, Professor Alistair Brown for his support towards the completion of my thesis. My sincere thanks is dedicated to Dr John Fielder, from the Learning Centre, Curtin University, for proofreading the first draft of all my thesis chapters and providing other useful insights in my thesis writing and, especially for Jo Boycott, the CBS HDR Coordinator for being such as a lovely and supportive counsellor /adviser during my study.

I also express my appreciation to the Ministry of Higher Education of Malaysia and my employer, Universiti Teknologi MARA, Malaysia for funding my course of study in Curtin University, Australia. I would like to thank a few important people in my university in Malaysia for providing full support and encouragement to me for pursuing my doctoral degree. These people are: Professor Ir Dr Sahol Hamid Abu Bakar, Professor Dr Ibrahim Abu Shah, Professor Dr Ibrahim Kamal Abd Rahman, Professor Dr Ruzainon Abd Aziz, Professor Dr Jamil Hamali, Professor Dr Muhd Kamil Ibrahim, and staff from the Scholarship Division, Universiti Teknologi MARA, Malaysia. I am also indebted to all friends (in Perth and Malaysia) and colleagues, not all of whom can be mentioned by name.

There are many challenges during my course of study. However, my energy and perseverance is restored by the power of the Almighty God. I must thank Fr Francisco Mascarenhas, Ms Mary Munelley, Jose and Lilia for their spiritual encouragement to keep going and to remain faithfully with the Lord.

Above all, I owe extra-special thanks to my beloved husband, **Michael Liset**, for his love, patience, understanding and sacrifices during my study. To my lovely children, **Abrone, Heidi** and **Ariel**, thanks for your nightly prayers. I will always love all of you from the bottom of my heart. My heartfelt thanks go to my parents, siblings, my late parents-in-law and extended families for their love and prayers.

Last but not least, I would like to thank the Economic Planning Unit of the Prime Minister's Department of Malaysia for approving my thesis, all the interviewees who gave their time freely, and to everyone who has participated in this study.

TABLE OF CONTENTS

	Page
DECLARATION	ii
ABSTRACT	iii
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS	vii
LIST OF APPENDICES	xi
LIST OF TABLES	xiii
LIST OF FIGURES	xv
LIST OF ABBREVIATIONS	xvi
RELATED THESIS PUBLICATIONS	xviii
CHAPTER 1: OVERVIEW OF THE STUDY	
1.1 Introduction and Background	1
1.2 Research Scope and Justification	11
1.3 Research Questions	16
1.4 Significance of Research	17
1.5 Overview of the Thesis	18
1.6 Limitations of the Thesis	22
1.7 Chapter Summary	22
CHAPTER 2: LITERATURE REVIEW	
2.1 Introduction	23
2.2 Overview of Sustainability Reporting	23
2.3 Sustainability Reporting in the Private Sector	28
2.4 Sustainability Reporting in the Public Sector	31
2.4.1 Reasons for Sustainability Reporting	31
2.4.2 Accountant's Involvement in the Public Sector Sustainability Reporting	32
2.4.3 Type of Sustainability Reporting in the Public Sector	34
2.4.4 Factors Influencing Sustainability Reporting in the Public Sector	35
2.5 Web-based Disclosure Studies	37
2.5.1 Advantages and Disadvantages of Sustainability Reporting on the Websites	38
2.5.2 Differences Between Annual Reports and Websites	41
2.5.3 Content of Sustainability Reporting on the Website	42
2.6 Social and Environmental Research in Malaysia	45
2.6.1 Development in CSR	45
2.6.2 Environmental vs. Social Reporting	46
2.7 Sustainability Reporting in the Malaysian Public Sector	50
2.8 Chapter Summary	51

CHAPTER 3: INSTITUTIONAL THEORY, RESEARCH METHODOLOGY AND HYPOTHESES DEVELOPMENT

3.1	Introduction	52
3.2	Theoretical Background of the Thesis	52
3.2.1	Theoretical Perspectives Related to Government Policy Choice	52
3.2.2	Theoretical Perspectives in Social and Environmental Reporting	54
3.3	Institutional Theory	56
3.3.1	Legitimacy	56
3.3.2	Isomorphism/Homogenization of Organizations	57
3.3.3	Institutionalization	58
3.4	Reasons for Isomorphism	63
3.4.1	Coercive Isomorphism	64
3.4.2	Mimetic Isomorphism	66
3.4.3	Normative Isomorphism	67
3.5	Institutional Theory and Sustainability Reporting	68
3.6	Insights from Past Studies Using Isomorphism	69
3.7	Research Methodology	72
3.7.1	Data Collection	75
3.8	Hypotheses Development	76
3.8.1	Size of Councils	76
3.8.2	Jurisdiction	77
3.8.3	LA 21 Program	78
3.8.4	Public Sector Awards	79
3.8.5	Type of Councils	80
3.8.6	Control Variables	82
3.9	Conceptual Schema	82
3.10	Chapter Summary	83

CHAPTER 4: RESEARCH DESIGN (QUANTITATIVE PHASE)

4.1	Introduction	84
4.2	Research Method in Phase One	84
4.3	Content Analysis	85
4.4	Disclosure Index	86
4.5	Advantages and Disadvantages of Content Analysis and Disclosure Index Approaches	87
4.6	Dependent Variable	88
4.6.1	Development of Content Analysis and Disclosure Index Instruments	92
4.6.2	Measurement of Total Dependent Variable	101
4.7	Independent Variables	103
4.7.1	Size of Councils	103
4.7.2	Jurisdiction	104
4.7.3	LA 21 Program	104
4.7.4	Public Sector Awards	105
4.7.5	Type of Councils	105

4.8	Control Variables	107
4.9	Statistical Methods	108
4.9.1	Descriptive Statistics	108
4.9.2	One-way Analysis of Variance Between Groups (ANOVA)	108
4.9.3	General Linear Model (GLM)	109
4.9.4	Correlation	112
4.9.5	Sensitivity Analysis	112
4.10	Pilot Study	112
4.11	Chapter Summary	115

CHAPTER 5: DESCRIPTIVE ANALYSIS

5.1	Introduction	116
5.2	Background to Data Analysis	116
5.3	Dependent Variable Based on Total Number of Sentences	117
5.3.1	Reliability Test on Dependent Variable (Using Sentence)	119
5.4	Dependent Variable for the Three Categories of Sustainability Information (Number of Sentences)	120
5.4.1	Environment	122
5.4.2	Social	126
5.4.3	Economy	128
5.5	Dependent Variable Based on Total Disclosure Index	131
5.6	Dependent Variable for the Three Categories of Sustainability Information (Index)	132
5.6.1	Environment	133
5.6.2	Social	135
5.6.3	Economy	136
5.7	Independent Variables	137
5.8	Relationship Between Independent Variables	139
5.9	Chapter Summary	142

CHAPTER 6: MULTIVARIATE ANALYSIS

6.1	Introduction	144
6.2	Regressions Using <i>logdvsentence</i> as a Measure of Dependent Variable	144
6.3	Regressions Using Disclosure Index as the Dependent Variable	148
6.4	Hypotheses Development Results	151
6.4.1	Size of Councils	152
6.4.2	LA 21	153
6.4.3	Jurisdiction	154
6.4.4	Public Sector Awards	155
6.4.5	Type of Councils	156
6.4.6	Internal Goals	156
6.4.7	Recycling Program Logo	157
6.5	Argument for Different Results in Both the Content Analysis and Disclosure Index Methods	157
6.6	Sensitivity Analysis	162
6.7	Chapter Summary	164

CHAPTER 7: RESEARCH DESIGN (QUALITATIVE PHASE)

7.1	Introduction	165
7.2	Justification of the Qualitative Phase	165
7.3	Qualitative Approach–Case Study	166
7.4	Data Collection Procedure	166
7.5	Data Analysis Procedure	172
7.6	Verification Steps	173
7.7	Chapter Summary	175

CHAPTER 8: INTERVIEWS

8.1	Introduction	176
8.2	Case Studies and Interviews	176
8.3	Analysis of Interview Questions	178
8.4	Background Information	179
8.5	The Reasons for Disclosing or Not Disclosing Sustainability Information on the Website	180
8.6	Factors that Influence (or Impede) Sustainability Reporting on the Website	188
8.7	Copying Behaviour of Sustainability Reporting	193
8.8	Answering the Third Research Question	197
	8.8.1 Normative Isomorphism	198
	8.8.2 Coercive Isomorphism	199
	8.8.3 Mimetic Isomorphism	203
8.9	Chapter Summary	206

CHAPTER 9: IMPLICATIONS AND CONCLUSIONS

9.1	Introduction	207
9.2	Brief Review of Research Questions and Motivations	207
9.3	Summary of Findings	208
9.4	Implications of the Thesis	211
	9.4.1 Policy Makers	211
	9.4.2 Community	214
	9.4.3 Local Authority	215
	9.4.4 Tertiary Accounting Education Curriculum	219
	9.4.5 NGOs	220
	9.4.6 Universities	221
	9.4.7 Theoretical Implications	222
9.5	Strength of the Thesis	224
9.6	Limitations and Future Research	225
9.7	Concluding Remarks	227

REFERENCES	229
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LIST OF APPENDICES

		Page
Appendix 1_1	: Types of Reports Prepared by Other Countries	253
Appendix 1_2	: Descriptions of Major Sustainable Development Indicator Initiatives in Malaysia	254
Appendix 3_1	: Summary of Past Studies Using Institutional Isomorphic Pressures	256
Appendix 4_1	: Examples from Chapter Four	258
Appendix 4_2	: Methodological Issues Based on Past Studies	259
Appendix 4_3	: Decision Rules to Determine a ‘Sentence’	262
Appendix 4_4	: Content Analysis Instrument	265
Appendix 5_1	: Distribution Shape of the Dependent Variable	269
Appendix 5_2	: Examples from Websites	271
Appendix 5_3	: Reflections on Content Analysis and Disclosure Index Instruments	277
Appendix 5_4	: International Logo for Recycling Program	278
Appendix 5_5	: Crosstabulation between Categorical Variables	279
Appendix 6_1	: Simple Regression (<i>logdvsentence</i>)	282
Appendix 6_2	: Scatter Plot of Residual Value for the Dependent Variables	286
Appendix 6_3	: Simple Regression (<i>dvindex</i>)	289
Appendix 6_4	: Content Analysis for Three Council Cases	292
Appendix 6_5	: Disclosure Index for Three Council Cases	294
Appendix 6_6	: Sensitivity Analysis Involves a Change in Measurement for LA 21 (Content Analysis Method)	296
Appendix 6_7	: Sensitivity Analysis Involves a Change in Measurement for LA 21 (Disclosure Index Method)	297
Appendix 6_8	: Alternative Explanatory Variable for Jurisdiction (Content Analysis Method)	298
Appendix 6_9	: Alternative Explanatory Variable for Jurisdiction (Disclosure Index Method)	299
Appendix 6_10	: Sensitivity Analysis Involves a Change in Proxy (region) for Jurisdiction (Content Analysis Method)	300
Appendix 6_11	: Sensitivity Analysis Involves a Change in Proxy (region) for Jurisdiction (Disclosure Index Method)	301
Appendix 6_12	: Sensitivity Analysis Involves a Change in Proxy (Msia) for Jurisdiction (Content Analysis Method)	302
Appendix 6_13	: Sensitivity Analysis Involves a Change in Proxy (Msia) for Jurisdiction (Disclosure Index Method)	303
Appendix 6_14	: Regression Results for Websites Accessed on 18 January 2009	304
Appendix 6_15	: Sensitivity Analysis When Using Logpopulation as an Alternative to Logrevenue (<i>Logdvsentence</i>)	306
Appendix 6_16	: Sensitivity Analysis When Using Logpopulation as an Alternative to Logrevenue (<i>Dvindex</i>)	307

Appendix 6_17	: Relationship if Excluding Size of Councils in the Regression	309
Appendix 7_1	: Permission Letter	310
Appendix 7_2	: Interview Guide	311
Appendix 7_3	: Participation Information Statement	314
Appendix 7_4	: Consent Form	315
Appendix 7_5	: Data Analysis and Representation	316
Appendix 8_1	: Brief Description of Respondent's Working Position	317
Appendix 8_2	: Summary of Responses to Questions 1 to 5, 10 and 11	319

LIST OF TABLES

	Page
Table 1.1 : Road to Vision 2020 and Sustainable Development	6
Table 2.1 : Converging Trends Pushing the Field Towards Sustainability Online Reporting	42
Table 4.1 : Categories of Environmental Communication	94
Table 4.2 : Development of the Content Analysis Instrument	96
Table 4.3 : Additional Items in the Content Analysis Instrument	98
Table 4.4 : Disclosure Index Instrument	100
Table 4.5 : Steps Involved in Calculating DV (Sentence)	102
Table 4.6 : Steps Involved in Calculating DV (Index)	102
Table 4.7 : Criteria in Determining Type of Councils	106
Table 4.8 : Summary of Independent and Control Variables	108
Table 4.9 : Disclosure Amount of Sustainability Reporting	113
Table 4.10 : Time Spent for Analysing the Dependent Variable (Minutes)	114
Table 5.1 : Breakdown of Websites' Analysis	117
Table 5.2 : Descriptive Statistic for the Dependent Variable (Total Sentences)	118
Table 5.3 : Descriptive Statistics (Individual Categories—Sentences)	120
Table 5.4 : Descriptive Statistics—Number of Sentences (Environment)	122
Table 5.5 : Descriptive Statistics—Number of Sentences (Social)	126
Table 5.6 : Descriptive Statistics—Number of Sentences (Economy)	129
Table 5.7 : Descriptive Statistics for the Dependent Variable (<i>Dvindex</i>)	131
Table 5.8 : Descriptive Statistics for Total from Each Category (Disclosure Index)	132
Table 5.9 : Descriptive Statistics of the Environment Category—Disclosure Index	134
Table 5.10 : Descriptive Statistics of the Social Category—Disclosure Index	135
Table 5.11 : Descriptive Statistics of the Economy Category—Disclosure index	136
Table 5.12 : Descriptive Statistic for Independent Variable (Size)	137
Table 5.13 : Frequency Table for all Categorical Independent and Control Variables	138
Table 5.14 : One-way ANOVA between Logrevenue, Independent and Control Variables	140
Table 5.15 : Correlations between Independent Variables	142
Table 6.1 : Summary of Backward Elimination Results (Sentences)	145
Table 6.2 : Parameter Estimates of the Final Model (<i>Logdvsentence</i>)	147
Table 6.3 : Summary of Backward Elimination Results (Using Disclosure Index)	148
Table 6.4 : Parameter Estimates of the Final Model (<i>Dvindex</i>)	150
Table 6.5 : Hypotheses Results	151
Table 6.6 : Pearson Correlation between <i>Logdvsentence</i> and <i>Dvindex</i>	157
Table 7.1 : Details of Case Sites	170
Table 8.1 : Profile of Respondents	177

Table 8.2	: Reasons for Disclosing Sustainability Information	181
Table 8.3	: Reasons for Not Disclosing Sustainability Information	184
Table 8.4	: Factors that Influence Sustainability Reporting on the Websites	189
Table 8.5	: Factors that Impede Sustainability Reporting on the Websites	191
Table 8.6	: Type of Website References	193
Table 8.7	: Classification of Explanatory Factors Based on Type of Isomorphism	198
Table 8.8	: Link between Hypotheses Results and Interview Findings	205
Table 8.9	: Additional Explanatory Isomorphism Factors	205
Table 9.1	: Research Questions and the Two Phases of the Thesis	208

LIST OF FIGURES

	Page
Figure 1.1 : Tiers of Government in Malaysia	3
Figure 1.2 : Flowchart of the Thesis	20
Figure 3.1 : A Politico-Economic Model of Sustainability Reporting	53
Figure 3.2 : Research Process	73
Figure 3.3 : Mixed Method Strategy	75
Figure 3.4 : Conceptual Schema	83
Figure 4.1 : An Example of Drilling Level Based on the LA 21 Program in Council C26	90
Figure 5.1 : Relationship between Type and Size of Councils	141
Figure 6.1 : Linear Regression between <i>Logdvsentence</i> and <i>Dvindex</i>	158
Figure 7.1 : Scatter Plot of Case Sites	169

LIST OF ABBREVIATIONS

ACCA	:	Association of Chartered Certified Accountants
ANOVA	:	One-way Analysis of Variance between Groups
ASX	:	Australian Stock Exchange
CEO	:	Chief Executive Officer
CIPFA	:	The Chartered Institute of Public Finance and Accountancy
CPA Australia	::	Certified Practising Accountant Australia
CSR	:	Corporate Social Reporting
DV	:	Dependent Variable
e-PBT	:	Electronic Local Authority
EDAR	:	Environmental Disclosure in the Annual Reports
EM	:	Effective Microorganisms
EMS	:	Environmental Management System
ESG	:	Environmental, Social and Governance
FAQ	:	Frequently Asked Question
GRI G3	:	GRI Sustainability Reporting Guideline Version 3.0
GAAP	:	Generally Accepted Accounting Principles
GFOA	:	Government Financial Officers Association
GLM	:	General Linear Model
GRI	:	Global Reporting Initiative
HTML	:	Hypertext Markup Language
ICLEI	:	International Council for Local Environmental Initiatives
ICC	:	International Chamber of Commerce for Sustainable Development
ICT	:	Information, Communication and Technology
ISA	:	Internal Security Act
ISO	:	International Organization for Standardization
IT	:	Information Technology
KLSE	:	Kuala Lumpur Stock Exchange
LA 21	:	Local Agenda 21
LESTARI	:	Institute for Environment and Development
MaSRA	:	Malaysia Sustainability Reporting Award
MBS	:	Modified Budgeting System
MESRA	:	Malaysia Environmental and Social Reporting Awards
MIA	:	Malaysian Institute of Accountants
MICG	:	Malaysian Institute of Corporate Governance
MICPA	:	Malaysian Institute of Certified Public Accountants
MIM	:	Malaysian Institute of Management
MP	:	Members of Parliament
MURNINet	:	Malaysian Urban Indicator Network
NACRA	:	National Annual Corporate Report Award
NCLG	:	National Council for Local Government
NGO(s)	:	Non-Governmental Organizations
NPM	:	New Public Management
OPP	:	Outline Perspective Plan
OSA	:	Official Secrets Act
PDF	:	Portable Document File
PFI	:	Private Finance Initiative
RM	:	Ringgit Malaysia or Malaysian Ringgit

SAINS	:	Sarawak Information Systems Sdn Bhd
SLGGA	:	Smart Local Government Governance Agenda
SIRIM	:	Standards and Industrial Research Institute of Malaysia
SPSS	:	Statistical Package for Social Sciences
SSPA	:	Sector Supplement for Public Agencies
TBL	:	Triple Bottom Line
UNEP	:	United Nations Environment Programme
UK	:	United Kingdom
US	:	United States
VRA	:	Volta River Authority
www	:	World Wide Web

RELATED THESIS PUBLICATIONS

The pilot test in Chapter Four had been published in:

Pilcher, R., Taplin, R. and Joseph, C. (2008), "Sustainability Reporting on Local Authority Websites within an Institutional Theory Framework", paper presented at the 7th Conference of Social and Environmental Accounting Research (A-CSEAR), 7–9 December, Adelaide, Australia.

The material in Chapter Six had been published in:

Joseph, C. (2009), *Sustainability Reporting on Malaysian Local Authority Websites: A Disclosure Index Approach*, Seminar Paper Perth, Western Australia, paper presented at the CBS Doctorial Colloquium 2009, Curtin University of Technology, 1–2 October, Australia.

The material in Chapter Eight had been published in:

Joseph, C., Pilcher, R. and Taplin, R. (2009), "Exploring Why Malaysian Councils Disclose Sustainability Information on Websites", paper presented at the 8th Conference of Social and Environmental Accounting Research (A-CSEAR), 6–8 December, Christchurch, New Zealand.

CHAPTER ONE

OVERVIEW OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND

Sustainability reporting is one of the accounting research areas that is still gaining prominence throughout the world. Studies have focused on factors influencing the level of disclosure in a variety of ways such as traditional annual reports, stand-alone sustainability reports, media and websites. Recently more sustainability reporting studies have been conducted in public sector organizations. This thesis adds to the literature by examining sustainability reporting in a public sector setting – that of local government websites in Malaysia.

Throughout recent decades many public sector agencies all over the world have been flooded with a radical wave of reform initiatives, including financial, organizational and management reforms. The Malaysian government introduced public sector administrative reforms for their departments and other government funded agencies during the mid 1980s with the purpose of improving their organizations' efficiency and effectiveness in the provision of services and, at the same time, to provide better accountability (Nichol and Taylor, 2001).

According to Lapsley and Pallot (2000), the reform of local government management can be seen as part of a wider set of public sector reforms, which are characterized by the umbrella heading of "New Public Management" (NPM).¹ The development of automation, particularly in information technology, in the production and distribution of public service is one of four administrative 'megatrends' which are connected with the NPM principle (Hood, 1991). As indicated by Abdullah and Kaliannan (2008), the public sector reforms in Malaysia for the past 20 years have been influenced by public services developments in western countries such as the United States (US) and Europe. Some examples of the various practices and approaches introduced at all levels of government to re-engineer the public sector are: Total Quality Management; Malaysia Incorporated; Services Recovery System; Client Charters; ISO 9000

¹ The terms 'local government', 'local authority' and 'local council' are used interchangeably throughout this thesis.

Quality Management Standard; Public-Private Partnership; Privatization; Outsourcing; and Online Services, which realistically have resulted in massive improvement in public services (Abdullah and Kaliannan, 2008).

The route towards Vision 2020 and developed nation status is mapped out in the five-year Malaysian Plan and the ten-year Outline Perspective Plan (OPP).² Economic growth is vital in determining the success of Vision 2020 and, thus far, all sectors of the Malaysian economy have shown resilient growth, including the information, communication and technology (ICT) sector. As such, by using ICT, the government aims to improve the public service delivery at various levels: federal, state and local government.

The use of the Internet in the public sector is associated with the public service administrative reforms (Moon, 2002; Moon and Norris, 2005). As claimed by Mussari and Steccolini (2006, p. 193), "Internet technologies provide public sector organizations with an opportunity to improve their accountability, and promote a change in the overall philosophy of government and organization of activities".

There are various ICT master plans that have been introduced by the Malaysian government to recognize and prepare for the transformation of the public service namely: the Eighth Malaysian Plan (2001–2005), the Knowledge-based Economy Master Plan (2002–2010), the Public Sector ICT Master Plan (2003) and the Ninth Malaysian Plan (2006–2010) (Abdullah *et al.*, 2006). The government of Malaysia has also launched the Public Sector ICT Strategic Plan to ensure that the various ICT initiatives undertaken by the government agencies will be in line with the Public Sector ICT Vision, that is, to provide efficient and quality service to its customers, the citizens and businesses (European Union–Ipoh Virtual City EIVC, 2005). One of the initiatives is the 'e-pbt' (*electronic local authority*), a strategic project identified under the Public Service ICT Strategic Plan which is implemented in 145 local authorities in Malaysia under the "e-pbt.gov.my" portal.³

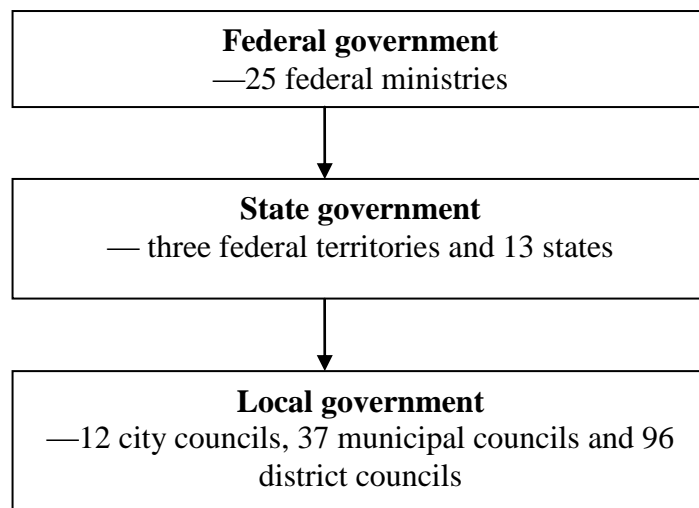
² Vision 2020 is Malaysia's long-term development strategy (30-year planning horizon) to achieve a developed nation status by 2020.

³This excludes other agencies which are empowered by the state government to carry out the function of local authorities such as Kulim Hi-Tech Local Authority, Bintulu Development Authority and Putrajaya Corporation. As at March 2010, there are 147 local authorities in Malaysia. The 'e-pbt

In Malaysia, the ‘e-pbt’ implementation is one of the initiatives implemented under the Smart Local Government Governance Agenda (SLGGA) by the Local Government Department in 2002. The SLGGA aims to improve public service delivery using information technology. According to Datuk Seri Ong Ka Ting, the Minister of Housing and Local Government in 2003, SLGGA helps to strengthen the elements of transparency, accountability and effectiveness in the public service and also helps it to be more responsive. The Minister stresses that all the local authorities must have functional websites and should include at least e-complaints, e-submission, e-tax, e-collection and e-licensing (Daily Express Online, 2003). In view of that, the local authorities should optimize the utilization of their websites to disclose as much information as possible to their community.⁴

Local government continues to be the driver for governance at the local level in Malaysia (Ting, 2002). Malaysia embraces a nominative representation system for local government, and council members are appointed by the state government. The three tiers of government in Malaysia are shown in Figure 1.1.⁵

Figure 1.1 Tiers of Government in Malaysia



portal’ contains the list of local authorities’ websites that aims to provide efficient online services to the people.

⁴ ‘Reporting’, ‘disclosing’ and ‘communicating’ are used interchangeably in this thesis. This refers to how the sustainability information message is conveyed via websites.

⁵ This figure is showing the statistics of local authorities as at September 2008. Out of three federal territories, only one federal territory is categorized as a city council (Council C1) and is thus included in the thesis. The other federal territories are not classified as local government (Ministry of Housing and Local Government, 2008a).

Local governance can be described as the process by which decisions made at the local government are noted to be a sign of, or are closely similar to, the needs of the local community. The Local Government Act 1976 (Act 171) governs the framework for local governance. The Act empowers local governments to administer the local governance in Malaysia. Act 171 applies only to Peninsular Malaysia (*West Malaysia*). The states of Sabah and Sarawak (*East Malaysia*) have similar legislation to cover local governments in the two states which is the Local Government Ordinance 1961 (Sabah) and the Local Authorities Ordinance 1996 (Sarawak).⁶

The local governments in Malaysia are primarily governed by the three sets of Acts, that is, the Local Government Act 1976 (Act 171), the Town Planning Act 1976 (Act 172) and the Street Drainage and Building Act (Act 173). The ranges of functions stipulated by Act 171 are (i) environmental, (ii) public health and cleansing, (iii) enforcement and licensing, (iv) public amenities, and (v) social services and development functions. The local authorities in Malaysia provide the local services in their areas, together with other federal and state government agencies. Each local authority has an advisory board comprising of 8 to 24 councillors appointed by the state government. The appointment is usually administered by a representative member from among the residents under the local authority's jurisdiction. Section 10 of Act 171 stipulated that the councillors selected should represent professions or the ethnic populace under the local authority.

The Federal Constitution provides that local public services undertaken by local authorities on behalf of the respective state governments are categorized as both mandatory and discretionary functions. The mandatory functions are: rubbish collection, maintenance of minor drainage, sewerage treatment, road maintenance, street lighting and activities pertaining to public health. Discretionary functions include all development functions such as providing amenities, recreational parks, housing and commercial activities, markets, sporting facilities and community centres.

⁶ Malaysia is a parliamentary federation of eleven states in the Peninsula, the federal territories of Kuala Lumpur, Labuan and Putrajaya and the states of Sabah and Sarawak located in the northern part of Borneo Island.

The above said roles are important to ensure the continuous growth and sustainable development within the context of maintaining national competitiveness in the era of economic globalization. Additionally, the financial and administrative pressures on the local authorities will increase as a result of new demands and challenges to improve the delivery of urban services (United Nations Economic and Social Commission for Asia and the Pacific, 2008).

Urban citizens mostly occupy local authority administered areas (Abdullah and Kaliannan, 2008). Abdullah and Kaliannan (2008, p. 87) stated that: "as the population becomes urbanized, local government grows in direct importance to the welfare and the quality of life experienced by a majority of the citizens ...". In relation to the governance issues, the local authorities in Malaysia have been soundly criticized for poor services over the years in the press, as well as by the higher state and federal authorities (Abdullah and Kaliannan, 2008). As well, local authorities are allegedly seen by the people and media as being "bureaucratic, inefficient, wasteful, unresponsive and not citizen-friendly" (Abdullah and Kaliannan, 2008, p. 88).

It has been claimed that the local authorities have not been proactive in improving their services (Abdullah and Kaliannan, 2008). Abdullah and Kaliannan (2008) maintained that the public did not get any information from the local authorities until some problems or issues were raised and received media coverage in the press or television. As a result, the community is becoming more forceful in expressing their grievances about the services provided by their local authorities and are also demanding greater accountability on how the local authorities make decisions and use their tax money.

Nevertheless, in some instances, many local authorities have improved their service delivery, due to support from the top management as well as pressures from state and federal administration (Abdullah and Kaliannan, 2008). According to Abdullah and Kaliannan (2008, p. 88), "some local authorities have made significant strides in realizing the objectives of the Local Agenda 21 program (LA 21)", one of the governance-based programs which supports the concept of sustainable development.

In line with other countries worldwide, Malaysia is progressively moving towards achieving sustainable development. Hezri and Hasan (2006, p. 43) highlighted the two factors that influenced Malaysia to embrace sustainable development, namely: "Malaysia's growing diplomatic influence and the allegation of wanton deforestation voiced by the international community". Hezri and Hasan (2006, p. 43) added, "a surge of media attention to sustainable development established the concept to the general public". In Malaysia, the concept of sustainable development is not confined to the international initiative of the LA 21 program, but is also applied to the Principles of Planning and Holistic Development set out by the Federal Department of Town and Country Planning.⁷ As well, this concept has been embedded in various national strategic policies in the country. The road to Vision 2020 and sustainable development is presented in Table 1.1.

Table 1.1 Road to Vision 2020 and Sustainable Development

Outline Perspective Plan	Malaysia Plan	Main Focus
OPP1 (1971–1990) National Economic Plan	Second, Third, Fourth and Fifth Malaysian Plan	To improve Malaysia's socio-economy especially in poverty alleviation and the restructuring of society
OPP2 (1991–2000) National Development Plan	Sixth and Seventh Malaysian Plan	To provide balanced and equitable developments in Malaysia
OPP3 (2001–2010) National Vision Plan	Eighth and Ninth Malaysian Plan	Striving to build a resilient and competitive nation to withstand domestic and global challenges
OPP4 (2011–2020) National Sustainable Development Plan	Tenth and Eleventh Malaysian Plan	Achieving sustainable development through sound economic, social and environmental principles and integrated practices

(Malaysia NGO Forum for Rio +10, 2003, p. 7)

One of the initiatives in achieving sustainable development is the establishment of the Malaysian Urban Indicator Network (MURNINet) portal, an urban indicator system. MURNINet measures sustainable development in town and city areas. It evaluates the achievement of towns and cities by 11 broad criteria: demographic, housing, urban economic, utility and infrastructure, public facilities and recreation, environment, sociology and social impact, land use, tourism and heritage, transportation and accessibility, and finance and management sectors (John, 2006).

⁷ Agenda 21 is a global sustainable development action plan. This action plan consists of 40 chapters explaining the actions needed to be implemented towards sustainable development.

The evaluation system is an important guide for authorities and planners who will have to manage a rapidly growing urban population with limited space and resources. This indicator system shows the strengths and weaknesses of local authorities and the necessary actions to be taken to make city living better and more balanced (John, 2007). Based on the 2008 sustainable level performance result, only two city councils (out of a total of 46 city and municipal local authorities) have achieved the sustainable city status under the MURNINet study (Ministry of Housing and Local Government, 2009).

One international initiative which is closely associated with sustainable development is the LA 21 program. This program is intended to translate sustainable development principles and objectives into practical action at the local level. In Ireland, for example, some of the major aims of LA 21 include to:

- Reduce the amount of energy and raw materials society consumes, as well as the pollution and waste it produces;
- Protect fragile ecosystems and environments;
- Bring about a fairer distribution of wealth, both between countries and between different social groups within countries, placing a special emphasis not just on the needs, but on the rights of poor and disadvantaged people (Department of the Environment and Local Government, 1995).

In Malaysia, the LA 21 pilot project is an initiative implemented by the Ministry of Housing and Local Government, with support from the United Nations Development Programme (UNDP) and in co-operation with the Economic Planning Unit of the Prime Minister's department (Ministry of Housing and Local Government, 2008b). The pilot project for LA 21 involved four agencies and commenced in 2000. In this project, the consultants were engaged to coordinate and facilitate the implementation of the LA 21 program. The participation of the UNDP and consultants ended in February 2002. The LA 21 program was fully implemented by the Ministry of Housing and Local Government and funded under the Eighth Malaysian Plan (2000–2005). An allocation of RM1.8 million for the three-year period was provided for the LA 21 program implementation (Mohamed-Osman *et al.*, 2008).

This LA 21 pilot project was extended to all other 60 city councils and municipal councils for phase two of the project in 2002 (Ting, 2002).⁸ Based on the pilot project in 2000, the guidelines were drawn up for the adoption of LA 21 by other local authorities in the country (News Strait Times, 2001). LA 21 pilot projects that have been implemented at several local authorities were evaluated and replicated nationwide. In 2002, the Minister urged all the local authorities to set up a Sustainable Development Unit in their organizations to facilitate the expansion of the LA 21 principles in their areas. Later, in 2007, this program was extended to all 145 local authorities in Malaysia.

One of the main objectives of the LA 21 program is to forge partnerships between agencies and stakeholders in achieving sustainable development. However, as revealed by Marcuccio and Steccolini (2004), in a developed country such as Italy, local governments' actual involvement with stakeholders is still considered minimal.

Recent findings in Malaysia by Mohamed-Osman *et al.* (2008) revealed the problems faced by the stakeholders in the participation process of the LA 21 program are: 1) no well developed policy for LA 21 and sustainable development at the state and local levels; 2) LA 21 has not been very successful in raising awareness of the possibilities of local sustainable development; 3) the sustainable development agenda is still not part of the broader reform of local governance in Malaysia; 4) the current structure of local authorities and their management style; 5) financial constraints, and 6) lack of consensus between the local authorities and community. Their study was conducted via documentation analysis, a postal survey to 48 local authorities in Malaysia and a case study of Petaling Jaya City Council. Mohamed-Osman *et al.* (2008, p. 8) also highlighted that "work is required on language and communication in order to facilitate a fuller sharing of concepts and values" to improve the awareness of sustainable development, both at the local authority and community level. Hence, it is suggested here that some of the problems raised by Mohamed-Osman *et al.*'s (2008) study, for example, lack of awareness and consensus between

⁸ The local authorities involved in the pilot project (Phase one program) are: Miri Municipal Council (Sarawak), Petaling Jaya Municipal Council (Selangor), Kerian District Council (Perak) and Kuantan Municipal Council (Pahang).

the community and councils, could be resolved by ensuring more communication via the use of Internet technology.

There are a few agendas at the national level which are assisting the progress of sustainable development.⁹ Apart from the LA 21 program and MURNINet, a few other related sustainable development initiatives in Malaysia are: the Urban Governance program, the Healthy Cities Project, the Safe Cities Initiatives, the Sustainable Penang Initiative and the Selangor State Sustainable Development Strategy (Mohamed-Osman *et al.*, 2008).

It is argued that local government is very closely linked to the sustainability concept which promotes the need for sustainability reporting (see, for example, Department of the Environment and Local Government, 1995). Local authorities may choose different ways of reporting their outcomes and defining an appropriate LA 21 program for their areas. As the government tier which is the closest to the community, the local authorities are effectively making themselves agents to advance the community towards sustainability as recognized by the LA 21 program (Lewis, 2000; Potts, 2004). Further, as highlighted by Herbohn and Griffiths (2008, p. 24), "local councils are becoming motivated to undertake sustainability reporting because it is an area of governance where things actually happen and boundaries are definable". Herbohn and Griffiths (2008, p. 24) added the role of local council (compared to other tiers of government) in achieving sustainable development:

That is, it is easier for a local council to focus on the sustainability of a city as compared with state and federal government that focus on the sustainability of an entire state or country.

Qian and Burritt (2007) argued that local government is a significant setting in terms of environmental development and associated environmental accounting. As a result, LA 21 emphasizes the significant role of local government in establishing a path towards sustainable development. This is reflected by the social orientation of public sector agencies which place a greater potential on accountability mechanisms as compared to the private sector (Burritt and Welch, 1997a). The LA 21 program also

⁹ Refer to Appendix 1_1 for a further explanation of other sustainable development initiatives in Malaysia.

requires the decision makers in the public sector to take into account the environmental impact when drawing up their spending plans (Bowerman and Hutchinson, 1998).

The LA 21 program calls for a community based approach to sustainable development which is a focus of the Ninth Malaysian Plan (2006–2010). The LA 21 program was started in the Eighth Malaysian Plan (2001–2005) and innovative initiatives were made to incorporate Agenda 21 principles in the Ninth Malaysian Plan. It is also envisaged that sustainable development through sound economic, social and environmental principles and integrated practices will be achieved in the Tenth and Eleventh Malaysian Plan. The LA 21 program promotes more public participation in the sustainability agenda. It was suggested that sustainable development values must be anchored in the politics and policies of the people for it ever to be sustainable (Abdullah and Kaliannan, 2008).

One of the flaws identified by the Malaysian NGO Forum for Rio + 10 is a general lack of access to official government information on all environmental matters.¹⁰ Among the recommendations made by the non-governmental organizations (NGOs) community in reviewing the Agenda 21 implementation in Malaysia is the requirement to disseminate sustainable development policies on a nationwide scale. Another recommendation is to facilitate greater and more meaningful public participation in national planning (Malaysia NGO Forum for Rio +10, 2003). In responding to these recommendations by the NGOs and with reference to problems highlighted by Mohamed-Osman *et al.*'s (2008) study, it is suggested here that the websites of local authorities could be utilized to provide access to technology and information for all levels of society. By using the websites as a way to communicate with the people, it may assist in increasing the awareness of environmental issues, one of the objectives of the national LA 21 program. Simultaneously, such websites will expand rural access to technology and information, enabling citizens to bridge the digital divide.

¹⁰ Malaysian NGOs Forum for Rio + 10 is a NGO community interest group in Malaysia that undertook a review of Agenda 21 implementation in Malaysia and offered some perspectives for advancing sustainable development in Malaysia. The Malaysian NGOs Forum for Rio + 10 assessed Agenda 21 implementation in preparing for multi-stakeholder dialogue at the national and regional level, both before and after the World Summit on Sustainable Development in Johannesburg.

1.2 RESEARCH SCOPE AND JUSTIFICATION

The Ninth Malaysian Plan (2006–2010) highlighted that mismanagement and deteriorating environmental issues required immediate attention from the government, society, media and NGOs. For that reason, local authorities, as the third tier of government in Malaysia, have been selected for this thesis as they are directly responsible for implementing the environmental projects in their local communities (Lewis, 2000; Potts, 2004; Auditor General, 2006b). The National Audit Department of Malaysia is increasing its environmental auditing due to the concern expressed by the government, and the people, about mismanagement and the deteriorating environment (Auditor General, 2006a). Further, the reason for choosing local government as the subject in this thesis is because these agencies' strength is their financial autonomy (Mohd-Ali *et al.*, 2006). Accordingly, local governments have power in collecting taxes and other revenues along with control of their own funds.

One of the challenges faced by the National Audit Department in environmental auditing is that it must ensure that government analyses the impact of proposed activities before making decisions on investments with respect to green issues. This is due to citizens expecting government to be more responsible in handling environmental matters. Substantial amounts of expenditure are incurred by the government in resolving this ecological agenda. For example, a sum of RM1.1 billion (US\$ 289,473,684) has been allocated for a flood mitigation program in four rivers in Malaysia to reduce the occurrence of floods throughout the country.¹¹ As well, an allocation of RM120 million (US\$ 31,578,947.40) is provided for a preserving, cleaning and beautifying program of rivers nationwide (Ministry of Finance, 2007). This, in turn, contributes to the impact on financial statements. Simultaneously, regular reports by the media also increase awareness of environmental concerns in the public arena (Auditor General, 2006c). Some examples of media reports on environmental mismanagement are: the lack of an integrated approach by the various levels of authorities, and the lack of concern by the local residents.

¹¹ RM = Ringgit Malaysia or Malaysian Ringgit

The use of the website has received considerable critical attention as it is one of the evaluation criteria of good governance under the star rating system designed to evaluate the performance of local authorities in Malaysia (Tan, 2007). The rating system was implemented in 12 city councils in the first quarter of 2008, and subsequently by the remaining local authorities. Another criterion of the assessment is community participation and the public's point of view (Ministry of Housing and Local Government, 2008c). Therefore, it is advanced here that the websites of local authorities can be used to promote public participation in the effective governance system of local governments.

The role of community support and participation is crucial in the performance of local government as it determines the success of a specific urban program, for example, the LA 21 program, and can help in reducing the operational costs. As much as possible, the public can be involved in activities such as tree planting activities, recycling of wastes, reducing litter and controlling vandalism. According to Mohd-Ali *et al.* (2006), in local government "the request for information comes from the citizens and is primarily a social request and only successively becomes an economic-financial nature". The citizens are interested to know about the public value generated and this should be communicated to them. Public value includes those societal benefits to which government more generally must contribute, for example, social, economic and environmental benefits (European Union–Ipoh Virtual City EIVC, 2005). Thus, the innovative system of communication and accountability is important for local government. Further, as asserted by Hezri (2004, p. 363), "good governance requires better communication within society". There are many stakeholder groups calling for sustainability reporting (Gibson and Guthrie, 1995; Ball and Grubnic, 2007).

Sustainability reporting implementation requires involvement from the local authority itself, the National Audit Department and accounting practitioners in discharging accountability and improving the level of transparency.¹² In spite of this, there has not been a lot of research into public sector social disclosure (Ball, 2004; Ball and Grubnic, 2007) including Internet disclosure (Groff and Pitman, 2004).

As in the private sector, sustainability reporting in the public sector is voluntary and the reasons for its adoption, its contents and its process of preparation do not depend on legal requirements (Jose and Lee, 2007). Sustainability reports aim to provide a holistic view of performance incorporating all the elements of the triple bottom line (TBL).¹³ TBL reporting is a response to the need for evaluating the contribution of an entity to economic, environmental and social sustainability (Bebbington, 1997).

Thus, TBL reporting is essential in local government as its core activities have become more complex and are no longer confined to the traditional role of 'housekeeping' (Ball and Grubnic, 2007). Furthermore, local government remains a primary focus for formulating policy at the community level, and thus a focus for making choices between 'development' and ecological and social sustainability (Ball, 2005). Since public service organizational objectives are often reported in the context of the broad public interest, it is also possible to argue that they should lead by example by providing a public account of their own direct impacts on the local environment, local social wellbeing and economic prosperity (The Chartered Institute of Public Finance and Accountancy—CIPFA, 2004).

Lewis (2000) confirms the notion proffered by Gray and Bebbington (1998) that sustainable development should not be left in the hands of business only. One of the main reasons why the public sector should engage in sustainability reporting is

¹² There are a few reporting guidelines to assist local governments in preparing sustainability reporting. Those are: 1) the International Council for Local Environmental Initiatives (ICLEI); Sustainability Management Resources; 2) the Global Reporting Initiative (GRI) in the form of the Public Agency Sector Supplement (PASS); 3) the Institute of Social and Ethical AccountAbility work on the AA1000 series which provides standard for sustainability, non-financial auditing and assurance, and stakeholder engagement.

¹³ The TBL is also referred to as sustainability reporting, with the two terms used interchangeably (Herbohn and Griffiths, 2008).

because of its significant operational impact on the economy, the environment and society (Ball and Grubnic, 2007).¹⁴

Further, Ball and Grubnic (2007, p. 253) stated:

Thus we envisage sustainability accounting which encompasses an account not only of the importance of good 'housekeeping' (better management of estate; green procurement; efficiencies in waste; energy, transport and so on); but of policy and programs for action on sustainable development.

Research by the Global Reporting Initiative (GRI) discovered that public sector agencies in Australia, Hong Kong, Japan, New Zealand and the United Kingdom (UK) are engaged in reporting that covers the environmental and social impact of their operations.¹⁵ Some of the agencies—for example, public agencies in Hong Kong—have produced environmental performance reports and made them available to the public on their websites. In countries such as Italy, sustainability reporting by local government organizations has grown out of the LA 21 activities (Herbohn and Griffiths, 2008) and is used as a tool to facilitate dialogue with citizens, local associations, and interest groups (GRI, 2004). The different types of reporting implemented by the public sector agencies in other countries are summarized in Appendix 1_1.

As for Malaysia, the major sustainable development indicator initiatives are similar to the sustainability indicators or index reports in other countries. However, in this thesis, the analysis and link is made to the sustainable development initiatives which directly involve the local authority, for example, MURNINet and the LA 21 program. The descriptions of these initiatives are explained in Appendix 1_2.

The private sector Internet based sustainability related information is one category of disclosure that has been examined by extant literature (Williams and Pei, 1999;

¹⁴ An example of the substantial amount of expenditure is for solid waste management. The Malaysian government allocated RM921.1 million in the Eighth Malaysian Plan and this was further increased to RM3, 300.1 million in the Ninth Malaysian Plan (Kuppusamy, 2008).

¹⁵ Generally, there are three categories of reports: 1) Reports that cover overall performance areas of an agency (often termed "annual reports"); 2) Reports outlining the policies and strategies of an agency on sustainable development; and 3) Reports that present economic, environmental, or social conditions for a given geographic scope, that is, country, region, city and others (GRI, 2004).

Razeed and Considine, 2002; Rikhardsson *et al.*, 2002; Ho and Taylor, 2007; Jose and Lee, 2007; Rodriguez-Bolivar, 2009). Additionally, demand for online sustainability reporting information is greater than that for disclosures within the annual report (Rowbottom *et al.*, 2006) and companies have begun to utilize web-based technologies as a means of reporting to external stakeholders (Adams and Frost, 2006). As for social and environmental responsibilities, firms are disclosing significantly more information on their websites than in traditional media.

As highlighted by Styles and Tennyson (2007), only two studies have investigated Internet financial reporting of the local government, that is, Groff and Pitman (2004) and Laswad *et al.* (2005). With regards to the website usage in the public sector, the Internet has been used to provide a wide range of information including social and community items, council history or background, news and announcements, environmental information and tourism or promotional information (Laswad *et al.*, 2001). Thus far, there is no known research conducted on website sustainability reporting in the public sector. Past research only focussed on sustainability disclosure in annual reports of government agencies and was conducted in developed economies (see, for example, Farneti and Siboni, 2008; Larrinaga-González and Pérez-Chamorro, 2008; Farneti and Guthrie, 2009). Subsequent to such discussion, this thesis intends to add to the public sector accounting literature and corporate social reporting (CSR) by examining the extent of sustainability reporting on the website by Malaysian local authorities.

Corresponding with the public service reforms, the websites of the local authorities could be fully utilized to promote the understanding of sustainable development issues, and to communicate these to the community.¹⁶ Additionally, this reporting process also can be integrated into the fifth action area in the LA 21 process (*implementing, reporting, monitoring and reviewing*) to determine whether the targets are achieved, progress is made and change is needed for any aspects of the LA 21 program (Environment Australia, 2000).

¹⁶ There is no specific guideline and requirement for the local authority to prepare their financial statements. Local authorities in Malaysia prepare their accounts in accordance with Act 240, The Statutory Bodies (Accounts and Annual Reports) Act 1980, and Treasury Circular 15/94, Guidelines for Annual reports and the financial statements of a statutory body (see Mohamed and Atan, 2006).

It has been indicated that the use of ICT has assisted city councils in Malaysia (for example, Petaling Jaya City Council) in implementing the LA 21 program. According to Yuen *et al.* (2006, p. 231):

To enhance participation and dissemination of information to a wide group, ICT is employed as an effective tool to facilitate effective communication. A high penetration rate among the community members will further enhance participation, transparency, equity, responsiveness, and efficiency in the local delivery system and planning process.

With the increasing call by the Ministry of Housing and Local Government in Malaysia on the use of functional websites to disseminate information to the local community, local authorities therefore can use this online technology to disclose more information especially related to sustainability.

1.3 RESEARCH QUESTIONS

Mohd-Ali *et al.* (2006) in their study on CSR awareness among local government accountants in Malaysia revealed that the most popular means of communicating CSR information is via the local government webpage. It was suggested that the local authorities may want to align their roles and responsibilities and functions accordingly to be relevant in the information age as Internet communication offers an economic and fast communication medium. For this reason, local authority websites could be used as a strategic tool to communicate and report sustainability information to the citizens. This leads to the question "are the websites used to report or communicate sustainability information?" Hence, the purpose of this thesis is to examine the extent of Malaysian local authority website reporting with a focus on sustainability information. This objective will be examined in the quantitative phase of the thesis. Correspondingly, the first research question is as follows:

RQ1 What, and how much, sustainability information is reported on Malaysian local authority websites?

Previous CSR and sustainability reporting studies in the private sector examined the relationship between explanatory variables such as a firm's characteristic and corporate governance variables, and the extent of disclosure. Various theoretical

frameworks were used to examine the relationship, namely: stakeholders' theory, legitimacy theory and political economy theory. This thesis adds to the pool of literature by using the institutional theory of isomorphism—coercive, normative and mimetic—to explain the relationship between the dependent and independent variables. Accordingly, the second research question is:

RQ2 Do a council's size, jurisdiction, LA 21 program, recognition by award and, type of councils have a significant impact on the extent of sustainability information reported on Malaysian local authority websites?

The second research question is examined in the quantitative phase, that is, by determining the relationship between the extent of sustainability reporting and the institutional theory variables. This is to determine the independent variables that are able to statistically explain the variability in the level of sustainability information disclosure. The qualitative phase provides support to the quantitative phase by explaining why there is a high or low level of disclosure, as well as why the explanatory factors under the institutional isomorphism influence (or not) such level of sustainability disclosure. The qualitative phase adds additional insights pertaining to the institutional theory factors that may not be explained from the quantitative phase. It is argued here that there are some institutional theory explanatory factors that can be obtained further from interview findings. Hence, the third research question of this thesis is:

RQ3 Do the isomorphism mechanisms of institutional theory aid in enhancing the explanation of why Malaysian local authority websites disclose sustainability information on their websites?

1.4 SIGNIFICANCE OF RESEARCH

This thesis is significant for the following reasons. Firstly, to the best of the researcher's knowledge there is no published research in Malaysia analysing sustainability website reporting using both content analysis and disclosure index techniques—particularly in the local government setting. This thesis also provides justification for differences in results derived from both techniques. This will assist future research to determine whether content analysis or a disclosure index is the

most appropriate research method to answer the research question. Therefore, this will add a significant methodological contribution to the CSR literature.

Secondly, this thesis extends the categories of environmental communication used by Jose and Lee (2007) and modifies these into environment, economic and community/social categories to suit the public sector objectives. Therefore, this extended work will provide new insights into sustainability reporting in local authorities. Further, past research in CSR placed more emphasis on CSR items in the checklist—a technique which is more applicable to the private sector setting.

Thirdly, this thesis considers the institutional isomorphism mechanisms—namely, coercive, mimetic and normative—in order to enhance the understanding of factors which may influence the extent of the sustainability website reporting by local authorities in Malaysia. The use of the institutional theory in explaining sustainability reporting is suggested by leading researchers in the social and environmental accounting and accountability area (see, for example, Bebbington *et al.*, 2007). In addition, prior literature maintains that there is lack of theoretical foundation used in the Internet reporting studies (Trabelsi *et al.*, 2004; Xiao *et al.*, 2004). This thesis adds to the pool of literature that employs the institutional theory to explain the level of sustainability related information disclosure on websites.

Finally, the thesis contributes to the growing literature on the extent of sustainability website reporting. This is in line with suggestions made by past literature to focus on media other than annual reports to disclose sustainability information. Other media includes websites, brochures and advertisements (Zeghal and Ahmed, 1990; Tilt, 2001; Adams and Frost, 2006).

1.5 OVERVIEW OF THE THESIS

Chapter One includes background of the thesis. Chapter Two covers the literature in both private and public sectors in relation to sustainability reporting and web-based reporting. This thesis assesses the level of sustainability information on the websites. It adopts a mixed method, utilizing both quantitative and qualitative approaches in a complementary way. The research methods are discussed separately in each chapter (Chapter Three, Chapter Four and Chapter Seven).

In the quantitative phase, 139 websites are analysed in order to determine the extent of sustainability reporting and thus to answer the first research question of this thesis. The content analysis and disclosure index methods are employed to calculate the extent of sustainability reporting on websites. Details of the research methods employed are outlined in Chapter Four.

To answer the second research question, several hypotheses were developed in Chapter Three and tested using the institutional theory isomorphism mechanisms to determine whether explanatory variables can explain variability in the extent of sustainability reporting.¹⁷ The results from the first phase assist in developing the interview guide to be used in the second phase. As well, the literature review in Chapter Two forms the basis of some of the interview questions. The statistical analysis is discussed in Chapter Four.

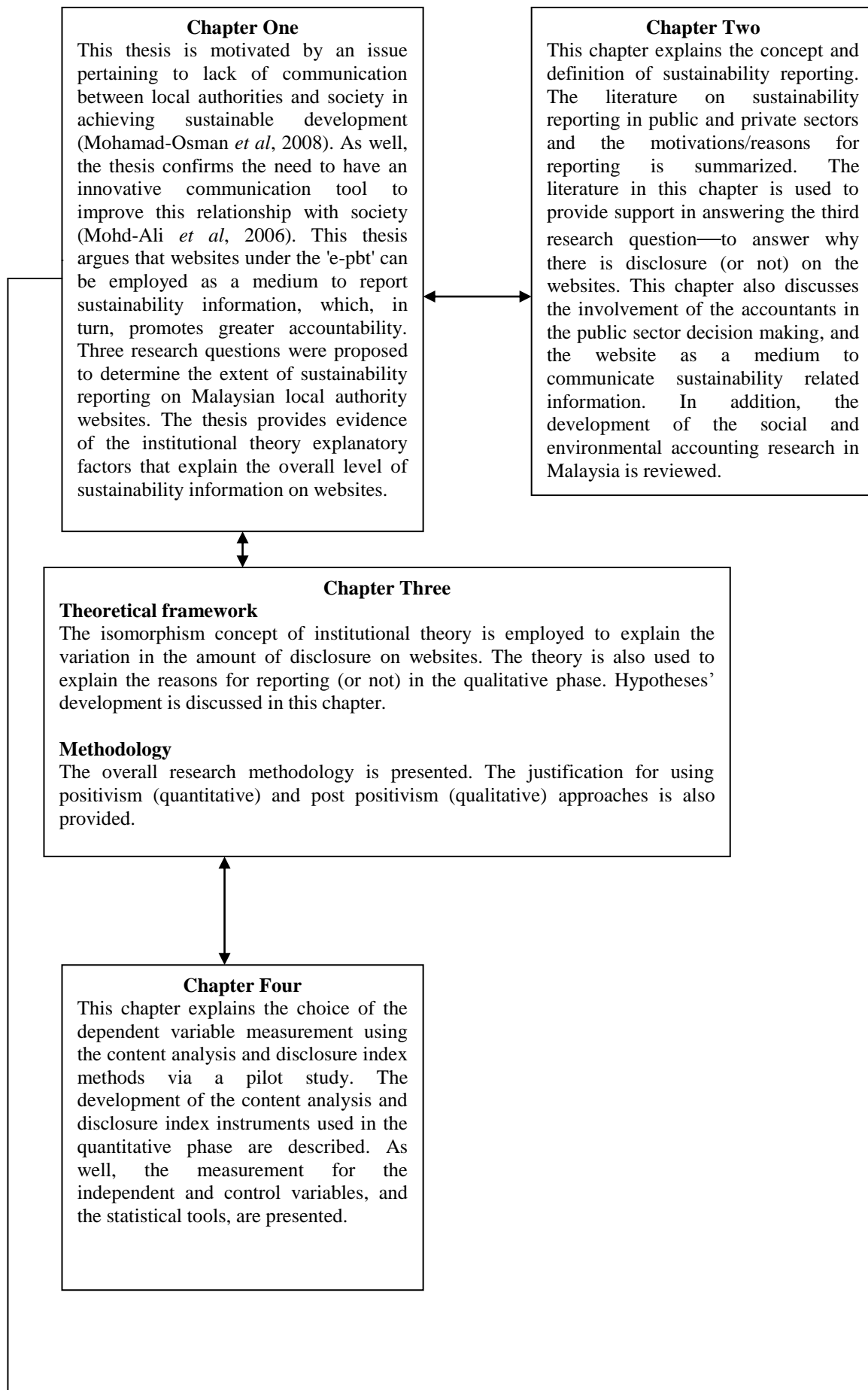
In order to answer the third research question, the qualitative phase is included to support the websites' analysis conducted to explain why Malaysian local authorities disclose (or not) sustainability information on their websites. The interview method is explained in detail in Chapter Seven.

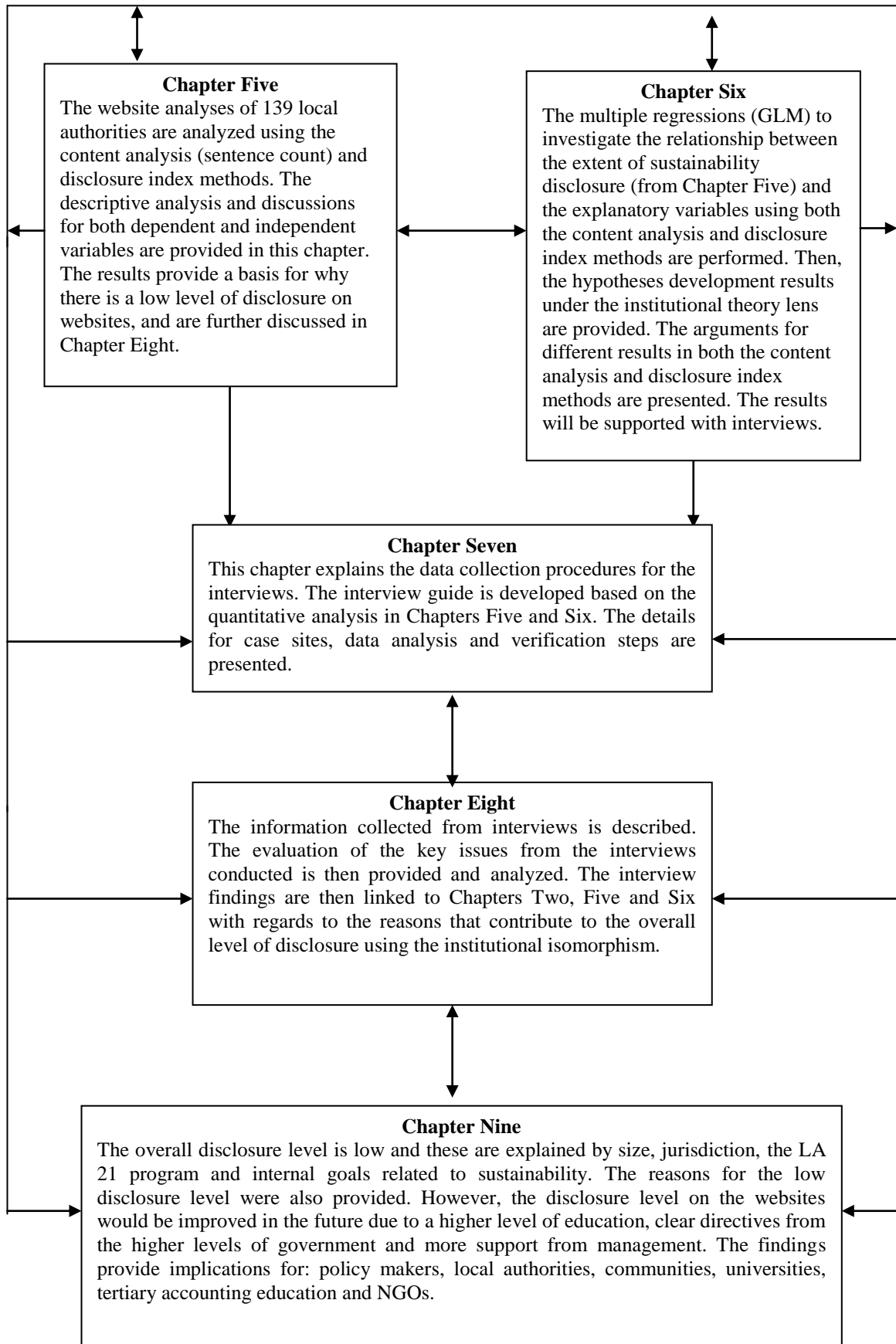
Findings from both phases are discussed in a complementary way in Chapter Eight. The combination of the websites and the interviews as the method of data collection—provides more robust empirical evidence for understanding the sustainability reporting research (Guthrie and Abeysekera, 2006). Finally, Chapter Nine concludes this thesis.

A flowchart summarizing interlinks between chapters in this thesis is explained in Figure 1_2.

¹⁷ Explanatory variables are also referred to as independent variables or predictors.

Figure 1_2 Flowchart of the Thesis





1.6 LIMITATIONS OF THE THESIS

This thesis is examining the sustainability information disclosure on Malaysian local authority websites based on the checklist developed for the content analysis and disclosure index methods. Therefore, the findings are confined to the Malaysian local government setting and should not be generalized to the private sector or other countries in the world.

Another limitation of the thesis is the use of only one financial variable, that is, revenue. This is due to the fact that there are no published financial statements of local authorities in Malaysia. The revenue information used in the thesis was available from the National Audit Department of Malaysia website.

A final limitation is that this thesis assumes that the websites of local authorities are the primary medium for communicating sustainability information. This assumption is based on there being no mandatory requirement for local authorities to produce annual reports—something which commonly exists in the private sector. In addition, the government has provided RM15 million under the Ninth Malaysian Plan for the ‘e-pbt’. Hence, it is important for local authorities to use their websites for reporting sustainability information to the citizens. In addition, other mediums such as internal bulletins and newspapers are not included in the scope of this thesis.

1.7 CHAPTER SUMMARY

This chapter sets out the background of the public sector reforms and the usage of websites to promote the sustainable development agenda in local government. The chapter also discusses the research scope and justification, research questions, overview of the thesis, and combines the significance and the limitations of the thesis. The next chapter provides an overview of the past literature relevant in this thesis.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reviews the literature related to social, environmental and sustainability reporting. The point of view expressed in this review is that there is no past literature that is directly related to the thesis. For example, there is lack of web-based sustainability reporting studies in the public sector; thus, most discussions concentrate on the private sector. As a result, most discussions are only partially connected to the thesis. An overview of sustainability reporting commences the literature review in Section 2.2, followed by sustainability reporting in the private sector in Section 2.3. Section 2.4 focuses on sustainability reporting in the public sector. A review of web-based disclosure studies are explained in Section 2.5. Finally, Section 2.6 describes social and environmental reporting studies in Malaysia.

2.2 OVERVIEW OF SUSTAINABILITY REPORTING

This section provides an overview and history of sustainability reporting. In the arena of sustainability reporting, there has been a recent surge in interest and research. The origin of sustainability reporting is primarily due to the extended scope of annual reports, which no longer simply provide financial information, but also, have "concomitantly begun to provide relevant information to a more comprehensive community of stakeholders" (Peiyuan *et al.*, 2007, p. 2). According to Buhr, (2007, p. 59):

Sustainability accounting, reporting and standardization is following a slow process that is not much over a hundred years old. The process begins with employee reporting and then moves on to social reporting, environmental reporting, TBL reporting and eventually, and ideally, sustainability reporting.

Barut (2007) summarized the trends of social reporting since the 1960s. In the 1960s and 1970s, companies included social responsibility as part of community issues and integrated environmental information as part of social disclosure.¹⁸ The research

¹⁸ See also Kok (2008), Parker (2005), Mathews (2000) and Mohamed-Zain (1999) for the history and development of social and environmental reporting.

started with quantity assessments of social reports and was later followed by reviews of information quality at the end of the 1970s. During the 1980s, there were reports about the declining trend of social reporting in the UK and the US. As claimed by Kolk (2005, p. 35), "it turned out that social reporting was not institutionalized". The irrelevancy of accountability on social and environmental issues was as a result of a greater focus on the economy and the emergence of market-oriented policies subsequent to recession and unemployment. Nevertheless, there was an increasing trend to environmental reporting in the late 1980s and early 1990s. There was a sign that social reporting was re-emerging in spite of the limited range of disclosure areas. As described by Farneti and Guthrie (2007, p. 3), "recent years have witnessed a substantial increase in reporting on social and environmental issues by major corporations".

It is becoming increasingly difficult to ignore the concept of sustainable development. This concept has been publicized all over the world as an effort to achieve a more unbiased approach to industrial development. A common definition of sustainability was provided by the United Nations World Commission on Environment and Development (The Brundtland Report, 1987, p. 8), "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

Sustainable development is not merely environmental protection, but also involves quality of life, the distribution of resources and benefits, interactions between the environment and development, and provisions for the future (Department of the Environment and Local Government, 1995). Sustainability reporting involves measuring, accounting and disclosing an organization's economic, environmental and social performance to improve organizational performance and advance sustainable development (Association of Chartered Certified Accountants—ACCA, 2005; Certified Practising Accountant Australia—CPA, 2007).

Sustainability reporting is also used synonymously with other terms such as, citizenship reporting, social reporting, and TBL reporting that encompass the economic, environmental, and social aspects of an organization's performance. Peiyuan *et al.* (2007) pointed out that there was no significant association between

the name of the report and its content. Indeed, Peiyuan *et al.* (2007) emphasized the implications of the quality of information provided to stakeholders over the name of the report. On the other hand, Schaltegger *et al.* (2006, p. 15) stated that sustainability reporting was the "new formalized means of communication which provides information about corporate sustainability". In short, the key aspect highlighted in definitions of sustainability reporting is the importance of an organization's performance in realizing the sustainable development goals. Other definitions for sustainability reporting which also integrate the aspect of performance are as follows:

Sustainable development reports are public reports by companies to provide internal and external stakeholders with a picture of the corporate position and activities on economic, environmental and social dimensions (World Business Council for Sustainable Development, 2002, p. 7).

Sustainability reporting is the practice of measuring, disclosing, and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development (GRI, 2006, p. 3).

The report is a set of information by the reporting organization about its sustainability performance, whether for general publication, targeted external distribution or internal use. This will generally refer to information contained within a specific report prepared periodically to inform stakeholders about the organization's sustainability performance (AccountAbility, 2003, p. 36).

This thesis adopts the definition of sustainability reporting given by the GRI (2004, p. 20), that is, "a vehicle to assess the economic, environmental and social impacts of the organization's operations, products, and services, and its overall contribution to sustainable development". The argument put forward in this thesis is that, from the perspective of local authorities, while ensuring the community is provided with proper services (*social*) by using the funds generated from various sources of revenue (*economy*), the aspect of *environmental* impact also requires careful consideration. A good example of a sustainability definition is that adopted by the City of Cockburn's policy in Western Australia (2006, p. 4), "meeting the needs of current and future generations through integration of environmental practices, social advancement and economic prosperity".

The past decades have seen the rapid development and diffusion of the sustainability concept in many accountability mechanisms. Subsequent to deliberations on sustainable development in 1990s and an increasing pressure for more information, accountability and transparency in corporate social responsibility from stakeholders (for example, shareholders', employees' and NGOs' interests), several companies have shifted away from producing corporate environmental accounting to corporate sustainability reporting, integrating accounting on environmental, social and economic issues into TBL accounting (Herdberg and Von Malmborg, 2003; Ballou *et al.*, 2006).

TBL reporting is also known as corporate sustainability reporting that involves the reporting of financial and non-financial areas to a broader set of stakeholders (Ballou *et al.*, 2006). The phrase TBL was coined by John Elkington in the 1980s to stress the importance of accounting for non-financial performance in businesses (Potts, 2004). According to Elkington (1998, p. 70), the TBL concept consists of three aspects: "economic prosperity, environment quality and—the element which business had preferred to overlook—social justice". ACCA (2005) has also highlighted the components of performance indicators under the three elements of sustainability reporting (economic, social and environment). In the public sector environment, Farneti and Guthrie (2007, p. 15) identified another important dimension of sustainability reporting from interviews conducted in the Australian public sector organizations, that is, "sustainability not only referred to environmental issues, but also social, ethical and political issues".

Notwithstanding the merits of TBL or sustainability reporting as discussed above, Archel *et al.* (2008) claimed that different problems caused the irrelevancy of TBL reporting. Their study identified three possible problems: 1) the motivations of organizations to adopt TBL is still unclear; 2) the quality of reporting is still low; and 3) TBL simply represents an approximation to sustainability reporting that is absolutely different from standard corporate reporting. The third point is rather confusing because earlier in their article it was mentioned that TBL is just a different name for social and environmental reporting, sustainability reporting and corporate social responsibility reporting, indicating an inconsistency in their argument. This

supports the point made by Hawke (2004, p. 2), "TBL is a well known symbolic commitment to sustainable development".

Following the emergence of sustainability reporting, an independent institution, GRI, was set up in 1997 with the mission to develop and disseminate a global reporting framework for organizations. GRI has collaborated with the United Nations Environment Programme (UNEP) to promote the sustainability reporting agenda. To date, GRI has issued a few reporting frameworks, namely: Sustainability Reporting Guidelines in 2002, the GRI Sector Supplement for Public Agencies (SSPA) in 2005, and Sustainability Reporting Guideline Version 3.0 (G3) in 2006.

The standard disclosure of the reporting guideline is articulated in three main parts: Strategy and Profile, Management Approach, and Performance Indicators. GRI outlines the components of three elements of sustainability reporting. The first component, environmental reporting consists of impacts of processes, products and services on air, water, land, biodiversity and human health. The second component, economic reporting refers to payroll expenses, job creation, labour productivity, expenditures on outsourcing, research and development, investments in training, and other forms of human capital. Social reporting includes workplace health and safety, employee retention, labour rights, human rights, wages, and working conditions at outsourced organizations (GRI, 2006).

Recent developments on sustainable development initiatives have heightened the need for sustainability reporting in the public sector. A form of sustainability reporting is via LA 21, which has been developed through a participating process on the basis of local needs and weaknesses to expand sustainable development of the territory (Bello, 2006). This is a very important action plan/tool applied in public sector agencies. Bello (2006) also suggested that sustainability reports should provide information for external stakeholders on policy formulation, and benefit internal stakeholders in making decisions, such as identifying weaknesses and assessing results derived from intangible investments and management. TBL reporting has been adapted, to a varying degree, by both public and private sector organizations.

2.3 SUSTAINABILITY REPORTING IN THE PRIVATE SECTOR

The sustainability agenda has received considerable critical attention in the private sector. Business entities are always accountable to the stakeholders, especially with regards to economic performance. Thus, traditional financial accounting is no longer able to reflect the company's actual performance. As pointed out by Qian and Burritt (2007, p. 3):

Conventional accounting systems and approaches, which focus on economic performance and implicitly exclude environmental resource values, have been criticized as being inadequate and inappropriate to meet the needs of environmental and sustainable development requirements.

Private sector entities all over the world have been forced to implement good governance and be accountable in the way they conduct their business. Additionally, as stated by Unerman and Bennett (2004, p. 605), "good corporate governance and accountability should focus on addressing these social, environmental, economic and ethics expectations". Accountability, as an organizing principle, has as its objective to create an open and transparent society (Gray, 1992). Further, Buhr (2007) indicated that, in order to be accountable, the mechanisms and requirements include employee, social, environmental, TBL and sustainability reporting. At the same time, there is a growing demand for public information about how organizations conduct their business in the context of sustainable development, which, in turn, becomes an influencing factor for external reporting by corporations. According to Gill *et al.* (2008, p. 244), "such firms must ensure their disclosures are a reflection of accurate behaviour and not merely a legitimacy device".

These sustainability reporting practices are immediately turning into best practice as companies seek to report and communicate their social and environmental performance as a means of protecting and enhancing their reputation and brands (ACCA, 2005). ACCA (2005, pp. 17–18) also emphasized the benefits commonly mentioned by companies that have implemented sustainability reporting:

- 1) demonstrating corporate responsibility;
- 2) strengthening stakeholders' relations;
- 3) increasing competitive advantage;
- 4) improving access to buyers list of preferred suppliers;
- 5) improving profitability;
- 6) enhancing reputation;
- 7) continuous improvement;
- 8)

minimizing risk of regulatory intervention; 9) reducing corporate risk; 10) enhancing employee morale and attracting new talents, and 11) assisting investment analysis.

Other benefits of sustainability reporting as provided by Peiyuan *et al.* (2007) are: promoting a company's image; enhancing communication; and potentially increasing an enterprise's overall performance. Therefore, it can be observed that these advantages are both financial and non-financial oriented in nature.

This chapter concentrates on reviewing recent private sector studies on TBL and sustainability reporting due to substantial prior research on social and environmental reporting. Nevertheless, the literature on the web-based, public sector and Malaysian context covers all aspects of social, environmental, TBL and sustainability reporting, and this will be discussed in detail. In the past three decades, a number of studies have sought to determine aspects such as assessment levels of quantity¹⁹ and quality²⁰ of reporting, and also determinants²¹ of such disclosures in annual reports. Lately, research has revealed evidence of increased interest in TBL and sustainability reporting, which is mostly assessed against the GRI indicators.

A study by Frost *et al.* (2005) on sustainability reporting of Australian companies against the GRI indicators revealed that the level of disclosure was considered low. There was a significant difference reported among companies over the range of GRI indicators. The labour related category was the predominant disclosure in the annual report. However, the environmental category was mostly reported in the discrete report. It was also suggested that the use of GRI may not be applicable to Australian companies. It was argued by Gill *et al.* (2008) that caution should be taken by researchers and analysts when interpreting the overall results of the term count frequencies by using GRI indicators to assess companies' environmental, social and economic disclosures. This was due to the contextual nature of how the items were assessed against GRI indicators in Gill *et al.*'s (2008) study.

¹⁹ (see, for example, Haron *et al.*, 2004; Thompson and Zakaria, 2004)

²⁰ (see, for example, Guthrie and Parker, 1990; Raar, 2002; Beck *et al.*, 2007)

²¹ (see, for example, Hackston and Milne, 1996; Eljido-Ten, 2004; Haniffa and Cooke, 2005; Smith *et al.*, 2007)

Ho and Taylor (2007) investigated TBL disclosure of the 50 largest US and Japanese companies. The findings revealed that disclosures were driven by non-economic factors and TBL reporting was higher for Japanese firms. The results also indicated that, on average, a higher percentage of economic items were disclosed in either annual reports or stand-alone reports, than were social and environmental items, which was quite unique when compared to other research on sustainability or CSR in the private sector.

In a study on the Global Fortune 250 companies, Kolk (2006) found that 161 companies reported sustainability in one form or another. There was a significant increase in reporting when compared to similar studies in 1998 and 2001 respectively. The findings indicated a rapidly growing focus on corporate accountability and non-financial issues by big corporations. The majority of the reports (54%) dealt with environmental, social and economic aspects combined in one separate publication. This finding differed from Kolk's (2004) earlier study of exploratory characteristics of sustainability reports by the Global Fortune 250. It was notable that the likelihood of implementation was seen to have advanced more for environmental issues than for social concerns.

In a study of sustainability reporting in China, Peiyuan *et al.* (2007) discovered that most companies in China adhered to the GRI and the TBL principles, in which both guidelines spelled out relevant strategies, policies, governance and achievement, from economic, social, and environmental perspectives. The Chinese companies presented well on the aspects of performance, governance and strategy. At the same time, the Chinese sustainability reports were weak in management indicators, and in the area of accessibility of information and assurance. The GRI G3 Guidelines would continue to be the main framework for reporting despite the irrelevance of some indicators in the guideline to the Chinese environment.

In a more recent study Austin *et al.* (2009) when examining the CSR disclosure of Chinese listed companies in 2002 and 2006 against the GRI G3 Guidelines found a significant increase in reporting between 2002 to 2006. The most reported theme was labour which was followed by the society and environment themes respectively. It

was concluded that the China CSR development was excellent although it was considered below par with other developed countries.

2.4 SUSTAINABILITY REPORTING IN THE PUBLIC SECTOR

This section covers information on reasons for sustainability reporting, extent of reporting and type of information reported, factors influencing the sustainability reporting in the public sector, and the role of accountants in public sector sustainability reporting. It is evident that there is limited research on corporate social responsibility, sustainability accounting, and social and environmental accounting research in the public sector (Ball and Grubnic, 2007), although the same themes have been widely debated over the last few decades in the private sector (Gray, 2002).

2.4.1 Reasons for Sustainability Reporting

There are some key issues identified in the literature providing reasons for sustainability reporting in the public sector, with accountability and governance being the two central ones. Farneti and Guthrie (2007) asserted the main reason for disclosure of sustainability information in annual reports is to inform internal stakeholders. Another main goal for sustainability reporting is "to enhance the image of the municipality" (Laine *et al.*, 2008, p. 8).

The GRI SSPA demonstrates the importance of sustainability reporting, that is, to:

- 1) Promote transparency and accountability; 2) reinforce organizational commitments and demonstrate progress; 3) serve as a role model for the private sector; 4) improve their internal governance; 4) highlight the significance of its role as a customer and employer in various economies; 5) meet disclosure expectations and make information available to facilitate dialogue and effective engagement with stakeholders (GRI, 2005, p. 8).

In terms of a more specific sustainable development activity, Qian and Burritt (2007) acknowledged reasons and explanatory factors for environmental accounting practices in waste management. They identified explanatory themes as being: 1) waste operations and services; 2) changes and challenges in recycling and landfill management; and 3) pressure from regulatory authorities. It was also perceived that

environmental accounting information is important to support the individual local government's waste strategy and target.

Research on sustainability reporting by public agencies in 2005 disclosed that the main purpose for providing sustainability reports was to monitor performance, which is mostly internally driven (Dickinson *et al.*, 2005). More than 50% of the respondents had an awareness of GRI and referenced GRI guidelines in their reporting practices, and most reports were prepared by the environment department (Dickinson *et al.*, 2005). This finding in Dickinson *et al.*'s (2005) study raises the issue of the minimal participation of accountants in environmental accounting.

2.4.2 Accountant's Involvement in the Public Sector Sustainability Reporting

This thesis involves interviews with non-accountants, for example, the LA 21 officer in Malaysian local authorities, to identify potential causes of either disclosure or non-disclosure of sustainability information on the organization's websites. Hence, consistent with the previous studies, it is important to discuss the issue of the role of accountants in CSR in this section. A number of researchers have discovered the minimal involvement of accountants in sustainability reporting in the public sector (Burritt and Welch, 1997a; Bowerman and Hutchinson, 1998; Frost and Seamer, 2002; Parker, 2005; Farneti and Guthrie, 2007; Qian and Burritt, 2007).

Frost and Seamer (2002) analysed the New South Wales public sector entities' environmental reporting and management practices noting that the level of development of an internal Environmental Management System (EMS) was significantly associated with environmental disclosure in the annual reports (EDAR). Surprisingly, their study indicated that the association between EMS and EDAR was stronger when compared to the relationship between environmental accounting practice and EDAR. The underlying conclusion made from Frost and Seamer's study was that there was minimal participation of accountants in the environmental reporting process.

Bowerman and Hutchinson (1998) examined the role of local authority accountants in the process of decision making in environmental capital expenditure. It was found that accountants had little involvement in capital expenditure decision making and

lacked the necessary accounting instruments for them to make a contribution. They were perceived to be in the "control function" (Bowerman and Hutchinson, 1998, p. 315). It was also indicated that a positive contribution was not made unless it was a political legitimating process and no accounting techniques were available to offer a positive contribution to decision making. Their study revealed a serious weakness for the accounting profession in dealing with practical environmental decision making.

Past literature acknowledged the competency of environmental managers and specialists in managing environmental impacts, control systems and regulations. According to Qian and Burritt (2007, p. 8):

Environmental managers have been regarded as the prime-movers in rethinking accounting systems so they may better serve the organizations' long-term environmental management objectives.

In addition, in 2007, a study by Farneti and Guthrie (p. 23) found that:

Not one of the organizations indicated that finance or accounting was involved in matters associated with sustainability reporting ... it was evident that sustainability did not have significant impact on the day to day operation of several organizations.

As suggested by prior studies, for example, Gibson and Guthrie (1995), at that particular time, future research should have been planned for environmental disclosures, especially in annual reports due to the increase in the number of corporatizations and privatizations of public sector organizations. Apparently, the importance of disclosure in public sector organizations has been emphasized due to changes in accountability structure.

Some of the examples in the public sector that lead the way in sustainability reporting are water and energy, utilities, land development corporations and environmental agencies (Centre for Public Agency Sustainability Reporting, 2007).

2.4.3 Type of Sustainability Reporting in the Public Sector

There is some literature discussing the type of sustainability information reported by public sector organizations. Mack (2006) asserted that empirical research on TBL reporting in the public sector was concentrated on the disclosure of environmental matters. This is consistent with a study by Gibson and Guthrie (1995) in comparing environmental disclosure in annual reports, both in the private and public sector. It was shown that disclosure via mission statement was more frequently taking place in the public sector whilst a private organization would report environmental issues in a separate report. In contrast to the private sector, public sector organizations were more likely to set environmental targets and implement third party annual reports of disclosure verification by internal or external auditors.

Burritt and Welch in 1997 conducted an exploratory analysis of the environmental disclosures of a sample of Commonwealth public sector entities from 1984 to 1993 due to the under-researched social and environmental accounting in the public sector. The key findings were: budget entities disclosed more environmental information as compared to non-budget entities in terms of internal data, and mostly disclosed community, education and training and energy related items. Most of the data available was qualitative in nature. Burritt and Welch (1997b) noted that public sector organizations were more likely to disclose environmental and social information due to the broader level of accountability within the community. It was also suggested that the environmental disclosures did not properly reflect the underlying principles of sustainable development.

A consequence of the above discussion is that sustainability reporting in the public sector is still lacking in delivering the impact of sustainable development to organizations. GRI (2004) drew attention to the importance of incorporating the element of impact in sustainability reporting in the public sector. It was claimed by GRI that sustainability reporting in the public sector only focuses on sustainability strategies and the information did not reflect the agency's overall sustainability performance. Some reasons identified included: deficient coverage of an agency's operation impact; no application of common framework in sustainability reports; and no reporting format in managing and incorporating sustainability performance into an agency's daily operation. Thus, the GRI Guideline issuance is very much in a

position to improve sustainability reporting in public agencies. It helps in filling a gap in reporting tools for the public sector and further advances the system of organizational sustainability reporting worldwide. However, Farneti and Guthrie (2007, p. 21) criticized the GRI public sector supplement:

In some cases the GRI public sector supplement was found not to be that useful, as it was considered too general and primarily focused on public sector organizations that were policy based and not organizations delivering goods and services.

A study by Guthrie and Farneti (2008) on sustainability reporting of seven Australian public sector organizations revealed that only 32% out of 81 elements within the GRI were used for reporting. The labour practice category was the most reported element, that is, 54% of the total possible elements that could have been reported. In relation to the use of the GRI, the results showed that the application of the GRI was fragmentary and organizations only chose some of the GRI indicators to disclose. The information disclosed was mostly non-monetary and narrative in nature. Overall, Guthrie and Farneti (2008) found that sustainability reporting is still in its infancy for public sector organizations.

Larrinaga-Gonzalez and Perez-Chamorro (2008) found differences depended upon the medium of reporting. They indicated that public water companies are proactively communicating with the stakeholders in order to raise public awareness. On the other hand, it was concluded that the practice of formal sustainability reporting is limited. Hence, the perspective presented here is that there are few factors that explain the stance of sustainability reporting in the public sector.

2.4.4 Factors Influencing Sustainability Reporting in the Public Sector

Several factors have been acknowledged in the literature as influences of social and environmental reporting. Among the themes identified are innovation and organizational factors. A new accounting innovation technique applied in the public sector, Private Finance Initiative (PFI), has been shown to have a greater tendency to promote a sustainability agenda. This was supported in a study by Ball *et al.* (2006) which showed that sustainability reporting is essential for the funding of the creation

of infrastructure assets (waste management) and acted as a prerequisite in PFI contracts with significant environmental impact.

Organizational internal and external factors also encourage the adoption of social and environmental accounting by the local authorities. For instance, management styles as shaped by both socio-psychological and techno-economic forces influence the adoption of social and environmental reporting in Italian local government (Marcuccio and Steccolini, 2004).²²

Burritt *et al.* (2009) examined the potential drivers and barriers to the introduction of sustainability accounting in the public sector. The drivers are categorized into positives and negatives:

The positive drivers are: government mandated reporting; public sector involvement in policy making; public goods controlled by the public sector; improved measurement techniques; risk and uncertainty in technological innovation; NPM and financial sustainability; adopting the notion of sufficiency; a balance scorecard with a dominant non financial focus; stakeholder engagement; voluntary communication; governance structure; political stability; budget or non budget/financing sources; and top management buy in and leadership. The negative drivers are: overemphasis on private sector; truncated social accounting focus in government; domination of accounting metrics by private sector market thinking; lack of a committed eccentric focus in government; NPM detracts from sustainability; political influences; high cost of sustainability accounting system; lack of standards; lack of specialized skill, knowledge and experience; and, absence of whole of government thinking (pp. 4–11).

Herbohn and Griffiths (2008) in their case study of three local councils in Australia highlighted several factors which provide support for sustainability reporting. The factors are:

- 1) top management's support;
- 2) climate change concerns (e.g. drought, rising temperatures and growing population);
- 3) high levels of interest in sustainability within councils;
- 4) conducive current

²² Both socio-psychological and techno-economic forces are included in the theory of management fashion. As cited by Marcuccio and Steccolini (2004), socio-psychological forces shape the demand for management fashion, whereas organizational performance gaps opened by technical and economic environmental changes do not play the same role in influencing management fashion demand.

political and community environment; 5) suitability of the council as the government's arm to deal with sustainability issues, and 6) cheaper cost involved in the preparation of sustainability reporting as compared to other holistic approach (p. 4).

Herbohn and Griffiths's (2008) study also identified several impediments to the sustainability reporting initiatives in the case studies. The impediments are:

1) organizational inertia stemming from the nature of large political organizations providing community services; 2) compartmentalized organizational structures with little integration; 3) lack of a common language shared by managers within councils; 4) resistance to any additional data collection by managers facing resource and time constraints; 5) managers' expectations (lack thereof) of the role of sustainability reporting; 6) lack of community understanding of sustainability; 7) the challenge of reporting critically on councils' performance, and 8) the challenge of making sustainability TBL reporting meaningful (p. 4).

Hawke (2004) advocated that there were three points that need to be taken with caution in adopting sustainable approaches in the public sector. These therefore are: 1) Setup and maintenance cost; 2) availability of robust data; and 3) the implication of another accountability to add to an already long list. The third point is related to this thesis which encompasses items such as what sustainability information to report, what are the extent of reporting and the medium of reporting. The website as a means to disseminate sustainability information is discussed next.

2.5 WEB-BASED DISCLOSURE STUDIES

This section describes prior studies on website sustainability reporting. The discussion also encompasses the advantages and disadvantages of website reporting, the difference between an annual report and a website and the content of social and environmental categories reported on the website. The discussion here is only confined to CSR and web-based sustainability studies and does not focus on any other form of Internet reporting, for example, Internet financial reporting.

Researchers have put forward an alternative reporting medium or channel other than the traditional annual report that could be utilized to report an organization's sustainability information (Zeghal and Ahmed, 1990; Adams and Frost, 2006;

Janggu *et al.*, 2007). One of those alternative media is the website as a means to disseminate sustainability information. Rodriguez-Bolivar (2009), in his evaluation of the Internet corporate environmental reporting of the utility and resource industries in Spain, indicated that a number of firms are using the Internet as a communication tool to disseminate corporate environmental reports. In the field of web-based sustainability reporting studies, there has been a recent surge in interest and research. For example, Lodhia (2005) has suggested that the social and environmental research trend should move towards Internet based perception studies to complement research on conventional annual reports.

2.5.1 Advantages and Disadvantages of Sustainability Reporting on the Websites

The advantages of website reporting are discussed initially in this section. Lodhia (2005) interviewed three companies in Australia that used websites for communicating environmental information in order to gain an in-depth understanding of the web-based environmental communication practice. The interviews revealed that disclosing environmental issues on the website: required a learning process; resulted in organizational change; and provided benefits in terms of the information accessibility to a wide range of stakeholders as a result of the Internet's interactive capabilities.²³ Further, this new genre of organizational communication enabled their organizations to be regarded as legitimate by reporting on their activities (Coupland, 2006). Additionally, Rowbottom and Lymer (2009, p. 177) claimed that "online reporting can offer instantaneous, two-way communication and provide direct linkages between different disclosures".

Frost *et al.* (2005) investigated sustainability reporting in Australian companies' annual reports, discrete reports and websites. It was found that corporate websites appear to provide a more diverse coverage of sustainability issues and are supported by the capability to provide larger documents and also incorporate electronic versions of both annual reports and discrete reports.

²³ See also Rowbottom and Lymer (2009).

Another strong point of using the website was presented by Ho and Taylor (2007, p. 137):

A company's website provides an effective and inexpensive vehicle to communicate various information to stakeholders, particularly information a company would like to impress on the stakeholders about the company's 'green' initiatives and/or its concern for and efforts to improve the community in which it operates.

Adams and Frost (2006) sought to identify how issues of accessibility and functionality of the website affect web-based sustainability reporting by interviewing corporate sustainability reporting (CSR) managers and visiting companies' websites. They pointed out that recently companies have begun to use web-based technologies. They also claimed that by increasing the Internet use, awareness of CSR and accountability with respect to social and environmental impacts would be improved. This was supported earlier by Pollach and Scharl (2005) who stated that, by disseminating environmental information via the website, public knowledge will be enhanced and awareness about the social, environmental and economic agenda will be built.

Past literature also highlighted several disadvantages of using the website. The analysis revealed there is no link between reporting and performance and no maximum usage of the Internet in disseminating sustainability information. As cited by Adams and Frost (2006, p. 277), the critical review by Isenmann and Lenz (2001, p. 101) identified the following three limitations of web-based environmental reporting:

- 1) Companies mainly publish single, freestanding corporate environmental reports, usually with no link to general corporate communications or other management indicators;
- 2) Significant data on environmental performance is being collated, but these databases are not being linked into corporate environmental reports;
- 3) Companies are not exploiting the benefits of the Internet—particularly integrated, efficient, dialogue-oriented, hypermedia features, interactive and customized environmental reporting. As a consequence, many corporate websites are difficult to navigate for less experienced users.

Moreover, the website was not fully utilized in continuous reporting due to problems such as: inaccessibility by some stakeholders; remote location; IT literacy and

preference for alternate forms of communication with stakeholders (Lodhia, 2005). Rowbottom and Lymer (2009, p. 177) highlighted that past literature questioned the effective use of a website to communicate sustainability information, "the inaccessibility to some user groups ... are due to a lack of technology, infrastructure, education and/or logistics necessary to utilize company websites". It was also highlighted that the potential of the Internet is not fully utilized to relate both social and environmental issues to stakeholder engagement (Rikhardsson *et al.*, 2002; Lodhia *et al.*, 2004; Razeed *et al.*, 2006). This should be resolved because, as emphasized by Unerman and Bennett (2004, p. 605), "stakeholder dialogue is a cornerstone of many recent developments in corporate social and environmental and accountability practice".

Lodhia *et al.* (2004) examined the existence/non-existence of 36 attributes for each of the 50 companies' websites in Australia. The findings of their exploratory study revealed that the companies: 1) put the same information as in the annual report; 2) used technological tools; 3) emphasized on how to download annual reports rather than how to use the Internet to disclose the information. It was also discovered that the procedure used during that time did not utilize the full potential of the Internet to disclose information to stakeholders. However, large companies are using the Internet as an additional communication channel and focus more on mandatory information. Based on the above discussion, it appears that the underlying reasons for not utilizing the maximum usage of the Internet are still under researched.

It is not in the scope of this thesis to examine the technological capability of websites, as discussed in the past studies. Rather, this thesis will concentrate on the content of sustainability information reported on Malaysian local authority websites.

The following section explains the difference between annual reports and websites in reporting sustainability information.

2.5.2 Differences between Annual Reports and Websites

One common discussion in past web studies is about the differences between annual reports and websites, for example, in terms of content and characteristics of reporting. Williams and Pei (1999) argued that there are differences between annual reports and websites as a medium to disseminate information. In terms of comparison between what is reported on the website and traditional media, research by Trabelsi *et al.* (2004) revealed that there was a significant difference between the content in website and that of traditional media. Additionally, the differences also exist in terms of the factors, methodology, motivation and theoretical drive for reporting in annual reports (Adams and Frost, 2006). This supports a notion of a lack in theoretical underpinnings with respect to the Internet disclosure (Trabelsi *et al.*, 2004; Xiao *et al.*, 2004).

Some private sector studies, for example, Trabelsi *et al.* (2004) and Williams and Pei (1999) claimed that disclosure on corporate social responsibility is reported more on websites than in annual reports. This could be attributed to a greater storage capacity of the information in the websites compared to the limited space in traditional annual reports.

An examination of the voluntary environmental reporting practices over five mediums—hard copy, annual report, hard copy environmental report, Internet annual report, Internet environmental report and additional requirements on the Internet—of 77 Australian resource companies listed on the Australian Stock Exchange (ASX) indicated that the companies on average disclosed low levels of environmental information in all media examined (Razeed *et al.*, 2006). The majority of the Australian resource companies primarily adopted hard copy annual reports and Internet-based annual reports to disclose environmental information and hence failed to exploit the power of other media for environmental disclosure.

Isenmann *et al.* (2007, p. 489) critically discussed that the shift of sustainability reporting should be "1) towards a more public procedure; 2) towards a more customized approach; and 3) towards a dialogue with stakeholders". These are summarized in Table 2.1.

Table 2.1 Converging Trends Pushing the Field towards Sustainability Online Reporting

Traditional reporting approach	Sophisticated reporting approach
Managerial closed shop procedure	Quasi-public-effort
One-way company controlled exercise	Stakeholder involvement
Monologue	Dialogue
One-way communication	Two-way communication
One size fits all reports	Customized reports
Ad hoc distribution of information	Continual exchange of ideas
Few opportunities for response	Many mechanisms for feedback and criticism
Hard copies	Computer-based media
Print media function	Cross-media availability

Source: Isenmann *et al.* (2007, p. 489)

As shown in Table 2.1, it is advanced here that the sophisticated reporting approach is more transparent and useful in encouraging public participation particularly—in the context of this thesis—in the local government setting. This is also believed to assist in achieving the objective of sustainable development.

2.5.3 Content of Sustainability Reporting on the Website

In accordance with the research question in this thesis, it is crucial to discuss the content of sustainability reporting on the websites. Jose and Lee (2007) examined website disclosure environmental reporting of 200 of the largest corporations in the world by using the conceptual content analysis technique specifically on management policies and practices. The key findings revealed that progress towards an achievement of environmental goals and reporting of compliance were mostly reported. The top ranking countries that disclose most information are the UK, Japan, Germany and the US. It was concluded that there was attempt for improvement in fulfilling stakeholder calls for greater business sustainability.

Another study on the website disclosure of sustainability reporting by international large corporations was conducted by Rikhardsson *et al.* (2002). Their study only examined the social and environmental categories. The findings showed that more companies reported on social information as compared to environmental information. As for the environmental category, the most reported items were the environmental policy and the chief executive officer's (CEO) statement. Meanwhile, under the

social category, the stakeholders' relationship was the most reported sub-category, which was followed by workplace performance and social policies.

In a developing country, Dutta and Bose (2007) attempted to fill the gap on the non-existence of study on web-based corporate environmental reporting in Bangladesh. Findings revealed that this type of reporting is still in its infancy and the level of disclosure is very low. Consistent with previous studies on environmental disclosure in the annual report of a developing country, such as Malaysia, most of the information was qualitative in nature and only represented by positive information (Ahmad and Sulaiman, 2002; Yusoff and Lehman, 2006; Sumiani *et al.*, 2007). The point of view put forward in this thesis is that the examination of different media of reporting in the developing countries produces a similar result, that is, a low level of disclosure which is narrative in nature.

In conjunction with a specific industry, Gill *et al.* (2008), in their study on a web analysis of sustainability reporting in the oil and gas industry, by using GRI indicators revealed that most of the firms reported on environmental responsibility, followed by economic and social information.

Esrock and Leichty (1998) in their analysis of a random sample of 500 companies ascertained how large corporate entities are making use of the web to present themselves as socially responsible citizens and to advance their own policy positions. Their study covered coding for 13 social responsibility content areas. The key findings indicated 82% of the websites had messages on corporate social responsibility items and the most reported issue was on community/civic involvement. Esrock and Leichty's study also suggested that web pages were mainly employed to disseminate corporate social responsibility information in a similar manner to other traditional, one-way communication channels. In contrast to Esrock and Leichty's findings, Patten and Crampton (2004) proposed that Internet disclosures are providing at least some additional, non-redundant environmental information beyond the traditional annual report disclosures.

Along the lines of GRI (2004) on sustainability reporting in public sector organizations, this thesis proposes that most studies concentrated on the private

sector social category, whilst environmental disclosures were in qualitative form and did not reflect the impact of sustainable development on the organization. Purushotaman *et al.* (2006) studied the environmental disclosure practices on Singapore listed companies' web pages. It was noted that most companies disclosed the general environmental conditions which were about pollution and conservation issues and were narrative in nature.

Earlier, Williams and Pei (1999) in their study on corporate social disclosures on the listed companies' websites in Australia, Hong Kong, Singapore and Malaysia found that the companies in these four nations have some homogeneity with respect to human resources and management (apart from Malaysia) and product and customer-related disclosures. There was a greater amount of space devoted to this disclosure on websites as compared to the annual reports. It was also discovered that most of the disclosures were in narrative form.

Public sector organizations provide different information on the website as compared to the private sector. Stowers (1999) described the current level and type of state and local public activity on the World Wide Web (www). Using the content analysis technique, Stowers reviewed a sample of 10 websites and at the same time developed a feature list. It was noted that information and services for business and other economic development activities were being emphasized rather than disseminating policy information, encouraging policy discussion or delivering public services. It is noteworthy to conclude that public sector organizations' websites promote the jurisdiction and attract or assist business, visitors and new residents rather than enhancing the community and polity of local citizens.

Gill and Yates-Mercer (1998) suggested that the website was being utilized by different types of organizations with different speeds, purposes and results. They indicated that local authorities used websites for information and publicity/marketing. They also concluded that a number of local authorities have utilized the web as an innovative way of communicating with a geographically wide range of people; that is, providing and promoting activities nationally and internationally, especially related to tourism and economic development and activities related to the functions and activities of local authorities.

The above discussion confirms there is limited research about sustainability reporting on public sector websites with most web studies focused on the environmental aspect. However, in regard to local authorities' websites, it was found that disclosure related more to economic information. Given that this thesis is set in Malaysia, it is critical to look at the development of sustainability reporting in this country.

2.6 SOCIAL AND ENVIRONMENTAL RESEARCH IN MALAYSIA

CSR research in Malaysia has focused on determinants of CSR reporting and determining the quantity and quality of CSR in annual reports using certain theoretical frameworks. This thesis reviews the development of CSR from the year 2000 onwards as there was no published research in the 1990s after the publication of two early CSR studies in the 1980s (Amran and Devi, 2007).

2.6.1 Development in CSR

In the new global economy CSR has become, or is becoming, a central issue for business organizations in Malaysia. One of the earliest developments related to CSR was the launch of the National Annual Corporate Report Award (NACRA) organized by Bursa Malaysia (Malaysia Exchange), the Malaysian Institute of Certified Public Accountants (MICPA), the Malaysian Institute of Management (MIM) and the Malaysian Institute of Accountants (MIA) to honour excellence in corporate reporting among public listed companies, as well as the Environment Reporting Award introduced in 2002 (Ahmad and Sulaiman, 2002).

Local professional associations such as ACCA also have been actively involved in CSR issues for years. The annual ACCA Malaysia Environmental and Social Reporting Awards (MESRA) aims to identify and reward the participating corporations for their innovative attempts to communicate organizational performance through disclosure of environmental, social or full sustainability information.

In 2005, the Department of Environment and ACCA Malaysia published the "Sustainability Reporting Guidelines for Malaysian Companies". The objectives of these guidelines are to:

1. Introduce the concept of environmental and sustainability reporting;

2. Encourage a greater interest and practice of environmental and sustainability reporting in Malaysia;
3. Illustrate, with corporate report extracts, examples of best practices in environmental and sustainability reporting;
4. Educate organizations in Malaysia about the steps to report on their environmental, social and economic impacts; and
5. Provide a listing of reference material for sourcing further reporting information.

(ACCA, 2005, p. 9).

The latest development of CSR in Malaysia is the introduction of a corporate social responsibility framework by the Bursa Malaysia in 2007 (Kok, 2008). This is basically a set of guidelines to help the Malaysian public listed companies in their corporate social responsibility practice. Following this requirement, all the listed companies are obligated to report their CSR activities.

Thus, it can be seen that government, accounting professional bodies, and other professional organizations are working together to ensure the concept of sustainable development is well understood and practiced by organizations in Malaysia.

2.6.2 Environmental vs. Social Reporting

This section discusses what type of CSR is generally reported by Malaysian companies. To date, there is no known published research on sustainability reporting in Malaysian companies. Hence, this section will only review research in the social and environmental areas. A survey of 500 companies within Malaysian industries conducted by ACCA in 2004 revealed there were only 16 companies reporting on environmental perspectives and seven on social perspectives (ACCA, 2005). From the analysis of past literature, it is evident that most of the research has focused on environmental reporting rather than social reporting.

Environment reporting

Most environmental reporting is qualitative in nature and only highlights 'good news'.²⁴ The highest emphasis is on environmental policies and general statements about environmental issues. Overall, the disclosure of environmental concerns in annual reports is still low.

Ahmad and Sulaiman (2002) examined the amount and type of voluntary environmental disclosures in the annual reports of public listed companies on the Kuala Lumpur Stock Exchange (KLSE) or Bursa Malaysia. The study used the content analysis sentences count method to indicate the content categories: 1) evidence; 2) news; and 3) location. Only 33.3% of the sample companies published environmental disclosure, with more environmentally sensitive companies disclosing more environmental information. However, the level of disclosure was still low and largely qualitative in nature, with an emphasis on 'good news' reporting. Ahmad and Sulaiman (2002) argued that based on previous research the use of publishing stand-alone environmental reports is impractical.

Ahmad *et al.* (2003) found that the practice of environmental reporting by Malaysian listed companies is considered very low in terms of quantity and quality. Most environmental disclosures were reported by environmentally sensitive companies. There was evidence to suggest that disclosers and non-disclosers of environmental information generally corresponded to the environmentally sensitive and non-environmentally sensitive industries respectively.

A stakeholder theory was employed by Elijido-Ten (2004) to explain the determinants of environmental disclosure in Malaysian companies. It was discovered that the most commonly mentioned information is the firm's policies or concerns for the environment, and there was no disclosure regarding monetary environmental information. In spite of the increase in the number of companies providing voluntary environmental disclosure, most of the disclosures were still general and vague.

²⁴ See also Smith *et al.* (2007)

An evaluation of the differences in corporate environmental disclosure practices between Malaysia and Australia including the factors influencing the disclosure decision was carried out by Yusoff and Lehman (2006). Stakeholder theory was used and the variables tested were environmental sensitivity, financial performance and ISO 14000. Generally, Malaysia is still lacking in the valuing and accounting of environmental issues, but is showing some initiative in environmental disclosure to the public. The results indicated the following: Australia disclosed both good and bad news, whereas Malaysia disclosed good news; Australia disclosed general and quantitative data, whilst Malaysia disclosed qualitative data; and ISO 14000 had a high influence on Malaysia and Australia. There was no significant difference between financial performance and environmental disclosures. As a whole, it was concluded that Australia has higher environmental disclosure practices compared to Malaysia.

When examining 23 environmental items disclosed in the annual reports of Malaysian companies, Yusoff *et al.* (2006) indicated that there were no items disclosed under the 'financial' and 'litigation' information categories. In terms of the individual environmental items rankings, it was discovered that 'environmental policies and concerns' are the most reported item.

Sumiani *et al.* (2007) examined whether the voluntary environmental disclosure included by corporations in the annual reports were related to either public pressure or firm profitability. The results showed that the extent of environmental information reported was rather low, that information reported was general and in qualitative form (especially on policies), and that ISO has some level of influence towards voluntary environmental reporting. According to the Malaysian Deputy Finance Minister, Datuk Wira Chor Chee Heung, in his speech at the ACCA Malaysia Sustainability Reporting Awards 2009 (ACCA MaSRA) recently:

Local companies, both public and private, have not fared well compared with their British and Australian counterparts in terms of being socially and environmentally friendly ... I have to admit that we are far off the mark in the area of CSR and our adherence to international environmental standards.

It was that concluded that businesses have some way to go towards performing well in corporate social responsibility (CSR Digest, 2009a).

Social Reporting

Previous studies have reported social disclosures are growing, are qualitative in nature, are primarily represented by good news, and emphasize the human resource theme.²⁵ Thompson and Zakaria (2004) assessed the state of CSR reporting in Malaysia and corporate environmental reporting by looking at incidence, nature, quality and quantity. The findings indicated that 81.3% of companies disclosed social information and most of them were in a declarative form and dominated by good news. They found that CSR reporting was still in its infancy, as a result of a lack of government and societal pressure to report on environmental issues.

Haron *et al.* (2004) examined the level of corporate social disclosure among Malaysian listed companies during the period of recession or financial crisis, and also during the pre- and post-financial crisis phases. The findings indicated that the highest disclosure level took place in 1998 due to socio-economic conditions at that time. The companies wanted to be seen as legitimate to shareholders. Another motivation behind the government's desire for disclosure was the aim of eradicating poverty, and this led to the introduction of the Malaysian Institute of Corporate Governance (MICG) code of ethics. The human resource theme received the greatest amount of disclosure and disclosure was mainly qualitative and favourable in nature.

In their longitudinal study, Janggu *et al.* (2006) aimed to ascertain the type and the quantity of social information disclosed by Malaysian industrial companies using the content analysis sentences count technique. The descriptive analysis of data from 1998 to 2003 revealed that, generally, the level of social responsibility among industrial companies in Malaysia could be described as growing. The overall disclosure level showed an increasing trend, as did the average disclosure per company. The most popular theme was the human resource theme under the social category in the six years studied. Meanwhile, the environmental theme was only ranked as the third most disclosed item.

²⁵ See also Haniffa and Cooke (2005).

In a more recent study, Amran and Devi (2007), consistent with previous studies, also identified employees as the most reported theme.²⁶ Surprisingly, as compared to the previous studies, there was an increase in the monetary and declarative form of disclosure of shares and the percentage of reporting, that is, 72%. Consistent with previous studies, in terms of news dimension, most companies reported good news.

In terms of the GRI framework adopted by Malaysian public listed companies, it is indicated that there are four companies to date voluntarily use the GRI G3 framework. However, it is highlighted that their reports have not been consistent. As for the government-linked companies, the incorporation of the Environmental, Social and Governance (ESG) issues into their management processes are required through the Putrajaya Transformation Program (CSR Digest, 2009b). This directly signals the long journey for the companies to engage in sustainability reporting.

To conclude this section, in general, research related to sustainability reporting in Malaysian companies focuses on environmental aspects as opposed to social themes. The most reported items in environmental reporting are environmental policies and general statements. The most reported theme in social reporting is on human resources. The levels of disclosure are still growing and mostly reflect good news and are qualitative in nature.

2.7 SUSTAINABILITY REPORTING IN THE MALAYSIAN PUBLIC SECTOR

With regards to the study on CSR in local government in Malaysia, only one research project has, to the best of the researcher's knowledge, been carried out and this was on the awareness of the local government's accountants about CSR (Mohd-Ali *et al.*, 2006). Nevertheless, their study did not examine the extent of CSR or sustainability disclosure on websites, although their findings indicated that the most popular way to communicate CSR communication with stakeholders was via websites. In view of that, this thesis aims to fill the gap of non-existence of literature related to CSR or sustainability on local authority websites in Malaysia.

²⁶ See also Amran and Devi (2008).

2.8 CHAPTER SUMMARY

In summary, the brief literature review identifies a number of sustainability reporting themes and importantly, indicates a lack of empirical research into the sustainability reporting of public sector organizations. The review of the literature in this field also reveals a gap that will be researched in this thesis, that is, sustainability reporting on Malaysian local government websites. The following chapter will cover hypotheses' development and the institutional theory as the theoretical framework of this thesis.

CHAPTER THREE

INSTITUTIONAL THEORY, RESEARCH METHODOLOGY AND HYPOTHESES DEVELOPMENT

3.1 INTRODUCTION

This chapter focuses primarily on the theoretical framework, that is, institutional theory, the research methodology and the hypotheses development. The chapter is organized as follows: Section 3.2 explains the theoretical background of the thesis; Section 3.3 discusses institutional theory and institutionalization; Section 3.4 elaborates reasons for isomorphism; Section 3.5 examines institutional theory and sustainability reporting; Section 3.6 describes the literature that has employed institutional isomorphism; Section 3.7 explains the research methodology; Section 3.8 outlines the hypotheses development to empirically test the independent variables utilized in the thesis. Finally, Section 3.9 shows the conceptual schema of the thesis.

3.2 THEORETICAL BACKGROUND OF THE THESIS

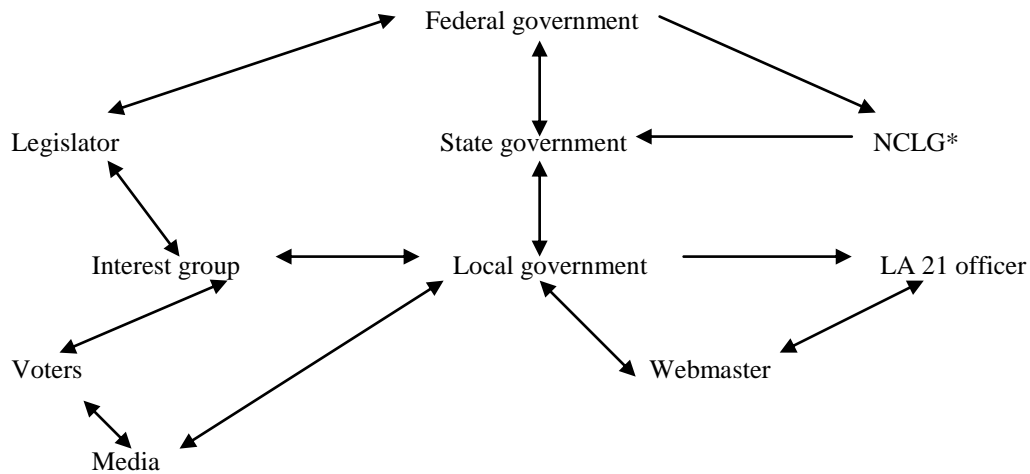
Given that this thesis combines CSR and public sector accounting, it is important to review the theoretical aspects for both areas. Policy choice as it relates to the government is the first theoretical area to be reviewed.

3.2.1 Theoretical Perspectives Related to Government Policy Choice

Past literature acknowledged the government's organizational characteristics and environment which influenced the policy choice of financial reporting. Cheng (1994) examined the institutional, political, and external processes that influenced the choice of accounting and financial reporting practices. She also summarized measures of governmental accounting and financial reporting employed in past literature.²⁷ A process model for accounting and financial reporting in state and local governments was provided by Cheng (1994) and modified in this thesis to explain sustainability reporting on Malaysian local authority websites. Figure 3.1 shows the modified model from Cheng (1994) explaining institutional, political and external processes that influence the implementation of sustainable development policy.

²⁷ See for example: Giroux (1989); Cheng (1992).

Figure 3.1 A Politico-Economic Model of Sustainability Reporting²⁸



* National Council for Local Government

According to Cheng (1994, p. 48):

The model has three components: (1) the overall state socioeconomic and political system comprised of individuals who are members of institutions and subgroups, (2) interaction on the part of a number of individual actors—for example, the legislator and staff, chief executive and staff, judicial and court administration, agency executives, program directors, other governments, the media, clientele, taxpayers, employee unions, professional accountants, and interest groups, and (3) these actors, working out various roles and rules governing forms of interaction, affecting accounting and financial reporting through their purposive action.

This thesis maintains that the politico-economic model by Cheng (1994) affects the sustainable development policy implementation in Malaysia. As well, the model assists in providing a better understanding of the unique characteristics of the political system. There are several key players illustrated in Figure 3.1 that have been identified and are applicable to the thesis.

1. Voters

Voters are viewed as an influencing force for financial reporting choice (Cheng, 1994). As well, they are integral to website sustainability reporting choices in Malaysian local authorities. As stated by Cheng (1994, p. 52), "information needs of

²⁸ Adopted from Cheng, R. (1994). A Politico-Economic Model of Government Accounting Policy Choice, *Research in Governmental and Nonprofit Accounting*, Vol. 8, p. 49.

voters have been found to be related to their socioeconomic status as measured by education and income level".

2. Interest groups

Interest groups refer to individuals or groups of people whose organized interests have "integrated participation in the formulation of public policy and the administration of public programs" (Cheng, 1994, p. 53). In the thesis, interest groups relates to NGOs that are actively promoting sustainable development awareness in Malaysia via educational seminars, campaigns and other activities. The NGOs also assist in formulating the sustainable development policy in Malaysia.

3. The federal government

As can be seen in Figure 3.1, there is a lack of direct influence of the federal government over local government. The formation of the National Council for Local Government (NCLG) chaired by the Minister of Housing and Local Government is provided in the Federal Constitution (Kuppusamy, 2008). The council consists of each state representative and other members representing the local government. In practice, the Deputy Prime Minister will be invited by the Minister to chair the meeting in order to "exert influence over the state representative and to expedite adoption of policies and delegation of action to the state government" (Kuppusamy, 2008, p. 82). Further, the state government will give directives to local authorities to implement the government's policy, for example, the sustainable development policy.

With regards to the thesis, the Ministry is using its power and political interest in giving directives to all local authorities to implement the LA 21 program. Local authorities have financial dependency on the federal government to carry out the LA 21 program. Local authorities have to submit annual reports of the LA 21 program implementation to fulfil the funding requirement. This indicates the influence of coercive pressure and will be discussed in Section 3.4.1.

3.2.2 Theoretical Perspectives in Social and Environmental Reporting

A number of researchers have studied why organizations disclose social and environmental information by examining various theories such as agency theory, legitimacy theory, the political economy of accounting theory, and stakeholder

theory. However, it was claimed that a unanimously accepted theoretical framework for corporate social and environmental accounting does not exist (see, for example, Choi, 1999). Along the same lines, from the discussion of prior literature, most web-based environmental communication literature does not have a theoretical foundation, largely due to the 'newness' of this area (Williams and Pei, 1999; Lodhia, 2005).

The theories in social and environmental research have been classified by Gray *et al.* (1995a) into three groups: decision-usefulness studies, economic theory studies, and social and political theory studies. In the decision-usefulness theory, it is assumed that firms disclose social and environmental information because of a belief in the users' usefulness of this information. For studies using economic theory, the basic argument relies on Watts and Zimmerman's (1978) agency theory (Choi, 1999). Agency theory assumes that voluntary social and environmental disclosure by corporations is used as a means of reducing agency costs that could arise in the form of legislation and regulation.

Gray *et al.* (1995b) categorized stakeholder theory, legitimacy theory and political economy theory under the social and political theory group. It was claimed that these three theories are neither separate nor competing, and this is supported by Deegan (2007) who writes that legitimacy theory is a positive theory and there exists many similarities between stakeholder theory and legitimacy theory.

Another theory advocated by Deegan (2007), institutional theory, has similarities with legitimacy theory in understanding how organizations recognize and respond to changing social and institutional pressures and expectations. Specifically, Deegan (2006, p. 305) stated:

Among other factors, it links organizational practices (such as accounting and corporate reporting) to the values of the society in which an organization operates, and to a need to maintain organizational legitimacy. There is a view that organizational forms of homogeneity—that is, the structure of the organization (including the structure of the reporting systems) and the practices adopted by different organizations tend to become similar to conform with what society, or particular powerful groups, consider to be 'normal'. Organizations that deviate from being of a form that has become

'normal' or expected will potentially have problems in gaining or retaining legitimacy.

From the above explanation, it is noted that the central issue is about gaining legitimacy and homogenization towards conformance with social values and norms. These aspects are considered essential for social acceptance by society. The two sources of the legitimacy premise come from the internal organizational factors and external stakeholders' influence (Lodhia, 2008). The features of institutional theory are further discussed in the following section.

3.3 INSTITUTIONAL THEORY

Institutional theory has been employed to understand various organizational and individual practices and activities (see, for example, Dacin *et al.*, 2002). As well, institutional theory has been applied in a large diversity of settings—for example, local authorities, universities, health care, and Fortune 200 companies—to understand accounting practices, for example, case-mix accounting systems, budgeting, generally accepted accounting principles (GAAP) adoption, TBL reporting, and financial reporting (Covaleski and Dirsmith, 1988; Mezas, 1990; Covaleski and Dirsmith, 1993; Dacin, 1997; Mack, 2006).

A few different concepts within institutional theory will be discussed in this chapter, namely: legitimacy, isomorphism and institutionalism. The legitimacy concept is discussed next.

3.3.1 Legitimacy

One of the central issues of institutional theory is legitimacy. Zucker (1987, p. 443) explained various factors that influence organizations internally and externally, and these can often "be guided by legitimated elements, from standard operating procedures to professional certification and state requirement, which often have the effect of directing attention away from task performance".

Along with this pressure for legitimacy, the institutional perspectives highlighted the importance of an organization's 'social contract' (Deegan, 2006; 2007). Meyer and Rowan (1977) suggested that firms operate within a social framework of norms, values and assumptions that are concerned about what constitutes appropriate or

acceptable economic behaviour. Under the lens of institutional theory, the common idea is that the survival of an organization depends on meeting the expectations of social norms. In gaining continued support from society, the legitimation of an organization's formal structure, policies and procedures is essential to ensure the compliance with institutionalized rules (Meyer and Rowan, 1977; Scott, 1987). In the thesis, the local authority website is an example of a formal structure, as a result of the institutionalization of the 'e-pbt' portal. Dacin (1997, pp. 46–47) further stated:

The institutional arena contains a number of exogenous pressures that influence the structure and behaviour of organizations. These include institutional pressures arising from connections among organizations, such as dependency and political pressures. Institutional pressure operates in concert with other forces such as competitive or market pressures, to influence ecological dynamics.

The compliance with certain rules and procedures, as well as, adoption of certain organizational practices so as to attain legitimacy is much more crucial than the efficiency and effectiveness of any organizational practice. Further, it was noted by Delmas and Toffel (2003, p. 3) that:

The institutional sociology framework emphasized the importance of regulatory, normative, and cognitive factors that affected firms' decisions to adopt a specific organization practice, beyond and further than the technical efficiency of the practice.

In addition, as claimed by Bowerman (2002, p. 49), "adoption is attractive because it provides legitimacy above improved performance".

3.3.2 Isomorphism/Homogenization of Organizations

Given that this thesis is related to public sector reforms, it is apposite to refer to the concept of isomorphism (Pilcher, 2007). For example, Tolbert and Zucker (1983, p. 17), when describing municipal reform, suggested, "the rapid institutionalization of the reform rested on the assumed isomorphism between it and the ideal rational bureaucratic form". Many institutional theories, such as Covalleski and Dirsmith, (1988), DiMaggio and Powell, (1983), Perrow, (1985) and Powell, (1985), have based their studies on isomorphism. DiMaggio and Powell (1983, p. 149) labelled the process by which organisations tend to adopt the same structures and practices as 'isomorphism', which they described as a 'homogenisation of organisations'.

Isomorphism is a process that forces one unit to conform to other units in the population that deal with similar situations (DiMaggio and Powell, 1983). As a result, organizations will become progressively more alike within certain areas and comply with the expectations of the wider institutional environment as a result of isomorphic pressures.

There are two types of isomorphism, competitive and institutional, as highlighted by DiMaggio and Powell (1983). Competitive isomorphism is associated with a free and open market competition environment; meanwhile, institutional isomorphism is concerned with the organizational fight for political power, social fitness and legitimacy. The second type of isomorphism is adopted in this thesis due to the nature of local government. The argument for this was presented by Frumkin and Galaskiewicz (2004) as follows: 1) the public sector is susceptible to institutional or legitimizing pressures because of their lack of accountability towards financial indicators, for example, profit and sales; 2) the public sector is more inclined towards a bureaucratic structure. Further, this argument is closely related to the role of the government as funding provider and regulator of business activities. The multiple roles of government entail the implementation of certain rules and procedures which, in turn, require compliance by organizations such as local authorities. As one form of government in the public sector, local authorities are also subject to other types of pressure which need to be experienced to achieve or maintain legitimacy.

In the Malaysian local authority environment, sources of pressures may come from the community, service users, ratepayers' opinions and the Ministry. For example, the implementation of a star rating system for Malaysian local authorities in 2008 directly or indirectly forced the local authorities to comply with the 352 indicators set by the Ministry of Housing and Local Government.

3.3.3 Institutionalization

The concepts of institution and institutionalization are important in the application of institutional theory. Zucker (1987) indicated institutionalization as one of the processes of isomorphism. Scott (1987) briefly reviewed four sociological formulations, all claiming an institutional focus due to variations in definitions of the concepts of institution and institutionalization. Covalleski and Dirsmith (1988, p. 562)

defined institutionalization as "the processes by which societal expectations of appropriate organizational form and behaviour come to take on rule-like status in social thought and action". As a result, these expectations will be widely accepted and adopted by the individual organization in order to be legitimate (Meyer and Rowan, 1977).

Carpenter and Feroz (2001, p. 568) suggested that "the institutional environments of organizations contain a number of exogenous pressures that influence their structures and practices". In their study of the decision to adopt GAAP by four state governments in the US, Carpenter and Feroz (2001) indicated that the institutional environments of state governments included the federal government, local governments, educational institutions, the accounting profession, creditors, taxpayers, associations of government employees and elected officials, and various public interest networks.

On a study of the adoption of civil service reform by cities, Tolbert and Zucker (1983) pointed out that the municipals diffused such reforms rapidly. On the other hand, when the procedures were not so legitimate, municipals diffused such reforms gradually and the underlying sources of adoption changed as time passed by. Hence, it is concluded that the adoption of a policy or program by an organization is determined by whether the extent to which the diffusion of certain practices are regulated by law or by gradual legitimation. As argued by Bowerman (2002), legitimacy and isomorphism are complementing each other to ensure the success of an organization's initiative.

During the interview phase, the thesis explored whether there was any legitimation of local authority policies or organizational structure that was related to achieving sustainable development. One of the legitimation policies was the implementation of five activities under the LA 21 program as an indicator to encourage community participation or stakeholders' engagement.

Scott (1987, pp. 493–501) reviewed the institutionalization concept of the institutional theorists as: "a process of instilling value; a process of creating reality; institutional systems as a class of elements and institutions as distinct societal

spheres". The four sociological formulations of institutionalization are further elaborated upon next.

Institutionalization as a Process of Instilling Value

Selznick's work (1957) was among the most influential versions of institutional theory. Selznick regarded organizational structure as an 'adaptive vehicle' as a consequence of the full participation by the actors and also shaped by exogenous forces. Selznick's study distinguished organizational structure as either a technical or institutional instrument. The importance of history was acknowledged as another significant concept under Selznick's institutional approach (Scott, 1987). As such, Selznick (1957, p. 16) viewed institutionalization as a "process" which was "something that happens to the organization over time". Additionally, the institutionalization process was seen as being dependent on "design and intervention" (Scott, 1987, p. 495). Scott (1987, p. 495) argued that Selznick's institutional approach was mainly "definitional rather than explanatory", so did not explain how to account for the institutionalization process. Scott criticized Selznick's work as only recommending ways to infuse institutionalization without explaining in detail how it was happening.

This first concept of institutionalization as a process of instilling value, by Scott (1987), is irrelevant in this context as the thesis does not aim to account for the institutionalization process of website sustainability reporting. It is argued here that this concept is more applicable to a longitudinal study, for example, to explain how the sustainability information changes over time on websites.

Institutionalization as a Process of Creating Reality

This second concept of institutionalization highlights that the human factor is important in the institutionalization process, whereby it involves actions taken by individuals when receiving orders, an understanding of the orders, and finally the sharing of this understanding with other people. It is contended here that, 'orders' refer to commands or instructions. As quoted in Scott (1987, p. 495), "social order is based fundamentally on a shared social reality which, in turn, is a human construction, being created in social interaction". It is recognized that people are

constrained by their human nature and pressure developed by the form of a social order.

The work of Berger and Luckmann (1967) was highly recognized in explaining the concept of social order under this second sociological formulation of institutionalization by Scott (1987). Further, Scott (1987, p. 495) cited the argument by Berger and Luckmann (1967, p. 52) regarding social order as "a human product, or more precisely, an ongoing human production. It is produced by man in the course of his ongoing externalization ... social order exists only as a product of human activity".

These interpretations or 'typification' attempt to classify behaviour into categories that will enable the actors to react in the same manner. Thus, "institutionalization refers to the process by which actions become repeated over time and are given similar meanings by individual and others" (Scott, 1987, p. 495).

Berger and Luckmann (1967, p. 54, as cited in Scott, 1987, p. 495) asserted that "... Institutionalization occurs whenever there is reciprocal typification or habitualized actions by types of actors". In other words, institutionalization is an ongoing and repeated process, performed by the same 'type' of people or same 'group of actors' in a process. The work of Berger and Luckmann (1967) has laid the foundation for other institutional scholars, such as Meyer and Rowan (1977) and Zucker (1987), in describing institutionalization. The proponents of institutional theory refer to a situation whereby an individual is expected to comply with commands or orders which have been regulated and widely accepted, as "a shared definition of social reality"(Scott, 1987, p. 496).

In relation to this thesis, it is anticipated that the disclosure of sustainability reporting on Malaysian local authorities' websites is not actually performed by the same personnel, although it may be regarded as a continuous process. The personnel involved are likely to be the LA 21 officer, the public relations officer, the environmental or landscape officer, the community service officer and others. These differences may possibly be contributed to by the diversity of departments involved

in website sustainability reporting. Again, this event is discussed in the interview process in Chapter Eight.

Institutional Systems as a Class of Elements

The presence of an organization's structure or an organization's form is important under this third concept of institutional systems as a class of elements. Scott (1987, p. 497) emphasized institutionalized belief systems which embrace a special group of elements that can answer for "the existence and/or the elaboration of organizational structure". Scott (1987, p. 497) further illustrated Meyer and Rowan's (1977) argument that "the prevalence of organizational forms can be attributed not only to the complexity of 'relational networks' and exchange processes, but also to the existence of elaborated 'rational myths' or shared belief systems".

The sociology formulations of institutional systems as a class of elements require several changes in order to account for the presence of organizational structure (Scott, 1987). The five changes are elaborated next.

Firstly, there is a need to reconceptualise the most important part of the organizational environment. The organizational environment is no longer confined to "technical requirements, resource streams, information flows, and influence relations" but, recognized as "cultural elements—symbols, cognitive systems, normative beliefs—and the source of such elements" (Scott, 1987, p. 498).

Secondly, institutionalization as a unique process has been given lack of attention. The institutional theorists are clearer about the multiplicity of processes that might bring about change in the organizational structure in order to become isomorphic to each other. This change is directly related to the thesis and will be discussed in detail in Section 3.4.

Thirdly, there is a greater attention given to the nature of the belief systems than the process itself. Scott (1987) highlighted that more attention was given to one of multiple institutional environments which deviate from a conception of the institutional environment.

Fourthly, there are changes from the traditional forms and sources of social beliefs to the state, the professionals and rationalized systems of law. Finally, this change has both played a role and gained from the "resurgence of interest of culture" that directly relates to "symbolic aspects of environments and their sources" (Scott, 1987, p. 499).

Institutions as Distinct Societal Spheres

The fourth concept of sociology formulations explained differences in belief systems and was further associated with the long-established concept of social institutions.

Scott (1987, p. 499) referred to social institutions:

As conventionally defined, social institutions refer to relatively enduring systems of social beliefs and socially organized practices associated with varying functional arenas within social systems, e.g., religion, work, the family, and politics. In most of these traditional definitions, social institutions are viewed as both symbolic—both cognitive and normative systems—and behavioural systems, and a strong emphasis is given to persistence and stability as a key defining characteristic.

Further, Scott (1987) argued that an institution requires mutual social values to ensure a long lasting existence. As well, it was asserted by Scott (1987) that there are differences in cognitive and normative systems, which involve different type of human activities in all societies. This raises the point that different organizations can adopt their own beliefs and practices that needs to be considered by a social analyst's agenda.

3.4 REASONS FOR ISOMORPHISM

Several areas are considered here within institutional theory, including that describing institutional systems as a class of elements. According to Scott (1987, p. 497):

It is emphasized that institutionalized belief systems constitute a distinctive class of elements that can account for the existence and/or elaboration of organizational structure.

There are reasons that influence organizations to become isomorphic. Firstly, institutional isomorphism promotes the success and survival of the organization

(Meyer and Rowan, 1977). Meyer and Rowan (1977, p. 349) argued that "by incorporating externally legitimated formal structure, this will increase the commitment of internal participants and external constituents of the organizations". Society will continue to perceive success in the organization by taking into account the social criteria assessment. Secondly, the hope of being judged as legitimate or appropriate is important, especially in the new or founding organization (Dacin, 1997). Nevertheless, in the context of local authorities in Malaysia, this argument is applicable to the strategic behaviour in complying with the requirement to submit yearly reports to fulfil the LA 21 funding requirement. Scott (1987, p. 498) further stated that:

Since the concept of institutionalization is not definitionally linked to a distinctive process, analysts begin to theorize more explicitly about the variety of types of processes that might cause an organization to change its structure in ways that make it conform to-become isomorphic with-an institutional pattern. The best-known classification of this type is that developed by DiMaggio and Powell (1983) who distinguished among coercive, mimetic, and normative processes leading to conformity.

The following sections discuss the three types of isomorphic pressures, starting with coercive isomorphism.

3.4.1 Coercive Isomorphism

Coercive isomorphism is the most cited type of institutional force. According to DiMaggio and Powell (1983, p. 149), the pressures can be "exerted by other organizations on which an organization may be dependent, as well as cultural expectations in which the organizations operate".

The pressures may be formal or informal. Formal pressure is a regulative process where regulators have the capacity to set up rules and procedures, monitor compliance and, when necessary, apply sanctions. Such pressures may be "felt as force, as persuasion, or as an invitation to join its collusion" (DiMaggio and Powell, 1983, p. 150). However, the pressure of coercion can also appear if there is reluctance or failure to comply with certain rules. For instance, Covaleski and Dirsmith (1988, p. 562), in their study on the budgeting process in a university, revealed that:

The process of institutionalization appears to be infused with power and self-interest both within the organization and in extra organizational relations, with extra organizational relations appearing to play a dominant role in periods of organizational decline.

In Covaleski and Dirsmith's (1988, p. 595) study, 'periods' refer to when the university "failed to reproduce the expression of these societal expectations through the budget" which resulted in unpleasant working relationships with the state. This thesis explores whether there exists unpleasant working relationships with the state that leads to less disclosure of sustainability information on the websites.

Early or later adopters of certain organizational practice will also reflect different types of pressures in the organization. As stated in Perez *et al.* (2003), institutional theory is conceptualized for various influences on the adoption of teleworking²⁹ practices by organizations. It was discovered that coercive pressures are more likely to influence early adopters.

There are different types of coercive pressure that have been recognized in the literature. Jennings and Zandbergen (1995) argued that regulations and regulatory enforcements have been the main stimulus of environmental management practices that caused all firms in industry to implement similar practices. Meanwhile, in Carpenter and Feroz's (2001) study, coercive institutional pressure has been identified as the influential power for early adoption of the GAAP financial reporting practices.

Coercive isomorphism also corresponds to the formulation of the resource dependence model, in which organizations are viewed as constrained by those on whom they rely upon for funding purposes (Pfeffer and Salancik, 1978; Mizruchi and Fein, 1999; Carpenter and Feroz, 2001). In this thesis, the Ministry of Housing and Local Government is a funding provider for the LA 21 program implementation by all councils, and is argued as a formal pressure.

²⁹ Teleworking is a way of flexible working that enables employees to have access to the resources they require for work from different and remote locations by the use of information and communication technologies (ICT) (Perez *et al.*, 2003, p.60)

Larrinaga-González (2007, p. 156) highlighted that coercive pressure related to sustainability reporting, and included "regulative structure and activities that would include reporting regulations and their enforcement, as well as the threat of regulation of reporting". An example provided by Larrinaga-González (2007) was the regulations for making compulsory environmental disclosure in financial statements in European countries. In Malaysia, this requirement applies to the public listed companies and not to the government settings.

In this thesis, an example of coercive pressure may be rules for the local authorities that are assigned to implement the LA 21 program and the invitation to appoint an LA 21 officer or setting up the special LA 21 Unit. Other rules include the 'e-pbt' rules in relation to information availability on the website, environmental auditing by the National Audit Department, rules relating to awards/recognition, state and federal government rules, and the internal rules by the top management in the organization. Other coercive pressures could be due to pressure from ratepayers, employees, elected officials, and media coverage.

3.4.2 Mimetic Isomorphism

The second type of institutional pressure is mimetic isomorphism. Mimetic isomorphism suggests the 'copying' of best practice of "those organizations perceived to be legitimate and successful" (DiMaggio and Powell, 1983, p. 150).

As indicated by Bogt (2008), an organization may consider it is socially sensible to imitate other organizations, that is, to adopt socially rational behaviour. Mimetic isomorphism usually resulted as a response to uncertainty, as well as the force of being committed to certain obligations. Baker and Rennie (2006, p. 88) suggested that by adopting other organizational practices, these organizations would hope for being acknowledged and "being seen to be doing something".

Thus, this thesis will explore whether there is a tendency to mimic the content of sustainability information on the website of private sector companies and other countries' public sectors involved in the LA 21 program. The mimicking behaviour is more likely to take place in large organizations that have more employees and

customers (DiMaggio and Powell, 1983). This size variable will be further investigated during the interviews as a factor which promotes mimetic isomorphism.

3.4.3 Normative Isomorphism

The final isomorphism category is normative isomorphism. This element of pressure is normally developed by professional and occupational groups (Rahaman *et al.*, 2004). DiMaggio and Powell (1983) argued that the more highly professionalized a workforce becomes in terms of academic qualifications and participation in professional and trade association, the greater the extent to which the organization becomes similar to other organizations in the field. This is achieved via formal and informal communication, for example, seminars, meeting and websites.

Baker and Rennie (2006) claimed expertise to be an important resource in reform implementation and helped to identify shortcomings in a process. As such, during the interview process this thesis will investigate whether there is any availability of webmasters (experts), and engagement of consultants who assist in reporting sustainability information for Malaysian local authorities. In Carpenter and Feroz's (2001) study, normative institutional pressure has been identified as the influential power in the late adoption of GAAP financial reporting practices.

DiMaggio and Powell (1983) asserted that it is not always possible to differentiate the three mechanisms of institutional pressures from each other. Furthermore, two or more may be operating concurrently, causing difficulties or uncertainty in ascertaining which mechanism of institutional pressure is strongly influencing the institutionalization of a norm or practice. This view was supported by Ryan and Purcell (2004), confirming that the distinction between the three forms of isomorphism can be blurred and difficult to distinguish empirically.

Further, Frumkin and Galaskiewicz (2004) claimed that these three mechanisms were inclined to develop from different environments; for example, the coercive isomorphism is linked to the condition neighbouring the organizational field, whilst the other two pressures focus on the organizational internal characteristics and aid in explaining the spread of rules and structures. A different view was given by Ashworth *et al.* (2007, p. 19), who argued that:

Coercive and normative pressures might be most effective in turning a whole set of organizations in the direction of a particular model of management, whereas mimetic pressures lead organizations to resemble each other more closely.

However, despite the different application of the three isomorphic pressures when they are operating at the same time, the common idea is to encourage homogenization and achieve legitimacy.

3.5 INSTITUTIONAL THEORY AND SUSTAINABILITY REPORTING

Given that this thesis is based on the local government setting, which is subject to many institutional pressures, it is beneficial to engage institutional theory as the theoretical foundation. Larrinaga-González (2007) observed that sustainability reporting has become a common practice for many large firms, which is powerful evidence of institutionalization. Specifically, according to Larrinaga-González (2007, p. 155):

Rather, sustainability reporting could become institutionalized, determining to some extent the choice of organizations in terms of whether or not to publish it. As an institution, sustainability reporting would consist of regulative, normative and cognitive structures and activities which would describe what type of reporting is produced, for who, by whom and with what assured purpose.

Institutional isomorphism will be considered as a possible explanation of why sustainability reporting practices become common in a particular context.

The use of institutional theory is recommended by Bebbington *et al.* (2007, p. 348):

Rather, theorists are needed to explain, inter alia; the linkages between the public policy agenda for sustainable development and how such agenda become embedded (or not) in the workings of the private, public and third sector; the way in which sustainable development becomes part of organizational discourses, and the impact of adoption of sustainable development by organizations; and how managerial action in the name of sustainable development is initiated and sustained over time, and the impacts of such actions.

Accordingly, many social and environmental accounting scholars have started to acknowledge institutional theory as the theoretical lens for sustainability reporting

and other CSR research due to its ability to uncover the reasons and motivations for sustainability reporting (Amran and Devi, 2008; Amran and Siti-Nabiha, 2009; Cahaya *et al.*, 2009).

3.6 INSIGHTS FROM PAST STUDIES USING ISOMORPHISM

This section provides a discussion of past studies that have used institutional isomorphism mechanisms as their theoretical underpinning. It can be seen that most studies found that there were multiple isomorphism mechanisms that influenced the organizational practice. It is advanced here that there is no previous research conducted to explain sustainability reporting on local authority websites using the institutional theory.

Carpenter and Feroz (2001) identified factors that potentially caused initial reluctance to using GAAP for external reporting. Specifically, the factors were: the passive participation of accounting bureaucrats in the professional association (normative), organizational printing issues (mimetic), and, lastly, powerful interests (coercive). Notwithstanding the different strategies adopted by each state to resist the initial adoption of GAAP, all the strategies failed because of the strong influence of the institutional pressures, that is, the well organized professional 'accounting' and the governmental 'institutions' field. Their findings also suggested the potential change of isomorphic pressures over time.

Baker and Rennie (2006) examined several factors that may have influenced the federal government's decision to adopt full accrual accounting. The factors included two royal commissions, the Office of the Auditor General of Canada, the Canadian Institute of Chartered Accountants, credit markets, and the practices of other national governments. It was revealed that the decision to shift to accrual accounting could be mostly due to the coercive and normative pressures from the Office of the Auditor General of Canada (supported by the normative pressure from the Canadian Institute of Chartered Accountants' Public Sector Board). Meanwhile, mimetic isomorphism was derived as a result of the practices from other members of the federal government's organizational field. Consistent with Carpenter and Feroz's (2001) study, the professional accounting bodies and the government's regulatory procedures strongly influence the accounting practice in government organizations.

Falkman and Tagesson (2005) employed institutional theory to explore and explain the impact of legislation and standard setting in the Swedish municipal sector. Overall, the level of compliance was very poor. The factors identified were: external stakeholders and political rules (coercive), auditing firms (normative) and size of municipalities (mimetic).

Ryan and Purcell (2004) applied institutional theory to develop an understanding of what motivates local government preparers of annual reports to disclose corporate governance information. The influence included the coercive isomorphic pressures of community expectations for enhancing accountability and transparency, and criteria provided in annual reports competition. The study further confirmed that the inclusion of corporate governance depended on the preparer's view as to whether the annual report is an accountability document or a compliance document. Mimetic isomorphic pressure influenced councils to mimic the practices of successful participants in annual report competition. Normative isomorphic pressure is perceived to be of less importance in local government disclosure practices.

Rahaman *et al.* (2004) engaged a combination of institutional theory and legitimacy theory to explain social and environmental reporting at the Volta River Authority (VRA), a Ghanaian public sector organization. It was found the funding agencies—for example, the World Bank—exerted coercive pressure on environmental reporting. With regard to social and environmental issues, VRA's reporting system seems to simply document institutional compliance to ensure the VRA's operation led to sustainable development. Similar pressures, which encouraged the reporting of physical environmental impacts, have led to prices which were not affordable by local people. Hence, it can be argued that institutional pressure may also impede the legitimation process.

Mack (2006) used insights from institutional theory to understand influences to adopt TBL in Queensland local authorities. The result concluded that all three pressures of institutional theory have been crucial to the introduction and development of the TBL in local authorities. The informal pressure came from external accountees such as ratepayers, local consumers and local electors, direct resource providers, service users, and voters. Mimetic pressure appeared as the initial influence on the adoption

of TBL in the organization under study in a form of awareness of other effective strategies employed by similar organizations in Victoria and New South Wales, and private sector organizations. In terms of normative pressure, it came directly from the interviewees themselves whom are tertiary qualified in their field, long term employed in the organization, and active members of the professional association related to their job. Mack (2006, p. 5) suggested that "TBL appears to be a mechanism that has the capacity to enable public sector authorities to discharge their accountability obligations".

Frumkin and Galaskiewicz (2004) examined whether public sector organizations when compared with non-profit and business organizations are, in fact, more or less vulnerable to different kinds of institutional pressures. They also explored whether there are any particular types of institutional pressure (being subject to regulations, licensing, and accreditation—coercive pressure; belonging to an association of peer organizations—normative isomorphism; and looking at the performance of other organizations—mimetic pressure) that play a dominant role in shaping public sector organizations. It was revealed that the governmental organizations are more susceptible to all three types of institutional pressures as compared to private and business organizations. They argued that the vulnerability was due to the funds received and rules imposed from the government. Thus, this phenomenon led to the legitimating notion, which is widely discussed in the institutional theory research.

Bowerman (2002) indicated that the three isomorphic pressures influenced the rise of the Business Excellence Model in local government, and all of them are interrelated to each other. The coercive pressure included the White Paper that introduced Best Value, funding dependency from the central government, and the central government being a major user of the Business Excellence Model. Mimetic isomorphism came from recognition by the central government of local authorities that use the Business Excellence Model as the criteria to become a "Beacon" authority. Meanwhile, normative pressure emerged from the accounting professional body, that is, CIPFA and the seminar to promote the use of the Business Excellence Model as a vital tool for meeting the "Government's Best Value criteria".

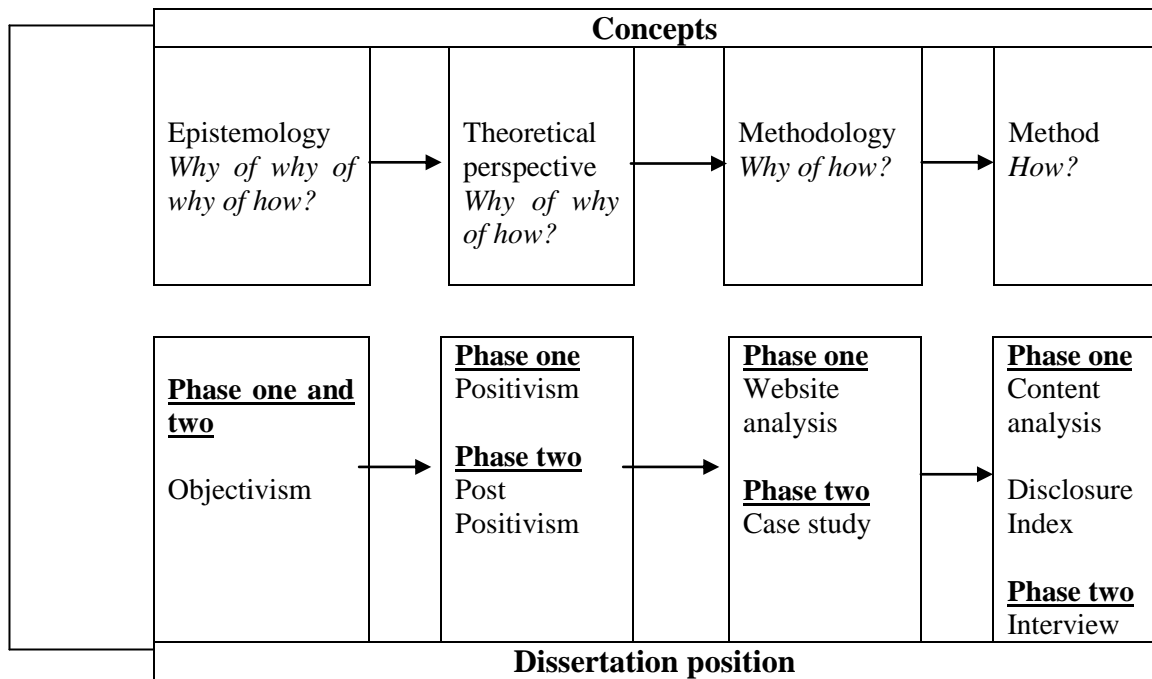
All the literature mentioned above relates to the public sector setting. Notably, there is one private sector study that applies institutional theory to CSR in Malaysia. Amran and Devi (2007) examined reasons behind the corporate social disclosures in the Malaysian companies' annual reports. Amran and Devi (2007) identified a few variables under all three isomorphic pressures. The coercive isomorphism identified was state and foreign organizations. Meanwhile, normative isomorphism included awards, internal goals, the parent company and associations. Finally, mimetic isomorphism encompassed industry, foreign activities and the company's size. The overall result indicated that all the three mechanisms contributed to Malaysian companies' CSR.

The summary of isomorphism mechanisms used in past studies is depicted in Appendix 3_1. In sum, institutional theory focuses on legitimacy and homogenization. There are three types of pressure mechanisms that influence the organizations in achieving legitimacy and the process of becoming similar to each other in their organizational field. There are several variables under institutional theory that will be examined to answer the second research question of this thesis.

3.7 RESEARCH METHODOLOGY

This section includes the explanation of the overall research process. The thesis involved two phases, namely: quantitative (phase one) and qualitative (phase two). There were four basic elements in the research process, that is: epistemology, theoretical perspective, methodology and method (Crotty, 1998). The research process for the first and second phases adopted in this thesis is described in Figure 3.2.

Figure 3.2 Research Process



Source: Adopted from Crotty (1998), Brown (2003), Astami (2005), Suhardjanto (2008).

As shown in Figure 3.2, epistemology is a way of explaining and understanding 'how' and 'what' we know and is embedded in theoretical perspectives which drive methodologies (Crotty, 1998). In this context, the question is "what is the relationship of the researcher to the researched?" The epistemology is related to 'objectivism' for the first and second phases in this thesis. According to Crotty (1998, p. 5):

Objectivism is the epistemological view that things exist as *meaningful* entities independently of consciousness and experience, that they have truth and meaning residing in them as objects ('objective' truth and meaning, therefore), and that careful (scientific?) research can attain that objective truth and meaning.

In this regard, the website of local authorities is independent from the researcher, and the quantitative method of the statistical analysis would help in determining the extent of sustainability reporting on the websites as well as assist in predicting the factors that influence the level of disclosure on the website. This is the epistemology behind the positivist position. However, this thesis via the interview process intends to explain why the factors influenced (or not) the level of disclosure on the websites.

This explanation will not be provided by the quantitative method/statistical analysis alone. Indeed, this stance is referred to as post positivist and will be used in the qualitative phase. According to Crotty (1998, p. 30):

For all the positivist concern that statements be verified by observation before being accepted as meaningful, a host of elaborate scientific theories have emerged whose development clearly requires the acceptance of much more than direct conclusions from sense-data. Many of the so-called 'facts' that serve as elements of these theories are not directly observed at all. Instead, they have been quite purposefully convinced and introduced as more heuristic and explanatory devices.

Theoretical perspectives explain the rationalization for choosing the research methodology. It is also referred to as a paradigm, which is "the researcher's overall conceptual framework" (Brown, 2003, p. 20). In this view, the concept of isomorphism was examined under the institutional theory lens and used to determine the factors which possibly explained the extent of sustainability reporting on the websites in the quantitative phase. Further, it was also employed in phase two to explain why such factors influenced (or otherwise) the extent of sustainability reporting on the websites. In verifying the proposed hypotheses, a positivism theoretical perspective was employed. In relation to the post positivism stance in the qualitative phase, the institutional theory concept of isomorphism was used to support why the local authorities disclosed (or not) sustainability information on the websites.

Meanwhile, research methodology is the middle ground between discussions of philosophy and the discussions of method. It is not about the methods or the strategies of inquiry to be employed, but the approach to the research. Positivism is aligned with quantitative methodologies, and nonpositivism (in its many forms) is aligned with qualitative and/or mixed methodologies. In the first phase, websites' analysis was conducted to examine what and how much sustainability information was reported on the websites. Part of this process will be described in Chapter Four and also Chapter Five. From the website analysis, the results to answer research questions one and two will be presented and will assist in developing the interview protocol for the qualitative phase.

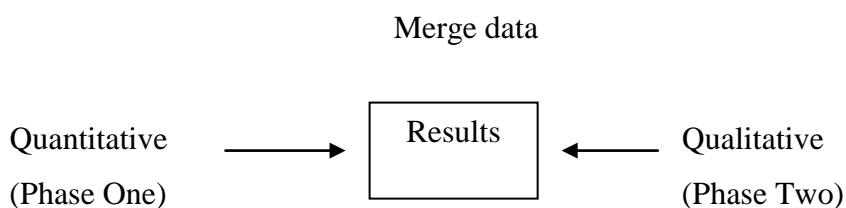
Finally, research method refers to the various means by which data can be collected and/or analysed. In the quantitative phase both the content analysis (sentence count) and disclosure index methods were employed, and this will be further elaborated in Chapter Four. As for the case study approach and the interview method, they will be explained in the Chapter Seven and results will be presented in detail in Chapter Eight.

3.7.1 Data Collection

The data collection involved two phases. The quantitative phase involved the data collection based on the website analysis. This process aimed to calculate the extent of sustainability reporting on websites and factors influencing the level of disclosure. The reasons for disclosure (or otherwise) were sought from semi-structured interviews in the qualitative phase to explain why there was such a level of disclosure from the quantitative phase.

A multi-method approach may enter into one or more phases of the research process: the research design; data collection; and interpretation and contextualization of data (Brannen, 2005). The advantage of using a mixed method is that the quantitative aspect can be used to measure outcomes and the qualitative part can provide a greater depth of understanding about complex phenomena, dynamic processes and insider's viewpoint (Johnson and Onwuegbuzie, 2004). Further, the increase in the mixed methods has the potential to reduce some of the problems associated with using a sole method (Sechrest and Sidana, 1995). Therefore, a mixed method strategy was employed in the data collection and discussion of findings, and this is depicted in the following Figure 3.3.

Figure 3.3 Mixed Method Strategy



Creswell (1994, p. 177) refers to this model as the "two-phase design" approach. In this thesis, the first phase was completed prior to phase two taking place. This is also referred to as "sequential triangulation". Results from both quantitative and qualitative phases are discussed simultaneously with regards to the institutional theory in Chapter Eight.

3.8 HYPOTHESES DEVELOPMENT

This section proposes a set of hypotheses to guide empirical tests. There were five institutional theory hypotheses developed in this thesis, based on: the size, jurisdiction, the LA 21 program, public sector awards, and type of councils. The dependent variable is the extent of sustainability reporting on the councils' websites. The hypotheses development is now explained in detail.

3.8.1 Size of Councils

The size of government organizations has been examined previously as one of the determinants in public sector accounting research, for example, in the adoption of e-government, choice of accounting standards, and Internal financial reporting. Further, in relation to isomorphism, size has been suggested by researchers as a potentially important determinant of legitimacy (Deephouse, 1996).³⁰ Legitimacy is a central issue in institutional theory and a primary concern of larger organizations.

Larger councils are subjected to more scrutiny by interested stakeholders relative to smaller councils. In relation to the organization's size, as stated by Luoma and Goodstein (1999, p. 556), "large organizations are more visible and hence subject to greater attention from external constituencies such as the state, media, professional groups and the general public".

³⁰ Previous private sector studies suggested a positive relationship between the size of the entity and the disclosure level of social and environmental information (Hackston and Milne, 1996; Neu *et al.*, 1998; Choi, 1999; Williams and Pei, 1999; Cormier and Gordon, 2001). As well, a similar positive relationship has been found between a firm's size and the extent of Internet corporate disclosure (Ashbaugh *et al.*, 1999; Debreceeny *et al.*, 2002; Marston, 2003; Lodhia *et al.*, 2004; Marston and Polei, 2004; Xiao *et al.*, 2004; Tagesson *et al.*, 2009). In the public sector accounting research, the size of an organization has been identified to have a positive relationship with the extent of disclosure in the annual reports of a state government (Taylor and Rosair, 2000), accountability disclosure (Ryan *et al.*, 2002), accounting disclosure (Gore, 2004), and the Internet disclosure (Groff and Pitman, 2004).

Public sector organizations have different patterns of accountability and objectives. Therefore, it has been advocated by, for example, GRI (2004), that public sector agencies are supposed to lead by example in disclosing social, economic and environmental information to society. One avenue of public exposure is the organization's website. From an institutional theory perspective, as highlighted by Falkman and Tagesson (2005; 2008), if large public sector organizations are more closely examined by mass media, then there is an increase in the coercive political pressure on these organizations.

In line with concepts discussed by Meyer and Rowan (1977), larger councils are inclined to present myths about their activities to comply with societal requirements. In other words, larger councils institutionalize their activities and programs to appear legitimate and conform to social values and norms. To appear legitimate under coercive isomorphism, the following hypothesis is proposed:

H1 The extent of sustainability reporting on the websites is higher for larger councils.

3.8.2 Jurisdiction

Under the institutional theory lens, a state or federal government's jurisdiction is one of the direct coercive pressures. As mentioned by Frumkin and Galaskiewicz (2004), past literature acknowledged the state's role in the production and dissemination of legitimate organizational forms. Further, they posited Meyer and Rowan's (1977) discussion on the government's role in institutionalization. This thesis put forward the legislative power of the jurisdiction or state as a direct coercive pressure that influences the extent of sustainability reporting via the institutionalization of policies and procedures.

Local government is the lowest tier in the governmental hierarchy of Malaysia. It is a "state creation" as prescribed in Lists Four and Five of the Ninth Schedule of the Federal Constitution. The Constitution also provides that the organization of the local government and most of the municipal services are under the responsibility of the state government. In this perspective, the state government has full power to implement policies in all local authorities under its jurisdiction. Different states have

different policies, including the implementation of the sustainable development program organized by the federal government.

Here is an example of how one state in Malaysia applies coercive pressure. Selangor has a special policy on LA 21 which is applicable to all 12 local authorities under its area of jurisdiction (Hezri and Hasan, 2004). Selangor is the pioneering state that implements the sustainable development policy in Malaysia. All 12 local authorities in Selangor are required to submit a report of sustainable development activity on a monthly basis as part of the performance evaluation criteria.

While it is not possible to obtain detailed information about which states apply higher coercive pressures to local councils under their jurisdiction than other states, it is hypothesised these differences exist. The details regarding the implementation of different sustainable development policies by different states are explored during the interviews.

Based on the above arguments, it is advanced here that different states place different pressures on local councils under their jurisdiction in reporting the sustainability information. The hypothesis designed for different pressures encountered by local authorities in different jurisdictions under the coercive isomorphism is formally stated as:

H2 The extent of sustainability reporting on the websites depends on the jurisdiction of local authorities.

3.8.3 LA 21 Program

In Malaysia, all councils are required to submit an annual report of the LA 21 activity implementation to the Ministry in order to comply with the LA 21 program funding requirement. This form of financial dependency or external resource provision is regarded as a formal coercive pressure (Pfeffer and Salancik, 1978; Mizruchi and Fein, 1999; Carpenter and Feroz, 2001). According to Falkman and Tagesson (2008, p. 274), "the more dependent the organization is, the more pressure it will feel". In this regard, the purpose of complying with the requirements of the funding agency, that is, the Ministry, is "to provide institutional legitimation" (Rahaman *et al.*, 2004, p. 35) by reporting the LA 21 activity implementation. The

organization's formal structure is "highly institutionalized and functions as myths" (Meyer and Rowan, 1977, p. 344). In this context, the LA 21 program is regarded as an element of formal structure.

This coercive pressure towards LA 21 activity can be felt to varying extents by different councils. Councils that feel a higher level of this pressure are expected to display a higher commitment to LA 21. It is advocated here that the extent of sustainability reporting depends strongly on the level of this commitment by the local councils. The councils that show a greater commitment in the LA 21 implementation are hypothesised to disclose more sustainability information on the websites. In this regard, the coercive pressure for reporting sustainability information on the websites is more subtle and less explicit (DiMaggio and Powell, 1983) than the funding requirement for implementing the LA 21 program. As well, this is an indication of the strategic behaviour to comply with the institutional environment (Oliver, 1991), that is, the requirement by the Ministry to implement the LA 21 program.

Corresponding with the different level of commitment undertaken by local authorities in the LA 21 program, under the coercive isomorphism mechanism, the hypothesis is:

H3 The extent of sustainability reporting on the websites is higher for councils that have greater commitment to the LA 21 program.

3.8.4 Public Sector Awards

The award criterion is used as a ceremonial assessment to define the value of the structured elements (Meyer and Rowan, 1977). Ryan and Purcell (2004, p. 21) found that "there was also evidence of informal coercive isomorphic pressures, mainly from criteria applied in annual report competitions".

A star rating system was designed in 2008 to evaluate the performance of local authorities in Malaysia. One of the evaluation criteria is related to the local authorities' websites. Thus, all the local authorities have to comply with the award criteria within the same organizational field.

In relation to legitimacy, it is contended here that award-winning councils are subjected to greater political visibility³¹ than councils that have not received any award. It was maintained by Lim and McKinnon (1993, p. 198) that "politically visible authorities would have voluntarily disclosed more information than authorities with lower visibility".

The institutional theory proponents such as Meyer and Rowan (1977) and Amran and Devi (2007) suggested that conformance to the ceremonial assessment criteria is as a result of the isomorphic pressure. Further, the award criteria include "legitimate organizations with internal participants" and the ability to "demonstrate socially the fitness of an organization" (Meyer and Rowan, 1977, p. 351). This is important to ensure the continued support from society. It is argued that an award-winning organization tends to adopt best practices in all aspects of the organization including achieving sustainable development. Due to a greater political visibility for the award-winning organization, the hypothesis designed to test this coercive isomorphism assertion is formally stated as follows:

H4 The extent of sustainability reporting on the websites is higher for councils that have won a public sector award.

3.8.5 Type of Councils

There remains a marked disparity in the usage of information technology between urban and rural areas in Malaysia (Genus and Mohamad-Nor, 2007). This situation is also applicable to the local authority's environment. The possible reason underlying this fact is the availability of more highly competent IT professionals in city councils compared to municipal councils. Similarly, it is maintained that there will be more highly competent IT staff in municipal councils than district councils. Further, the more highly professionalized a labour force becomes, in terms of academic qualifications and participation in professional and trade associations, the greater the tendency to which that organization would become similar to their counterparts in the same organizational field (DiMaggio and Powell, 1983). According to DiMaggio

³¹ At a general level, an entity which is politically visible (or politically sensitive or exposed) may be described as one which attracts a disproportionate share of scrutiny by politicians, organized groups such as trade unions, and the general public, making it a potential target for the imposition of political costs (Lim and McKinnon, 1993, p. 192). Another evidence of political visibility is the media. Evidence of the prominence of the media in state and local politics can be found in the presence of media specialists and press secretaries in most large political organizations (Cheng, 1994).

and Powell (1983, p. 155), "the more elaborate the relational networks among organizations and their members, the greater the collective organization of the environment".

By attending professional training, seminars or ongoing continued professional development programs, the professionals from each council will meet, discuss and share similar topics related to their work, including website reporting. This situation is taking place more in city councils (i.e. professionals from the councils are meeting more). Such networking may promote normative pressure in the sense that progressive values and norms in the public service will be actively promoted. Norms such as online interactivity, transparency, and accountability among professional members, in turn, will be transferred to the members of the respective councils. Arguably, the level of normative pressure differs based on the type of council due to the variation in terms of the availability of IT professionals. This would have impact on the extensiveness of information reported on a council's website.

Consistent with the blurring of boundaries between three types of isomorphism (Scott, 1995; Ryan and Purcell, 2004; Mack, 2006), this thesis also put forward type of councils as a determinant of disclosure due to coercive pressure. In advancing the sustainable development agenda among the local councils, it appears that the directive was initially imposed on city and municipal councils in 2002 with district councils following in 2007. Therefore, the pressure for sharing the knowledge, concepts and awareness of sustainable development is asserted to have been experienced in a similar sequence.

Due to different levels of professionalism in different councils, under the normative isomorphism and the stage of coercive pressures exerted on different councils in the sustainable development agenda implementation, final hypothesis to be tested is:

H5 The extent of sustainability reporting on the websites is different for different types of councils.

3.8.6 Control Variables

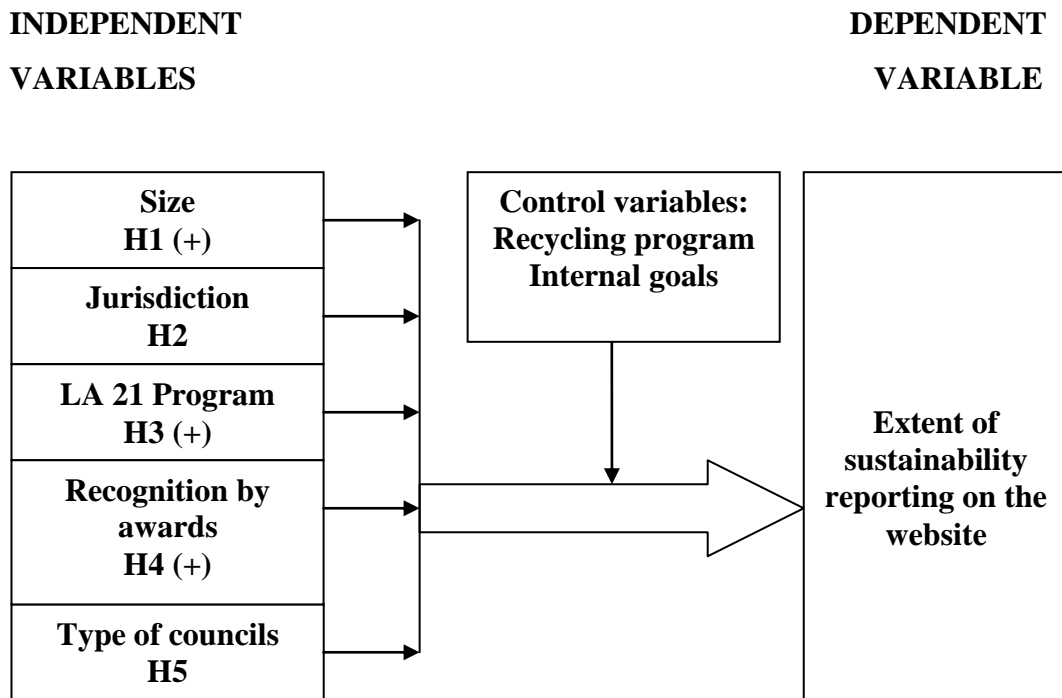
This section discusses the control variables which may affect the extent of sustainability reporting on Malaysian local authority websites: that is, recycling program logo and internal goals. A recycling program logo is expected to have a positive relationship with the extent of sustainability reporting. It is suggested here that councils that display the recycling program logo would have more disclosure of recycling program information. A recycling program logo indicates the identity of an organization which is socially responsible and highly committed to environmental protection and control. Therefore, it is also expected that these organizations will promote the sustainable development agenda, which possibly can be done via the websites, and which includes the reporting of sustainable development activities.

In this thesis it is maintained that, for local authorities, it is well understood that public value should be reflected in the organizational mission statements to show commitment to the society. Mohd-Ali *et al.* (2006) highlighted that an example of public value was the social, economic and environmental benefits to society. Therefore, this thesis intends to examine the information related to sustainable development elements (social, environmental and economic) in the objectives, vision or mission statement on the local councils' websites. Internal goals are expected to have a positive relationship with the extent of sustainability reporting. It is suggested here that councils that have internal goals would have more disclosure of sustainability information.

3.9 CONCEPTUAL SCHEMA

Figure 3.4 provides a conceptual schema underlying the testable hypotheses. It shows the hypotheses direction on the extent of sustainability reporting on Malaysian local authority website. All the independent variables (except jurisdiction and type) and control variables are expected to have a significant positive relationship with the dependent variable. The measurement for the dependent variable, independent and control variables will be further explained in detail in Chapter Four.

Figure 3.4 Conceptual Schema



3.10 CHAPTER SUMMARY

To conclude, this chapter has reviewed the theoretical foundation and research methodology used in the thesis. This chapter also outlined five testable hypotheses and the summary of the hypotheses' direction is presented in Figure 3.4. The next chapter explains research design for the quantitative phase.

CHAPTER FOUR

RESEARCH DESIGN (QUANTITATIVE PHASE)

4.1 INTRODUCTION

In the previous chapter, hypotheses were developed for factors potentially related to the extent of sustainability reporting on Malaysian local authority websites. This chapter begins with an explanation of the research phase in Section 4.2. Sections 4.3 and 4.4 describe the methods used to measure the dependent variables in the quantitative phase, that is, content analysis and disclosure index respectively. Section 4.5 discusses the advantages and disadvantages of content analysis and disclosure index relative to each other. The integrity of the chosen instrument is reported in Section 4.6. Section 4.7 describes the measurement of the independent variables. The control variables are presented in Section 4.8. The statistical analysis methods employed in the thesis are described in Section 4.9. Section 4.10 explains the pilot study and Section 4.11 concludes this chapter.

4.2 RESEARCH METHOD IN PHASE ONE

This section introduces the methods used in the website analysis. The measurement techniques for the dependent variable in the thesis are content analysis (form approach) and a disclosure index. The dependent variable in this chapter is the extent of sustainability reporting on websites which is associated with the 'how much' component of the first research question.³² The choice of a particular instrument is important for this thesis as the contrast between these two approaches can have serious implications for researchers (Williams, 1998). One example was highlighted by Williams (1998) when comparing the economic performance of three companies. Williams found that different results could be derived if, firstly, the company's level of reporting was measured using three different units of analysis in the content analysis method (word, sentence or page) or, secondly, by using a disclosure index. Below is a more extensive discussion of each instrument, concentrating on the development of the exact measurement used in the thesis.

³² The 'what' component of the first research question is explained in Chapter Five.

4.3 CONTENT ANALYSIS

This section provides an overview of the first technique used to measure the dependent variable (DV), that is, content analysis. Content analysis involves the process of quantifying qualitative information acquired from written materials such as annual reports as well as other media, for example, newspapers and websites. Content analysis includes the coding and categorization of qualitative information into the "quantitative scales" (Abbot and Monsen, 1979, p. 504) and "is mainly associated with a positivistic approach" (Collis and Hussey, 2003, p. 255).

Content analysis is claimed to be the most common method used to measure an organization's disclosure of social and environmental information and involves two activities, namely: "the construction of a classification scheme (defining a set of boxes into which to put the data) and devising a set of rules about 'what' and 'how' to code, measure and record the data to be classified" (Milne and Adler, 1999, p. 240).

The Writing Centre of Colorado State University (2007) explained the steps in conducting analysis after identifying research questions and choosing a sample or samples. The steps include managing categories on a variety of levels—word, word sense, phrase, sentence, or theme—and examining them using one of content analysis' basic methods: conceptual analysis or relational analysis (semantic analysis). According to the Writing Centre of Colorado State University (2007), conceptual content analysis can be considered to establish the "existence and frequency of concepts—most often represented by words or phrases—in a text".

A different description of content analysis was provided by Smith and Taffler (2000) who claimed there were two types of content analysis. The first type they referred to as the 'form oriented' method (objective analysis) which involves routine counting of words or concrete references, and the second type, the 'meaning oriented' (subjective analysis) method, focuses on analysis of the underlying themes in the texts under investigation. Beck *et al.* (2007) claimed that the form oriented studies have, in the past, focussed on volumetric measurement. The 'form oriented' content analysis approach and a disclosure index are examined in this thesis to determine the most appropriate method to measure the dependent variable.

The first technique under content analysis considered here is the 'form oriented' approach. The content/measurement unit chosen is the number of sentences. The quantity assessment by type of sub-categories and total are based on the number of sentences commonly used to examine written material contained in the annual report (Hackston and Milne, 1996; Walden and Schwartz, 1997; Buhr, 1998; Williams and Pei, 1999; Thompson and Zakaria, 2004; Haseldine *et al.*, 2005; Yapa *et al.*, 2005).

4.4 DISCLOSURE INDEX

Beck *et al.* (2007) argued that one of the principal methods of capturing the meaning of disclosure has been the disclosure index. There is a similarity between conceptual content analysis and disclosure index techniques. This supports the notion by Tendori and Veneziani (2007) that the disclosure index follows the principles of content analysis. Beck *et al.* (2007) further added (p. 5):

In the simplest form of data capture in an index, items are recorded in a dichotomous (present/not present) code where 'present' is indicated by a one in a spreadsheet field and 'not present' by a zero.

The disclosure index is widely used to measure the extent of voluntary disclosure. As asserted by Coy and Dixon (2004, p. 79):

Disclosure indices are an oft applied method in accounting research, particularly studies in annual reports, being used to provide a single-figure summary indicator either of the entire contents of reports of comparable organizations or of particular aspects of interest covered by such reports such as voluntary disclosures and environmental disclosures.

Nurhayati *et al.* (2006a) implied that this technique is more suitable for developing countries that generally have a poor quality and quantity of environmental information disclosed in annual reports. According to Williams (1998, p. 142), it has been discussed in past literature that "this technique is an effective means of codifying qualitative information that can be empirically tested for associations with potential explanatory variables".

The following section discusses the advantages and disadvantages of the methods explained above.

4.5 ADVANTAGES AND DISADVANTAGES OF CONTENT ANALYSIS AND DISCLOSURE INDEX APPROACHES

This section focuses on the differences between content analysis and disclosure index that represent advantages and disadvantages of both methods relative to each other. The first difference is the emphasis of disclosure. Content analysis is able to highlight the depth of information related to the 'extensiveness' of activities undertaken by the councils towards achieving sustainable development. For example, 10 environmental activities are recorded as 10 or more sentences in the content analysis method, whereas the score of '1' is only awarded to the first environmental activity using the disclosure index method. Further, Williams's (1998) advocated that content analysis potentially provides a wider scope of sustainability issues reported as compared to the disclosure index.

The second difference is in terms of the measurement. In the disclosure index, the scoring system helps in examining the existence of concepts and issues. The simplest scoring system is that '1' is given to indicate the presence of certain concepts or issues, whilst '0' indicate otherwise. This reduces the problem of over counting in the content analysis method. Purushothaman *et al.* (2000) highlighted that sentences are not an accurate measure of the importance placed on a particular theme and may potentially result in double counting, thus overstating the quantity of CSR information. It is argued that an organization may report the same item/issue in several places in annual reports or other medium such as websites.

The third difference in both methods is due to the level of subjectivity. In a disclosure index, pictures or graphics are included in determining the presence of disclosure items or concepts. The content analysis method is likely to ignore pictures due to the high level of subjectivity. Additionally, according to Steenkamp and Northcott (2007, p. 20), "as a research method, content analysis is inherently subjective and presents a number of practical challenges" such as difficulties in selecting recording units, coding of repetitive message and subjective judgements.

The fourth difference is addressed by time spent on both methods—the disclosure index method involves less time than the content analysis method. This is because in

the disclosure index, the process involves determining the presence of items or concepts regardless of the number of times they appear. In addition, the disclosure index method did not require specific decision rules to count for any item, as used in counting the sentences. Meanwhile, in content analysis, for example, in the sentence count method, the process requires counting each time the items or concepts appear. This is a fatiguing process compared to the disclosure index method.

Based on the above explanation, it can be concluded that both the content analysis and disclosure index techniques have their own strengths and weaknesses. Both methods have been used to determine the level and extent of social and environmental disclosures. From this perspective, the measurement of the dependent variables is discussed further in the following section.

4.6 DEPENDENT VARIABLE

This section provides an explanation of calculating the dependent variable, that is, the extent of sustainability reporting on Malaysian local authority websites. The "extent" is defined here as the total amount or the quantity of disclosure in order to measure the 'how much' component of the first research question. The thesis did not cover the quality aspect of sustainability reporting on the website. This thesis did not examine other disclosure dimensions such as evidence (monetary quantification, non-monetary quantification, and declaration), news (good news, bad news, neutral news) and location of the information disclosed, as they were related to the quality measurement of social and environmental disclosure (Gray *et al.*, 1995a; Deegan and Gordon, 1996; Hackston and Milne, 1996; Raar, 2002).

The recording unit in this thesis are the three categories of the sustainability reporting theme: 1) environment; 2) social; 3) economy. There are many definitions of sustainability reporting.³³

The websites were accessed, downloaded and printed in September 2008. The timeframe is emphasized in the website studies as the content of websites change frequently, in turn requiring rapid collection of data (McMillan, 2000; Lee *et al.*,

³³ Refer to Chapter Two, Section 2.2 for the definition of sustainability reporting adopted in this thesis.

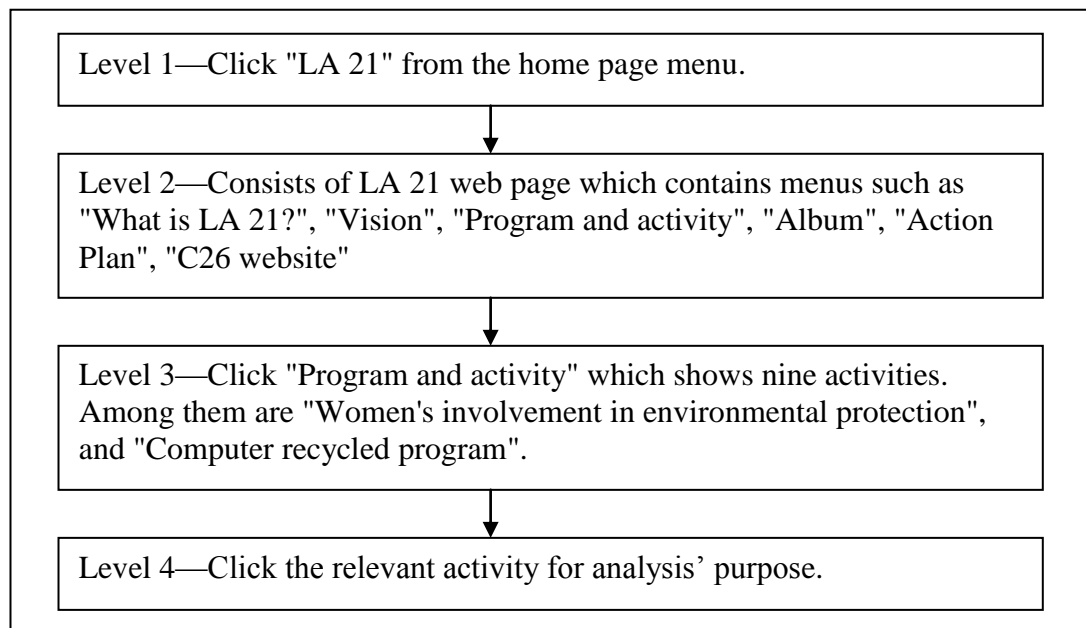
2007). Additionally, Purushothaman *et al.* (2006) criticised the data gathering method used in the past literature as: 1) being silent about the data collection stage which raised doubts about the issue of comparability within the sample, and 2) failing to download the information and thus solely analysing from the Internet (not analysing hard copies of the content of websites). Both these criticisms could raise questions regarding the reliability of data.

Careful observation of each item on the website's home page and its link to subsequent web pages were made before the printing of the entire website to avoid omission of any web pages. As quoted in the ACCA Reporting Guideline (2001, p. 15):

The most common approach to aid navigation is to allow users to 'drill down' through several levels of information with varying levels of details ... a drill-down approach can also be used to present information via levels that correspond to the likely knowledge level of the users. A first level web page, for example, may provide an overview, with second and third level pages providing increasing detail for the more interested or special user.

In carrying out this thesis, the analysis is not limited to any number of drilling levels to capture the relevant data from the website. The drilling level normally starts from the home page menu and is followed by the subsequent 'clicks' depending on the location of the information in the website. For example, as shown in Figure 4.1, in analysing LA 21 activity implementation in Council C26, the following steps were undertaken:

Figure 4.1 An Example of Drilling Level Based on the LA 21 Program in Council C26



By referring to Figure 4.1, it can be seen that the complete analysis for the LA 21 program in the Council C26 comprises four levels of drilling. The levels of drilling vary from one set of information to another depending on its relevancy for analysis' purpose.

At the end of the printing³⁴, the website's site map was reviewed to ensure all relevant web pages had been printed out. The site map³⁵ provides a diagrammatic summary of site contents, illustrating the structure used to organize information (ACCA, 2001). The thesis's unit of analysis was the entire website of the local authority. The home page is central to web-based communication because it provides a kind of "front door" to all the messages contained in the site (Zhou, 2004; Hashim *et al.*, 2007). In addition to the content that was provided in detail on the home page, hyperlinks, including text links, image links and navigation bars which appeared on the home page were also coded. Any link from the home page to another organization was excluded from the scope of this thesis.

³⁴ At this point in time, there is no special way to print all the web pages simultaneously. Hence, the researcher is 'clicking' and printing the information on each web page at the same time.

³⁵ Not all websites contain a site map.

Callaghan (2003) highlighted a few threats in judging the content of websites: time consuming; involves numerous assessments of links and website volume; inconsistencies in format and discussion of general topics; personal researcher's bias in judging the level of communication over the website; and no prior notice of change in the websites when using more than one coder. To address the issue of reliability, it is not uncommon to make some assumptions in website studies. Hence, in this thesis, to minimize the potential limitations associated with website analysis, the following assumptions were made in determining the relevant information for analysis.

Sections excluded from analysis

This thesis did not cover analysis on the information such as electronic services provided by the local authority, downloadable forms, laws, functions of the local authorities, Frequently Asked Question (FAQs), any application procedure, list of interesting places, list of committee members and any common terms related to the LA 21 program such as the definition of sustainable development and history of this program. Most councils have included common information about sustainability as shown in Example 1, Appendix 4_1. This is due to the fact that this information is mostly of a descriptive nature and is not considered to impact on, or be related to, sustainability. Another example is FAQs shown in Example 2, Appendix 4_1, which mostly provide the same information as in the Ministry of Housing and Local Government's website.

Exclude links to other organizations' websites

Here, this thesis did not consider links to other organizations' websites, for example, most council websites provide links to the Ministry of Housing and Local Government. Therefore, any information related to the Ministry's website was excluded from the thesis.

4.6.1 Development of Content Analysis and Disclosure Index Instruments

This section covers the sustainability items from previous studies to develop both content analysis (Appendix 4_4) and disclosure index instruments (Table 4_4).

This thesis did not refer to the GRI solely. There were two reasons for this. Firstly, it was observed that some of the indicators in GRI were irrelevant to the context of this thesis, that is, the public sector environment.³⁶ This supports Guthrie and Farneti (2008, p. 363) in their study on the application of GRI by the Australian public sector whereby they determined that "the application of the GRI was fragmentary and organizations choose only some of the GRI indicators to disclose". They concluded that the GRI and SSPA was too generic for public sector organizations and did not include sufficient sector-specific variables. Secondly, a recent finding from a developed country (Italy) stated that none of the local governments referred to the GRI framework in their social reports (Farneti and Siboni, 2008). In relation to GRI, the content analysis instrument encompassed the type of information stated in the Sustainability Reporting Guidelines, namely: 1) strategy and profile; 2) management approach, and 3) performance indicators (GRI, 2006).

There were five steps involved in developing the content analysis and disclosure index instruments:

- Step 1 - Use of Jose and Lee's (2007) categorization list for the environment category
- Step 2 - Removal of some items from Jose and Lee's (2007) categorization list
- Step 3 - Extension from environmental to social and economy themes with justifications from other literature
- Step 4 - Addition of other items from other literature and specific to LA 21
- Step 5 - Application of content analysis items to the disclosure index instrument

³⁶ A review of indicators in the GRI version 3.0 and SSPA was made prior to development of the content analysis and disclosure index instruments.

Step 1 - Use of Jose and Lee's (2007) categorization list for the environment category

The main reference for categorization was taken from Jose and Lee (2007). Their study was chosen as a guideline because they used websites to analyse environmental information. Jose and Lee analysed the content of corporate website environmental disclosures of Fortune's Global 200 companies in seven areas which consisted of 37 specific environmental parameters. They developed the parameters based on environmental reporting guidelines, such as the GRI and the International Chamber of Commerce for Sustainable Development (ICC). Jose and Lee (2007) analysed the content of corporate environmental disclosures with respect to the following seven areas: 1) environmental planning considerations, 2) top management support to the institutionalization of environmental concerns, 3) environmental structures and organizing specifics, 4) environmental leadership activities, 5) environmental control, 6) external validations or certifications of environmental programs, and 7) forms of corporate environmental disclosures. The seven areas and their respective measures are presented in Table 4.1.

Table 4.1 Categories of Environmental Communication

	Categories
1.	Environmental planning considerations
a.	Policy <ul style="list-style-type: none"> • Presence of environmental policy
b.	Philosophical underpinnings <ul style="list-style-type: none"> • Sustainable development • Life-cycle approach • Integrated management
c.	Strategic rationale and driving forces <ul style="list-style-type: none"> • Compliance • Competitive advantage • Openness to stakeholder concerns • Proactive approach or strategy • Contributing to global sustainability
d.	Planning approach <ul style="list-style-type: none"> • Risk management • Corporate priority or not • Continuous process improvement • Predetermined targets and objectives • Environmental research and development
2.	Top management commitment to the institutionalization of environmental practice <ul style="list-style-type: none"> • Foreword (of environmental issues) by top-level executives such as the CEO
3.	Environmental structure and organizing specifics
a.	Department affiliation of corporate environmental function <ul style="list-style-type: none"> • Separate (independent function) • Combined with other departments, such as Human Resource and Safety and Health
b.	Management priority <ul style="list-style-type: none"> • Top-level executive in charge
c.	Structural integration of environmental concerns <ul style="list-style-type: none"> • Presence of EMS
d.	Prevalence of environmental practices <ul style="list-style-type: none"> • Office and site practice
e.	Stakeholder involvement <ul style="list-style-type: none"> • Employee training • Customer training • Supplier or contractor training • Community involvement
4.	Environmental leadership activities <ul style="list-style-type: none"> • Promotion of environmental issues at the micro (industry) level • Promotion of environmental issues at the macro (national) level • Partnership with NGOs
5.	Environmental control
a.	Control measures <ul style="list-style-type: none"> • Compliance data • Historical trends • Progress towards goals • Explanation of variances • Explanation of corrective actions
b.	Audits <ul style="list-style-type: none"> • Internal audit • External or independent audit
6.	External Certifications <ul style="list-style-type: none"> • EMAS, ISO 14001
7.	Environmental communication
	Medium of environmental disclosure <ul style="list-style-type: none"> • General external report • Environmental annual report

Step 2 - Removal of some items from Jose and Lee's (2007) categorization list

Only four areas from Jose and Lee's list were applied in the thesis, namely: 1) Environmental planning consideration, 2) Top management commitment to the institutionalization of environmental practice, 3) Environmental structure and organizing profiles, and 4) Environmental leadership activities. The other three areas were not chosen because they were irrelevant to this thesis. For example, there was no external environmental annual report under the area of environmental communication.³⁷ Out of these four areas based on Jose and Lee's study, only 11 items were applicable to the thesis:

Environmental planning consideration area—Presence of environmental policy and client charter, proactive approach or strategy, process improvement such as quality management system, for example, ISO procedure for solid waste management, predetermined targets and objectives. (4)

Top management commitment to the institutionalization of environmental practice—Foreword (of environment issue) by a president or mayor or secretary. (1)

Environmental structure and organizing specifics—Separate (independent function), combined with other departments, such as Human Resource and Public Health, top-level executive in charge and contact details, community involvement. (4)

Environmental leadership activities—Promotion of environmental issues, partnership with NGOs. (2)

³⁷These areas were chosen after analyzing a few websites of local authorities in April 2008. Belal and Momin (2009, p. 12) asserted the caution of "using similar CSR categories often established in CSR literature through content analysis of annual reports of corporations in developed countries while describing CSR practices in emerging economies". In view of this, the preliminary examination was conducted to determine the 'real' disclosure on a council's website.

Step 3 - Extension from environment to social and economy themes with justifications from other literature

The five areas from the environment category were also extended to both the social and economy categories. The extension to both the social and economy categories is presented in Table 4.2.

Table 4.2 Development of the Content Analysis Instrument

Environment Category/Area	Source	Social Category/Area	Economy Category/Area
Environmental planning consideration	JL	Social planning consideration	Economy planning consideration
Presence of environmental policy and client charter	JL, R, SM, GG	Presence of social policy and client charter (HT)	Presence of economy related policy and client charter (E)
Proactive approach or strategy	JL, HT, website	Proactive approach or strategy (HT)	Proactive approach or strategy (E)
Continuous process improvement such as quality management system	JL, CG, SM, website	Continuous process improvement such as quality management system (E)	Continuous process improvement such as quality management system (E)
Predetermined targets and objectives	JL, SM, GG	Predetermined targets and objectives (E)	Predetermined targets and objectives (E)
Top management commitment to the institutionalization of environmental practice	JL	Top management commitment to the institutionalization of social practice	Top management commitment to the institutionalization of economy practice
Foreword (on environmental issues) by a president or mayor or secretary	JL, SM, HT website	Foreword (on social issues) by a chairperson or mayor or secretary (HT)	Foreword (on economic issues) by a president or mayor or secretary (E)
Environmental structure and organizing specifics	JL, website	Social structure and organizing specifics	Economy structure and organizing specifics
Separate (independent function)	JL, CG, GG	Separate (independent function) (E)	Separate (independent function) (E)
Combined with other departments	JL, website	Combined with other departments (E)	Combined with other departments (E)
Internal program or activities	R, GG, website	Internal program or activities (R)	Internal program or activities (S)
Major services related to environment	B	Major services related to social (E)	Major services related to economy (E)
Top-level executive in charge and contact details	JL, HT	Top-level executive in charge and contact details (HT)	Top-level executive in charge and contact details (HT)
Community involvement	JL	Community involvement (R, HM, HC)	Community involvement (E)
Environmental leadership activities	JL	Social leadership activities	Economy leadership activities
Promotion of environmental issues	JL	Promotion of social issues (E)	Promotion of economic issues (E)
Partnership with NGOs	JL	Partnership with NGOs (E)	Partnership with NGOs (E)
Others		Others	Others
Financial information	HT, GG, HM, SM, FS	Financial information (R)	Financial information (E)
Performance indicators	B	Performance indicators (E)	Performance indicators (E)

E = extension from Jose and Lee (2007); JL = Jose and Lee (2007); CG = Cormier and Gordon (2001); F = Frost *et al.* (2005); SM = Smith *et al.* (2007); GG = Gibson and Guthrie (1995); FS = Frost and Seamer (2002); HM = Hackston and Milne (1996); HC = Haniffa and Cooke (2005); HT = Ho and Taylor (2007); R = Rikhardson *et al.* (2002); S = Stowers (1999); B = Rodriguez-Bolivar (2009)

As presented in Table 4.2, it can be seen that there were many references taken from the past literature in relation to the environmental items.³⁸ In this instance, an item from the environment category was applied to both the social and economy categories. An example of this was the predetermined environmental targets and objectives. This item was used in the past literature (see, for example, Gibson and Guthrie, 1995; Jose and Lee, 2007; Smith *et al.*, 2007). In both the social and economy categories, this item was known as 'predetermined social targets and objectives' and 'predetermined economic targets and objectives' respectively.

Meanwhile, there were also references with respect to both the environment and social categories. In this context, the extension was applied to the economy category. An example of this was the presence of the environmental policy and client charter. This item was used by previous research (Gibson and Guthrie, 1995; Rikhardsson *et al.*, 2002; Jose and Lee, 2007; Smith *et al.*, 2007). Meanwhile, the social policy was used by Ho and Taylor (2007) in their TBL reporting study in the US and Japan. Next, these two items were used in the economy category and known as 'the economy policy and client charter'. In the Malaysian context, this relates to the policy and client charter economy services such as licensing, rate of services, tender and quotation, industrial and commercial, valuation and asset management, and others.

There was also an instance whereby all the three categories have their own individual references. An example of this was the internal program or activities. In the environment category, this item was used by Rikhardsson *et al.* (2002) and Gibson and Guthrie (1995). As well, Rikhardsson *et al.* (2002) used this item in the social category. Finally, in the economy category this item was used by Stowers (1999) in order to explain the economic activities of the local authority, such as tourism, business activities and economic development activities.

Notably, it is apparent from Table 4.2 that most of the items under the economy category were extended from the environment category. An argument for this is that most economy indicators employed from past studies were not relevant to the public sector environment. For example, Ho and Taylor (2007) used items such as

³⁸ Refer to Appendix 4_2 for details of the methodological issues of the five main studies.

customers, suppliers, investors/creditors and corporate investments which were based on the GRI. These items were not applicable to local government in Malaysia.

Step 4 - Addition of other items from other literature and specific to LA 21

Table 4.3 reveals some additional items which are only relevant to an individual category.

Table 4.3 Additional Items in the Content Analysis Instrument

Environment Category/Area	Source	Social Category/Area	Economy Category/ Area
Environmental planning consideration	JL	Social planning	Economic planning
Statements about recycling, waste management, environmental protection and control, beautification of landscape, pollution of water, air and natural resources	HT, CG, SM, HM, website		
Environmental structure and organizing specifics	JL, website	Social structure and organizing specifics	Economic structure and organizing specifics
		LA 21 Unit (website)	
		LA 21 officer (website)	
		Any special LA 21 committee (websites)	
Others		Others	Others
		Number of employees (HT, F, HM, HC)	
		Local employment (HT, website)	

JL = Jose and Lee (2007); CG = Cormier and Gordon (2001); F = Frost *et al.* (2005); SM = Smith *et al.* (2007); HM = Hackston and Milne (1996); HC = Haniffa and Cooke (2005); HT = Ho and Taylor (2007).

From Table 4.3, it can be seen that specific items, that is, statements about recycling, waste management, environmental protection and control, beautification of landscape, pollution of water, air and natural resources were used in past studies (Hackston and Milne, 1996; Cormier and Gordon, 2001; Ho and Taylor, 2007; Smith *et al.*, 2007).

In relation to the social structure and organizing profile, there were three items available on the websites: the LA 21 Unit, the LA 21 officer and the LA 21 committee. These items are important because the LA 21 program is one of the sustainable development initiatives in Malaysia.

Another additional item specifically in the social category is the number of employees. This item was used extensively by past research in social, environmental, as well as TBL studies (Hackston and Milne, 1996; Frost *et al.*, 2005; Haniffa and Cooke, 2005; Ho and Taylor, 2007). This item was not extended to both the environment and economy categories. Finally, the item about the local employment was taken from Ho and Taylor (2007). The combination of Tables 4.2 and 4.3 are included in Appendix 4_4.

Step 5 - Application of content analysis items to the disclosure index instrument

Finally, the disclosure index checklist was developed based on the content analysis checklist. Several items from the three categories were spelled out in a more specific manner as shown in Table 4.4. There were two major points to support this. Firstly, based on Ho and Taylor (2007), the four items that were measured as an individual item in the disclosure index method were: materials that are recycled, type of waste, strategies of recycling and methods of waste management. However, under the content analysis method all of these items were counted as the general statement related to the environmental issue in the environment category. Hence, the disclosure index considered some items to be several, which is important for index computation. Secondly, the disclosure index instrument could be used for content analysis. That is, counting the same result is obtained regardless of whether the disclosure index instrument or the content analysis instrument is used.

Table 4.4 Disclosure Index Instrument

	Items	Source
Environment	General statement or policy (environment)*	JL, R, SM, GG
	Client charter (environment)*	JL, R, SM, GG
	Any mention about the environment for example in the mission statement	HT,CG, SM, HM, website
	Any strategy related to environmental issues	JL, HT, website
	Any mention about the environment as part of a continuous improvement process	JL, CG, SM, website
	Any mention about predetermined environmental targets	JL, SM, GG
	Any mention about the environment in a foreword by the chairman or secretary	JL, SM, HT, website
	Individual environmental department	JL, CG, GG
	Combined environmental department and other departments	JL, website
	Environmental activities or programs	R, GG, website
	Environmental services	B
	Head of department of the environment, and contact details	JL, HT
	Promotion of environmental issues	JL
	Stakeholders' engagement on environmental issues by forum	JL
	Financial information on environmental issues	HT
	Materials that are recycled*	HT
	Strategies for recycling*	HT
	Performance indicators	B
	Type of waste*	HT
	Methods of waste management*	HT
Social	General statement or policy (social)*	E
	Client charter(social)*	E
	Any mention about social issues for example in the mission statement	website
	Any strategy related to social issues	HT
	Any mention about social issues as part of a continuous improvement process	E
	Any mention about predetermined social targets	E
	Any mention about social issues in a foreword by the chairman or secretary	HT
	Individual social department	E
	Combined social department and other departments	E
	Social activities or programs	E
	Social services	E, websites
	Head of department of social, and contact details	HT
	Promotion of social issues via news	E
	Stakeholders' engagement on social issues by forum	E
	Any special LA 21 Unit or Sustainable Department Unit	website
	Any special committee of LA 21	website
	Financial information on social issues	R
	Number of employees	HT
	Local employment	HT
	Performance indicators	E
Economy	General statement or policy (economy) *	E
	Client charter (economy) *	E
	Any mention about the economy for example in the mission statement	website
	Any strategy related to economic issues	E
	Any mention about the economy as part of a continuous improvement process	E
	Any mention about predetermined economic targets	E
	Any mention about the economy in a foreword by the chairman or secretary	E
	Economy department*	E
	Economy activities or programs	S
	Economy services	E
	Head of department of economy, and contact details	HT
	Promotion of economic issues	E
	Stakeholders' engagement on economic issues by forum	E
	Financial information	E
	Tender and quotation*	website
	Performance indicators	E
Rental*	website	

* Modification from content analysis instrument

E = extension from Jose and Lee (2007); JL = Jose and Lee (2007); CG = Cormier and Gordon (2001); F = Frost *et al.* (2005); SM = Smith *et al.* (2002); GG = Gibson and Guthrie (1995); FS = Frost and Seamer (2002); HM = Hackston and Milne (1996); HC = Haniffa and Cooke (2005); HT = Ho and Taylor (2007)

4.6.2 Measurement of Total Dependent Variable

This section introduces the two different methods used to measure the dependent variable. The two methods were used in the thesis due to advantages and disadvantages of each method as reported in Section 4.5. The analysis started with the first technique, that is, the content analysis 'form oriented' approach using 'number of sentences' (DV sentence) as a unit of measurement to count the sustainability reporting categories (environment, social and economy). This was subsequently followed by the disclosure index (DV index). The explanation of each measure of the dependent variable is presented next.

DV (sentence)

The recording unit is comprised of the three categories of the sustainability reporting theme: 1) environment; 2) social; and 3) economy. One of the two basic decisions in the categories' definition as mentioned by Weber (1990) was the mutual exclusivity of the categories.³⁹ However, in the event that there were item(s) that belonged to more than one category, the decision rule from Hackston and Milne (1996, p. 86) was applied, "If any sentence has more than one possible classification, the sentence should be classified as to the activity most emphasized in the sentence". For example, in a case of the department, that is, the Environmental Health Department, it could be argued as being directly related to either the environment or social category. In this context, it will be counted as the environment theme due its description relating mostly to ecological matters.

The number of sentences related to the sustainability items was counted based on eight decision rules explained below. Due to an inconsistent reporting format, it was important to establish decision rules (see, for example Hackston and Milne, 1996). Examples of each (Example 1 to Example 5) are presented in Appendix 4_3.

1. Include those sentences starting with a bullet and dot point.
2. Headings are not counted as sentences.

³⁹ Environmental reporting consists of impacts of processes, products and services on air, water, land, biodiversity and human health. On the other hand, social reporting includes workplace health and safety, employee retention, labour rights, human rights, wages and working conditions at outsourced organizations (GRI, 2006). Economic reporting refers to payroll expenses, job creation, labour productivity, expenditures on outsourcing, research and development, investments in training and other forms of human capital. Nevertheless, this thesis does not incorporate the items in GRI due to the unique public sector environment.

3. Sentences starting with numbers, for example, 1), 2), 3) and also with the letters a), b), and c) are counted as one sentence.
4. Information on contact people, designation, address and telephone number are counted as one sentence each.
5. If there is a table, each row will be counted as a sentence.
6. Pictures are excluded from sentence counting.
7. If information is presented in a structured form, count one line as a sentence.
8. Repetitive messages are counted as different sentences.

The steps undertaken in measuring the total DV (sentence) appear in Table 4.5.

Table 4.5 Steps Involved in Calculating DV (Sentence)

Steps	Details
1	Read all the websites' hard copies.
2	Classify the information based on the categories outlined in Appendix 4_4.
3	Count the amount of classified information based on the decision rules in ascertaining what constitutes a sentence.
4	Record the sentence count in the coding sheet.
5	Calculate the total for DV (sentence).

DV (index)

For the disclosure index approach, the presence of items in the disclosure index instrument was investigated. A score of '1' was given if an item was present and a '0' if otherwise. The disclosure index was unweighted to reduce any subjectivity. Moreover, each disclosure item in the checklist (Refer Table 4.4) is considered equally important and relevant to all sample organizations (Craig and Diga, 1998). The total score of the DV (index) was calculated based on the presence of items developed from the disclosure index instrument which is scored as '1'. The steps undertaken in measuring the total DV (index) are revealed in Table 4.6.

Table 4.6 Steps Involved in Calculating DV (Index)

Steps	Details
1	Read all the websites' hard copies.
2	Determine the presence of information based on the categories outlined in Table 4.4.
3	Score '1' if item present and '0' if otherwise.
4	Record the presence of items in the coding sheet.
5	Calculate the total for DV(index)

All the steps undertaken in the thesis were firstly examined via a pilot study, which will be detailed in Section 4.10. This was to ensure the robustness of both the content analysis and disclosure index instruments developed in the thesis.

4.7 INDEPENDENT VARIABLES

This section discusses the independent variables and their measurement. These independent variables are the council's size, jurisdiction, the LA 21 program, public sector awards and type of councils.

4.7.1 Size of Councils

The size of councils was measured by their (relative) council's revenue.⁴⁰ Unlike private companies in Malaysia, public sector organizations do not publish their financial statements publicly. In addition, only 136 councils submitted their financial statements to be audited by the Auditor General as at 31 December 2006.⁴¹ This means that there was no revenue data available for nine councils. The nine councils were represented by a federal council (Jurisdiction J1), two councils from Jurisdiction J12 and six councils from Jurisdiction J13. The auditor in charge of these three jurisdictions was contacted to find out the availability of revenue information for the nine councils. The auditors co-operated and supplied the required information.

The size of council was the only continuous independent variable in this thesis. Previous studies that employed institutional theory as their theoretical lens used various proxies to measure size, for example, sales (Amran and Devi, 2007; Collin *et al.*, 2009), revenue and number of employees (Leiter, 2005), number of inhabitants and turnover (Falkman and Tagesson, 2008). With regards to local government research, proxies for size include population using a 7-point scale (Moon, 2002; Moon and Norris, 2005) and average total assets and revenue (Laswad *et al.*, 2005).

There are two main reasons for using revenue as a proxy for a council's size. Firstly, there is no other information that can be tested under institutional isomorphism, such

⁴⁰ The latest published data for a council's revenue is taken from the Auditor General's Report 2007, which is published in 2008 and is available from the National Audit Department's website (www.audit.gov.my).

⁴¹ This is closely associated with the overall poor financial management system in Malaysia.

as the number of employees, from the council's websites. Secondly, the financial information available from the Auditor General's report is limited, and consists of only revenue, expenditure, current assets, and current liabilities.

The number of inhabitants was inappropriate to measure the size of councils because of the unavailability of the latest census by the Department of Statistics, Malaysia. The latest available census of population was for the year 2000 and was considered to be outdated. Further, this variable was unlikely to explain the isomorphic pressures that drive the extent of sustainability reporting on Malaysian local authority websites.

4.7.2 Jurisdiction

There are 13 states and one federal territory in Malaysia, all of which are included in this thesis. Jurisdiction was assigned as a categorical variable (refer to Table 4.8).⁴²

4.7.3 LA 21 Program

This thesis measured the commitment of a local council to the LA 21 program in two ways. Firstly, in their 2007 annual report, the Ministry named the councils they considered to be implementing the LA 21 program. Secondly, each website was examined to determine whether there was any disclosure of the LA 21 implementation or otherwise.

Based on the Ministry's 2007 annual report, there were 84 councils that had implemented the LA 21 program (Ministry of Housing and Local Government, 2008d). This figure was verified by the Director of Policy and Local Government Development Division in November 2008 via a personal communication. Further, a list of the implementing councils had been provided by the Deputy Director of Policy and Local Government Development Division for analysis purpose. This is considered a unique measurement employed in this thesis, that is, using an official list of implementing councils provided by the Ministry.

⁴² In the sensitivity analysis, the dichotomous variable will be used to measure jurisdiction, with a score of '1' given to the councils that belong to a state with the same political ruling party as the federal government and '0' if otherwise. The scoring will be based on the 12th Malaysian General Election's result in March 2008. As well, the additional categorical variables-based on region and division of Malaysia —classification will be used in the sensitivity analyses.

Then, the list of implementing councils was compared with the list of councils that had disclosed the LA 21 activity implementation on the councils' websites. The measurement for this categorical variable is as follows:⁴³

'0' was given for the councils that did not implement nor disclosed LA 21 on websites

'1' was given for the councils that implemented but did not disclose LA 21 on websites

'2' was given for the councils that implemented and disclosed LA 21 on websites

Comparison of disclosures for these three groups of councils enabled an explanation of the effect of both implementation and disclosure of LA 21.

4.7.4 Public Sector Awards

Amran and Devi (2007) categorized the National Annual Corporate Reporting Award (NACRA) as a categorical variable. Another categorical variable was employed by Styles and Tennyson (2007) when awarding a score of '1' to the city in the US that was awarded a Certificate of Achievement for Excellence in reporting for its comprehensive annual financial report by the Government Financial Officer's Association (GFOA), and '0' if otherwise. Similarly, this thesis identified the local authority which had received a public sector award as '1', and '0' if otherwise. Here, 'award' represents any public sector award received from the government before or during 2008. The nine public sector awards are: Prime Minister's Quality Award, ICT Quality Award, Financial Management Quality Award, Local Government Quality Award, Land District Administration Quality Award, Project Management Quality Award, Public Service Innovation Award, Joint Research Innovation Award and Quality Circle Award.

4.7.5 Type of Councils

There are three types of councils in Malaysia, namely: city councils, municipal councils and district councils. These criteria are based on the Secretary General Circular, Ministry of Housing and Local Government No 4/2008 and issued on 1

⁴³ The coding of LA21 (0, 1, 2) is arbitrary.

July 2008 (Ministry of Housing and Local Government, 2008e). The criteria in determining the type of council is summarized in Table 4.7.⁴⁴

Table 4.7 Criteria in Determining Type of Councils

Criteria	City	Municipal	District
Description	State administration centre	Main town/state/ district administrative centre	Location other than main town
Population	More than 500,000 people	Between 150,000 and 500,000	Less than 150,000 people
Revenue	Fiscally sustainable Annual revenue not less than RM100 million Capability to ensure the spending balance	Fiscally sustainable Annual revenue between RM20 million and RM100 million Provide convenient services	Annual revenue less than RM20 million
Services	Provide a high level standard of services.	Provide space and opportunity to traders Promote the growth of investment, business and commercial activities.	Emphasis on the infrastructure and public utilities.
Development	Give priority to sustainable development. Prioritize the efforts to resolve municipality issues such as illegal factory operations, safety, allocation for lower income groups and environmental protection. Sustainable city indicator as outlined in the Malaysian Urban Indicator System network (MURNINet)	Sustainable city planning that is capable of providing safe and comfortable living environment. Sustainable city indicator as outlined in the Malaysian Urban Indicator System network (MURNINet)	
Other facilities	Industrial centre, financial institution Fully equipped educational centre Centre for culture, sport and recreational activities Complete infrastructure, public utilities and public parks especially for the disabled people National and international recognition	Encourage the local residents to develop each community via the implementation of an efficient governance based program such as the LA 21 program.	

A telephone conversation was conducted with an Administrative Manager of the municipal council on 2 October 2008 to clarify the criteria in determining the type of

⁴⁴ It is noted that the development criteria has just been included in the Secretary General Circular 4/2008. This is in line with the federal government's commitment to achieving sustainable development. As well, this corresponds to the various long-term national strategic plans in relation to the sustainable development agenda.

councils in Malaysia. According to the manager, all six criteria are used in determining the municipality status of a council. However, the ultimate decision maker to award the status of councils is the Ministry.

The list of councils was provided on the Ministry's website.⁴⁵ In this thesis, the type of councils had been classified as a categorical variable, that is, '1' for district councils, '2' for municipal councils and '3' for city councils. Similarly, Laswad *et al.* (2005) used a categorical variable for the type of council: '1' if a district council and '0' if a city or regional council. Another categorical variable for a city council was employed by Gore (2004) where '1' indicated the city form of government and '0' indicated the township form of government.

4.8 CONTROL VARIABLES

This section discusses the control variables which may affect the extent of sustainability reporting on Malaysian local authority websites. A recycling program logo on the council's website had been identified as a control variable. In this thesis, the recycling logo was identified as a categorical variable. A score of '1' was given if the council's website had a link to a recycling program logo and '0' if otherwise.

Consistent with Amran and Devi's (2007) and Cahaya *et al.*'s (2009) studies, this thesis also identified internal goals as a categorical variable, that is, a score of '1' was given to the local authorities that had a mission statement and objectives related to sustainable development, and '0' if otherwise. Earlier, Elijido-Ten (2004) used the same measurement if the companies included environmental concerns in their mission or vision statement in the annual report.

A summary of the independent and control variables' measurement is described in Table 4.8.

⁴⁵ <http://jkt.kpkt.gov.my>

Table 4.8 Summary of Independent and Control Variables

Variable	Measurement/Operationalization	Type of variable	Source of information
Size	Total revenue	Continuous	Auditor General's 2007 report
Jurisdiction	Values 1 to 14 representing one federal territory and 13 states.	Categorical	Ministry's website
LA 21	Based on the disclosure of the LA 21 program and the implementation of the LA 21 program	Categorical	List from Ministry Council's websites
Public sector awards	'1' if the council has won a public sector award; '0' if otherwise.	Categorical	Council's websites
Type of council	'1' if district council, '2' if municipal council and '3' if city council.	Categorical	Ministry's website
Recycling program logo	'1' if the councils have a link to a recycling program logo; '0' if otherwise.	Categorical	Council's websites
Internal goals	'1' if the council has a goal/mission related to sustainability information; '0' if otherwise.	Categorical	Council's websites

4.9 STATISTICAL METHODS

This section explains the descriptive and inferential statistics to test the hypotheses used in this thesis. Data pertaining to the dependent variable, independent and control variables were analysed using the Statistical Package for Social Science (SPSS) software version 15.0.

4.9.1 Descriptive Statistics

The purpose of descriptive statistics is to explore, summarize and describe the data collected (Coakes *et al.*, 2006). Among the descriptive statistics used are the frequency distribution, measure of central tendency (mean), measure of variability (standard deviation), and examination of the shape of the distribution.

4.9.2 One-way Analysis of Variance between Groups (ANOVA)

The relationship between the council's size and the other independent variables were tested using a one-way ANOVA. There were two assumptions that needed to be met, namely: population normality and homogeneity of variance.

4.9.3 General Linear Model (GLM)

The General Linear Model (GLM) is a form of multiple regression with a feature that is important not only for this thesis but should be utilised in accounting research generally. According to Field (2005, p.738):

Multiple regression is an extension of simple regression in which an outcome is predicted by a linear combination of two or more predictor variables. The form of the model is $Y = (b_0 + b_1X_1 + b_2X_2 + \dots + b_nX_n) + \varepsilon$ in which the outcome is denoted as Y , and each predictor is denoted as X . Each predictor has a regression coefficient b_i associated with it, and b_0 is the value of the outcome when all predictors are zero.

GLM considers how a numerical dependent variable is related to both categorical independent variables and a metric predictor variable at the same time. In performing the GLM, the parameter estimate provides information about the effects of the individual predictor variable. There were two type of information presented, namely, the coefficient and significance tests. The transformation of the continuous dependent variable (*dvsentence*) and the independent variable (revenue) is discussed in Chapter Five. The success of transformations in improving the fit of the model is dependent on the structure of the data (Cooke, 1998).

The assumptions to be tested here were: multicollinearity, normality, linearity and homoscedasticity (Coakes *et al.*, 2006). Multicollinearity is a situation in which two or more variables are very closely linearly related. Homoscedasticity is an assumption in regression analysis that the residuals at each level of the predictor variables have similar variances (Field, 2005). The explanation of assumption tests are important in discussing the multiple regressions in Chapter Six.

The GLM is expounded here in detail as only limited accounting disclosure studies have engaged GLM (for example, Astami and Tower, 2006; Petty and Cuganesan, 2005; Tower, Hancock and Taplin, 1999). The most important feature of the GLM is the statistical test of several variables simultaneously in a regression which is computed automatically in the GLM command but not the regression command in SPSS. This partial F test (Ramsey and Schafer 1997, p. 269) can be computed from regression output with the formula

$$F = \frac{(RSS_2 - RSS_1)/(df_2 - df_1)}{RSS_1 / df_1}$$

where RSS_2 is the residual sum of squares and df_1 is the residual degrees of freedom of the regression including the variables being tested and RSS_2 and df_2 are the corresponding values for the regression without these variables. Any other variables included in either regression must be included in both regressions. P-values testing the null hypothesis that the simpler regression without the additional variables is sufficient are calculated from F tables with $df_2 - df_1$ and df_1 degrees of freedom.

Two special cases of this F test are reported in multiple regression. First, the F test typically reported in multiple regression, tests whether all independent variables can simultaneously be removed (comparing the two regressions with all or none of the independent variables included). Second, this F test equals the square of the traditional t-test for a single variable in a multiple regression.

This test is important whenever hypotheses involve several variables (possibly dummy variables). In this thesis jurisdiction is an important case because whilst it is hypothesized that disclosure will differ across the 14 jurisdictions insufficient information is available to hypothesize which jurisdictions will have higher disclosure. Determining which jurisdictions apply more coercive pressure on their local councils is beyond the scope of this thesis. Furthermore, it is not only the non-directional nature of these hypotheses that makes testing individual dummy variables inappropriate but also the lack of an unambiguous way of defining the 13 dummy variables to capture this relationship in the regression. For example, it is not clear which of the 14 jurisdictions should be the reference council to which the other 13 councils are compared and why two councils from these remaining 13 should not be compared directly.

Finally, the F test above provides a single result (p-value) for the hypothesis. With 14 jurisdictions and 13 dummy variables, it is inappropriate to provide 13 p-values for what should be a single hypothesis⁴⁶. This thesis therefore provides results using this F test for jurisdiction, LA 21 and type of council. For the latter two variables only two dummy variables are required and these are directly interpretable so results for the dummy variables are also included.

The relationship between dependent and independent variables is depicted in the following equation.

$$\begin{aligned}
 \text{Log}dv\text{sentenc}_i &= \alpha_i + b_1\text{Size}_i + b_2J1_i + b_3J2_i + b_4J3_i + b_5J4_i + b_6J5_i + b_7J6_i + \\
 & b_8J7_i + b_9J8_i + b_{10}J9_i + b_{11}J10_i + b_{12}J11_i + b_{13}J12_i + \\
 & b_{14}J13_i + b_{15}J14_i + b_{16}LA21a_i + b_{17}LA21b_i + b_{18}Award_i + \\
 & b_{19}TypeCity_i + b_{20}TypeMunicipal_i + b_{21}RecyclingLogo_i + \\
 & b_{22}InternalGoal_i + e_i \\
 dv\text{index}_i &= \alpha_i + b_1\text{Size}_i + b_2J1_i + b_3J2_i + b_4J3_i + b_5J4_i + b_6J5_i + b_7J6_i + \\
 & b_8J7_i + b_9J8_i + b_{10}J9_i + b_{11}J10_i + b_{12}J11_i + b_{13}J12_i + \\
 & b_{14}J13_i + b_{15}J14_i + b_{16}LA21a_i + b_{17}LA21b_i + b_{18}Award_i + \\
 & b_{19}TypeCity_i + b_{20}TypeMunicipal_i + b_{21}RecyclingLogo_i + \\
 & b_{22}InternalGoal_i + e_i
 \end{aligned}$$

Where

<i>Log</i> dv <i>sentenc</i> _{<i>i</i>}	=	Total number of sentences (logarithm base 10)
<i>dvindex</i> _{<i>i</i>}	=	Total index
<i>Size</i> _{<i>i</i>}	=	Total revenue in council (logarithm base 10)
<i>J1</i> _{<i>i</i>}	=	1 if Jurisdiction 1, 0 otherwise
<i>J2</i> _{<i>i</i>}	=	1 if Jurisdiction 2, 0 otherwise
<i>J3</i> _{<i>i</i>}	=	1 if Jurisdiction 3, 0 otherwise
<i>J4</i> _{<i>i</i>}	=	1 if Jurisdiction 4, 0 otherwise
<i>J5</i> _{<i>i</i>}	=	1 if Jurisdiction 5, 0 otherwise
<i>J6</i> _{<i>i</i>}	=	1 if Jurisdiction 6, 0 otherwise
<i>J7</i> _{<i>i</i>}	=	1 if Jurisdiction 7, 0 otherwise
<i>J8</i> _{<i>i</i>}	=	1 if Jurisdiction 8, 0 otherwise
<i>J9</i> _{<i>i</i>}	=	1 if Jurisdiction 9, 0 otherwise
<i>J10</i> _{<i>i</i>}	=	1 if Jurisdiction 10, 0 otherwise
<i>J11</i> _{<i>i</i>}	=	1 if Jurisdiction 11, 0 otherwise
<i>J12</i> _{<i>i</i>}	=	1 if Jurisdiction 12, 0 otherwise
<i>J13</i> _{<i>i</i>}	=	1 if Jurisdiction 13, 0 otherwise
<i>J14</i> _{<i>i</i>}	=	1 if Jurisdiction 14, 0 otherwise
<i>LA21a</i> _{<i>i</i>}	=	1 if disclose and implement LA21, 0 otherwise
<i>LA21b</i> _{<i>i</i>}	=	1 if implement but do not disclose LA21, 0 otherwise
<i>Award</i> _{<i>i</i>}	=	1 if the councils have won a public sector award; 0 otherwise

⁴⁶ Since any of the 14 councils can be chosen as the reference council, more than 13 p-values can be computed comparing councils. When there are 14 councils there are 91 pairs of councils that can be compared to each other. This thesis uses the partial F test to provide a single p-value for jurisdiction as this more satisfactorily summarizes the evidence for the hypothesized relationship between jurisdiction and disclosure than up to 91 p-values comparing pairs of jurisdictions.

$TypeCity_i$ = 1 if city council, 0 otherwise
 $TypeMunicipal_i$ = 1 if municipal council, 0 otherwise
 $RecyclingLogo_i$ = 1 if the councils have recycling program webpage logo, 0 otherwise
 $InternalGoal_i$ = 1 if the councils have goal/mission related to sustainability information, 0 otherwise

Where,

i = council number
 α_i = constant
 b_i = coefficient variable
 e_i = error term

4.9.4 Correlation

Correlation measures the linear relationship between two variables. The parametric measure for correlation is a Pearson-product moment correlation coefficient that describes the relationship between two continuous variables, as well as a dichotomous variable and a continuous variable. On the other hand, a Spearman's rank order correlation was used to correlate the variables in the event that the assumptions were not met. The underlying assumptions for this procedure were: normality; linearity, and homoscedasticity.

4.9.5 Sensitivity Analysis

A few sensitivity tests were undertaken to ensure the robustness of results, especially with relation to the second research question of the thesis. These involved determining whether change of measurement in jurisdiction and the LA 21 program would have impacted on the overall regression results. As well, regressions were conducted for samples accessed on January 2009 that were excluded from the main analysis in September 2008.

4.10 PILOT STUDY

For the purpose of examining the dependent variable measurement, 30 local authorities' websites were selected from the Ministry of Housing and Local Government 'e-pbt' portal (www.epbt.gov.my) and all 14 jurisdictions in Malaysia were represented. This pilot study comprised of nine city councils, 11 municipal councils and 10 district councils. Approximately 20 minutes per website was spent to print all 30 websites.

Table 4.9 shows the amount of sustainability reporting on the websites of all 30 local authorities using the two different methods.

Table 4.9 Disclosure Amount of Sustainability Reporting

Councils	Content analysis—using number of sentences	Disclosure index
C2	163	20
C8	564	27
C45	114	14
C53	13	13
C80	334	27
C82	29	15
C89	26	9
C1	515	16
C117	148	20
C120	29	12
C139	34	10
C74	79	14
C76	44	13
C54	41	20
C55	117	19
C58	29	8
C15	200	12
C19	149	12
C27	157	15
C31	137	13
C34	88	13
C14	42	15
C77	217	14
C78	321	17
C951	145	21
C96	360	10
C100	140	13
C61	207	22
C64	25	13
C26	362	29

Table 4.9 shows different results provided by councils using different methods, for example, Council C8 (564 sentences and 27 index items), Council C1 (515 sentences and 16 index items) and Council C96 (360 sentences and 10 items). As pointed out by Williams (1998), content analysis (using three measurements, that is, word, sentence and page) and disclosure index do not measure the same concept. Hence, Williams concluded that findings and conclusions drawn using these two techniques should not be directly compared. Table 4.10 illustrates the amount of time spent on measuring the extent of sustainability reporting on the Malaysian local authority websites.

Table 4.10 Time Spent for Analysing the Dependent Variable (Minutes)

Councils	Content analysis (using number of sentences)	Disclosure index
C2	60	30
C8	75	30
C45	60	20
C53	30	20
C80	60	40
C82	30	20
C89	30	20
C1	90	40
C117	60	25
C120	30	20
C139	30	20
C74	45	25
C76	45	20
C54	60	30
C55	45	25
C58	10	20
C15	75	30
C19	60	20
C27	50	30
C31	50	30
C34	30	20
C14	40	25
C77	60	30
C78	60	25
C951	60	30
C96	45	25
C100	45	20
C61	75	30
C64	30	20
C26	60	40
Total	1500	780

The time spent on the content analysis sentence approach was double the amount of time spent on the disclosure index method. This was due to the tedious process of counting items by using the number of sentences.

Both the content analysis sentence count and disclosure index methods were employed to measure the dependent variable in the thesis due to different results derived from both methods. Results from the pilot test suggested that no change should be made to the items included in the content analysis and disclosure index

instruments. It should be noted that, regardless of which method was chosen, both can be applied to calculate the total dependent variable.

4.11 CHAPTER SUMMARY

Outlined in this chapter were: (a) approaches to be used to measure both dependent and independent variables; (b) development of the content analysis and disclosure index instruments, and (c) statistical methods to analyse the data in Chapter Five. Of particular importance was the review of the content analysis and disclosure index approaches which were discussed via a pilot study. Chapter Five will present the descriptive statistical results. Meanwhile, the result of multivariate analysis is presented in Chapter Six.

CHAPTER FIVE

DESCRIPTIVE ANALYSIS

5.1 INTRODUCTION

Chapter Four explained the research design used in this thesis. In order to address the central research question, the extent of sustainability reporting and factors affecting the level of disclosure had to be ascertained. This chapter reports the findings from analysing 139 Malaysian local authority websites.

The discussion on the descriptive statistics of sustainability information is used to answer the first research question of the thesis, namely, "What and how much sustainability information is reported on Malaysian local authority websites?" Section 5.2 starts this chapter with an explanation of background to the data analysis. Discussion of the dependent variables (content analysis and disclosure index) includes examining each of the three categories individually as well as the total of the three categories: environment, social and economy. Under content analysis, these categories are described in Sections 5.3 and 5.4 respectively. Sections 5.5 and 5.6 explain the results using the disclosure index method with the three categories, including the totals. It is highlighted here that there will be some repetitions in results presented in Section 5.3 and Section 5.5, as well as Section 5.4 and Section 5.6 respectively due to the use of two methods to measure the dependent variable. Section 5.7 presents the analysis of the independent variables. The relationship between the independent and control variables is discussed in Section 5.8. Finally, Section 5.9 presents the summary of this chapter.

5.2 BACKGROUND TO DATA ANALYSIS

The websites for the total population of 145 Malaysian local authorities representing all 14 jurisdictions in Malaysia under the 'e-pbt' portal were accessed and printed for the month of September 2008.⁴⁷ The breakdown of the websites' analysis is presented in Table 5.1.

⁴⁷ Hard copies printed from the websites assist in overcoming potential problems in checking intercoder reliability for changing content.

Table 5.1 Breakdown of Websites' Analysis

	Total	Total (%)
Websites that can be accessed	139	95.8
Websites that cannot be accessed	6	4.2
	145	100

There were two councils that were not accessible from the 'e-pbt' portal but were available using a different search engine and hyperlink. The reasons for not successfully accessing six of the websites were as follows:

- Two websites required a user log in and special commands, for example, 'Plesk'.⁴⁸
- One website displayed special instructions on the web page, that is, 'server default page'.
- Two websites were under maintenance.⁴⁹
- One website indicated 'authentication not valid'.

The Head of Department for ICT under the Ministry of Housing and Local Government was contacted for assistance. This resulted in the names of the personnel in charge of the six websites being provided. Attempts were then made to contact the officers in charge of the six websites. However, only one officer responded to the email enquiry by indicating that their website was still under maintenance. There were no responses from the other five officers. The results for the dependent variable analysis are presented next.

5.3 DEPENDENT VARIABLE BASED ON TOTAL NUMBER OF SENTENCES

This section specifically discusses the descriptive analysis of total sustainability information on Malaysian local authority websites by using the number of sentences under the content analysis method. As well, this section aims to answer 'how much' sustainability information is reported on websites, based on the first research question.

⁴⁸ The six inaccessible websites were accessed later on 18 January 2009. Out of the six websites, only three could be successfully accessed. Out of the total, two websites did not require any log in identification. However, these websites were not included in the samples for this study due to the different timeframe in data collection.

⁴⁹ One website was accessed on 18 January 2009.

Table 5.2 highlights information on the minimum, maximum, mean, standard deviation, sum, skewness and kurtosis for the dependent variable using the number of sentences.

Table 5.2 Descriptive Statistic for the Dependent Variable (Total Sentences)⁵⁰

	Minimum	Maximum	Sum	Mean	Std. Dev	Skewness	Kurtosis
<i>Dvsentence</i>	2	785	14697	105.7	130.4	2.7	9.0
<i>Logdvsentence</i>	0.3	2.9	246.8	1.8	0.5	0.04	-0.2

The extent of sustainability reporting is widely dispersed as the range between the minimum and the maximum disclosure level is 783 sentences. The lowest reported number of sentences was by Council C103, where the council's website disclosed information related to only job vacancies. Council C1's website reported the maximum number of sentences related to sustainability information. Out of these 785 sentences, 556 were from the economy category.

The mean score as a central tendency measure indicated 106 sentences related totally to sustainability information on the websites. This result is higher when compared to the disclosure using the number of sentences in the Malaysian companies' annual report studies: 27 sentences (Amran and Devi, 2007), 16 sentences (Elijido-Ten, 2004) and 85 sentences (Thompson and Zakaria, 2004). This is possibly due to the web having the advantages of being less costly and offering more space to report such information as compared to annual reports. As well, the result is higher than Williams and Pei's (1999) work on CSR disclosure in Malaysian public listed companies' annual reports (as part of Asia-Pacific companies' samples) and websites, with an average of 17 sentences. It should be noted that the studies were conducted at different times, different settings, were of different sizes and had different mediums of analysis. Accordingly, this result only provides a general picture, and is not an accurate comparable finding.

The measure of variability as shown by the standard deviation was 130. It also indicated a large dispersion in total sentences. Based on skewness and kurtosis, it is evident that the *dvsentence* is not normally distributed, and is highly positively

⁵⁰ Std. Dev – Standard Deviation

skewed.⁵¹ Hence, the *dv*sentence is transformed by using a logarithm (base 10) in order to derive the normal shape of distribution.⁵² This can be observed from the transformation highlighted by skewness and kurtosis, which is from 2.684 and 9.002 to 0.038 and - 0.166 respectively.⁵³

According to Coakes *et al.* (2006, p. 31), "the assumption of normality is a prerequisite for many inferential statistical techniques". Amran and Devi (2007, p. 22) asserted the importance of identifying techniques in dealing with accounting disclosure, that is, "to pay attention to the structure of data and consider the appropriateness of transformation, whenever necessary". Amran and Devi (2008) claimed it was essential to use the normal score transformation to ensure the rigor of the regression tests. However, they did not specify clearly whether the data transformation is applicable to the dependent variable measurement (sentence count) or not. Other studies that used transformation such as rank data in using the disclosure index method are, for example, Ho and Taylor (2007), whilst Haniffa and Cooke (2005) used normal score transformation for both content analysis (word count) and disclosure index.

5.3.1 Reliability Test on Dependent Variable (Using Sentence)

Consistent with prior research on social and environmental themes, this thesis engaged an independent coder to ensure the reliability of the content analysis instrument and the data collected from the websites. An accounting PhD student was provided with a coding sheet, content analysis instrument, and 14 hard copies of selected websites (10% of the population) accessed in September 2008.⁵⁴ The Pearson coefficient of correlation for both results is 0.977, indicating a high correlation between the results.

⁵¹ If variable distribution deviates dramatically, the validity of the results produced may be affected (Coakes *et al.*, 2006, p. 29).

⁵² The decision to transform variables depends on the severity of the departure from normality. Having decided that transformation is desirable, the researcher must select the most appropriate transformation method (Coakes *et al.*, 2006, p. 36).

⁵³ As shown in Figure 5.1 (Appendix 5_1), the distribution of the number of sentences is highly skewed. After transformation, the distribution of the number of sentences is closer to normality (Figure 5.2, Appendix 5_1).

⁵⁴ Steps involved in calculating the dependent variable (sentence) was provided to the coder (refer Chapter Four, Table 4.5).

5.4 DEPENDENT VARIABLE FOR THE THREE CATEGORIES OF SUSTAINABILITY INFORMATION (NUMBER OF SENTENCES)

This section aims to answer the 'what' component of the first research question on the extent of sustainability information reported on websites using the content analysis sentence count. The discussion starts with the disclosure of each category of sustainability information and is followed by individual items in each category in Sections 5.4.1 to 5.4.3. Table 5.3 provides the minimum, maximum, mean, standard deviation, sum, skewness and kurtosis for the individual categories of sustainability information.

Table 5.3 Descriptive Statistics (Individual Categories—Sentences)

	Minimum	Maximum	Sum	Mean	Std. Dev.	Skewness	Kurtosis
Total environment	0	393	2936	21.1	52.4	4.7	24.9
Total social	1	238	4666	33.6	45.9	2.4	6.1
Total economy	0	556	7095	51.0	65.9	4.1	25.9

The extent of sustainability reporting is widely dispersed as the range between the minimum and the maximum disclosure level is 393 sentences, 237 sentences and 556 sentences for the environment, social and economy categories respectively. The highest amount is the total sentences for the economy category, that is, 7,095 sentences followed by the social category 4,666 sentences and the environment category which is 2,936 sentences.

As can be seen from Table 5.3, under the environment category, the lowest number of sentences reported is zero. This represents seven district councils and one municipal council that did not disclose any environmental information on their websites. On the other hand, Council C8 reported 393 sentences related to environmental information. Some of the environmental information disclosed by Council C8 included the following:

- Advice in dry season (25 sentences)
- List of recycling centres and shopping complex recycling centre (58 sentences)
- Recycling van schedule (14 sentences)

- Recycling best practices at home, school, office and shopping centre—including recycled materials (84 sentences)
- Energy savings tips (19 sentences)
- List of landscape contractors (47 sentences)
- Description of environmental issues, for example, illegal rubbish dumping and open burning management workshop (18 sentences).

Under the social category, the lowest reported number of sentences was one, as found in the following three councils' websites: C20, C108, and C129. For example, Council C20 only disclosed information related to the department in charge of social activities. Meanwhile, Council C26 reported the highest number, that is, 238 sentences related to the social category.

Table 5.3 contains the descriptive results for the economy category. Results indicate that the total disclosure for the economy category is greater than the total disclosure for both the social and environment categories. This result is similar to findings by Stowers (1999, p. 111) that "governments are clearly becoming 'cyberactive' but are emphasizing information and services for business and other economic development activities". One reason for a higher disclosure in the economy category is the availability of information regarding the number of departments in charge of economic activities, for example, the Finance and Treasury Division, Rating and Valuation, and the Licensing Department. Tender and Quotation disclosures are reported under this category since they relate directly to the councils' economic activities or services.

Council C103's website did not report economic information. Meanwhile, Council C1 disclosed the maximum amount of economic information. These sentences mostly came from the 2008 budget speech (49 sentences), rental charges for facilities (92 sentences) and lists of stalls and small businesses market places (270 sentences). Other economic information reported by Council C1 was in the client charter of various departments, namely: Treasury, Culture, Tourism and Sport, Rating and Valuation, Small Business Development, and Management and Licensing. Next, descriptive statistic results for the three individual categories are discussed. The explanation starts with the environment category.

5.4.1 Environment

Table 5.4 highlights the descriptive results for all environmental items developed in the content analysis pro forma.

Table 5.4 Descriptive Statistics—Number of Sentences (Environment)⁵⁵

	Councils with 0 sentences (%)	Max	Sum	Mean	Std. Dev
1. Environmental planning consideration					
a. General statement and policy					
Presence of environment policy and client charter	73.4	24	84	0.6	2.3
Statement about recycling, waste management, environment protection and control, beautification and landscape, pollution of water, air and natural resources	46.7	257	563	4.0	23.0
b. Strategic rationale and driving forces					
Proactive approach or strategy, for example, LA 21 environmental strategies	90.6	50	146	1.0	5.5
c. Planning approach					
Continuous process improvement such as quality management system, for example, ISO procedure for solid waste management	92.1	10	32	0.2	1.1
Predetermined targets and objectives	51.8	11	165	1.2	2.0
2. Top management commitment to the institutionalization of environmental practice					
Foreword (on environmental issues) by a president or mayor or secretary	79.1	39	89	0.6	3.5
3. Environmental structure and organizing specifics					
a. Department affiliation of corporate environmental function					
Separate (independent function)	66.9	2	49	0.3	0.5
Combined with other departments, such as Human Resource and Public Health	96.4	1	5	0.0	0.2
Internal program or activities, for example, LA 21	62.6	270	1120	8.1	28.3
Major services related to environment	66.9	119	348	2.5	11.2
b. Management priority					
Top-level executive in charge, and contact details	69.8	2	45	0.3	0.5
c. Stakeholder involvement					
Community involvement	97.8	1	3	0.0	0.1
4. Environmental leadership activities					
Promotion of environmental issues	92.1	105	195	1.4	9.5
Partnership with NGOs	100	0	0	0.0	0.0
5. Others					
Financial information	97.1	25	30	.22	2.1
Performance indicators	89.9	12	62	0.4	1.9
Total environment		393	2936	21.1	52.4

Table 5.4 reveals the percentage of councils with zero (minimum) disclosure, as well as the maximum amount of sentences, total sentences, mean and standard deviation.

⁵⁵ Max = maximum

The first category under environmental disclosure considered environmental planning.

Environmental Planning Consideration

It was found that 73.4% of the councils had neither an environmental policy nor a client charter. Also, 46.7% of the councils did not disclose a statement about recycling, waste management, environment protection and control, beautification and landscape, and pollution of water, air and natural resources. It was indicated that 90.6% and 92.1% of the councils did not report a strategic rationale, driving forces, and a planning approach respectively. In terms of the common disclosure of predetermined targets and objectives, 51.8% of the councils did not disclose information about the objective of departments in charge of the environment and services related to the environment, for example, tree planting, landscape and solid waste management.⁵⁶ With regards to environmental strategies, C118 is a good example of a council that highlighted strategies for good living in line with environmental concerns (Example 5.1, Appendix 5_2).

Top Management Commitment to the Institutionalization of Environmental Practice

Table 5.4 shows that 79.1% of the websites did not reflect top management commitment to the institutionalization of environmental practice. This means the chairman or secretary of 21.9% of the councils mentioned policies associated with the environment in their foreword or welcoming address compared to 27% as revealed by Jose and Lee's (2007) study. It seems that environmental issues are not given high priority by top management of the local authorities in Malaysia.

Environmental Structure and Organizing Specifics

It was highlighted from Table 5.4 that 62.6% to 97.8% of councils did not have any separate or combined departments with environmental functions, internal programs or activities, major services related to the environment, information regarding top-level executive or community involvement. In terms of department affiliation, most

⁵⁶ A predetermined target is a statement that shows a specific future action plan as well as its intended timeframe to be achieved, for example, 'transforming the district council to become a fully food industrial zone by the year 2015'.

councils, that is, both municipal and district councils combined the environmental department with other departments, for example, with the Public Health or Town Planning Department. It was noted that most city councils have a specific department directly in charge of the environment.

Disclosure of sentences was highest—1,120 in relation to the internal programs or activities under the environment category. Several councils have carried out special environmental programs, for example, the 'Green Barter Trade' (Council C115) and 'My Home is Beautiful' programs (Council C77). Another example was Council C26's website which disclosed comprehensive environmental action plans, objectives and strategies, specifically under the Local Action 21 implementation working team. The LA 21 activity calendar related to environmental activities was also included on the website of Council C26.

Environmental Leadership Activities

Ninety-two percent of the councils did not promote environmental issues or environmental leadership activities on their websites. It seems that the websites as a medium of communicating sustainability information was not fully engaged by the councils. Also, none of the councils report any collaboration and partnership with NGOs on their websites. This indirectly indicates the stakeholders' engagement process via websites is not really taking place among the local authorities in Malaysia despite the fact that a website can serve as a vehicle to encourage community participation.⁵⁷ Another finding was that websites are not used extensively to promote environmental activities via news and announcements (Example 5.2, Appendix 5_2). This example highlights the disclosure of 11 sentences out of a total of 393 sentences.

Other Environmental Information

Ninety-seven percent of the councils did not report any environmental financial information. This signifies that only three websites (2.9%) included quantitative or

⁵⁷ Although the community involvement and suggestion is only one of the criteria (20%) for the Local Authority Quality award, it is argued that the websites should be fully utilized to encourage stakeholders' engagement. This criteria, which includes the e-Community Development Committee portal, is also used in the Star Rating System for Local Authorities in Malaysia (Ministry of Housing and Local Government, 2008c).

monetary environmental information. Two other municipal councils presented financial statements on their websites. This shows that councils in Malaysia may not be ready to share their financial position with the public. The website financial reporting practice has been carried out in other developed countries such as the US and New Zealand (see, for example, Laswad *et al.*, 2005; Styles and Tennyson, 2007).

An example of environmental targets and expenditure was included in Council C117's year-end message (Example 5.3, Appendix 5_2). In this context, generally, lack of financial information disclosure confirms the government's lack of transparency regarding the expenditure for handling ecological concerns. Another example of quantitative and monetary environmental information was found in the 2008 Budget on Council C3's (*a city council*) website. This is the only council that provided budgetary information with regards to environmental issues. It included the budget objectives for environmental programs, the allocation for 2008, and the difference between the allocations for 2007 and 2008 (Example 5.4, Appendix 5_2). This is due to the fact that the budget preparation of this particular council involves the public's participation and feedback prior to its approval. In this way, the public will know exactly the allocation for specific sustainable development activities, for example, city beautification and waste minimization, in the following year. The disclosure of budget practice could be followed by other councils in Malaysia to improve the level of accountability and transparency.

Also, 88.9% of the councils did not include key performance indicator (KPI) information on their websites. In this perspective, one of the criteria identified from the findings is environmental awards or recognition. In terms of the environmental awards, these awards do not refer to the public sector awards as defined in Chapter Three. Four councils mentioned the environmental awards on their websites, namely, Councils C1, C77, C86, and C135. Examples of these awards are the National Landscape Award competition, the Beautification Award and the Environmental Sustainability Award. In relation to the ISO 14001 certification (Environment Management System), Council C86 is the first local authority in West Malaysia since 2001 that has been certified by the Standards and Industrial Research Institute of Malaysia (SIRIM).

5.4.2 Social

Table 5.5 presents the descriptive statistics for the social category as below.

Table 5.5 Descriptive Statistics—Number of Sentences (Social)

	Councils with 0 sentence (%)	Max	Sum	Mean	Std. Dev
1. Social planning consideration					
a. General statement and policy					
General statement and presence of social policy and client charter such as public health and others	33.8	85	565	4.1	8.7
b. Strategic rationale and driving forces					
Proactive approach or strategy, for example, LA 21 strategy	89.2	6	39	0.3	1.0
c. Planning approach					
Continuous process improvement for example, ISO procedure for rubbish collection	82.9	9	56	0.4	1.5
Predetermined targets and objectives	46.0	36	277	2.0	4.0
2. Top management commitment to the institutionalization of social practice					
Foreword (on social issues) by a chairperson or mayor or secretary	67.6	29	101	0.7	2.7
3. Social structure and organizing specifics					
a. Department affiliation of corporate social function					
Separate (independent function)	71.9	3	58	0.4	0.7
Combined with other departments, such as City Services and Public Health	46.8	3	87	0.6	0.7
Internal program or activities, for example, LA 21	49.6	197	1422	10.2	26.4
Major services related to social issues	54.7	228	1188	8.5	28.5
LA 21 Unit	96.4	1	5	0.0	0.2
LA 21 officer	97.1	1	4	0.0	0.2
Any special LA 21 committee	95.0	3	10	0.1	0.3
b. Management priority					
Top-level executive in charge, and contact details	38.8	3	121	0.9	0.8
c. Stakeholder involvement					
Community involvement	98.6	2	3	0.0	0.2
4. Social leadership activities					
Promotion of social issues	90.6	67	166	1.2	7.1
Partnership with NGOs	99.3	7	7	0.0	0.6
5. Others					
Financial information	99.3	3	3	0.0	0.2
Performance indicators	97.1	17	31	0.2	1.7
Number of employees	76.3	43	140	1.0	4.3
Local employment	92.1	117	383	2.8	13.3
Total social		238	4666	33.6	45.9

Social Planning Consideration

Under this category, a range of 33.8% to 89.2% of the councils did not disclose a general statement about the presence of a social policy and client charter, predetermined targets and objectives, strategic rationale, driving forces and continuous improvement processes with regards to social activity. An example of disclosure about community involvement in the strategic plan is shown on Council C26's website (refer Example 5.5, Appendix 5_2).

Top Management Commitment to the Institutionalization of Social Practice

From Table 5.5, 32.4% of the councils include social issues in the chairperson's or secretary's foreword or welcoming address. This finding indicates a greater management emphasis on social issues than the environmental matters (21.9%).

Social Structure and Organizing Specifics

As can be seen from Table 5.5, a range of 38.8% to 97.1% of the councils did not provide information about department affiliation of corporate social function and management priority sub-categories. In relation to social internal programs and activities, Council C26's website reported 197 sentences related to the LA 21 program, activities and action plans (refer Example 5.6, Appendix 5_2). A small number of websites also provided a description of the characteristics of the city. For example, Council C80's website disclosed information related to 'Peaceful City' and Council C115 disclosed information about the 'C115 City'. A sample of the description can be found in Example 5.7 (Appendix 5_2). It was discovered that these city characteristics encompass the three elements of sustainability—environmental, social and economic.

Several council websites were also utilized to disseminate information regarding the location, time and schedule for services provided by the councils, for example, market cleaning and rubbish collection. Consistent with the environment category, the non-disclosure about councils' stakeholder engagement is also very high as shown by 98.6% of the councils. It seems that the website is not employed as a tool to encourage community participation. This finding is contrary to the arguments advocated in the private sector research (Frost *et al.*, 2005; Lodhia, 2005; Adams and

Frost, 2006; Ho and Taylor, 2007) which emphasized stakeholder engagement on the websites.

Social Leadership Activities

Table 5.5 illustrates that 90.6% of the councils did not promote any social issues and 99.3% did not indicate partnerships with NGOs. Only one website highlighted the council's involvement with certain community groups including the Women's Association.

Other Social Information

A range of 76.3% to 99.3% of the councils did not disclose any financial information, performance indicators or local employment information on their websites. Consistent with the environment category, most of the social category information was in narrative form. Only three websites disclose quantitative and monetary information under the social category:

- Budget 2008 objectives and healthy city expenditure (Council C3—a city council)
- Budget speech (Council C1—a city council)
- Annual cost for cleaning services (Council C86—a municipal council)

The councils that advertise job vacancies for the community on their websites were C19, C7, and C11.

5.4.3 Economy

Based on the following Table 5.6, the details of economic information are presented next.

Table 5.6 Descriptive Statistics—Number of Sentences (Economy)

	Councils with 0 sentence (%)	Max	Sum	Mean	Std. Dev
1. Economy planning consideration					
a. General statement and policy					
General statement and presence of an economy related policy and client charter such as licensing and business activities	22.3	95	979	7.0	11.0
b. Strategic rationale and driving forces					
Proactive approach or strategy, for example, LA 21	89.2	9	46	0.3	1.2
c. Planning approach					
Continuous process improvement such as quality management system, for example, ISO procedure for licensing	81.3	24	136	1.0	3.3
Predetermined targets and objectives	33.1	45	554	4.0	6.6
2. Top management commitment to the institutionalization of economy practice					
Foreword (on economic issues) by a president or mayor or secretary	77.0	49	117	0.8	4.3
3. Economy structure and organizing specifics					
a. Department affiliation of corporate economy function					
Separate (independent function)	20.1	5	250	1.8	1.7
Combined with other departments, such as Health and Licensing	95.7	36	48	0.3	3.1
Internal program or activities, for example, LA 21	64.7	53	667	4.8	10.7
Major services related to economy	23.7	362	3774	27.1	49.9
b. Management priority					
Top-level executive in charge, and contact details	31.7	5	210	1.5	1.2
c. Stakeholder involvement					
Community involvement	97.8	3	6	0.0	0.3
4. Economy leadership activities					
Promotion of economic issues	87.1	32	143	1.0	3.8
Partnership with NGOs	100	0	0	0.0	0.0
5. Others					
Financial information	92.1	55	145	1.0	5.4
Performance indicators	95.7	8	20	0.1	0.9
Total economy		556	7095	51.0	65.9

Economy Planning Consideration

Table 5.6 shows that 22.3% of councils did not report economic information such as by a general statement on policy. Meanwhile, 33.1% of the council websites did not include predetermined objectives and targets. This result is not surprising as the economic category has many functions, including finance, licensing, rate and valuation and others. On the other hand, 89.7% and 81.3% of the councils did not reveal a strategic rationale, driving forces, and a planning approach respectively.

Top Management Commitment to the Institutionalization of Economy Practice

With regard to top management commitment, 77% of the councils did not highlight economic sustainability information on the websites. It appears that the economic matters (23%) are second only to the social category (32%) as being highly regarded by the management (refer Section 5.3.2.2).

Economy Structure and Organizing Specifics

It is revealed in Table 5.6 that 20.1% of council websites did not display information regarding individual departments or functions, for example, licensing, finance, rating and valuation and others. This indicates that 79.9% councils include this information. As well, the information on top-level executives and the contact details of each department were not disclosed by 31.7% of the councils. This shows the importance of economic activities in generating income and revenue for the councils to achieve sustainable development in line with social and environmental activities. The most reported information in the economy category comes from the information related to major economy services, that is, 3,774 sentences. Consistent with the environment and social categories, council websites non-disclosure on stakeholder engagement is high as signified by 97.8% of the councils.

Economy Leadership Activities

It was found that 87.1% of council websites did not promote economic issues. The non-availability of the economic information on the collaboration with NGOs is quite reasonable because the economic activities are internally oriented as compared to the social and environmental activities which normally involve the external stakeholders' participation.

Other Economy Information

Ninety-two percent of the councils did not report financial information with regard to the economy category despite the fact that this category is usually associated with ways of generating revenue in the councils. It seems that local authorities in Malaysia may not be ready to disclose financial information to the public. Examples of councils that provided quantitative economic information include:

- Estimate for receipts and expenditure (C2—a city council).
- Revenue for the year 2006 and 2007 (C25—a municipal council).

Two examples of economic information being disclosed are seen in the city mayor's speech and the examples of rental charges for facilities provided by the councils as shown in Examples 5.8 and 5.9 (Appendix 5_2) respectively. Meanwhile, 95.7% of the councils did not disclose performance indicators on their websites.

The following section discusses the dependent variable based on the total disclosure index.

5.5 DEPENDENT VARIABLE BASED ON TOTAL DISCLOSURE INDEX

This section aims to answer the 'how much' component of the first research question, which is related to the extent of sustainability disclosure on websites using the disclosure index. Table 5.7 presents information on the minimum, maximum, mean, standard deviation, skewness and kurtosis of the disclosure index.

Table 5.7 Descriptive Statistic for the Dependent Variable (*dvindex*)

	Total index	Minimum	Maximum	Mean	Skewness	Kurtosis
<i>Dvindex</i>	57	1 (1.7%)	36 (63.2%)	15.3 (26.8%)	0.6	0.6

Table 5.7 shows that the range of items disclosed is between 1 and 36. On average, there are 15 items (out of 57 items) disclosed which represents 26.8% of the overall disclosure. This result is higher than Haniffa and Cooke's (2005) findings of CSR disclosure in Malaysian companies' annual reports that provided an average of 16.28% (1996) and 17.13% (2002). This can be explained by the use of websites to capture disclosures rather than annual reports and by more diverse objectives of the public sector organizations compared to public companies. Further, a website is relatively cheaper than other media such as annual reports, newspapers, internal bulletins and newsletters.

Ho and Taylor's (2007) study also examined websites and found a high level of disclosure (43%), although their study was conducted in countries (the US and Japan) with significantly more developed economies. Meanwhile, Nurhayati *et al.* (2006b) found only 9% environmental disclosure in the Indonesian public listed companies' annual reports, about half the 19.0% (*mean of environmental index*) in

this thesis. Another reason for the higher result in this thesis is that most past studies highlighted one or two categories of sustainability information. This thesis is similar to Ho and Taylor's (2007) study where the three categories of sustainability information were examined: environment, social, and economy.

It is indicated by the standard tests on skewness and kurtosis that *dvindex* is close to normally distributed. Hence, no transformation is required for the disclosure index as the dependent variable. Consistent with the content analysis method, Council C103 website only reported one item, that is, job vacancy. Meanwhile, Council C117 reported 36 items on the website.

5.6 DEPENDENT VARIABLE FOR THE THREE CATEGORIES OF SUSTAINABILITY INFORMATION (INDEX)

This section discusses results related to 'what' sustainability information is reported on websites in terms of the three categories of sustainability information and their individual items (Sections 5.6.1 to 5.6.3). Descriptive statistics for the three individual categories of environment, social and economy information using the disclosure index results are summarized in Table 5.8.

Table 5.8 Descriptive Statistics for Total from Each Category (Disclosure Index)

	Total items	Minimum	Maximum	Mean
Environment	20	0 (0%)	14 (70%)	3.81 (19.1%)
Social	20	1 (5%)	12 (60%)	5.50 (27.5%)
Economy	17	0 (0%)	12 (71%)	6.00 (35.3%)

As shown in Table 5.8, the range of items disclosed under the environment category is between 0 and 14. For the social category, the range of items disclosed is between 1 and 12. Meanwhile, the range of items disclosed is from 0 to 12 in the economy category. It is noted that the dispersion in the disclosure index is much lower than that using the content analysis method. Similar to the content analysis method, on the average, the highest reported item comes from the economy category (35.3%) followed by the social (27.5%) and environment categories (19.1%) respectively. The highest disclosure in the economy category is consistent with Ho and Taylor (2007) and Stowers (1999). This could be due to the diversity of economic functions

in the councils. In the economy category, the most reported item is the description of economic services provided by councils.

In the environment category, the lowest number of items reported is zero. Eight councils did not disclose any environmental items on the websites. Council C117's website reported the maximum number of environmental items on its website (70%). In the social category, Council C103 disclosed only one item, being the local employment. Consistent with the content analysis method, Council C26 reported the maximum number of items related to social information (60%).

Meanwhile, in the economy category, Council C103 did not disclose any items. Council C117 disclosed the maximum number of items (71%). The following discussion covers frequency results for each of the 57 items developed in the disclosure index instrument by scoring '1' if present, and '0' if otherwise. The environment category is reported first.

5.6.1 Environment

Table 5.9 provides the frequency results of the environmental items developed in the disclosure index instrument.

Table 5.9 Descriptive Statistics of the Environment Category—Disclosure Index

	Frequency	Percent (%)
ENVIRONMENT		
General statement or policy	37	26.6
Client charter	41	29.5
Any mention about environment in the mission statement, vision, objectives and other forms e.g. logo, motto or theme	73	52.5
Any strategy related to environmental issues i.e. recycling, solid waste management, environment control, landscape, beautification, energy saving etc	9	6.5
Any mention about environment as part of a continuous improvement process such as quality management system related to solid waste management	9	6.5
Any mention about predetermined environmental targets and objectives	67	48.2
Any mention about the environment in a foreword by the chairman or secretary	28	20.1
Individual department related to the environment	53	38.1
Combined environment department and other department e.g. landscape and town planning	19	13.7
Environmental activities or programs, for example, LA 21 activities, beautification campaign, flower plantation campaign	48	34.5
Environmental services (landscape, drainage and sewerage)	49	35.3
Head of department of environment, and contact details*	41	29.5
Promotion of environmental issues	13	9.4
Stakeholders' engagement on environmental issues via forum	3	2.2
Financial information on environmental issues	6	4.3
Materials that are recycled	7	5.0
Strategies for recycling	6	4.3
Performance indicators	14	10.1
Type of waste	3	2.2
Methods of waste management	3	2.2
Total environment	529	

It is apparent from Table 5.9 that 52.5% of the councils reported environmental information in their mission statement, vision, objectives and other forms such as logo, motto or theme. The second item mostly reported was predetermined environmental targets and objectives (48.2%). There was a minimal disclosure (2.2%) of stakeholders' engagement on environmental issues, type of waste and methods of waste management. This result is consistent with the content analysis method, that is, the website is not fully engaged to encourage participation and interaction with external stakeholders.

5.6.2 Social

The description of items under the social category is discussed in this section. Table 5.10 below illustrates the breakdown of the items under this category.

Table 5.10 Descriptive Statistics of the Social Category—Disclosure Index

	Frequency	Percent (%)
SOCIAL		
General statement or policy	33	23.7
Client charter	65	46.8
Any mention about social issues in the mission statement, vision, objectives and in other forms e.g. logo, motto or theme	71	51.1
Any strategy related to social issues i.e. health, staff training, safety etc	14	10.1
Any mention about social issues as part of a continuous improvement process e.g. quality management system related to rubbish collection.	14	10.1
Any mention about predetermined social targets	76	54.7
Any mention about social issues in a foreword by the chairman or secretary	45	32.4
Individual social related department	35	25.2
Combined social department and other department	87	62.6
Social activities or programs, for example, LA 21, sport/recreational, educational, safety and health, green cutting etc)	73	52.5
Social services	73	52.5
Head of department (social related), and contact details*	89	64.1
Promotion of social issues via news	21	15.1
Stakeholders' engagement on social issues via forum	3	2.2
Any special LA 21 Unit or Sustainable Department Unit	7	5.0
Any special committee of LA 21	9	6.5
Financial information on social issues	2	1.4
Number of employees	33	23.7
Local employment	10	7.2
Performance indicators	5	3.6
Total social	765	

As can be seen from Table 5.10, 64.1% of the councils reported details regarding key personnel in charge of social activities as well as their contact details. Also, 62.6% of the councils disclosed the combined social department and other departments. The third mostly reported item in the social category is predetermined targets. A very low disclosure was apparent for stakeholders' engagement (2.2%) and social financial information (1.4%).

5.6.3 Economy

This section covers the details of economic items developed in the disclosure index instrument. Table 5.11 provides the frequency of items and its percentage of presence.

Table 5.11 Descriptive Statistics of the Economy Category—Disclosure index

	Frequency	Percent (%)
ECONOMY		
General statement or policy	60	43.2
Client charter	76	54.7
Any mention about the economy in the mission statement, vision, objective and in other forms e.g. logo, motto or theme	80	57.5
Any strategy related to economic issues, for example, LA 21	15	10.8
Any mention about the economy as part of a continuous improvement process e.g. procedure on licensing	24	17.3
Any mention about predetermined economic targets	92	66.2
Any mention about the economy in a foreword by the chairman or secretary	29	20.9
Individual economy related department	127	91.4
Economic activities or programs, for example, LA 21	38	27.3
Economic services, for example, consultation on arrears on rate assessments, payment, business licensing	78	56.1
Head of department (economy related) and contact details	92	56.2
Promotion of economic issues	39	28.1
Stakeholders' engagement on economic issues via forum	3	2.2
Financial information	6	4.3
Tender and quotation	18	12.9
Performance indicators	6	4.3
Rental charge	51	36.7
Total economy	834	

Ninety-one percent of the councils have individual departments related to economic functions. The second and third most disclosed items were predetermined economic targets (66.2%) and any mention about the economy in the mission statement, vision, objective, and in other forms (57.5%). The high percentage in the disclosure of the individual departments shows the variety of economic functions that are taking place, for example, finance, rating and valuation, and others. The lowest item disclosed was on stakeholders' engagement (2.2%).

Reflections on the content analysis and disclosure index instruments derived from results (Section 5.3 to Section 5.6.1) are presented in Appendix 5_3.

5.7 INDEPENDENT VARIABLES

Size is the only continuous variable in this thesis and is measured by the total revenue within the council's jurisdiction. Table 5.12 illustrates the descriptive results for revenue.

Table 5.12 Descriptive Statistics for Independent Variable (Size)

	Minimum	Maximum	Mean	Std. Dev	Skewness	Kurtosis
Revenue (RM)	1080000	1042824211	34269286.96	95868842.392	8.737	89.944
Logrevenue	6.03	9.02	7.0699	.57870	.625	-.046

As can be seen from Table 5.12, the minimum revenue was RM1,080,000 with the maximum being RM1,042,824,211. The revenue is highly skewed. After transformation by using the logarithm base 10, the revenue distribution is found to be closer to normal. Hence, in line with Falkman and Tagesson (2005), this thesis uses log (revenue) as a proxy for size.

The following discussion covers the frequencies in number and percentage for all the categorical variables and is summarized in Table 5.13.

Table 5.13 Frequency Table for all Categorical Independent and Control Variables

Jurisdiction	Frequency	Percent
J1	1	0.7
J2	12	8.6
J3	1	0.7
J4	10	7.2
J5	2	1.4
J6	15	10.8
J7	12	8.6
J8	7	5.0
J9	11	7.9
J10	5	3.6
J11	3	2.2
J12	15	10.8
J13	20	14.4
J14	25	18.0
LA 21 program		
Do not implement nor disclose LA 21 program	55	39.6
Implement but do not disclose LA 21 program	61	43.9
Implement and disclose LA 21 program	23	16.5
Public sector award		
Never won a public sector award	135	97.1
Have won a public sector award	4	2.9
Type of councils		
District Council	90	64.8
Municipal Council	37	26.6
City Council	12	8.6
Recycling program logo web page		
Do not have recycling program logo	116	83.5
Have recycling program logo	23	16.5
Internal goals		
Not having internal goals on sustainability	108	77.7
Having internal goals on sustainability	31	22.3

As shown in Table 5.13, there are 14 jurisdictions comprised of one federal territory and 13 states. It is noted that Jurisdiction J14, as the largest state in Malaysia, has 25 local authorities.

In terms of the LA 21 program implementation and disclosure on websites, it was found that 43.9% of the councils involved in the program did not acknowledge their involvement on their websites. There is a possibility that the councils are using other means to promote their LA 21 program other than the websites. For example, councils could use the radio or television. It seems that the websites of these councils

are not fully utilized to encourage community participation which, in turn, would assist in improving accountability and transparency. This will be further explained in the interview phase.

Only four councils mentioned the award achievement on their websites.⁵⁸ Again, it appears that most councils do not reveal information concerning their performance and achievement on the websites. In relation to the type of councils, of the websites analysed, 64.8% are district councils, with 26.6% and 8.6% being municipal and city councils respectively.⁵⁹

The first control variable in this thesis is the international logo of recycling program located on a council's website home page (refer Figure 5a, Appendix 5_4). It was found that 16.5 % of the local authority websites have the recycling logo web page on their website's home page. It shows that the majority of the councils do not promote themselves as an environmentally friendly organization nor are they portraying an overall picture of achieving sustainable development.

With regard to the second control variable—internal goals contained in local authority objectives and mission statement—77.7% of the councils failed to mention three elements of sustainability in their mission statements or objectives.⁶⁰ This result is discouraging as it implies that the councils are not fully committed to supporting the government's movement towards achieving sustainable development.

5.8 RELATIONSHIP BETWEEN INDEPENDENT VARIABLES

This section evaluates whether there are any statistical differences in the means of the size of councils (logrevenue) across the categorical variables. So as to be able to proceed with this evaluation, one-way ANOVA tests were performed and the results are summarized in Table 5.14.

⁵⁸ In this context, the public sector award refers to awards recognized by the Prime Minister's Department (refer to Chapter Four).

⁵⁹ This study encompasses 100% of the city and municipal councils in Malaysia.

⁶⁰ Score '1' is only given if the entire environmental, social and economic information are included in the mission statement or objective. If only two elements are included, for example, social and economic, score '1' would not be awarded. (See section 9.6).

Table 5.14 One-Way ANOVA between Logrevenue, Independent and Control Variables

Logrevenue with	p-value
Jurisdiction	0.000
LA 21	0.000
Internal goals	0.059
Awards	0.000
Type of councils	0.000
Recycling logo	0.002

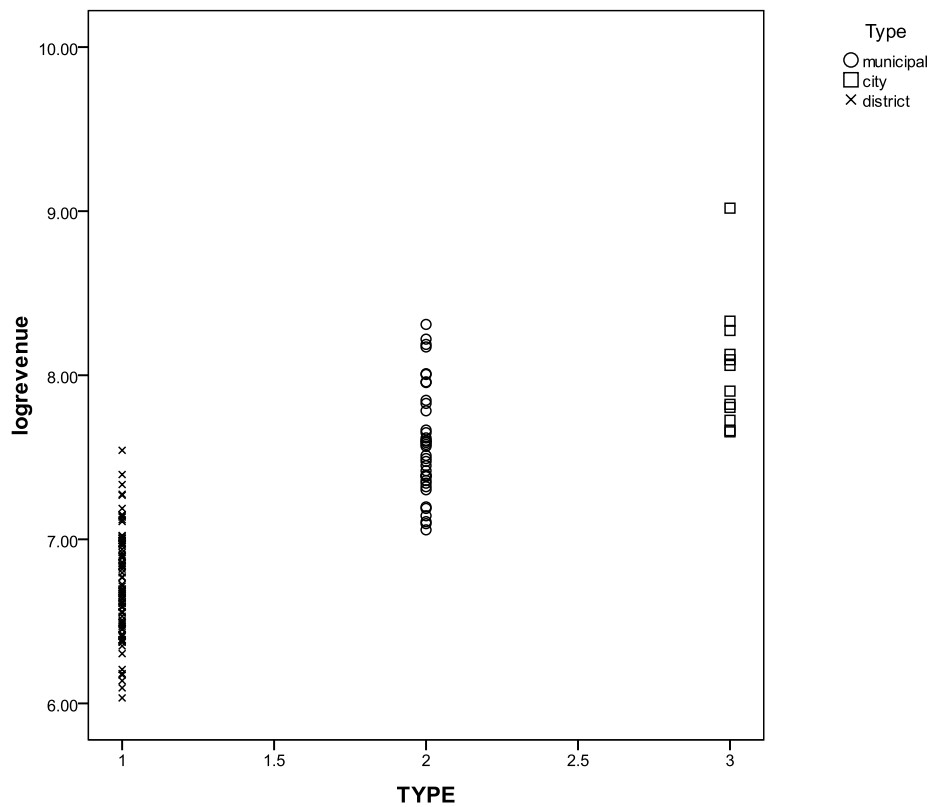
The 14 jurisdictions have significantly different means in relation to the councils' size. Hence, some states tend to have larger councils and other states tend to have smaller councils. There is also a significant difference in the mean of the councils' size and the implementation and disclosure of the LA 21 program on the councils' websites. Larger councils tend to be involved in the LA 21 program.

As well, there is a significant difference in the mean of council size between the councils that have won a public sector award and the councils that have not. Larger councils are more likely to win public sector awards as compared to the smaller ones.

Table 5.14 highlights that the type of council has a significant relationship with the council's size. The larger councils are inclined to be a city or municipal council and located in urban areas. Meanwhile, smaller councils tend to be district councils and are usually situated in rural areas. As can be seen in Table 4.7 (Chapter Four), city and municipal councils tend to have high revenue and a large population. It is advanced here that type depends on revenue, which, in turn, confirms there is a definitional relationship between these two variables. Despite the relationship, the thesis examines both size and type for several reasons. Firstly, Laswad *et al.* (2005) examined both variables in their Internet financial reporting study. Secondly, Laswad *et al.* (2005) used different statistical scales (one continuous and one categorical) and this may affect the relationship with disclosure. Thirdly, they measured different aspects of councils, and the type of council is an easier way to refer to councils than revenue, which will be important during interviews (see Chapters Seven and Eight).

The relationship between the size (logrevenue) and type of councils is depicted in Figure 5.1.

Figure 5.1 Relationship between Type and Size of Councils



As can be seen from Figure 5.1, city councils tend to have higher revenue than municipal and district councils. Similarly, municipal councils are more likely to have higher revenue than district councils. This is in line with the criteria in determining the type of councils in Malaysia (Chapter Four, Table 4.7). This suggests that there is a relationship between type and size of councils. There is, however, overlap in revenue for the three types of councils confirming that type of council is not a simple categorization of size, further justifying the inclusion of both variables in this thesis.

As for the recycling program logo on web pages, the means of council size between the councils that have and do not have a recycling program logo are significantly different. The bigger councils tend to have no recycling logo as compared to the smaller councils. In sum, larger councils are different based on jurisdictions; have a greater commitment to the LA 21 program; have internal goals; have won awards; are city or municipal council; and do not have a recycling program logo. Finally, larger councils are more likely to have internal goals related to sustainability than smaller councils. As well, a few cross tabulation tables were provided to show the correlation between categorical variables (refer Appendix 5_5).

To further test the relationship among independent and control variables Pearson correlations were performed.⁶¹ As shown in Table 5.15, the highest correlation coefficient is only 0.115.

Table 5.15 Correlations between Independent Variables

	Internal goals	Public sector awards	Recycling logo
Internal goals	1	0.115	-0.053
Public sector awards	0.115	1	0.039
Recycling logo	-0.053	0.039	1

5.9 CHAPTER SUMMARY

This chapter presents the results of the descriptive statistics for the dependent, independent and control variables examined in this thesis. Analyses reveal that Malaysian councils are more likely to report economic information than social and environmental information on the websites. The results of descriptive statistics help to answer the first research question of the thesis. The level of disclosure is low despite the fact that a website is a potentially important tool to communicate sustainability information to the community due to its technological capacity, such as speed and high information storage. The reasons underpinning the level of disclosure will be discussed in Chapter Eight.

The results from the content analysis method reveal that sustainability information disclosure varies significantly from 2 to 785 sentences with a mean of 106 sentences. Meanwhile, the disclosure index method indicates a range between 1 to 36 items (out of 57 sustainability items) present on the websites. The mean of 15 items only represents 26.8% of the overall items disclosed in this method.

Generally, the findings reveal the following:

- Both methods indicate that the top management give greater emphasis to social issues, followed by the economy and environmental matters.

⁶¹ Correlation looks at the relationship between two variables in a linear fashion (Coakes *et al.*, 2006).

- It is apparent that the economy category has many individual departments due to the diversity of economic functions and activities which led to higher disclosure of economic information compared to social and environmental information.
- Although there is a positive disclosure regarding the activities and programs related to the sustainability agenda as a whole, it is argued here that there is less impact due to a very low disclosure on the financial information pertaining to the sustainable development agenda.
- It seems that the websites of these councils are not fully utilized to encourage community participation, which, in turn, would assist in improving accountability and transparency. As well, the website is not used fully to disclose performance indicators and achievements which may assist in promoting the image of the councils as a whole.

The next chapter presents regression analysis, involving the hypotheses tests for the effects of council's size, jurisdiction, the LA 21 program, public sector awards, the type of council, a recycling logo and internal goals, on the extent of sustainability reporting on Malaysian local authority websites. The results of these tests are used to answer the second research question of the thesis.

CHAPTER SIX

MULTIVARIATE ANALYSIS

6.1 INTRODUCTION

This chapter provides inferential statistical analysis on the extent of sustainability reporting on Malaysian local authority websites, presenting the multiple regression results for the five hypotheses proposed in Chapter Three. The results of the analyses are then used to answer the second research question: 'Do a council's size, jurisdiction, the LA 21 program, public sector awards, and type of council have a significant impact on the extent of sustainability information reported on Malaysian local authority websites?'

Sections 6.2 and 6.3 present the results of regression by using the content analysis and disclosure index methods respectively. The hypotheses development results are discussed in Section 6.4. A comparison of results using the content analysis and disclosure index methods is made in Section 6.5. The sensitivity analysis results are reported in Section 6.6. Finally, Section 6.7 provides a summary of the chapter.

6.2 REGRESSIONS USING *LOGDVSENTENCE* AS A MEASURE OF DEPENDENT VARIABLE

This section provides regression results using *logdvsentence* as a dependent variable and the potential relationship with the explanatory variables.⁶² To explore different theoretical possibilities, a few regressions were run.

The backward elimination procedures were conducted.⁶³ Backward elimination is used as the model reduction method to determine the most significant predictor variables that can explain the extent of sustainability information on websites. In this procedure, all independent variables are entered into a model and sequentially

⁶² Refer to Section 4.9.3 for the regression equation.

⁶³ The thesis also examined the relationship between the *logdvsentence* and the independent variables one at a time - see Appendix 6_1. There are three major regression models – Simultaneous model, hierarchical and stepwise regression. Backward and forward entries are two entry methods for the independent variables (Coakes *et al.*, 2006). The forward entry method was performed and revealed the similar result to the backward elimination procedure.

removed one at a time until only significant variables remain (Cooper and Schindler, 2008). Table 6.1 provides the statistical significance (p-value) and a summary of backward elimination procedure results.

Table 6.1 Summary of Backward Elimination Results (Sentences)

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Logrevenue	0.001	0.000	0.000	0.000	0.000	0.000
Jurisdiction	0.292	0.187	0.192	0.150	0.173	
LA 21	0.068	0.052	0.039	0.034	0.025	0.049
Awards	0.450	0.341	0.321			
Type	0.842					
Recycling logo	0.167	0.173	0.170	0.219		
Internal goals	0.598	0.525				
Adjusted R square	0.496	0.503	0.505	0.505	0.503	0.484

Step 1 provides the result when all independent variables are included - regression examined the relationship between the independent variables and the *logdvsentence* simultaneously.⁶⁴ It is found that revenue of council is a very significant variable that explains the extent of sustainability reporting on Malaysian local authority websites at a p-value = 0.001. As well, there is a moderately significant relationship between the LA 21 program and the *logdvsentence* at a significant level < 0.1. Other variables such as type of councils, jurisdiction, internal goal, award and recycling logo do not explain the extent of sustainability reporting on Malaysian local authority websites.

Step 1 also shows that the value of the adjusted R square is 0.496 which means 49.6% of the variation of sustainability reporting on the websites can be explained by the five independent variables and two control variables. This result is higher when compared to the adjusted R square of 0.367 in a CSR study using content analysis (sentence) by Amran and Devi (2008) on Malaysian companies. When compared to a study using word count by Haniffa and Cooke (2005), this thesis produces a similar result as shown by the adjusted R square in 1996 (0.485) and in 2002 (0.438) respectively.

⁶⁴ Hair, Anderson, Tatham, and Black (1998, p.196) stated that: "...meeting the assumptions of the regression analysis is essential to ensure that the results obtained were truly representative of the sample and that we have obtained the best results possible". Refer to Appendix 6_2 for the scatter plot of the residual value for all dependent variables (regression assumption test) and Appendix 5_1 for the distribution shape of the dependent variables.

Based on Step 1, the most insignificant independent variable is the type of council; therefore it is removed in the Step 2 regression. In the Step 2 regression, it is shown that the size of councils is a key predictor of the extent of sustainability reporting on the websites at a significant level < 0.01 . Similarly, the LA 21 program is moderately significantly related to *logdvsentence* at a p-value = 0.052.

Internal goals are not included in the Step 3 regression. The size of councils (logrevenue) and the LA 21 program continue to be the main determinants of sustainability reporting on the websites with a p-value = 0.000 and 0.039 respectively. Awards, jurisdiction and a recycling logo remain insignificant in the Step 3 regression.

The Step 4 regression excludes the most insignificant variable from the Step 3 regression, which is, awards. Logrevenue's p-value remains highly significant at 0.000. Meanwhile, LA 21 is highly significant at a p-value = 0.034.

The Step 5 regression only includes jurisdiction, logrevenue and the LA 21 program. Jurisdiction does not explain the extent of sustainability reporting on the websites. Meanwhile, logrevenue and LA 21 are significantly related to *logdvsentence* at p-value = 0.000 and 0.025 respectively.

Finally, Step 6 regression confirms the key predictors for the extent of sustainability reporting on Malaysian local authority websites using the content analysis sentence count method, these being the size of councils and the LA 21 program with p-value = 0.000 and 0.049. This suggests that these two variables are considered determinants of sustainability reporting on Malaysian local authority websites. The estimated coefficients for the final model (from Step 6, Table 6.1) are presented in Table 6.2.

Table 6.2 Parameter Estimates of the Final Model (*Logdvsentence*)Dependent Variable: *Logdvsentence*

Parameter	Coefficient	Std. Error	p-value
Intercept	-1.49	0.493	0.003
Do not implement nor disclose the LA 21 program	-0.23	0.106	0.033
Implement but do not disclose the LA 21 program	-0.22	0.089	0.016
Implement and disclose the LA 21 program	0(a)	.	.
Logrevenue	0.49	0.063	0.000

(a) This parameter is set to zero because it is redundant.

It can be seen from the above table that councils which have implemented and disclosed LA 21 have a higher disclosure by 0.23 compared to councils that have neither implemented nor disclosed. The councils that implemented but did not disclose the LA 21 program have an insignificantly ($p = 0.878$) higher dependent variable by 0.01 ($= 0.23 - 0.22$) as compared to the councils that did not implement nor disclose LA 21. In this regard, the implementation of the LA 21 program has little effect on disclosure but the disclosure of LA 21 involvement does. Thus, it is posited here that disclosure of LA 21 affects the dependent variable and the program implementation does not. Thus, the evidence suggests it is the commitment by a council to the LA 21 program by explicitly stating this commitment on their website that is linked to higher sustainability disclosures and not the fact that they are implementing LA 21. This result is noteworthy because most past studies have relied on disclosure – an independent assessment of what an entity is actually doing has not been available. These results suggest higher sustainability disclosures are not driven by technical involvement in a program to promote disclosure but by the organizational commitment to the program, as reflected by their disclosure of this involvement.

In relation to a council's size, as shown in Table 6.2, the increase of logrevenue by 1 will increase *logdvsentence* by 0.49. In other words, if revenue is 10 times higher the *dvsentence* is $10^{0.49}$, or 3.1 times higher. Further, as shown in Table 6.2, size has a larger impact on disclosure than LA 21 in terms of the coefficient and p-value. While the LA 21 has a maximum effect on disclosure by 0.23, size of councils can vary from 6 to 9 on which the maximum effect on disclosure is 1.5 (3×0.49).

Hence, based on the above discussions, it can be concluded that the size of councils and the LA 21 are key predictors in explaining the disclosure level of sustainability information on the websites by using the content analysis sentence count method.

6.3 REGRESSIONS USING DISCLOSURE INDEX AS THE DEPENDENT VARIABLE

This section provides regression results using disclosure index (*dvindex*) as the dependent variable, and the relationship with the independent variables. In parallel with the first method using the content analysis, the backward elimination procedures were performed.⁶⁵

The p-value derived from the backward elimination procedure to analyse the variables that may influence the disclosure level of sustainability information on the websites is summarized in Table 6.3.

Table 6.3 Summary of Backward Elimination Results (Using Disclosure Index)

	Step 1	Step 2	Step 3	Step 4
Logrevenue	0.016	0.015	0.000	0.000
Jurisdiction	0.054	0.050	0.031	0.019
LA 21	0.000	0.000	0.000	0.000
Awards	0.092	0.094	0.081	
Type	0.312	0.309		
Recycling logo	0.822			
Internal goals	0.000	0.000	0.000	0.000
Adjusted R square	0.562	0.566	0.564	0.557

Step 1 of Table 6.3 shows the result of the multiple regressions. In the first step, it was found that LA 21 and internal goals are significantly related to the extent of sustainability reporting on Malaysian local authority websites at a p-value = 0.000.

Meanwhile, logrevenue also has a significant relationship with *dvindex* at a significant level < 0.05 (p-value = 0.016). Awards and jurisdiction are found to be moderately significantly related to the disclosure level at a p-value = 0.092 and 0.054 respectively. It seems that only the council's type and the recycling logo did not explain the extent of the disclosure level on the websites. As shown by Table 6.3 (Step 1), the adjusted R square (0.562) for the disclosure index is higher than the

⁶⁵ Refer to Appendix 6_3 for simple regression for *dvindex*.

content analysis sentence count method, that is, 0.496 (refer Step 1, Table 6.1). Additionally, this result is higher than the following studies:

- A study of CSR on Malaysian companies' annual reports by Haniffa and Cooke (2005) with adjusted R square 0.389 (1996) and 0.453 (2002).
- A study on Internet based disclosure for Chinese listed companies by Xiao *et al.* (2004) with adjusted R square = 0.08.
- A research on TBL reporting (annual reports, stand-alone reports and special website report) on the US and Japan companies with an adjusted R square 0.331 when using ranked data (Ho and Taylor, 2007).

The reasons for this higher score in this adjusted R square is possibly due to different organizational contexts since this thesis focuses on local authorities, whilst other past studies were based on the private sector setting.⁶⁶ In addition, this thesis does not have to transform the *dvindex* because it is normally distributed.

From Step 1, it can be seen that the recycling logo is the most insignificant independent variable; therefore, it is excluded in the Step 2 regression. It is revealed that LA 21 and internal goals are still highly significant at a p-value = 0.000. Jurisdiction and logrevenue are also significant at a significant level < 0.05 and awards is moderately significant at a p-value = 0.094.

The third regression indicates that logrevenue, the LA 21 program and internal goal are the main determinants that explain the level of disclosure with a p-value = 0.000. Similarly, jurisdiction is highly significant at a significant level < 0.05.

The final regression (Step 4) confirms the key predictors that explain the extent of sustainability reporting on the websites using the disclosure index method. LA 21, internal goals and the size of councils are highly significantly related with the *dvindex* at a p-value = 0.000. Jurisdiction, as well, is having a strongly significant relationship with the *dvindex* at a p-value = 0.019.

⁶⁶ It is acknowledged that it is not comparable to discuss the adjusted R² with different studies and different transformation of data.

Subsequent to the above discussion, the estimated coefficients of the final model are presented in Table 6.4.

Table 6.4 Parameter Estimates of the Final Model (*Dvindex*)

Dependent Variable: *DVINDE*X

Parameter	coefficient	Std. Error	Sig.
Intercept	-22.04	7.243	0.003
Jurisdiction J1	-7.27	4.798	0.132
Jurisdiction J2	-5.53	1.815	0.003
Jurisdiction J3	-1.93	4.248	0.650
Jurisdiction J4	-4.19	1.604	0.010
Jurisdiction J5	-10.35	3.432	0.003
Jurisdiction J6	-1.09	1.418	0.443
Jurisdiction J7	-2.24	1.626	0.171
Jurisdiction J8	-0.981	1.909	0.608
Jurisdiction J9	-1.565	1.577	0.323
Jurisdiction J10	-6.16	2.157	0.005
Jurisdiction J11	-0.782	2.631	0.767
Jurisdiction J12	-3.37	1.462	0.023
Jurisdiction J13	-4.140	1.376	0.003
Jurisdiction J14	0(a)	.	.
Do not implement and disclose the LA 21 program	-4.70	1.440	0.001
Implement but do not disclose the LA 21 program	-5.21	1.260	0.000
Implement and disclose the LA 21 program	0(a)	.	.
Do not have internal goals on sustainability	-3.47	0.914	0.000
Have internal goals on sustainability	0(a)	.	.
Logrevenue	6.63	0.994	0.000

(a) This parameter is set to zero because it is redundant.

It can be seen from Table 6.4 that not all jurisdictions are significantly different from each other. The councils that implemented and disclosed the LA 21 program have a higher dependent variable by 4.70 than councils that have neither implemented nor disclosed. The councils that implemented but did not disclose LA 21 have a higher dependent variable by 5.21 than councils that have neither implemented nor disclosed the LA 21 program. There is no statistical difference ($p = 0.618$) in the dependent variable between councils that did not implement and disclose the LA 21 program and councils that implemented but did not disclose LA 21 ($5.21 - 4.70 = 0.51$). Similar to the content analysis method, the implementation of the LA 21 program has little effect on disclosure but the disclosure of LA 21 involvement does.

Thus, it is posited here that disclosure of LA 21 affects the dependent variable and the program implementation does not.

From Table 6.4, councils without internal goals have a lower dependent variable by 3.47. Meanwhile, Table 6.4 also highlights that if logrevenue increases by 1, the *dvindex* will also increase by 6.63. In other words, if revenue is 10 times larger, *dvindex* will increase by 6.63.

Overall, this suggests that by using the disclosure index to measure the dependent variable, the key variables are the size of councils, LA 21, internal goals and jurisdiction which produced different results in the content analysis method. The arguments for different results are discussed in Section 6.5.

6.4 HYPOTHESES DEVELOPMENT RESULTS

This section reports the results for each hypothesis using both dependent variables developed in Chapter Three. The result is summarized in Table 6.5. Hypotheses were accepted if regression p-values were less than 0.05 and marginally accepted if less than 0.1.

Table 6.5 Hypotheses Results

Variables	Hypotheses	Description	Accepted/ rejected (using <i>logdvsentence</i>)	Accepted/ rejected (using <i>dvindex</i>)
Size	H1	The extent of sustainability reporting on the websites is higher for larger councils.	Accepted	Accepted
Jurisdiction	H2	The extent of sustainability reporting on the websites depends on the jurisdiction of the local authorities.	Rejected	Accepted
LA 21 program	H3	The extent of sustainability reporting on the websites is higher for councils that have greater commitment to the LA 21 program.	Accepted	Accepted
Public sector awards	H4	The extent of sustainability reporting on the websites is higher for councils that have won a public sector award.	Rejected	Marginally accepted
Type	H5	The extent of sustainability reporting on the websites is different for different types of councils.	Rejected	Rejected

The following section concentrates on the discussion by using the disclosure index method for several reasons. Firstly, based on the inferential results, the disclosure index method is able to produce more significant results than the content analysis method (whereby four hypotheses were fully accepted in the disclosure index as

compared to only two in the content analysis method). Secondly, based on the adjusted R square result, the variation of sustainability reporting on the websites can be explained by the variation of the five independent variables and the two control variables, which is higher in the disclosure index (0.557, Step 4, Table 6.3) than in the content analysis method (0.484, Step 6, Table 6.1). The theoretical explanation is also provided to support the hypotheses results. Additional discussions will be included in Chapter Eight.

6.4.1 Size of Councils

The size of councils is a main determinant for the extent of sustainability reporting on the websites in both methods. Therefore, H1 is accepted.

This thesis's result is similar to Groff and Pitman's study (2004) which claims size may affect Internet financial reporting because of the sophistication of the city's financial functions. However, it must be pointed out in this thesis that in sustainability reporting more than one department may be involved to produce a report (or a separate department) that includes all the sustainable development activities from all three categories, namely: environment, social, and economic functions. Thus, it is not appropriate to compare the financial information (Groff and Pitman's study) together with the sustainability information reported on the website (this thesis). Financial information is in itself an integral part of the overall sustainability information.

The thesis's result is not consistent with Laswad *et al.*'s (2005) work, which is among a very small number of past studies that examined the impact of size and type of councils in a multivariate analysis.⁶⁷ Laswad *et al.* (2005) found that type was a significant predictor and size was not. This possibly indicates the high correlation between the size and type of councils in a multiple regression analysis which potentially produces a significant result in only one variable (refer to Chapter Five, Table 5.14).

⁶⁷ Laswad *et al.* (2005) used a categorical variable to measure type, that is, district versus non-district, and used total assets and total revenue as proxies for size.

It is also not surprising to note that size as a key predictor in this thesis emerges from the fact that large councils have a higher budget for IT services and the maintenance of a more sophisticated website. Larger councils often have the advantage of greater administrative, technical and financial resources than smaller councils. It seems that the larger councils may be taking full advantage of the potential economy of scale, which may be available from the use of the Internet, for disseminating sustainability information.

Further, larger councils are legitimating their activities via websites due to coercive political pressure from external factors such as the mass media. In line with concepts discussed by Meyer and Rowan (1977), larger councils are inclined to present myths about their activities to fulfil societal requirements. In other words, larger councils institutionalized their activities and programs to appear legitimate and conform to social values and norms. In short, there are many factors which contribute to the significant result of size as an independent variable using coercive political pressure. Other factors such as financial or non-financial resources are also important in determining the level of disclosure of sustainability information on websites.

6.4.2 LA 21

The LA 21 program is found to be a significant independent variable in explaining the extent of sustainability reporting on the websites in both methods. The commitment, as reflected in the disclosure of LA 21 involvement on a council's website indicates the strategic behaviour in response to the institutional environment, that is, the requirement to implement the LA 21 program by the Ministry, which corresponds with the coercive isomorphism tenet. As well, this indicates that the councils that are implementing and reporting the LA 21 program are showing more commitment by disclosing more sustainability information. An invitation or demand by the Ministry to set up the Sustainable Development Unit in 2002 and to appoint a LA 21 officer in the councils is also an instance of coercive pressure which possibly drives the level of disclosure.

In addition, local authorities have to comply with the funding requirement from the Ministry to implement the LA 21 program (see, for example, Mizruchi and Fein, 1999; Carpenter and Feroz, 2001; Rahaman *et al.*, 2004). Although, there is no

requirement to report on websites, there is a requirement to submit yearly reports for fulfilling funding requirements by the Ministry. There is a possibility that some of the councils also put the same report on their websites although there is no requirement for the councils to do so. Therefore, it is contended that there is an indirect coercive pressure for councils to report on websites. Hence, H3 is supported. This will be discussed further in Chapter Eight.

6.4.3 Jurisdiction

Jurisdiction is significantly related to the *dvindex* in multiple regressions. Thus, H2 is accepted. The local authorities are subjected to close scrutiny by the state government for the program and policy implementation related to sustainable development and the usage of the councils' websites. Different program and policy implementation by the state governments exert different levels of coercive pressures on councils in their area of jurisdictions.⁶⁸

Although determining which jurisdictions apply this coercive pressure is difficult and beyond the scope of this quantitative phase, the evidence of this link between jurisdiction and disclosure is significant. This result is particularly noteworthy because this statistical test is expected to have low power for several reasons.

Firstly, the large number of 14 jurisdictions means including this independent variable is equivalent to adding 13 independent variables into a regression model.

Secondly, without relevant information about which jurisdictions are exerting more coercive pressure than other jurisdictions, this is determined by the statistical test. The fact that the p-value must take into account the difference in disclosure of the highest and lowest disclosing jurisdictions could be due to the large number of jurisdictions examined (rather than the characteristics of those particular jurisdictions) will significantly reduce the chances of achieving a significant p-value.

Finally, the fact that many jurisdictions have a small number of councils means the disclosure resulting from the influence of these jurisdictions is estimated

⁶⁸ Refer Chapter Three, Section 3.8.2 for an explanation regarding a state that has a sustainable development policy for all local authorities under its jurisdiction.

inaccurately, making even large differences in disclosure statistically insignificant. Hence, the low power when testing the statistical significance of jurisdiction implies the actual effect of jurisdiction is large for this statistically significant result to be achieved. Although only moderately significant ($p = 0.054$) when all variables are included, this is due to minor association with type of councils; some jurisdictions include many district councils while other jurisdictions tend to have many city and municipal councils. The qualitative phase will further discuss the differences in coercive pressures exerted by different jurisdictions in the sustainable development policy and program implementation.

When using the number of sentences count method, jurisdiction is not found to be a determinant of the sustainability disclosure level on the websites. Therefore, H2 is rejected under content analysis.

6.4.4 Public Sector Awards

As determined in the disclosure index method, a public sector award is found to be a moderately significant predictor for reporting sustainability information on the websites. Therefore, there is evidence to suggest that in the disclosure index measure, H4 is marginally supported. This could be due to there only being four councils that had won awards in the sample based on the website analysis.⁶⁹

This indicates a consistency with findings by Ryan and Purcell (2004) that annual report competition criteria are an informal pressure under the coercive isomorphism pressure. Further, in relation to legitimacy, award-winning organizations are subjected to greater political visibility than councils that have not received any award. This is important to ensure continued support from society. It is argued that an award-winning organization tends to adopt best practices in all aspects of the organization including achieving sustainable development.

In the content analysis method, award is a weak predictor for the disclosure of sustainability information on Malaysian local authority websites. Therefore, H4 is rejected under content analysis.

⁶⁹ See Table 5e, Appendix 5_4.

6.4.5 Type of Councils

The type of councils as a source of normative isomorphism provides weak evidence for the extent of sustainability reporting on the websites as shown in both measures for the level of disclosure. The multiple regressions reveal that the type of councils has no significant effect on the disclosure. Thus, H5 is not supported. In this thesis, the multivariate analysis provides that the size of councils, that is, logrevenue is a significant explanatory variable, and the type of councils is not. This indicates that logrevenue has a higher explanatory power than the type of councils. The main reason for using both variables in the regression is to determine which variable is a more powerful explanatory variable in explaining the sustainability disclosure on the websites. As well, this thesis refers to Laswad *et al.*'s (2005) study that employed both variables in the regression.

The thesis's result is not consistent with Laswad *et al.* (2005) where it was claimed that the type of local councils was significantly related to Internet financial reporting. In their study, it was found that a high proportion of New Zealand urban councils engaged in Internet financial reporting when compared to district or regional councils. This thesis contends that size is a more superior predictor of disclosure compared to type of council.

6.4.6 Internal Goals

Although internal goals is not an independent variable (only as a control variable) to explain the extent of sustainability reporting on websites, it is important to discuss this variable because it produces a significant result in the regression analyses.

The disclosure index method produces the significant result when examining the relationship between the councils that have internal goals and the extent of disclosure level on the websites. The significant result from the disclosure index method is similar to Amran and Devi (2007) who regarded internal goal and mission related to CSR as a process of normative isomorphism under the content analysis (sentence count) method. This implies that the organizations which include their commitment to sustainable development in their mission statement and internal goals are promoting normative isomorphism to report the sustainability information on their websites.

The significant result in this thesis is consistent with Eldijo-Ten's (2007) work using the stakeholder theory to analyse the quantity of environmental disclosure in Malaysian companies' annual reports using the content analysis method (sentence count). Nevertheless, the significant result in this thesis differs from Cahaya *et al.*'s (2009) study that did not regard clear internal goals of employees as the significant predictor under the normative isomorphism tenet for two reasons. Firstly, Cahaya *et al.* (2009) investigated the factors influencing the labour practice disclosure on Indonesian listed companies' annual reports which is different from the Malaysian local authority websites in this thesis. Secondly, Cahaya *et al.* (2009) examined only the quantity of labour practice disclosure under the social category which is an integral part of sustainability information in this thesis. Their study only included 14 items in the disclosure index instrument as compared to 57 items developed in the thesis.

6.4.7 Recycling Program Logo

Both the content analysis and disclosure index methods did not support that a recycling program logo explains the variation in the sustainability information disclosure on the websites. This suggests that any form of organizational identity such as a recycling logo does not necessarily represent the amount of information reported on websites.

6.5 ARGUMENT FOR DIFFERENT RESULTS IN BOTH THE CONTENT ANALYSIS AND DISCLOSURE INDEX METHODS

This section discusses possible reasons why different results were obtained using the two dependent variables. The relationships between both measures of the dependent variables are explained first. Table 6.6 provides a Pearson coefficient correlation for both measures of dependent variable.

Table 6.6 Pearson Correlation between *Logdvsentence* and *Dvindex*

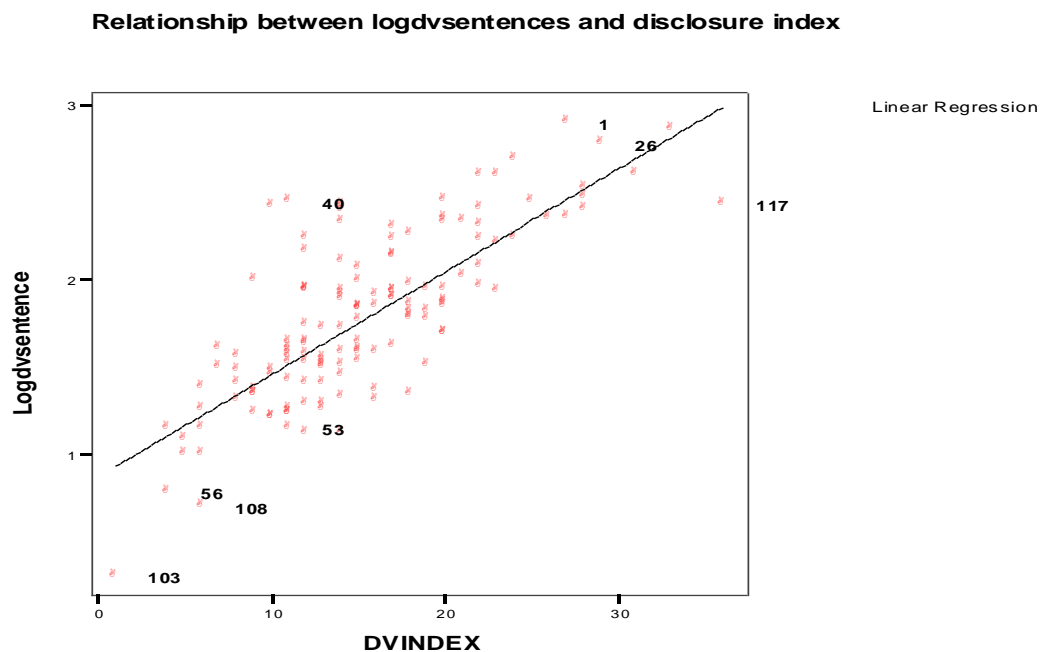
Pearson Correlation	<i>Dvindex</i>
<i>Logdvsentence</i>	0.776

As can be seen from Table 6.6, both dependent variables are positively correlated at a significant level < 0.01 and with a coefficient correlation of 0.776. There are very few past studies which examined the relationship between both measures of the dependent variables. This thesis's result is higher as compared to a finding by Williams (1998) that presented a coefficient of 0.652 for the correlation between disclosure index and sentence count, when examining Asia Pacific companies' annual reports. This different correlation by studies could be due to:

- Difference in medium of analysis—Williams (1998) analysed annual reports, whereas this thesis focused on content of the sustainability information on the websites.
- Difference in organizational context—Williams (1998) concentrated on the private sector companies' reporting. Meanwhile, this thesis investigated the local authorities' reporting. Both types of entities have their own unique features, for example, in terms of objectives, accounting principles and practices, and also shares of ownership.
- Difference in country—Williams (1998) focused on Asia Pacific countries and this thesis focuses on the Malaysian setting.

A scatter plot showing the relationship between *logdvsentence* and *dvindex* is provided in Figure 6.1.

Figure 6.1 Linear Regression between *Logdvsentence* and *Dvindex*



There are a few councils that deviate unusually from the general pattern in Figure 6.1. This may explain the difference in regression results derived from the content analysis and disclosure index as measures for the dependent variable. These councils, marked in Figure 6.1 will be referred to below.

Turning now to the differences in regression results, this section elaborates on the possible reasons for the differences in both measures of the dependent variable as follows:

- Firstly, it appears that some councils place a higher priority on certain aspects with regards to sustainability information disclosed on the websites. This as well indicates the advantage of the content analysis sentence count compared to the disclosure index. This would result in great differences which can be seen from the regression slope in Figure 6.1.
- Secondly, there is no standard format for sustainability information disclosure on the websites for the local authorities. Some of the items developed in this thesis, for example, client charter, details of services provided, top executive and contact details are part of basic features of websites outlined by the General Circular 1/2006 issued by the Prime Minister's Department of Malaysia. However, this thesis only accounts for sustainability information.
- Thirdly, both methods measure different concepts.
- Fourthly, differences could be due to the decision rules developed in this thesis which may over count some sentences.

The differences in both methods are explained next.

The emphasis on the type of information to be disclosed on websites

Firstly, differences may be possibly as a result of advantages and disadvantages of content analysis and disclosure index relative to each other (refer Chapter Four, Section 4.5), that is, content analysis is able to indicate the 'emphasis' and 'importance' of sustainability information for each council. This can be illustrated by the case of Council C117.⁷⁰

⁷⁰ See Appendix 6_4 and 6_5 for details in three cases: Councils C117, C1 and C40.

Council C117 has 36 items in the disclosure index instrument and discloses 270 total sentences. Out of the total sentences, 37% is represented by environmental activities and programs. These environmental programs and activities are mostly obtained from the Council C117's press room on the website. Among the programs are:

- A campaign under the LA 21 Unit of Council C117 to reduce the use of plastic bags and other plastic materials by a few participating outlets. This program aims to reduce the operators' expenditure in printing and buying of plastic bags and to protect the environment.
- The details of the Council C117's Landscape Day as part of the council's Fest program.

As can be seen from Figure 6.1, Council C117 and Council C40 have almost the same amount of sentences. However, Council C117 disclosed a lot of items in the disclosure index compared to Council C40.

As shown in Figure 6.1, Council C53 and Council C40 disclosed almost the same level of sustainability information when measured using the disclosure index method. There were a few items in the content analysis instrument that were mostly described by Council C40, for example, 150 sentences and 38 sentences related to social and economic services respectively. However, there were no disclosures made in these two items in Council C53. Council C53 only has a few sentences on sustainability issues in the council's mission and vision, motto and theme, top executive in charge of department, and finally client charter.

Therefore, it can be argued that certain councils disclose relatively more sentences than other councils because of the special emphasis made by the individual organization. This is also supported by the fact that reporting of sustainability information, such as the sustainability related program, is just a voluntary initiative of the councils, although in terms of the implementation it is clearly being emphasized, for example, as the criteria assessment in the star rating system and Local Government Quality Award exercises.

No standardization of sustainability disclosure on the websites

Secondly, differences in results are possibly due to no standardization in the websites' content, particularly in reporting the sustainability information. This thesis also identifies another two councils that deviate from the other councils, namely, Councils C108 and C56. From the main website analysis in September 2008, it was discovered that these two councils were disclosing low level of sustainability information on the websites. It was observed that these two councils' websites did not contain basic information such as a client charter, a keynote address by top management, activities or services and contact details of the head of departments.

Different concepts measured in different methods

Thirdly, another point which supports the difference in both results is that a content analysis and a disclosure index do not measure the same concept. According to Haniffa and Cooke (2005), the disclosure index measurement captures 'variety' of disclosure while the content analysis (word) captures the extent of disclosure. In this thesis, when assessing the LA 21 activity and program on Council C26's website, there are 197 sentences counted if using the content analysis method, whereas in the disclosure index it is only scored as '1' to show the presence of each item (9.1%). In line with Haniffa and Cooke (2005), this thesis highlights that the disclosure index method is able to capture the variety of items disclosed on the websites which indicates the advantage of this method as compared to the content analysis sentence count method. For example, with Council C117, although this council is not disclosing the most sustainability information under the content analysis (sentence count) method, this council appears to be the highest discloser in the disclosure index method. Thus, it is posited here that the amount of sentences does not represent the diversity of information in the disclosure.

Decision rules to count sentences

Fourthly, a reason for the difference between the two results could be also due to the decision rules developed in this thesis which tend to over count the number of sentences. For example, the amount of sentences for a list of small businesses market places provided by Council C1 is based on the decision rule that the sentence is counted when it started with a system, for instance, 1), 2), 3) ... or a), b), c) ... or i), ii), iii. This is especially related to the councils' websites that provide a long list of

information, for example, a list of market places (Council C1) and a list of rubbish collection services (Council C40). Nevertheless, it is believed that this type of information is useful to the community at large and implies higher level of accountability by the councils. Further, the repetition in sentences counted implies the importance of certain issues disclosed on the websites. One of the key assumptions underlying all quantitative content analysis studies is that quantity of disclosures within a category signifies the importance of the category (Krippendorff, 1980; Gray *et al.*, 1995b; Neu *et al.*, 1998; Unerman, 2000).

6.6 SENSITIVITY ANALYSIS

A number of sensitivity analyses were conducted to confirm the robustness of the results provided in the earlier discussion. These include the use of different measurements in LA 21 and jurisdiction. The main measurement scores were '2' for implementing and disclosing LA 21, '1' for implementing but not disclosing, and '0' for not implementing and disclosing LA 21. Meanwhile, the alternative measurement is '1' if there is a disclosure about LA 21 involvement and '0' if otherwise. In terms of LA 21, both methods confirm the robustness of the main result, that is, a different measurement does not change the main results (Table 6k, Appendix 6_6; Table 6l, Appendix 6_7).

Alternative measures for jurisdiction were considered to determine whether political party and geographical location of the councils have a significant relationship with the extent of sustainability disclosure on websites. Sensitivity analyses were conducted with these alternative independent variables in place of jurisdiction to see if significant results for jurisdiction could be due to, for example, geographical region.

The alternative measurement is '1' if the council belongs to the state that has the same political party as the federal government, and '0' if otherwise. The justification for this alternative definition is that coercive pressure could be political. The result is in agreement with the main results (refer to Table 6m, Appendix 6_8), when a different measurement is used in the content analysis method. As well, when using the alternative measurement based on regions ('1'- northern, '2'- central, '3'- southern and '4'- east) and division of Malaysia ('1'-West Malaysia and '2'- East Malaysia), results

from the sensitivity analyses are consistent with the main results in the thesis under the content analysis (Refer Table 6o, Appendix 6_10 and Table 6q, Appendix 6_12).

Meanwhile, the disclosure index method produces a different result from the main result in the thesis, that is, political party is not a significant predictor of the level of disclosure on the website (Table 6n, Appendix 6_9). This suggests the coercive pressure applied by jurisdiction is not due to which political party is in power at the time. Similarly regions and division of Malaysia variables are not significant predictors of the level of disclosure on the website under the disclosure index. (Table 6p, Appendix 6_11 and Table 6r, Appendix 6_13). This suggests it is not the political party or region of the council that is causing the level of disclosure to depend on jurisdictions under the disclosure index. Hence, this sensitivity analysis supports the hypothesis that it is coercive pressure from higher levels of government that influences the level of CSR disclosure.

Regressions were also conducted by using the two methods for the websites that were not accessible in September 2008 but successfully accessed on 18 January 2009. The results were similar to the main result of this thesis (Table 6s, Appendix 6_14).

Another sensitivity analysis involved the use of logpopulation as an alternative to logrevenue to measure size. Both Table 6t (Appendix 6_15) and Table 6u (Appendix 6_16) show that the type of council is a significant predictor of the dependent variables, and size is not (logpopulation). This indicates population is a poor measurement of size compared to revenue when explaining levels of disclosure. It might also explain different results in the literature concerning whether type of council or size is the best variable to explain disclosure. Future studies should consider carefully the measurement of size.

Finally, if size is excluded from the regression, the results are similar, except the type of councils becomes significant (Table 6v, Appendix 6_17). The type of council is a reasonable surrogate for size when it comes to the significance of the other independent variables.

6.7 CHAPTER SUMMARY

This chapter presented the results of multiple regressions in relation to the five proposed hypotheses. The findings have helped in answering the second research questions of this thesis: 'Do a council's size, jurisdiction, the LA 21 program, public sector awards, and type of councils have a significant impact on the extent of sustainability information reported on Malaysian local authority websites?' It is found that the disclosure index method (four significant variables compared to two) provided more significant results as compared to the content analysis method. Arguments for such differences were also presented. A few additional analyses were performed to ensure the robustness of the overall results in the thesis.

Based on the findings, the implications for the qualitative phase in Chapter Eight are as follows:

1. Why do larger councils disclose more sustainability information as compared with the smaller councils?
2. Why are councils reporting (and not reporting) sustainability information on the websites?
3. Why are the websites not utilized as the stakeholders' engagement tool?

The possibilities of other types of isomorphism for certain independent variables will be further discussed in the interview findings in Chapter Eight.

CHAPTER SEVEN

RESEARCH DESIGN (QUALITATIVE PHASE)

7.1 INTRODUCTION

In Chapter Four, the explanation of the research methods in the quantitative phase was provided. In this chapter, Section 7.2 covers the justification of the qualitative research. Section 7.3 presents the case study information and is followed by the data collection procedures in Section 7.4. Data analysis and verification steps are explained in Sections 7.5 and 7.6 respectively. Finally, Section 7.7 provides a summary of this chapter.

7.2 JUSTIFICATION OF THE QUALITATIVE PHASE

The qualitative phase sought to explain why the local authorities disclose (or not) the sustainability information on the websites. The phenomenon was interpreted based on the meanings conveyed by the interviewee. Thus, the qualitative findings enriched the quantitative phase by providing information regarding motivation for sustainability reporting on the websites.

Qualitative research is able to capture adequately the complexities of the problem examined (Creswell, 2007). The purpose of the interview was to probe the ideas of the interviewees.⁷¹ The semi-structured interview method was used in this thesis. By having a semi-structured interview approach, the restriction of a structured interview could be avoided with regards to the arrangement of the questions. Relative to the structured interview, the semi-structured interview was more flexible and comfortable for the interviewee.⁷² The following section discusses the qualitative approach.

⁷¹ The working background of the practitioners directly or indirectly involved in the web-based sustainability reporting will be further described in Chapter Eight.

⁷² The interviewer does not follow the questions in the set order, and can change the wording and sequence of any questions in the interview guide (Patton, 1992). It is important for the interviewer to keep the interview process and not allow the interviewee to go off on a topic that is irrelevant to the study.

7.3 QUALITATIVE APPROACH—CASE STUDY

A case study approach was employed as this school of thought emphasizes 'the desire to understand complex social phenomena' (Yin, 2003, p. 2). As the 'why' question was posited, the explanatory case study was used as a thesis strategy using a sample of local authorities chosen based on the results from phase one.

In phase one, websites' analysis for the 139 local authorities was conducted in September 2008. In phase two, 17 local authorities were chosen and interviews conducted from 7 April to 30 May 2009. These times and places were always regarded as boundaries in case studies which "seek to provide an in-depth understanding of the cases or a comparison of several cases" (Creswell, 2007, p. 74). The data collection procedure is discussed next.

7.4 DATA COLLECTION PROCEDURE

This section explains seven criteria highlighted by Creswell (2007) and their applicability to the thesis.

What is traditionally studied? (Sites or individuals)

The first step was to determine the parameters for this thesis. No parameters exist as to the exact number of cases to be included in the sample. In relation to sample size, Cooper and Schindler (2008, p. 169) claimed that, "sample size for the qualitative research vary by technique but is generally small". In the thesis, the effort was made to contact as many local authorities as possible prior to the organization's confirmation to finally participate as a respondent. This is due to the fact that the research culture in Malaysia is still under-developed and there are a lot bureaucratic procedures which need to be complied with, especially in relation to conducting research in public sector organizations.

What are typical access and rapport issues? (Access and rapport)

The procedure involves two aspects: gaining entry to the research site and ethical considerations (Creswell, 1994).⁷³ In the qualitative phase, an organizational chart (available on council's website) was used to identify participants that were thought to

⁷³ This thesis was approved by the Economic Planning Unit of the Prime Minister's Department of Malaysia in June 2008.

have some role in reporting sustainability information on the websites. Following that, an official letter was sent to the mayors and secretaries of the 17 local authorities in February 2009 to request approval to conduct interviews in these organizations. Other means were also employed to secure the participation such as via fax, email and telephone calls. This was necessary due to the fact that it took quite a while for these councils to approve the interviews. Only one council did not respond.⁷⁴

To overcome potential delays, contact was done three months prior to the tentative interview date (refer Appendix 7_1). Names of key people were sought with the request adhering to appropriate ethical requirements as stipulated by Curtin University Form C (Application for Approval of Research with Low Risk).⁷⁵ The names of interview participants were chosen by the council mayor or secretary and altered to protect confidentiality when the thesis was completed. The interview guide was emailed to the informants after confirmation was received from the respective councils (refer Appendix 7_2).⁷⁶ The interview guide was prepared in both the English and Malay languages.

How does one select a site or individuals to study?

A purposive sampling technique was employed to select cases in this thesis. According to Babbie (2002, p. 178), "it's appropriate to select a sample on the basis of knowledge of a population, its elements, and the purpose of study". As stated by Stake (2000, p. 446), "the cases are expected to represent some population of cases". Councils were selected based on unique characteristics, such as: size of councils, accessibility in terms of geographical location, researcher's financial and time constraints, as well as the results derived from the earlier analysis. To obtain a more complete picture of the factors that influence the reporting of sustainability

⁷⁴ It was found during the data collection in Malaysia (April 2009) that the secretary had assigned a director of the ICT division to be interviewed. The director of the ICT division then assigned the task to the assistant director. Following that, the assistant director assigned the responsibility to one of the officers. However, the officer assigned never contacts the researcher. Finally, the researcher managed to find a replacement interviewee for this particular council based on a 'snowball' sampling, that is, reference by one of the interviewees in another council within the same region. This was one of the instances that showed a lack of research culture among Malaysians.

⁷⁵ The thesis was approved by the Curtin University Human Ethics Committee on 24 February 2009.

⁷⁶ Two mock interviews were conducted with two PhD students to ensure the clarity of the questions in the interview guide. The students also used the interview method in their research.

information on the websites, the sample included unusual and ordinary cases. The operationalization of these case descriptions are based on the results in phase one. The definitions of these categories of cases are explained below.

Unusual cases

This refers to an unusual situation or characteristic such as:

- the agencies were involved in the LA 21 pilot project in 2000.
- the council classification of under or over average of disclosure level differs in both methods. For example, council A is classified as a high discloser council in the content analysis method but otherwise in the disclosure index method as shown by the mean score.
- when a district council discloses a considerable amount of sustainability information in both the content analysis and disclosure index methods.

Ordinary case

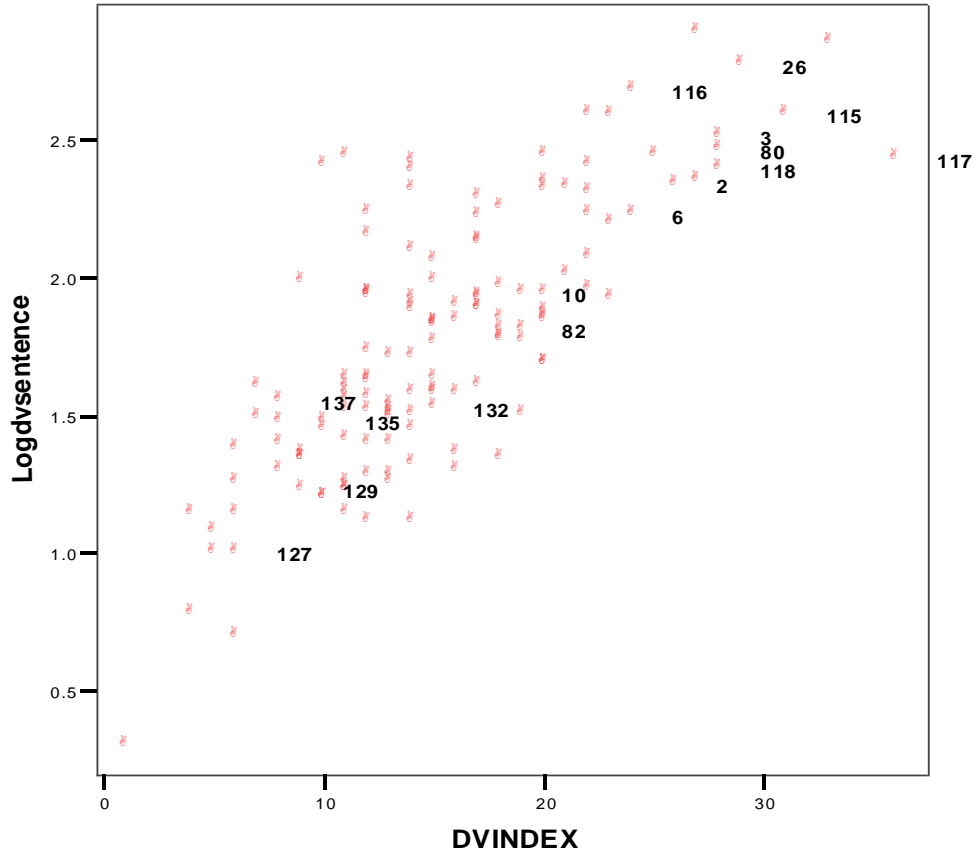
This refers to a situation or characteristic such as:

- when a district council discloses less sustainability information (less than the average amount of disclosure).
- applies when city or municipal councils disclose above the average amount of sustainability information.
- based on the researcher's convenience in terms of the geographical location, time and financial capability.

The case sites selected (based on the actual fieldwork) can be depicted in Figure 7.1, a scatter plot that shows the relationship between the two dependent variables.

Figure 7.1 Scatter Plot of Case Sites

Relationship between logdvsentences and disclosure index



It can be seen from Figure 7.1 that based on the mean of *logdvsentence* and *dvindex* explained in Chapter Five Councils C127, C129, C132, C135, and C137 are regarded as low discloser councils (disclose less than the average amount).⁷⁷ Additional details of the case sites are presented in Table 7.1.

⁷⁷ Mean number of sentences = 106 sentences; mean for the index score = 15.3.

Table 7.1 Details of Case Sites

Council	Type of councils	Type of cases	Total sentences	Total index
C2	City	- ordinary case (city council discloses more sustainability information)	221	26
C3	City	- unusual case (one of the pilot agencies involved in the LA 21 program in 2000 and having a budget on the website).	329	28
C6	Municipal	- ordinary case (geographical location)	715	33
C10	District	- ordinary case (among a very few district councils that disclose sustainability information)	88	19
C26	Municipal	- unusual case (a very detailed LA 21 action plan and the highest discloser of social information)	592	29
C80	City	- ordinary case (city council discloses more sustainability information)	291	28
C82	Municipal	- unusual case (did not disclose much sustainability information)	65	19
C115	City	- ordinary case (city council discloses more sustainability information)	396	31
C116	City	- ordinary case (geographical location)	484	24
C117	City	- unusual case (one of the pilot agencies involved in LA21 in 2000 and the highest discloser in the disclosure index method).	270	36
C118	Municipal	- ordinary case (geographical location)	250	28
C132	District	- ordinary case (district council discloses less sustainability information)	34	15
C127	District	- ordinary case (district council discloses less sustainability information)	10	6
C129	District	- ordinary case (district council discloses less sustainability information)	17	9
C135	District	- ordinary case (district council discloses less sustainability information)	30	10
C137	District	- ordinary case (district council discloses less sustainability information)	36	8

What type of information typically is collected? (Forms of data)

The interview instrument consisted of questions designed to inform the main objective of the qualitative phase—the motivation of sustainability reporting on the website. An interview guide was provided to the interviewee. These questions were based on the website analysis in the quantitative phase as well as the literature review in Chapter Two.

The interviewees were given the Participant Information Statement (refer Appendix 7_3) prior to the interview. The main purpose of this statement is to provide participants with a plain language statement that clearly describes the aims of the project and the nature of the participants' involvement. Participants were informed of their rights and any risks associated with participation. At all times, the welfare,

respect, dignity and personal privacy of the participants were observed by the researcher. Additionally, the interviewees were required to sign the consent form (refer Appendix 7_4) which indicated a willingness to be interviewed. All the interviewees gave full support and cooperation by signing the consent form.

The conduct of the interviews was as follows:

- The interviewees were informed about the aim of the interview.
- The interviewees were reminded at the beginning of each interview that their identity as well as the organization's identity would be kept confidential.
- The interviewees' permission was sought to allow the conversation to be audio-recorded. All the interviewees allowed their conversation to be recorded and careful attention was paid to ensure that the interviewees had the freedom to use their own words and expressions.
- The interviewees were encouraged at the outset of each interview to enquire about any questions or issues for further clarification.
- The interviewees were invited to raise any issues at the end of each interview. No interviewee raised a major issue and four interviewees expressed their interest about the thesis's final results.

The language used in the interviews was mainly English but in some cases, where appropriate, a mixture of both English and Malay was used. This was not expected to impact significantly on the thesis since the objective was to ensure that the message was conveyed and understood clearly. The interviews were designed to be one hour in duration to allow time for discussion and probing into any further issues raised by the subjects.

What are common data collection issues? (Field notes)

In the actual interview process, the main problem that occurred was several changes of the interview appointment date and time. The interviewees were contacted one or two weeks before the actual interview session. Another confirmation was made at least three days before the actual interview, with, on occasion, last minute changes

occurring at the request of the interviewees.⁷⁸ During the data collection process, one council finally turned down the interview after several times of appointment rescheduling. To overcome this problem, the researcher contacted the council which did not respond to indicate a willingness to be interviewed prior to the actual data collection. Finally, this particular council agreed to participate in the interview.

How is information recorded? (Recording information)

Interviews were audio-recorded (with the interviewee's permission). The important points highlighted by the respondents were jotted down during the interview.

How information is typically stored? (Storing data)

The interviews were transcribed verbatim by the researcher in order to ensure transcription accuracy and to minimize possible interviewer's error or bias. "Word-for-word" transcription of discussion is done together with editing the grammatical errors. The translation from Malay to English was also made for the interviews that were conducted in Malay. The translations were checked to ensure accuracy in the meaning. The transcriptions are stored in both hard and soft copies.

7.5 DATA ANALYSIS PROCEDURE

Data analysis in the qualitative study requires some flexibility and creativity in analysing the data. According to Creswell (1994, p. 153):

Data analysis requires that the researcher be comfortable with developing categories and making comparisons and contrasts. It also requires that the researcher be open to possibilities and see contrary or alternative explanations for the findings.

The information from the interviews was analysed using thematic content analysis with the coding done manually. In the thesis, the main factor for not using the qualitative software was due to time constraints and high training costs. This process minimizes the factors that need to be considered when coding using specific qualitative software such as: software cost, training time and the need for additional

⁷⁸ There was an instance whereby the researcher had an interview at 9.30 am which ended at 11.00 am at the southern region of West Malaysia. Then, the researcher had to rush for an interview at 5.00 pm located in the central region of West Malaysia. It took more than four hours to arrive at the second destination. This shows that the researcher had no control over the timing of the interview as it was at the interviewee's convenience and availability.

supporting software to combine coding from multiple NVivo databases before analysis is conducted (Auld *et al.*, 2007). Further, according to Monette *et al.* (2002), computers do not change the steps in the qualitative data analysis. The process is still tedious and requires a lot of time and creativity.

It can be said that the manual analysis was more practical than the software analysis because the exact meanings from the interview transcription had to be interpreted accurately. This process required further thought and was not possible to perform with the computer software. Further, Creswell (2007) suggested the guidelines for analysing qualitative data, and the application in this thesis is presented in Appendix 7_5.

7.6 VERIFICATION STEPS

Both validity and reliability aspects need to be addressed in any sort of method, and are addressed here in relation to the qualitative plan (Creswell, 1994). There were four tests that were considered in the case study approach, namely, construct validity, internal validity, external validity, and reliability.

Construct validity

According to Yin (2003, p. 34), this involves "establishing current operational measures for the concept being studied". Here, the concept refers to the disclosure of sustainability information on the websites which guide the categorization of the cases. Maintaining the chain of evidence of data is also one tactic suggested by Yin (2003). The chain of evidence in this thesis was consistent with Elijido-Ten's (2006) work that included original soft copy/CD of all 16 interviews, printed verbatim transcription of interviews, original copies of signed consent forms and a register of dates of interviews and respondent profiles (whether transcripts were sent electronically and feedback was received).

As suggested by Merriam (1988), and in line with Yin (2003), this thesis had members (participants) check by taking the transcriptions to the councils and asking whether the conclusions were accurate. Only six councils responded to the request.⁷⁹

⁷⁹ There is a reasonable assumption to indicate that all the other 10 transcriptions were accurate although there was no response from the councils.

Internal validity

Cooper and Schindler (2008, p. 705) defined internal validity as:

The ability of a research instrument to measure what is purported to measure; occurs when the conclusion(s) drawn about a demonstrated experimental relationship truly implies cause.

Yin (2003) claimed that this test only applies to explanatory case studies, and hence it is applicable to this thesis. As explained earlier, this criterion is dealt with during the data analysis, that is, when examining themes across cases to detect themes that are common to all cases (*pattern matching*).⁸⁰

External validity

External validity must be dealt with from the research design stage. External validity includes "establishing the domain to which a study's findings can be generalized" (Yin, 2003, p. 34).

The primary strategy utilized in this thesis to ensure external validity was the provision of rich, substantial, detailed descriptions to allow comparison for transferability purposes by analysing responses of the individual questions and links to the relevant literature review in Chapter Two. Further, the analysis was explained in relation to the institutional isomorphism to answer the research question. By doing so, the findings of this thesis can be generalized to other contexts or settings, for example, state government agencies or statutory bodies.

Reliability

The idea of dependability in qualitative research emphasizes the need for the researcher to account for the ever-changing context within which research occurs. The reliability issues were addressed by the following techniques:

- A detailed account of the focus of the thesis, the interviewee's position and basis of selection, and the content from which data was gathered. The use of an interview guide and case site database assisted in minimizing the errors and biases in the thesis (Yin, 2003). This may enhance the thesis's chance to be replicated in another setting.

⁸⁰ Refer Appendix 7_5.

- Data collection and analysis strategies were reported in detail to provide a clear and accurate picture of the methods used in the thesis.
- In these multiple cases, replicability can be determined based on whether the same pattern or events occur in one case to another.

To conclude, both the validity and reliability aspects were highly considered in this qualitative phase to ensure the quality of the research outcome and to understand more about the research process.

7.7 CHAPTER SUMMARY

Outlined in this chapter was a case study approach and the interview method to be described in Chapter Eight. Chapter Eight will provide results from the interview process. As well, results from Chapters Five and Six will be linked with the results in Chapter Eight.

CHAPTER EIGHT

INTERVIEWS

8.1 INTRODUCTION

Chapters Five and Six provided empirical evidence designed to answer the first and second research questions in this thesis. This chapter reports findings from the interviews with the intention of answering the third research question: 'Do the isomorphism mechanisms of institutional theory aid in enhancing the explanation of why Malaysian local authorities disclose sustainability information on their websites?' The findings from this chapter are used to support discussions from Chapters Five and Six. As well, where applicable, differences in results from both quantitative and qualitative phases are highlighted. A brief summary of the case sites and interview process begins the chapter. Then interview responses are analysed and reported in Section 8.3. Section 8.4 summarizes the background information gathered from the interviews. Section 8.5 explains reason for disclosing or not disclosing sustainability information on the website. Factors influencing and impeding sustainability reporting on the website are discussed in Section 8.6. Section 8.7 describes the copying behaviour of sustainability information reported on councils' websites. The results from Section 8.6 are classified into the three types of isomorphism mechanisms to answer the third research question in Section 8.8.

8.2 CASE STUDIES AND INTERVIEWS

The case studies involved interviews with six city councils, four municipal councils and six district councils. In Chapter Five, the selection of case sites was based on several aspects such as the type of councils, the level of disclosure, as well as the researcher's time and financial constraints. Table 8.1 presents a brief profile of the respondents.⁸¹

⁸¹ Refer to Appendix 8_1 for a brief description of each position.

Table 8.1 Profile of Respondents

Council	Type	Division	Position	Length of service
C3	City	Town Planning	Sustainable Development officer	3
C2	City	Town Planning	LA 21 officer	19
C8	Municipal	Town Planning	Assistant Town Planning officer	11
C10	District	Environmental Division Town Planning	Assistant Community officer Planning officer	20 10
C26	Municipal	Information technology Community	Director* Senior Community officer	23 23
C80	City	Social and Culture	Head of LA 21 Unit*	25
C82	Municipal	Corporate Information	Assistant Information officer	1.5
C115	City	Environmental Health Town Planning	Head of Division* Town and Country Planner	19 12
C116	City	Information Technology	Head of Division*	15
C117	City	LA 21	LA 21 officer	6
C118	Municipal	Administrative	Manager*	35
C127	District	Administrative	Secretary*	3
C129	District	Administrative Public Health Administrative Valuation	Secretary* Head of Division* Webmaster Technician	23 23 4 27
C132	District	Public Health	Enforcement Assistant	19
C135	District	Administrative Administrative	Secretary* Acting Assistant Secretary	22 33
C137	District	Administrative	Secretary*	20

*Management position

A total of 16 interviews were conducted involving 23 respondents, 10 of which are currently holding a managerial level position. The longest service duration is 35 years and the shortest is one and a half years. The interviewees were chosen by the mayor / chairman or secretary of the councils. The number of interviewees varies from one council to another. Table 8.1 shows that five councils provided more than one interviewee to participate in this current study. The interviews were conducted in

only one session for these five councils.⁸² In the following section, the questions were analysed based on the council's response and not based on the respondents' responses.

8.3 ANALYSIS OF INTERVIEW QUESTIONS

This section reports the responses from the interview questions based on the interview guide (Appendix 7_2).⁸³ The link between the interview responses and the literature review in Chapter Two is also explained in this section. Questions 1 and 2 are related to the understanding of sustainable development and sustainability reporting. Questions 3 and 4 are associated with the use of websites in communicating the sustainability information. Questions 5(a) and (b) investigate whether there is any involvement of the local authority's accountant in the sustainable development agenda decision making. Questions 1 to 5 (background information) are not directly relevant in answering the third research question in the thesis and therefore reported in detail in Appendix 8_2. The interview responses from Questions 1 to 5 are summarized in the following section.

Question 6 explains reasons for disclosing (or not) the sustainability information on the websites and discussed in Section 8.5. Question 7 describes the factors which influence the reporting of sustainability information on the websites and discussed in Section 8.6. Questions 6 and 7 are developed based on implications 2 and 3 in Chapter Six. Questions 8 and 9 determine whether mimetic isomorphism or copying or imitating other councils' content of websites exists among local authorities. Question 10 links to the activities involved in reporting sustainability information on the councils' websites. Finally, Question 11 asks whether there is any involvement from other organizations or NGOs in promoting the sustainable development agenda on the websites. The responses from Questions 10 and 11 (together with responses for Questions 1 to 5) are summarized next.

⁸² For example, with regards to Council C129, only one interview session was held with all four interviewees. The council's secretary was delighted with the interview session and initially invited all head of departments to participate in the interview. Finally, the researcher was given the privilege by the secretary to select the interviewees based on the relevancy of the interview questions and subject to be discussed.

⁸³ The format of analysing interview transcription data based on 'questions by questions' are not unusual in PhD thesis (See Eljido-Ten, 2006).

8.4 BACKGROUND INFORMATION

This section provides an overview of the sustainability reporting on Malaysian local authority websites based on Questions 1 to 5, 10 and 11. Generally, the concept of sustainable development is understood similarly by the councils however some councils emphasised different aspects of sustainability development. It can be presumed that the meaning of the sustainable development concept is quite broad from the local authority's perspective in Malaysia.

There were two different views regarding the definition of sustainability reporting by GRI (2004). The councils that agreed with the definition comply that the dissemination of sustainability information is important to the stakeholder which, in turn, promotes transparency. Meanwhile, councils which did not agree with the definition considered the implementation of the sustainable development activity has more impact than the reporting aspect. One of the reasons for this is that successful implementation of the sustainable development program is highly dependent on the involvement from various groups, such as, NGOs, private sector and government agencies. This finding differs from the quantitative phase where disclosure did matter and implementation did not in determining the extent of sustainability disclosure on websites. Further implications are discussed in Section 9.4.3.

There are factors which contribute to the use of websites to improve accountability and transparency. Responses to Question 3 highlight the importance of resources to ensure the success of website reporting generally. This includes the availability of a specific IT Department and the commitment shown by the top management that strongly support the website reporting. As well, accountability is seen to be improved by providing regular communication of sustainability issues. As a whole, the process of website reporting is quite straight-forward especially for the councils that have a separate IT Department (refer Question 10, Appendix 8_2).

Meanwhile, the perception regarding the popularity of using websites as a medium of communicating CSR information differ among councils. Despite having superior features such as: accessibility, effectiveness and increased storage size, the usability of the website varies based on different features of each organization. For example, smaller versus larger councils; private versus public sector organizations and user

versus non-user groups.⁸⁴ This has implications for policy makers, local authorities and the community - all of which are discussed in detail in Chapter Nine.

Decision makers related to sustainable development are categorized as being internal (top management) or external (council members and representation from associations and government). This shows the importance of partnerships between various groups in the sustainable development program implementation, for example, the LA 21 program. Meanwhile, the accountant is perceived to have minimal involvement and only responsible for controlling the sustainable development program implementation expenses. This is possibly due to their lack of expertise in handling the sustainability related issues such as environmental pollution. In other words, the accountants are just playing a supporting role in the sustainable development agenda in the councils. It was also revealed from responses to Question 11 that stakeholders' (private sector, NGOs and government agencies) involvement has more impact on sustainable development program implementation than disclosure activity.

Generally, there are positive impacts perceived by councils involved in the sustainability reporting. There are impacts in terms of more accountability to the public, reduction of costs, better provision of services, allocation of funds received for the activity or program implementation, and that also then becomes part of the routine responsibilities of the council. These impacts are associated with reasons for disclosing (or not) sustainability information on websites, as discussed next.

8.5 THE REASONS FOR DISCLOSING OR NOT DISCLOSING SUSTAINABILITY INFORMATION ON THE WEBSITE

The interviews revealed that 12 councils (75%) indicated reasons for disclosing sustainability information on the website and four councils (25%) mentioned the reasons for not disclosing the sustainability information on their websites. The

⁸⁴ In this context, 'user group' means the group of people that use the sustainability information on the websites, for example, the community that has access to the Internet facility. Meanwhile, a 'non user group' means the group of people who are capable of using the Internet and have the access to it but are not using the sustainability information on the websites, for example, teenagers and school children.

reasons for disclosing sustainability information are categorized into themes and presented in Table 8.2.

Table 8.2 Reasons for Disclosing Sustainability Information

Reasons for reporting	Theme	Number of councils
increase participation e.g. public	Community	6
sharing of information	Community	5
two-way communication, feedback	Community	5
free or low cost	Websites	3
highlight sustainable development achievement	Sustainable development	3
continuous improvement	Organizational	3
networking e.g. with community or course participants	Organizational	2
open and transparent	Organizational	2
fast and effective way of communication	Websites	2
funding from private sector	Organizational	2
easy access	Websites	1
permanent information compared to other media	Websites	1
easy update	Websites	1
motivation from community	Community	1
increase understanding of LA 21	Sustainable development	1
long term impact of LA 21	Sustainable development	1
achieve objective	Organizational	1
pioneer in LA 21 project	Sustainable development	1
promote organization	Organizational	1
duty and responsibility to stakeholders	Organizational	1
catalyst for business opportunity	Organizational	1
follow what other countries are doing	Organizational	1
supporting role for LA 21	Sustainable development	1
high storage	Websites	1
local authority operates based on people's trust	Organizational	1

There were three steps involved in the data analysis process. Firstly, these reasons were initially grouped into four themes based on the first round of the transcript reading. As shown in Table 8.2, the reasons for disclosing sustainability information can be categorized into four themes, namely: community, advantages of website, sustainable development program implementation and organizational factors. With an exception to organizational factors which are consistent with Adams (2002), all the other three themes emerged from their frequent occurrence in the interview transcript. Secondly, after the main factors were defined and coded, the interview transcripts were read another two times. Many sub-themes were identified, defined and coded during the process. Thirdly, where possible, these sub-themes were grouped under any of the main themes found in the first stage.

Reasons for reporting, such as to increase the public's participation, sharing of information and two-way communication, are associated with the community theme. This signifies that the community support towards achieving sustainable development is important. One way to improve the community's support is by providing awareness on sustainable development via the website. The following is an example of a comment made by a district council that discloses 19 items in the disclosure index method and 88 sentences in the content analysis method.

Council C10

We are doing that [the website reporting]. We use our website to let the public know our functions and the development around them [public]. We have an IT Department to handle our website. Their [IT Department] duty is to update our website to ensure that the public can visit the website (Town Planner).

Below is an example of a city council's quote which discloses 484 sentences in the content analysis method and 24 items in the disclosure index method.

Council C116

I believe it [the website reporting] will help because nowadays more people prefer to read news on ICT telecommunication infrastructure [which] publishes the information of any development project. The public will understand more instead of merely guessing [since the information] is [more] accurate (Head of IT Department).

It was discussed during the interviews that community groups in urban councils are more vocal in expressing their viewpoint. This is happening when there is any potential negative direct impact on the people, for example, in relation to the environmental and social issues in their surrounding areas. This explanation supports the empirical testing of the first hypotheses, that is, larger councils tend to disclose more sustainability information on websites. It seems the public in urban areas have an indirect influence on the sustainability reporting on websites.⁸⁵ Consistent with Cheng (1994), this is due to people's higher education level and standard of living in urban areas than the people in rural areas.

⁸⁵ See implication on the policy maker in Chapter Nine, Section 9.4.1.

Council C3

At the moment, it is so much tied up with the personal encounters. For example, we [council] have been approached by a group of people who want to know about the development project in a particular neighbourhood area. So, they are only concerned about what is the benefit to them? How's the traffic jam? What is the social impact in the surrounding area? Just within those parameters ... Beyond that they [the public] never ask (LA 21 officer).

The second theme relates to the advantages of using websites to report sustainability information. It can be seen from Table 8.2 that 5 out of 12 councils (42%) and 3 out of 12 councils (25%) indicated that advantages of using websites included primarily having two-way communication at a relatively small cost to the council. This is consistent with the previous studies (see for example, Pollach and Scharl, 2005; Adams and Frost, 2006; Ho and Taylor, 2007; Rowbottom and Lymer, 2009). As shown by Table 8.2, 2 out of 12 councils (17%) revealed that the website is more effective than other media.

Council C8 (municipal council)

I agree with that [communicating CSR via the website]. Through the website, the public can interact with us [council] easily the road congestion here is terrible and it would be difficult for the public to come and visit us. Therefore, the website is the best tool for interaction between both parties (Assistant Town Planning Officer).

Council C80 (city council)

Yes, I agree with this [communicating CSR via the website]. At present, the website is the most effective way. It is accessible everywhere, at any time and very fast. It plays an important role to disseminate information ... There is a limited space in the newspaper and we have to pay for the size (Head of Division).

These comments indicate councils believe they have a responsibility to try and ensure the community are able to access up-to-date information easily. In other words, councils prefer to provide regular information via websites.

The third theme which is associated with the reasons for disclosing on the websites is the sustainable development program implementation. As mentioned by 3 out of 12 councils (25%), the website can be used to highlight sustainable development

achievements. One example of this use is the statistic which shows the number of collected recycling items over the years.

Finally, under the organizational factor theme, the reasons for disclosing sustainability information on the websites are: continuous improvement (25%), openness and transparency (17%) and funding from the private sector (17%). As well, this demonstrates the commitment of the councils towards achieving sustainable development.

Table 8.3 displays the reasons given for not disclosing sustainability information on the websites.

Table 8.3 Reasons for Not Disclosing Sustainability Information

Reasons for not reporting	Theme	Number of councils
lack of staff	Lack of resources	2
usage of website depends on user group	Others	2
report preparation is tedious	Others	1
not for public access	Others	1
lack of internet access/infrastructure	Lack of resources	1
lack of funds	Lack of resources	1
reporting needs approval from higher authority	Red-tape procedure	1
reporting via state government controlled website	Red-tape procedure	1
preference for other forms of communication	Others	2

As shown in Table 8.3, two out of four councils (50%) indicated that the main reasons for not reporting sustainability information on the website are because of a lack of staff and having non-relevant user groups. This finding is consistent with Unerman and Bennett's (2004) study. These reasons can be further grouped into three themes: lack of resources, red-tape procedures (*bureaucratic tendency*) and 'others'.

Lack of resources refers to a lack of staff, infrastructure and funding. It was revealed from the interview that several personnel in district councils have their own core duty, for instance, as the assistant enforcement officer, apart from handling the IT matters in the council. The interviewees also regarded themselves as doing 'multitasking' jobs. As a result, website maintenance, updating and reporting is not considered as a primary function in the district councils and hence impacts on the overall level of sustainability disclosure. This finding supports the acceptance of the

first hypothesis in the quantitative phase indicating smaller councils (in this case district councils) report less (refer Sections 5.8 and 6.4.5).

It was revealed that there is slow Internet access and poor Internet infrastructure for councils in remote locations. In addition, as the controlling officer, the secretary of the council in the rural area is empowered to use any funding at their discretion. In most cases, the budget is utilized for the highest priority development project, which is consistent with Cheng (1994) who stated that some benefits from other non-core programs need to be treated as opportunity costs.

Council 129

Personally, I do not really agree. We have one system i.e. 'e-request'. We tested it [the system] and found out that nobody had accessed it [the system]; we started six, seven years ago. I think it [the system] is not that user friendly ... Our infrastructure is poor compared to West Malaysia (Secretary).

Meanwhile, red-tape procedures include the requirement for approval from a higher authority, such as the council's secretary prior to reporting on the website. It also includes the requirement of that council to report information on the state government controlled website.

Council 129

Actually our development project cannot be reported on the website. We report directly to the state government's website which is a controlled website (Technician).

It is apparent from the interviews that there are several procedures with regards to uploading the information on the local authority websites. Apart from writing, submitting and publishing information in relation to the sustainable development agenda, the council has to consider the confidentiality and privacy of the information before it can be accessed by the public. Furthermore, the principles of privacy and confidentiality are some of the ethical aspects which need to be adhered to by government officers in Malaysia.

Additionally, there are limitations for the council's staff to upload the information, that is, it is only confined to the standard menu which has been designed by the

vendor and has to undergo several vetting processes before it is finally published on the website. One council indicated that there is a specific circular from the state regarding website management by the district councils. These factors often discourage district councils from uploading and updating the information on the websites.

There are other factors which need to be taken into account such as the sensitivity of the information, and the type of language used, before it is uploaded on the website. This is one of the main barriers to the sustainable development agenda in Malaysia. According to Hezri (2004, p. 362):

Malaysia is yet to fully embrace the principle of freedom of information. Historically, the Official Secrets Act (OSA), the Sedition Act and the Internal Security Act (ISA) have restricted information flow. These legal instruments express the principle of secrecy of administrative procedures ... This tradition does not give rise to a general public right to access governmental information, thus limiting the participatory ideal in decision-making inherent in the sustainability agenda.

Finally, the 'other' theme includes tedious report preparation, preference of other forms of communication and the type of user groups that are using the information from the website. The usage of websites is also subject to whether the information on the websites can be accessed by any particular user groups or not. The perspective presented here is that not all stakeholders are interested in the sustainability information on the websites. This is in line with the argument by Hezri (2004, p. 364):

There is often confusion in environmental and sustainability reporting on who are the 'users' (the public, manager, politicians, the media, shareholders, NGOs etc) and how they use the information (general education, monitoring change, reviewing policy, informing specific decisions). This is a weakness of sustainability indicators and reporting in many countries.

It seems that the main concern here is about the accessibility and the usability of the Internet. Hence, these two aspects need to be considered by the councils before deciding to use the website as a media of communicating sustainability information,

which affects the overall level of disclosure in the quantitative phase. The following comment on the preferred form of communication was made by a larger council.

Council C82 (municipal council)

I do agree that the website needs to be used to the fullest, but not as the main tool to provide information to the public. For example, in the council [area] itself, there are many ICT illiterates that are unable to access the Internet. Therefore, from this aspect, [we can say that] the website is not the main medium to disclose information to the public (Assistant Information Officer).

The report preparation is regarded as an additional burden to the council. It was asserted that not all activity and program implementation need be reported to the public. This, as well, reflects a lack of commitment from the members of the organization to be accountable to the public.

Council C127

We always have activity, but we do not have routine reporting, and we seldom put it on our website. Sometimes we feel that such report is tedious or may be for our own consumption and not for public access (Secretary).

Notably, the following comment is made by a municipal council that disclosed 65 sentences in the content analysis method and 19 items in the disclosure index method which is associated with a lack of the website's usage to report sustainability information.

Council 82

The correct way to measure is through the implementation [of activities or projects]. It means that if we manage to complete a project and the public can see the impacts of implementation, then the accountability and transparency come in. Undeniably, the website is an important tool to disseminate information; however, in relation to the level of accountability and transparency, the website is not the main supplier of these two elements (Assistant Information Officer).

Councils have the choice to use other ways to be accountable to the public, such as conducting community meetings or sharing news via the press, radio and television. An example of such preference is provided in the following quote.

Council C82

The public will be more satisfied [with the face-to-face meeting with the council]. During meetings with the members of public, the president and secretary will tell them the information ... The members of the public, on the other hand, can directly post any questions to the person in charge and get direct answers from them. It is the same for the website. The public can post their comments on the website, but the duration of getting feedback will be longer. As a conclusion, face-to-face dialogue is more effective than the use of the website (Assistant Information Officer).

Therefore, consistent with the view presented by past literature (see, for example, Unerman and Bennett, 2004; Throdeniya *et al.*, 2008) two aspects that emerge from the interview findings are the importance of accountability by reporting to the public, but, at the same time, being hindered by some governance issues such as a lack of infrastructure and manpower. It is noticeable that several councils have other means as an alternative to the website to improve the level of transparency and accountability.⁸⁶ This response implies that the traditional way of interaction is often more favoured and is believed to be more effective than communicating via the websites. The councils perceive that communities prefer personal communication via meetings, and they fulfil that requirement.

8.6 FACTORS THAT INFLUENCE (OR IMPEDE) SUSTAINABILITY REPORTING ON THE WEBSITES

Question 7 aims to provide information which can be used to partially answer the third research of the thesis, as well as providing support for the second research question, that is, to investigate the relationship between the explanatory factors (the size, jurisdiction, the LA 21 program, awards, and type of councils) and the dependent variable.⁸⁷ Factors influencing sustainability reporting on the websites are presented in Table 8.4.

⁸⁶ See Chapter Five, Sections 5.4.1, 5.4.2 and 5.4.3 for stakeholders' engagement disclosure in the content analysis method and Sections 5.6.1, 5.6.2 and 5.6.3 for stakeholders' engagement disclosure in the disclosure index method.

⁸⁷ The difference between this questions 6 and 7 is that question 7 will be further categorized into the three types of institutional isomorphism (where applicable) in Section 8.8.

Table 8.4 Factors that Influence Sustainability Reporting on the Websites

Factors that influence reporting	Number of councils
support from management	9
awards/and recognition (rating system, MURNINet)	7
two-way communication, feedback	5
LA 21 champion or leader	5
easy access	3
competition with council's website	3
link from other organization's website	3
own initiative	3
sustain image	2
new ideas or learning	2
push from state on usage of website	2
change in state government	2
requirement for reporting from state	2
inform public on sustainable development activity	1
performance management	1
easy funding	1
responsibility of organization	1
future generation	1
report for funding to Ministry	1
have resources	1
local election	1
transparency and accountability	1
promote organization	1
Investment	1
Community	1
compete with community's website	1
organization's members commitment	1

The most common factor that influences sustainability reporting on Malaysian local authority websites is support from management. Awards and recognition is also seen as an internally driven goal for sustainability reporting on the websites. During one interview, the Head of the LA 21 Unit specified that the Unit received an award from the Department of Environment for being innovative in preparing a report about the LA 21 program implementation. Another point raised by one council is that winning an award is considered a challenge for the council and is seen as a way of maintaining its reputation, as well as a way of being different from other councils.

As shown in Table 8.4, five councils (31%) indicated that the reason for sustainability reporting is to provide two-way communication, that is, to receive feedback from the public/community. This result is associated with the special features of websites, which are equipped with interactive capabilities that provide opportunities for the public to give feedback, suggestions and complaints via email or a discussion forum.

Burritt *et al.* (2009) regarded management buy-in and leadership as the positive drivers for sustainability accounting. Here, there were five interviewees who expressed their concerns regarding the commitment and enthusiasm by management towards providing a successful sustainable development implementation agenda in the councils, as well for the benefit of the public at large.⁸⁸ It was mentioned during the interviews that several mayors participated and joined the sustainable development activity organized in the councils. For example, the mayor was involved directly in the demonstration to the public of making the Effective Microorganisms (EM). This reflects the need for full support from the leaders as champions of the sustainable development agenda in the councils (Farneti and Guthrie, 2007). As stated by Mohamed-Osman *et al.* (2008, p. 5):

Undoubtedly, support and commitment by the senior officer in the council has been an important factor in the development of the local authority's stance on sustainability and environmental issues.

In short, only the LA 21 program and awards⁸⁹ (out of five explanatory variables in the hypotheses development) are explicitly discussed in the interviews. This will be discussed further in Section 8.8.

The factors which impede sustainability reporting on Malaysian local authority websites are explained in Table 8.5.

⁸⁸ This supports why social information is promoted by top management compared to both environmental and economic information (see Chapter Five, Section 5.4.3). The possible reasons are: to improve the awareness of people, and to encourage public participation and legitimate council's activities. Several mayors also encourage the public to provide feedback and suggestions on how to improve the quality of the websites and services as a whole.

⁸⁹ In the first phase, awards refer to recognition that has been received by council. Meanwhile, in the qualitative phase, it refers to motivation for receiving an award.

Table 8.5 Factors that Impede Sustainability Reporting on the Websites

Factors that impede reporting	Number of councils
red-tape procedures	2
unqualified webmaster	2
lack of staff	2
limited budget	2
sensitivity of the information	1
complying with vendor's guideline	1
no guideline to report sustainability information	1
resistance to change	1
geographical factors	1
more concern with the basic development	1
more emphasis on other initiatives e.g. work improvement initiatives	1

There are several factors that impede the less-disclosing councils from reporting sustainability information on their websites. Being in the government setting, there are bureaucratic procedures which need to be complied with, especially for the district councils. These include the consideration of the sensitivity of information and compliance with the guidelines or specifications provided by the vendor. One interviewee specifically stated that there is no clear directive regarding the disclosure of sustainability information on the website.

Another problem faced by councils in rural areas is that their communities include people without a formal education who do not want to accept change. Additionally, the district councils are more interested in fulfilling the basic needs of the people, for example, the supply of water and electricity, road maintenance, provision of services and other needs. This finding particularly provides some implications for local authorities, communities and policy makers which will be discussed in Chapter Nine.

The following response indicates differences between the type of council (district) and size (revenue). This supports a general finding that it is revenue, not the type of council that drives disclosure. During the interviews, there was a tendency to identify councils based on type (city, municipal or district council) instead of based on size (larger council versus smaller council).

Council C127

The acceptance and response level is too slow and they [local people] always think negatively, but I don't simply blame them. We [district council] have to put aside all the challenges that can hinder further development. What is important is the development to the local community. Like me [secretary], I am not a local here. I always think whether the people here can accept my ideas or otherwise ... The members of parliament (MP) will be facing problems if there are no facilities such as markets and toilets. The MP will pressure us. We cannot please everyone because we have a very limited budget, not like the city councils and municipal councils. It is not that we don't want to implement, but we have to look at the priorities, budget and strength, for example, the manpower; this basically delays the development (Secretary).

In terms of other management initiatives, it was claimed that the sustainable development agenda is less important than the other initiatives, such as improvement in work processes and also benchmarking.

Council 127

At present we focus on ISO and 5s [work improvement] practices. LA 21 is considered as an ad hoc program; maybe this is a compulsory program for each local authority but we do not prioritize on LA 21. As for the LA 21 program, there is a lack of monitoring because there is no report submitted to them (Ministry) on a monthly basis. The impact is that, we will be less motivated to give full commitment because there is less monitoring on us (Secretary).

This comment implies that district councils (with lower website disclosure) are not aligned with the government's target to achieve sustainable development as outlined in various strategic national long-term action plans. This is, in part, because district councils are more interested in fulfilling the basic needs of the people. The findings indicate there is a lack of support shown by top management of district councils towards implementation of the sustainable development program, which, in turn, will have an adverse impact on sustainability reporting. This type of resistant behaviour towards the government's policy implementation may inhibit the government's aspiration to be more accountable and transparent which could be achieved via public reporting. This explanation will be further discussed in the implication section in Chapter Nine.

8.7 COPYING BEHAVIOUR OF SUSTAINABILITY REPORTING

Question 8 was asked to determine whether the mimetic isomorphism was apparent in terms of imitating occurring between councils. It is interesting to note that 15 councils (94%) stated that they refer to the sustainability information on other organizations' websites. The councils refer to local and overseas council websites for guidance, especially in relation to the information regarding the sustainable development activities. As well, district councils (smaller councils) refer to websites of city and municipal councils (larger councils) for the implementation of sustainable development activity. Table 8.6 presents the type of websites that the local authorities refer to for guidance.

Table 8.6 Type of Website References

Council	Type	Local authority websites	Overseas websites
C3	City	NA	Australia, the UK and Sweden
C2	City	NA	LA 21 overseas websites
C8	Municipal	Other local authority's website	NA
C10	District	No	No
C26	Municipal	C80, C3, C62	NA
C80	City	C115, C26	NA
C82	Municipal	Other local authority's website	NA
C115	City	C3, C26	Singapore and Australia
C116	City	C1, C115, C117, C118, C120	NA
C117	City	NA	LA 21 overseas websites
C118	Municipal	C1, C115, C116	NA
C127	District	Other local authority's website	NA
C129	District	C115, C116	NA
C132	District	C3, C115, C2, C117, C12	Singapore
C135	District	C120	Denmark
C137	District	Other local authority's website	NA

NA = Not available (Not mentioned during interview)

It can be seen from Table 8.7 that Council C115 is mostly referred to by other councils. This is due to the fact that Council C115's website discloses a substantial amount of sustainability information, for example, the sustainable development strategies, achievement and activity implementation. Further, Council C115 is also recognized as an award-winning organization, for example, the Prime Minister's Quality Award and the Environmental Sustainability Award. It was also found during the interview that Council C115 is in the process of renewing its certification of the Environment Management System (ISO 14001).

As for Councils C3 and C117, they were being referred to because of their involvement in the LA 21 pilot projects in 2000. Additionally, Council C117 was also recognized for their contribution in promoting public participation. As a result, Council C117 was chosen by the Ministry of Housing and Local Government to represent Malaysia in writing a special report with regards to the success story of the LA 21 program implementation, together with other countries in other part of the world. In doing so, Council C117 revealed that reference was also made to other LA 21 overseas websites in preparing such report. This shows the superiority of websites in promoting and communicating the sustainable development agenda all over the world.

Two councils (13%) specified that they know of two other councils that refer to their websites for reference purposes. Several councils also noted that there was less sustainability information available for the councils that were newly involved in the LA 21 program implementation in 2007 than there was for agencies which participated in the LA 21 pilot project in 2000.

Council C117

Some of them (councils) just started in 2007, so information is very limited. Sometimes the councils also refer to ours [website] and Council C3's website; we already know [and are familiar with] some of the information (LA 21 officer).

It was gathered from the interviews that there were also two councils (13%) that discovered the website content of the other councils was not being regularly updated. This is considered as a '*check and balance*' practice among the local councils in the same organizational field, which could be regarded as an informal benchmarking process among the councils themselves.

Council C26

For the last two years, their website [Council C3] has not been updated. I want to find something but it's still the same. They [the Ministry of Housing and Local Government] say that Council C3 receives the most allocation. The ministry keeps on saying that the council is the most active, but the truth is, look at the council's two-years and not-updated website (Senior Officer).

Council C8

We used to refer to other websites as examples. When we wanted to update and learn something new by looking at other websites, the things [contents] are still the same, unchanged. There is no different item, exactly the same as in the books. The public knows this, and perhaps they are getting bored as they can't interact with the council. The website needs to provide the latest information, for example [the seminar or conference] working paper (Assistant Town Planner).

One council (Council C10) did not refer to any other organization's website for reference purpose. This is due to the fact that the uploading and maintenance of the website is being handled by the IT department. It is noted that the departmental report is prepared to fulfil the requirement by the State Town and Country Planning Unit. However, for website reporting, the report will be prepared by each department and finally forwarded to the IT department. This suggests that there is a problem when the website reporting is controlled solely/separately by the IT department, and it signifies no linkage of information among the departments. This may become a barrier to discharging accountability to the stakeholders.

Question 9 helps to explain the possible existence of mimetic isomorphism when the interviews mentioned other organizations' websites as a source of reference. Nine councils (56%) maintained that referring to other organizations' websites assisted in promoting new ideas and continuous improvement and also served as a reference in the implementation of their sustainable development program.

Council C80

Even now I am still referring to Council C115's website because they implement an Effective Microorganism (EM) program, solid waste management and others. I also refer to Council C26. I don't copy them. I think on my own what I should do (Head of Division).

Council C26

To improve, we need to look at the better organizations. Right now, I am looking at Council C2. I look at their website to see what their activities are that we have yet to organize and to see if it is possible to follow their steps and do the same in our council (Senior Officer).

It was noted from the interview that the key person in charge of the LA 21 program in one of the pilot agencies is well known in other councils in Malaysia. This person is the LA 21 officer of Council C2. He was involved in the implementation of the pilot project in 2003 and has been invited by many councils in Malaysia to brief them on the implementation of the LA 21 program. He has been regarded as an 'expert' in the LA 21 program and is considered very knowledgeable in sustainable development. This situation of sharing of information among professionals to homogenize a practice is evidence of normative isomorphism among key people in charge of the council's sustainable development program in Malaysia.

Council C115

Yes, sometimes we have to refer to other websites in order to improve knowledge on sustainable development ... As staff, it is essential to refer to other councils' websites that report on the LA 21 program. I know Council C2 is very active, it can give some idea to us to implement in our council. Sometimes other councils also organize to visit our council. It can be the other way around, whereby we can browse through other council's websites and contact the person in charge, propose to the top management to make arrangements about a visit to that council or organization as part of the learning process on the sustainable city. Actually the website is good. I know the LA 21 officer in Council C2; he has given a lot of talks. He assisted us in the initial starting up of the LA 21 program implementation in the council (Town Planner).

Another point revealed by three councils (19%) is how referring to other organizations' websites may also allow for comparison and benchmarking among the councils. This indirectly exhibits a healthy competition among the councils in the same organizational field. This is also a sign of the social legitimacy via the reporting of the sustainable development programs and activities on the council's website.

Council C118

Yes, we look at the website of our peers such as Council C115, Council C116 and at the other side like Council C1 ... comparing figures to see what is their strength. That's good for benchmarking (Administrative Manager).

Council C137

I scroll through bigger council websites and make comparisons with the smaller councils and find out what is included in the content to improve our website (Secretary).

Thus, the websites assist the councils in many ways: learning, improvement and comparison of the contents. In other words, the website can be used as a learning tool for the council. It may serve as guidance, especially for the personnel in charge of the sustainable development activity and program in the council. The websites also allow the council to improve the performance in the sustainable city urban indicator system evaluation (MURNINet). This is important because out of 12 cities in Malaysia, only two are recognized as being sustainable as per 2008 MURNINet's evaluation. It seems that it will take quite a while for the other 10 cities to achieve this sustainable city status. The behaviour of copying the contents of other organizations' websites, especially in relation to the sustainable development activity implementation, provides evidence of mimetic isomorphism. This will be further discussed in Section 8.8.

Interestingly, one council (6%) stated that there is a push from the top management to refer to the websites of other countries. This is particularly in dealing with how to attract a greater audience to the council's website, and not so much about the websites' content.

Council C116

Our mayor did ask us to refer to either New Zealand or Australia; I can't remember which one. We were asked to look for a council's website design, the publishing and how they attract the public to visit the website (Head of IT Division).

8.8 ANSWERING THE THIRD RESEARCH QUESTION

To help answer the third research question of the thesis, the 27 explanatory factors which were provided by at least two councils (from Table 8.4) are categorized into the three isomorphic pressures, namely, normative, coercive and mimetic (see Joseph *et al.*, 2009; Qian and Burrit, 2007) as displayed in Table 8.7 and further explained in Sections 8.8.1 to 8.8.3.

Table 8.7 Classification of Explanatory Factors Based on Type of Isomorphism

Isomorphism	Factors that influence reporting	Number of councils
Normative	awards/and recognition (rating system, MURNINet)	7
Normative	LA 21 champion or leader	5
Coercive	two-way communication, feedback	5
Coercive	push from state on usage of website	2
Coercive	change in state government	2
Coercive	requirement for reporting from state	2
Mimetic	competition with other council's website	3

8.8.1 Normative Isomorphism

The interviews revealed that the motivation to receive awards or recognition may potentially explain the process of normative isomorphism throughout the organizations. The participants of any award competition and the recipients of recognition were exchanging ideas and processes which were disseminated via professional meetings or networking and other forms of communication. It is perceived that all the efforts towards sustainability by a city, such as MURNINet, are vital because the city wants to be regarded as a highly responsible organization.⁹⁰ Additionally, the MURNINet urban indicator system indirectly provides benchmarking for the participating councils to be regarded as a 'sustainable city'. It was revealed from the interviews that seven councils (44%) interviewed were involved in the evaluation under this urban indicator system in 2008 (Ministry of Housing and Local Government, 2009).

In the quantitative analysis, an award is hypothesized to exert coercive pressures to maintain legitimacy among the award-winning organizations. This is due to the fact that award-winning organizations are subjected to more external influences, such as from politicians and the media. As well, the award-winning councils tend to maintain legitimacy in order to become role models to other members in the same organizational field. It is also advanced here that there is blurring of boundaries

⁹⁰ This refers to the evaluation score under the MURNINet study. The council will be awarded the sustainable city status if the council achieved 80% in the overall evaluation.

between coercive and normative isomorphism for awards. However, these boundaries are identifiable in separate phases of this thesis.

Interview results indicate that the LA 21 champion or leader is an influencing factor under normative isomorphism. The evidence from interviews reveals that there is some formal or informal communication among the key personnel of the sustainable development program in Malaysia. Further, the information regarding MURNINet is also posted on the Federal Country and Town Planning Department's website. This supports the argument for normative isomorphism which, when applied here, indicates that the sustainable development activity becomes a shared norm of organizational members and gains acceptance within organizations. This is consistent with Mack's (2006, p. 21) finding that "there was a process of osmosis and the willingness of key TBL reporting instigators to try something new". The qualitative findings highlight the importance of key personnel in charge of the sustainable development in the Malaysian councils. It appears that the networking among the sustainable development leaders is quite good although there is no special mention about professional networks during the interviews.

The information regarding LA 21 is also posted on the Ministry's websites. This finding provides an additional insight into the LA 21 program, which in the quantitative phase has been identified as a process of coercive isomorphism in determining the level of sustainability information on websites. As well, this point advocates the blurring of boundaries for LA 21 as a normative isomorphism in the qualitative phase, apart from being identified as coercive pressure in phase one. Consistent with other studies (Scott, 1995; Ryan and Purcell, 2004; Mack, 2006), this thesis also found that there is a tendency for more than one isomorphism pressure to explain certain behaviour of local authorities.

8.8.2 Coercive Isomorphism

It can be seen from Table 8.7 that one of the reasons for using the website as a medium for disclosing sustainability information is to have two-way communication with the community. The interactive capability of the websites allows the people in the community to make complaints and suggestions to the councils, which can be considered coercive in nature. As well, this indicates the importance of

voters/community in determining the usage of a council's website for disseminating sustainability information (Cheng, 1994). This interaction indirectly allows the website personnel to be responsive to any information supplied by the community to improve the level of accountability as this is part of the council's duty and responsibility. One of the public sector web portal requirements outlined by General Circular 1/2006 issued by the Prime Minister's Department of Malaysia is that the council must respond to emails, enquiries, complaints or suggestions within three working days (Malaysian Administration Modernization and Planning Unit, 2006). This represents an important performance measure for the public sector web portal. This requirement can be regarded as an indirect coercive pressure since it relates to the governance of the public sector's web portal and not to the reporting of sustainability information on the websites.

Some local authority websites have a special link to e-complaints or e-suggestions provided by the state information technology department. It was also pointed out that several states are very aggressive in promoting the usage of websites for the government departments. This explains the different policy implementation by different jurisdictions as previously discussed in the quantitative phase. An example of this is the 'e-request', one of the systems in the 'e-pbt', which came about as a result of the Sarawak state government's vision for electronic government to deliver outstanding value regardless of time and location (Junaini and Musa, 2007). One council commented on this 'e-request':

Council 115

In my opinion, besides reporting, the council is giving a response to what is happening on the ground [everyday issues] and the council has 'e-request' so that the public can post their ideas, complaints or suggestions. It will be looked into and usually by complying with the client charter the feedback will be given within three days. The system will be opened every day, and [queries] will be responded to via a phone call or email. I think in terms of the local councils, it's more a two-way communication through the website about the services and activities related to sustainable city (Town Planner).

This indirectly places pressure on the local authority to ensure maximum utilization of the website including disseminating information to the relevant stakeholders relating to sustainable development.

The LA 21 program implementation contributes to disclosure of sustainability information on the websites. The funding requirement requires all councils to submit the report of the LA 21 program implementation on an annual basis. A council indicated that there is a reduced allocation in the subsequent year if there is no submission of the sustainable development activity report to the Ministry. This form of financial dependency is regarded as a formal coercive pressure. Due to a deficit reported by several councils, these resources are required for survival. This result supports DiMaggio and Powell's (1983) conclusion that coercive isomorphism is more likely to occur when there is a financial dependence. The findings explain the ability of the LA 21 requirements to be perceived as a coercive pressure as hypothesized in the first phase. One possible reason for this was the requirement imposed by the Ministry for the city and municipal councils to implement this program in 2002. Subsequently, a few councils have taken the further step of uploading sustainability information on the websites. The website can be used as one of the tools to promote the sustainable development activity. In this regard, the report submission to the Ministry is categorized as an indirect pressure for reporting sustainability information on the websites.

A change in state government as a result of the general election in 2008 could be also regarded as coercive pressure.⁹¹ A general election's result has an impact on state leadership, for example, a change from the government ruling party to the opposition party. Different states have different styles of leadership. One council stated that the change in state leadership based on the general election result in March 2008 could have potentially increased coercive pressure due to the requirement to be more accountable and transparent. The new state leadership was likely to comply with all their 'promises' made before they won the general election in March 2008.

⁹¹ As with all preceding general elections following independence in 1957, the parliamentary election was won by *Barison Nasional* (the federal government ruling party), but yielded one of the worst results in the coalition's history. It marked also the first time since the 1969 election that the coalition did not win a two-thirds supermajority in the Malaysian Parliament required to pass amendments to the Malaysian Constitution. In addition, 5 out of 13 state legislatures were won by the opposition, compared with only one in the last election (Wikipedia, 2008).

Council C3

With the current state government who themselves before the election were the champion of transparency and other good governance principles, now that they [the current state government] are the ruling government they have to talk about that, of course; they have to do it carefully (LA 21 officer).

According to Oliver (1991) political self-interest influences how organizations respond to institutional demand for change. Additionally, in this context the state government is also identified as an organization that can be perceived as a coercive pressure on local authorities. As mentioned by Frumkin and Galaskiewicz (2004), past literature acknowledged the state's role in the production and dissemination of legitimate organizational forms.

Different states have different policies including programs organized by the federal government, as well as ICT policy related matters. Hence, the state, being the regulatory body, could influence the local authority as the social actor under the institutional theory framework. The state government has full power to implement policies in all local authorities under its jurisdiction. Thus, the local authorities are subjected to close scrutiny by the state government. It is apparent from the interviews that there are several procedures related to uploading the information on local authority websites, particularly in Jurisdiction J14. This is due to the fact that the websites are controlled by the Ministry at the state level and a special ICT division under the state government. It seems that all the IT-related matters are not controlled by the district councils. This may give the impression that the IT matters are not important to the district councils since they are handled by the vendor as well as the ICT agency belonging to the state government. On the other hand, there is a specific IT department to handle website matters in three larger councils in Jurisdiction J14 interviewed in this thesis. This inconsistency in the bureaucratic procedure also contributes to the reasons for not using websites to disclose sustainability information on Malaysian local authority websites.

The significant result regarding jurisdiction from phase one directly indicated that a formal or informal rule imposed by the state on sustainable development represents a strong force for the local authorities to promote sustainable development issues on

their websites. It was highlighted by councils under Jurisdiction J2 during interviews that they are required to submit reports on sustainable development activity on a monthly basis to the state government.⁹² Jurisdiction J2 is a pioneering state in the formulation of the sustainable development policy at the state level in Malaysia. This may be regarded as an indirect coercive pressure because it is not related to the requirement to report on websites.

In short, the qualitative phase explains the importance of jurisdiction as a significant key predictor in the quantitative phase. Different jurisdictions exert different levels of coercive pressures on local authorities under their administrative areas with regards to the ICT and sustainable development policy implementation, which, in turn, affect the overall disclosure level on websites.

8.8.3 Mimetic Isomorphism

With reference to Question 8, there was evidence that local councils did mimic the reporting practices of other local government entities, especially larger and better resourced councils, which is consistent with Ryan and Purcell's (2004) study. Here, there is a blurring of boundaries for size in providing evidence for mimetic isomorphism during the interviews. In the quantitative phase, size was hypothesized to exert coercive pressures for larger councils. In the interviews, it was determined that the smaller councils tended to copy the implementation of the LA 21 activity information from the larger council's websites. It was also gathered from the interviews that the websites of the larger councils serve as a useful source of reference for the smaller councils. This is in line with Collin *et al.* (2009, p. 152), who pointed out that these smaller councils need to "appear legitimate in their organizational field". This may enhance legitimacy for smaller councils and demonstrates that at least organizations try to improve services or information provision.

Most interviewees copied the information in relation to the LA 21 program activity implementation. As well, this promoted the mimetic isomorphism concept, especially for the councils that were required to subsequently implement the LA 21 program in

⁹² Jurisdiction J2 is located in West Malaysia and is the most developed state in Malaysia.

2007. Therefore, the councils that started earlier in the LA 21 program implementation indirectly helped councils that subsequently implemented. This is due, in part, to there being no standardization in terms of the content of the websites of the local authorities in Malaysia and overseas—in particular on the sustainable development activity. As highlighted by one interviewee:

Council C117

We need to know how councils in other countries run their sustainable development program, so that we can improve our program. If we are based on our way to implement LA 21, we would not know how to improve the LA 21 program. If we are exposed to other people's programs, we can learn, adopt and try to implement in our council. So, that's why the website is essential. If we had to go to the country itself, just imagine how much we would have to spend (LA 21 officer).

These findings support those of DiMaggio and Powell (1983) whereby organizations model themselves on other organizations that they perceive to be legitimate and successful. Further, this finding provides an additional explanation of how the LA 21 program can be implicated under all three isomorphic pressures, namely: coercive, normative and mimetic.⁹³

In summary, there is existence of coercive, normative and mimetic isomorphism in Malaysian website sustainability reporting. The link between the hypotheses development results from phase one (using the disclosure index)⁹⁴ and the interview findings is summarized in Table 8.8.

⁹³ See Chapter Nine, Section 9.4.7.

⁹⁴ This discussion is based on the measure using the disclosure index because it produces more significant results compared to the content analysis method.

Table 8.8 Link between Hypotheses Results and Interview Findings

Hypothesis	Type of isomorphism in the quantitative phase	Type of isomorphism in the qualitative phase
H1 (size)—supported	Coercive —larger councils want to appear legitimate due to political coercive pressure.	Coercive—pressure from the highly educated people in urban areas.
H2 (jurisdiction)—supported	Coercive—different jurisdictions exert different levels of pressures for local authorities in relation to policy and program implementation.	Coercive pressures vary based on type of IT and sustainability development policy by different jurisdictions. The change of state leadership causes isomorphism in terms of encouraging more transparency and accountability that indirectly impact on the website disclosure practice.
H3 (LA 21 program)— supported	Coercive—councils are committed to response to the institutional environment i.e. the implementation of the LA 21 program.	Coercive—there was a requirement to implement for city and municipal councils in 2002, followed by district councils in 2007.
H4 (public sector awards)—marginally supported	Coercive—the award-winning organizations are experiencing pressures to maintain legitimacy in order to continue to gain support from the society.	Not mentioned. (Refer Table 8.9).
H5 (type of councils)— not supported	Normative—different levels of IT professionalism vary depending on the type of council.	Not mentioned. (Refer Table 8.9).

The summary of additional types of isomorphism that took place as revealed during the interviews is presented in Table 8.9.

Table 8.9 Additional Explanatory Isomorphism Factors

Independent variables	Additional type of isomorphism revealed in interviews
Size	Mimetic—tendency for smaller councils to copy the content of website of larger councils in relation to the sustainable development activity implementation.
Jurisdiction	Not mentioned.
LA 21 program	Normative—influence via formal or informal communication among key personnel. Mimetic—there is evidence of mimicking the content of websites of pilot agencies for the councils that subsequently implemented.
Motivation to receive public sector award	Normative—the motivation to receive awards is a shared norm and value throughout the organizations via dissemination of information among professionals.
Type of councils	Mimetic—district councils as late adopters copy the sustainable development activity implementation of earlier adopters, the city and municipal councils.

8.9 CHAPTER SUMMARY

This chapter reveals that the sustainable development concept is understood similarly by the councils and that sustainability reporting is a vehicle to assess the three pillars of sustainability as defined in the GRI (2004). The websites are perceived as not the ultimate approach to discharge accountability and promote transparency. However, they are recognized as an important tool to communicate CSR or sustainability information because of features such as speed and being inexpensive. Additionally, there are some hindrances in using websites, for example, lack of staff and infrastructure. These problems are also relevant as reasons for not reporting on the council website. Reasons for reporting are mostly related to encouraging two-way communication and sharing information.

Accountants are only involved in the determination and approval of the budget in relation to the sustainable development activity. Most of the decisions are made by the councillors and the working committees.

In answering research question three of the thesis it has been determined that normative, coercive and mimetic isomorphic pressures all exist in regards to the reporting of sustainability information on the council websites. The findings also highlight that the councils refer to other organizational websites for learning and benchmarking purposes. The activity involved in sustainability website reporting for the bigger councils is simpler than the smaller councils. This is because the information is uploaded by the IT department for the bigger councils. Finally, the support from other organizations, such as NGOs and the private sector, is also useful in promoting the sustainable development activity implementation of the councils, but does not affect sustainable development activity implementation

CHAPTER NINE

IMPLICATIONS AND CONCLUSIONS

9.1 INTRODUCTION

The first three chapters of the thesis covered the introduction, relevant literature, theoretical framework, hypotheses development, and the research process adopted. Chapter Four detailed the research design for the quantitative phase. Chapter Five presented results and discussions of the descriptive statistics to answer the first research question of the thesis. Chapter Six provided the findings and discussions for multivariate analysis to answer the second research question of the thesis. The research design for the interviews was explained in Chapter Seven. Chapter Eight reported findings from the interviews with 16 local authorities in Malaysia in conjunction with findings from the quantitative analysis. In this chapter, a brief review of the research questions and motivations is explained in Section 9.2. Section 9.3 summarizes the main findings of the thesis. Then, Section 9.4 highlights the implications of the thesis, with Section 9.5 detailing its strengths and weaknesses. The opportunity for future research is suggested in Section 9.6. Finally, concluding remarks are made at the end of the thesis.

9.2 BRIEF REVIEW OF RESEARCH QUESTIONS AND MOTIVATIONS

The use of the website in government organizations in Malaysia is closely associated with the public service administrative reforms. It assists in promoting transparency, accountability and effectiveness which are the ultimate aims for implementing the governance-based programs related to sustainable development, such as the LA 21 program and MURNINet. Past research in Malaysia (see, for example, Hezri and Hasan, 2006; Mohamed-Osman *et al.*, 2008) highlighted poor communication as a factor that contributed to the slow progress in advancing sustainable development. The central theme in this thesis is the voluntary sustainability reporting on websites by Malaysian local authorities to improve accountability to the public. Institutional theory offers a useful framework to explain a council's behaviour with regards to disclosure decisions.

The country of Malaysia is chosen as the focus of this thesis because it is a country that is aiming to become a developed nation by the year 2020 and also because of its

participation in the Rio de Janeiro Earth Summit in 1992. In addition, local government is chosen because it is the lowest tier of government and is the closest to the community. Thus, the relationship with the community could be improved via the provision of voluntary sustainability information on local authorities' websites as there is no mandatory requirement for preparing annual reports by local councils in Malaysia. The three research questions aligned with the two phases in this thesis, sources of data and the main method of analysis used are presented in Table 9.1.

Table 9.1 Research Questions and the Two Phases of the Thesis

	Research questions	Phase of the study	Sources of Data	Main Method of Analysis Used
1	What and how much sustainability information is reported on Malaysian local authority websites?	Phase one, Quantitative, supported by phase two, Qualitative	websites of local authorities	descriptive analysis, ANOVA, correlation
2	Do a council's size, jurisdiction, the LA 21 program, awards and type of councils have a significant impact on the extent of sustainability information reported on Malaysian local authority websites?	Phase one, Quantitative and supported by phase two, Qualitative	websites of local authorities, Ministry's website, National Audit department's website, personal communication with staff from Ministry	content analysis, disclosure index, GLM
3	Do the isomorphism mechanisms of institutional theory aid in enhancing the explanation of why Malaysian local authorities disclose sustainability information on their websites?	Phase two, Qualitative to support phase one, Quantitative	semi-structured interviews with officers of 16 councils included in phase one	question by question matrix analysis of interviews linked to findings from phase one

The summary of findings from each phase is presented next.

9.3 SUMMARY OF FINDINGS

To answer the first research question in the thesis, two methods were employed to measure the extent of sustainability reporting on websites: content analysis and

disclosure index. There are three common units of analysis used in the content analysis technique, namely: number of words, pages and sentences. This thesis used sentence count in the content analysis technique. Sustainability information disclosure varies significantly from 2 to 785 sentences with a mean of 106 sentences. Disclosure of sentences was highest in the following areas —1,120 in relation to the internal programs or activities under the environment category; 1,422 sentences in relation to the internal programs or activities under the social category; and 3,774 sentences related to economic services in the economy category.

In the disclosure index method, the mean disclosure is 15 out of 57 items. Similar to the content analysis method, on the average, the highest reported item comes from the economy category (35.3%) followed by the social (27.5%) and environment categories (19.0%) respectively.

To answer the second research question, analysis involved determining the relationship between the explanatory variables and the extent of sustainability reporting on websites using the content analysis and disclosure index methods within an institutional theory framework. The size of councils and LA 21 were found to be key predictors in explaining the extent of sustainability reporting on websites in the content analysis method. The disclosure index was able to produce more significant results in explaining the level of sustainability information disclosure—with the size of councils, the LA 21 program, jurisdiction, and internal goals—using institutional theory isomorphism. The public sector award is a moderately significant predictor in the disclosure index method. Overall, this thesis reveals that jurisdiction is the most noticeable variable directly related to coercive institutional isomorphism. The findings from phase one provided a useful model in explaining the extent of website sustainability reporting in the local government in Malaysia.

The reasons for differences in results produced by both content analysis and disclosure index were provided in Chapter Six (Section 6.5). The justification for differences in results for both methods also contributed to the limited literature on this issue (see, for example, Williams, 1998; Haniffa and Cooke, 2005).

Finally, to answer the third research question, the reasons for reduced disclosure identified from interviews could include the following: lack of staff; lack of specialized skills; lack of infrastructure; too many procedures (bureaucratic); restrictions on the content of information; an attitude problem of the organizational members; and, finally, a lower priority on the sustainable development governance program compared to other initiatives, such as improvement in work processes and benchmarking.

The level of disclosure could also be due to the large number of district councils in the sample, 90 district councils (out of 139 councils). Larger councils tend to disclose more sustainability information on their websites. This was supported by the univariate result (p -value = 0.000) as indicated by both methods (see Appendices 6_1 and 6_3 respectively). Meanwhile, the reasons for disclosure by disclosing councils were categorized into four themes: community, advantages of the website, sustainable development program implementation and organizational factors (see Table 8.2).

The qualitative phase findings added meaningful insights to the explanatory variables hypothesized in the quantitative phase. The additional factors identified under normative isomorphism are: motivation to receive awards and key personnel in charge of sustainable development. As well, the interview findings explain the reasons to support the council's size, jurisdiction and the LA 21 program as key predictors in the quantitative phase. Finally, the interview findings also provided evidence that copying of the sustainable development activity implementation occurred between councils in the same organizational field, suggesting mimetic isomorphism.

It is anticipated that this website sustainability reporting effort is a promising direction for the future because most of the disclosure in the economy category is related to economic services information, as well as in both the social and environment categories (the sentence count method) it is related to sustainable development internal activities and programs. With more commitment from the federal and state governments, accompanied by more support from management and a greater understanding from the stakeholders about the sustainable development

concepts, the website sustainability disclosure practice will continue in the years to come.

9.4 IMPLICATIONS OF THE THESIS

Some of the issues emerging from this thesis relate specifically to implications for: the policy maker; communities; local authorities; tertiary accounting education; NGOs; universities, and theoretical perspectives in light of the convergence towards achieving sustainable development. The discussion starts with implications for the policy makers.

9.4.1 Policy Makers

During the interviews, several councils indicated that they have voluntarily uploaded information regarding sustainable development on the websites. This information includes the LA 21 action plan, the LA 21 Unit, the personnel in charge of LA 21, LA 21 activities, and achievement. To encourage similar activities in other councils, one suggestion provided for the Ministry at both state and federal levels is to give recognition to councils that disclose sustainability information on the websites. This can be done by including the disclosure of sustainability-related information on the council's websites as one of the assessment criteria in the Sustainability Award competition. A similar practice has been conducted for the public listed companies in Malaysia, for example, by ACCA Malaysia. ACCA MaSRA 2009, previously known as ACCA MESRA, was first introduced in Malaysia in 2002, with the aim of encouraging the uptake of sustainability (or corporate responsibility) reporting among companies in Malaysia.

In the context of government agencies, the Sustainable City Environment Award initiative was introduced to give recognition to local authorities for incorporating the environmental dimension in planning, administration and implementation of programs, projects and activities. This initiative was further strengthened with greater support and cooperation from the Department of Local Government (Ministry of Housing and Local Government) and the Institute for Environment and Development (LESTARI), with the latter providing technical support. Assessment was based on five components: physical environment, ecological initiatives, urban services, environmental governance as well as education and awareness activities.

The findings of this thesis suggest that jurisdiction is a predictor of the extent of sustainability information disclosure on websites. This indicates that some states in Malaysia are more committed to gearing towards sustainable development via policy and program implementation. The federal government could highlight the effort undertaken by these 'disclosing' states so that their practices could become a role model to other states in Malaysia. This could be done via providing awards or recognition to states that are committed to promoting the sustainable development initiative.

The evidence from this thesis suggests that the rating system introduced in 2008 by the Ministry could be used as an avenue to promote the use of the council's website to report sustainability information. One of the criteria for assessment is for the local authorities to carry out at least five activities under the LA 21 program. This could be further improved by incorporating reporting of such activity implementation on the council's website as part of the criteria assessment.

In general, therefore, it seems that the maximum utilization of the websites could be encouraged to report sustainability information using the 'e-pbt' portal provided for all local authorities in Malaysia. A reasonable approach to address this issue could be to include sustainability information as part of mandatory items on the websites, as directed in the public sector web portal requirement outlined by General Circular 1/2006 issued by the Prime Minister's Department of Malaysia. The website is more cost effective compared to other mediums of reporting, such as annual reports and newspapers. The Ministry has allocated RM181,200 in 2007 for improving the awareness of the LA 21 program, for example, on posters and booklets (Ministry of Housing and Local Government, 2008d). Further, the use of the website is supported by the CSR experts' view in Malaysia who claims the websites are the most common communication media amongst Malaysian organizations (Lu and Castka, 2009).

The interview findings reveal that bureaucratic procedures imposed by the state ICT⁹⁵ agency are factors contributing to the low disclosure of sustainability information on the websites among smaller councils. These procedures include the

⁹⁵ An example of the state ICT agency is Sarawak Information Systems Sdn Bhd (SAINS) in Sarawak.

sensitivity, privacy, and authorization of information to be reported on websites. In showing support towards achieving sustainable development, the federal and state governments may liaise with the state ICT agency to encourage the reporting of sustainable development agenda information on the councils' websites. This may be achieved by having joint participation among various ministerial portfolios (both at federal and state level) in Malaysia to promote the use of ICT in advancing the sustainable development agenda. Among the affected ministries are the Prime Minister's Department and the Ministry of Housing and Local Government. The existing General Circular 1/2006 issued by the Prime Minister's Department of Malaysia (guideline for public sector web management) could be improved by including the requirement to promote sustainable development activities on the websites. Because of such requirements, councils are more likely to be committed to using websites to report sustainability information.

The results of this thesis support the idea that, in line with the website usage, issues of digital divide between the rural and urban areas could be addressed. One program introduced by the Ministry of Housing and Local Government is called 'Bridging Digital Divide' that aims to give equal opportunity for the poor groups in the city to access the IT facility. The policy maker could also make full use of this opportunity to educate the people in rural areas. The results of this thesis indicate that people in rural areas may be less concerned about sustainable development compared to people in urban areas. Thus, public awareness campaigns or educational talks are a great start for improving the level of knowledge among the people in rural areas. Simultaneously, this program could be used to promote the sustainable development agenda via website technology. In this way, cost effectiveness would be achieved by incorporating a few objectives in one program.

The main issue arising from the qualitative phase is the usability of information on the Internet. There is a possibility that the local council's users do not appreciate the sustainability information uploaded on the council's website. To ensure this system works, the community could communicate with the local council about what type of information they expect from the sustainability website reporting and how such information can help them in their own lives. This may assist in bridging the gap between users of council websites and the council itself.

It is put forward here that the LA 21 program has a significant impact on sustainability disclosure on Malaysian local authority websites. This is as a result of Malaysia's participation in the Rio De Janeiro Earth Summit in 1992 that introduced the Agenda 21 action plan. Therefore, it is contended here that the country's commitment as a key player in advancing sustainable development should be highly recognized. In view of that, the country's participation in the global sustainable development initiatives should be encouraged in the future.

As well, the Ministry of Housing and Local Government deserves credit for aggressively promoting this program among local authorities in Malaysia, especially in promoting the public participation which is a critical success factor in progressing sustainable development. This situation is also expected to happen in other countries all over the world. Hence, Malaysia provides a good example which can be replicated by other countries worldwide.

9.4.2 Community

Following on from the interview findings, as a whole, people in Malaysia are still not forthcoming in expressing their concerns regarding the impact of rapid economic growth and urbanization on society and the environment. As confirmed by Amran and Siti-Nabiha (2009, p. 371):

And, like the citizens of many other developing countries that have yet to come to grips with this new reality, the Malaysian public has not been as critical as the more informed public in developed countries of the practice of their corporations and the impact that these have on the environment and society.

A reason for no strong push from the community is that the level of awareness of the sustainable development agenda is lower than for people in developed countries.

The results of the interviews support the idea that the concept of sustainable development should be better understood by Malaysian society. The common definition of sustainable development by the World Commission of Environment and Development (The Bruntland Report, 1987)—"sustainable development is the development that meets the needs of the present without compromising the ability of

future generations to meet their own needs"—is very practical for all the people. By nurturing this concept in everyone's daily lives, this will assist the government in achieving sustainable development. Thus, the people's understanding is important in helping to achieve the government's aspiration.

The evidence from the interviews suggests that there should be a clearer definition of sustainable development in the Malay language. It was emphasized during the interviews that people have difficulty in understanding the Malay terminology for sustainable development, that is, '*pembangunan mampan*'. A few LA 21 officers during interviews mentioned the problems in explaining the concept in Malay during a public lecture. Most of the time, the interviewees referred to sustainable development as 'a balanced development' (*pembangunan seimbang* in Malay) to create understanding, especially among the less educated people. Therefore, it is suggested here that this 'jargon' language problem should be revisited/reviewed immediately by the language experts to improve understanding of this concept in Malaysia.

It is very important for all the people to appreciate website usage in Malaysia not only in the context of sustainable development efforts but also in other aspects of development as well, especially among the poor people. If the poor people in rural areas do not develop familiarity and competence with ICT, in the long-run this will have the impact of Malaysia being behind the information age, as well as being behind in achieving the national vision of becoming a developed country. Thus, a change in mindset is quite crucial for the people in Malaysia.

9.4.3 Local Authority

One interviewee revealed that there is a lack of motivation in preparing an annual report of the LA 21 activity implementation due to a lack of monitoring by the Ministry. This is an example of a lack of commitment by top management of local authorities in Malaysia in responding to procedures or policies introduced by the federal government. In gearing towards achieving sustainable development, and as the tier of government which is the closest to community, the local authority should become a role model and provide a good example to the public. This would, in turn, enhance the image and reputation of local authorities as the stimulus in progressing

sustainable development. For this reason, award and recognition could be a motivating factor for the local authorities to be actively involved in sustainability reporting.

One way to show to the public the total commitment towards sustainability is to create and improve awareness relating to the sustainable development concept. This could be done by encouraging people to obtain details of a council's sustainable development information from the website. For a start, the local authorities may encourage the public to use computer facilities that are mostly provided at the public library in rural areas. This may assist in improving the IT awareness which, in turn, could be used to support the sustainable development concept.

As stated during the interviews, councils in Malaysia refer to other local or overseas council websites as a useful guide in implementing the sustainable development activity in their own areas. Several councils also indicated their confusion related to the type of sustainability information to be reported on websites. In terms of reporting, local authorities may consider adopting initiatives from other developed countries such as Australia. For example, the City of Melbourne, Victoria, Australia includes a sustainability reporting toolkit (checklists, guidelines and templates) on its website. By referring to overseas council websites such as the City of Melbourne's, local authorities in Malaysia would be able to understand and learn a range of indicators relevant to social, environmental and economic activities. In addition, other reports available on the City of Melbourne's website are: environmental sustainability, a draft climate change adaptation report, and strategy reports. Local authorities in Malaysia would learn a lot from the overseas councils' experiences which, in turn, could indirectly assist in speeding up the process of achieving sustainable development.

One main difference between the quantitative and qualitative phases is the disclosure versus implementation of the LA 21 program. In the quantitative phase, it was determined that disclosure did matter and implementation did not in determining the extent of sustainability disclosure on a website. This finding differs from the interview phase.

Councils need to have more participation from the public in implementing activities such as tree planting, river cleaning and recycling campaigns. By participating and reporting the program implementation, the awareness of the public would be improved. As mentioned during the interviews, to be more effective, the LA 21 program should be conducted on a regular basis and not as an ad hoc activity.

The main objective of the LA 21 program is to forge partnerships between the community, the private sector and other agencies, such as NGOs. This is achieved by taking part in the sustainable development program. During the interviews it was stated that it is the committee's (comprised of a community representative, the private sector and other agencies) decision to organize the activity for all the local populace on behalf of the councils. Thus, the successful partnership outcome among these stakeholders in the LA 21 program should be regularly reported and this can be done via websites.

The formal annual report is mainly prepared for the Ministry by the councils to obtain funding to implement the LA 21 program. It seems that the pressure applies to program implementation instead of reporting the activity implementation. However, there is a relationship between implementation and reporting of the sustainability activities. The reporting is an outcome of the program implementation. If there is no program implementation, there is no reporting on outcomes of the implementation. Therefore, to be more accountable and transparent, the LA 21 activity report submitted to the Ministry can be also uploaded on council's websites.

Community participation is one of the criteria in the local authority rating system in Malaysia. One council during the interviews stated that, as part of the evaluation process, the panel will ask the public random questions regarding the extent of their involvement in the council's program and activity. Further, in the rating system, another criterion for assessment is the requirement to implement at least five activities under the LA 21 program. These activities should also be reported and may assist in the star rating evaluation system.

Therefore, in ensuring the effectiveness of all efforts undertaken by the councils, it is suggested in this thesis that a sustainability report should be prepared by each

council. One way of getting this information to the public is via the website. It was revealed in the interviews that those councils already disclosing on the website did so by way of a "special annual report" of the LA 21 program.⁹⁶ Once on the web, this information may become an informal guideline (at least) for other councils in Malaysia and improve transparency and accountability. Regardless of both the disclosure and implementation aspects of the LA 21 program, the perspective advanced here is that the LA 21 program in Malaysia is progressing at par with other countries in the world. All these efforts should be highlighted and publicized globally and this could be done via websites.

Stakeholders' engagement would also be improved by reporting via websites. According to Chaudhri and Wang (2007, p. 244):

By proactively communicating with and involving stakeholders in the formulation of CSR strategy and practice, corporations can forge long-term relationships and effectively lead or respond to widening stakeholder influence.

If this communication were to occur, the gap between the local authorities and stakeholders would be reduced. This, in turn, could provide for more partnerships in the future. There are many avenues that are currently available on the websites for feedback and complaints. These include discussion fora and emails designed to promote stakeholders' engagement.

Due to the highly departmentalized nature of the departments in local authorities in Malaysia, it is therefore suggested here that there should be a special LA 21 Unit and LA 21 program manager in each council. Based on the interview findings, the LA 21 officer would act as a coordinator and compile all the relevant information collected from various departments involved in sustainable development activities in the councils. At the same time, the LA 21 officer can work together with the IT department to upload the sustainable development information on the websites.

In regards to implications for local authorities outside of Malaysia, the international sustainable development initiatives for example, fora and summits organized by the

⁹⁶ The sustainability reporting in Italian local government is motivated by the LA 21 implementation.

UNDP, have been successful in promoting sustainability reporting. In the case of Malaysia this was a significant catalyst in improving sustainability reporting. Many developed countries such as Italy and the UK have instigated sustainability reporting after implementing their LA 21 program. These international forums and summits are worthwhile and should be continuously conducted to enhance the sustainable development awareness in the international arena. As well, the promotion of the use of websites to communicate this sustainability information could also be highlighted during the summit or forum.

9.4.4 Tertiary Accounting Education Curriculum

It is suggested by one interviewee that the accounting tertiary education system should educate the younger generations to understand the meaning of sustainable development. At present, based on '*Halatuju 2*'⁹⁷, the corporate social responsibility aspect is integrated together with the ethics element in a few courses⁹⁸ such as Financial Accounting and Reporting, Accounting Theory and Practice, Management Accounting, Principles of Marketing, Principles of Management, and Corporate Governance for the Bachelor in Accounting degree program offered by public universities in Malaysia. The students are also expected to demonstrate ethical and social responsibility behaviour upon the completion of their six months industry attachment. It is noted that there is no special course on CSR for the accounting bachelor degree program in Malaysia. It is also observed that the CSR and ethics elements in the tertiary accounting curriculum relate more to business organizations than the public sector.

Therefore, it is suggested here that this aspect should also be integrated in the public sector accounting course or as an elective course. Currently, public sector accounting in the undergraduate program level only focuses on aspects such as government financial systems and procedures, management accounting, financial accounting, local government, public sector auditing, and accounting practices and development in the public sector. The public sector accounting course syllabus should go beyond

⁹⁷ This is a special report on the reassessment of accounting programs at public universities in Malaysia and is especially prepared for the Ministry of Higher Education of Malaysia (Ministry of Higher Education, 2007).

⁹⁸ 'Course' refers to a subject taught at the university level in Malaysia. 'Program' reflects the type of degree offered at the university level, for example, program of Bachelor in Accountancy or Masters of Accountancy.

number crunching and extend to non-financial accounting practices and other emerging issues, for example, sustainable development plans in Malaysia. The details of government policies are normally included in the course offered by the Faculty of Administrative Science or Public Policy and not by Faculty of Accountancy.

Another aspect that could be looked into to improve the existing accounting education system is by referring to the university curriculum used in neighboring countries. For example, several public and private universities in Indonesia have introduced (between six months to one year) special courses related to CSR in the Accounting and Management Bachelor Degree Program. The courses include: 'Non-financial Analysis' (elective) and "Social Aspects in Economy' (core).⁹⁹ Thus, networking is certainly important among the academics in the Asian region, especially to foster knowledge sharing related to sustainable development issues.

9.4.5 NGOs

The interviews indicated that the NGOs are actively involved in implementing the sustainable development program together with councils. Hence, the findings of the thesis may be of particular interest to NGOs or individuals/groups that are committed to promoting involvement of community in the local authority sustainable development agenda. The Malaysian NGO Forum for Rio +10, an informal network of NGOs, have worked together to prepare for and participate in the multi-stakeholder dialogue at the World Summit on Sustainable Development in 2002. This network has identified a few drawbacks which can impede the sustainable development process in Malaysia, for example, in relation to the public participation process and inconsistency of policies. It was recommended by this network that there should be a wide dissemination of sustainable development policies on a nationwide scale, which, in turn, contributes to good governance and public participation. Since NGOs are regarded as interest groups that affect the choice of government's policy in advancing sustainable development in Malaysia, this is in line with Cheng (1994) (refer Chapter Three, Section 3.2 for further discussion).

⁹⁹ This information is obtained from an accounting lecturer in a private university in Indonesia. She gained her PhD qualification in CSR reporting in Indonesia.

The thesis supports the view by the Malaysian NGO Forum for Rio +10 for technological and information access to be available to all levels of society, that is, via websites. In this case, the promotion and communication of the sustainable development agenda could be done aggressively on websites.

Due to the prominent role played by NGOs, it is advocated that the findings of this thesis and other related publications should be made available to them to assist in promoting awareness of the overall sustainable development, and to assist in addressing societal concerns. In addition, their invaluable insights and opinions are important for the policy makers in removing the present loopholes in the sustainable development policy implementation.

9.4.6 Universities

There are a growing number of research institutes or centres among the public universities in Malaysia. Most of these entities are established at both national and international level, for example, at the Asia-Pacific level. One of the centres is the Asia Pacific Centre for Sustainability set up by Mara University of Technology and ACCA Malaysia. This centre is aiming to promote the sustainability development principles within the Asia-Pacific region. A more rigorous promotion and publicity is needed to ensure all the objectives set by this research centre are being met, especially so as to be highly regarded at the international level.¹⁰⁰

One way of achieving its objective for the centre is to encourage the postgraduate students—especially those pursuing their doctoral studies overseas in social, environment or sustainability accounting research—to collaborate with their supervisors or professors in this area even after the completion of their study. Indirectly, this kind of networking would bring more 'internationalization' to the public universities in Malaysia. Further, there are many experts in these areas, especially from Australia and New Zealand, who are also editorial members of highly reputable journals in accounting.

¹⁰⁰ This is based on the researcher's personal experience as a staff member in the university and also based on personal observation of the centre's webpage.

In addition, the academics in Malaysia may be encouraged to liaise with organizations that directly relate to sustainable development, for example, local governments. By participating directly in the organization, a researcher would understand the process involved in preparing a sustainability report. As well, the researcher can conduct research out of the industrial training. Thus, the knowledge acquired from the industrial attachment could be applied in the academic profession.

Another aspect that should be looked into is the weight of marks allocated in annual performance and academic staff promotion exercises. At present, only 5% of the total 100% mark is allocated for non-academic activities, for example, community involvement and development.¹⁰¹ This may discourage academic staff from taking part in community development programs, for example, providing public lectures or workshops related to sustainable development. It is timely for top management of public universities in Malaysia to look into this matter more seriously. As highlighted during the interviews, more involvement from academics is important to improve the level of sustainable development awareness, especially among younger generations.

9.4.7 Theoretical Implications

The findings indicate the presence of institutional isomorphism in explaining the extent of sustainability reporting on websites. The results suggest that the normative isomorphism occurs via both formal and informal communication, such as briefings in councils as well as via occupational networking. The government's websites, such as the Federal Country and Town Planning, have been aggressively promoting the sustainable development initiative, for example, MURNINet to the participating councils. These forms of communication assist in promoting norms, values and concepts of sustainable development among the councils, and should be improved regularly.

This thesis found that the significant result in jurisdiction was due to different policies in sustainable development initiative implementation. The state which is aggressively promoting sustainable development—for example, Jurisdiction J2—will exert more pressure on the local authorities. The local authorities in Jurisdiction J2

¹⁰¹ The 100% mark allocation is based on: 1) Work outcome (50%); 2) Knowledge and skills (25%); 3) Personal Quality (20%), and 4) Non-academic activities (5%).

are required to submit monthly reports to the State Town and Country Planning Department, which signifies the presence of coercive pressures. The state, being the regulatory body, could influence the local authority as the social actor under the institutional theory framework. As previously hypothesized, this thesis confirms the legislative power of the jurisdiction or state as a coercive pressure that influences the extent of sustainability reporting via the institutionalization of policies and procedures.

In relation to the mimetic isomorphism, there is evidence of copying the content of websites among the councils. Particularly, the information copied is related to the sustainable development activity implementation. It is put forward here that another important theoretical implication is to acknowledge the website as an important tool to achieve or maintain legitimacy, and this can be further investigated. Another important point is that the qualitative phase was able to indicate factors that related to mimetic isomorphism which could be possibly tested in a quantitative longitudinal study, for example, by examining the level of changes in sustainability disclosure on smaller local authority websites over several points in time.

In explaining the copying behaviour of the smaller councils, the interview finding gives the impression that the smaller councils want to appear legitimate and being seen as doing something. This is especially true in relation to the implementation of a sustainable development program by the larger councils. At the same time, the findings also support the notion that larger councils are subjected to more normative and political pressures from the mass media. Therefore, it should be noted that other theories, such as legitimacy theory, could go some way to explaining this behaviour.

The local authority community, to some degree, also influences the sustainability reporting. It seems that the people in the urban cities are more vocal than those in rural areas in expressing their concerns about the sustainability issues that affect their normal lives. Therefore, the councils affected are more pressured to include more information on their websites. Conversely, in rural councils, there is less demand from the community due to their lower standard of living and education level. This is possibly explained by politico-economic factors that influence the choice of government's policy (refer Chapter Three, Figure 3.1). As well, this finding

suggests that the lower disclosure by smaller councils in Malaysia is due to their having relatively less power and political interest in the government's policy implementation than larger councils. Thus, it is put forward here that community could be considered as a coercive pressure in future research.

9.5 STRENGTHS OF THE THESIS

This thesis has several strengths. Firstly, it used almost the total population of Malaysian local authority websites, although the accessible sample was only 95% (Chapter Four). This total is sufficient to generalize findings across Malaysia regarding sustainability web disclosure.

Secondly, interviews with 16 councils supported and added explanation to the quantitative findings, especially relating to reasons for disclosure and non-disclosure using the websites. It also provided additional theoretical support to results achieved in the empirical analysis (Chapters Five, Six and Eight). In addition, the links between the theoretical support from both quantitative and qualitative phases were also discussed (Chapter Eight).

Thirdly, the thesis employed two methods as measures for the dependent variable, namely: content analysis and disclosure index. The findings were able to highlight advantages and disadvantages of using both methods relative to each other. This assists in deciding the most appropriate method to calculate the dependent variable for disclosure studies. Reasons for differences in both results were also discussed (Chapter Seven). Further, this supports the idea from Guthrie and Abeysekera, (2006) who suggested that the use of the content analysis method be supported by other research approaches, such as interviews, to give richer explanation of the findings.

Fourthly, the thesis highlights jurisdiction and the LA 21 program as important determinants in explaining the extent of sustainability reporting on websites. Jurisdiction was found to be related to the coercive isomorphism process in both quantitative and qualitative phases. Meanwhile, the use of LA 21 as the explanatory variable is a huge success in the thesis (for both methods). There is no known published research to date that has employed LA 21 as a variable under the

institutional theory. This adds substantially to a growing body of literature on public sector accounting and CSR.

Fifthly, this thesis has identified a limitation in the measurement of internal goals, that is, '1' is awarded if there is disclosure of the three categories of sustainability and '0' if otherwise. Future research could measure internal goals in more detail: '0' if there is no disclosure of all the three categories of sustainability, '1' if there is a disclosure of only one category of information, '2' if there is any disclosure of two sustainability categories and '3' if there is any disclosure of all three sustainability items. This measurement is more precise as compared to the measurement in the thesis.

The thesis has undergone several rigorous steps in developing the content analysis and disclosure index instruments. This may enhance the validity of the thesis. As well, the chance for replicating a similar study in other settings—for example, in other countries—is higher.

Finally, the thesis has a successful application of the isomorphism concept under institutional theory, in the Malaysian local authority setting. Previous literature asserted that the distinction between the three forms of isomorphic pressures—that is, coercive, normative and mimetic—can be blurred, and that it is difficult to establish the separate effects of each isomorphic pressure if more than one influence is operating at any time (Scott, 1995; Ryan and Purcell, 2004; Mack, 2006). The thesis has identified several variables that have multiple sources of isomorphism, that is, the LA 21 program, awards and the size of councils. This was done successfully by using both quantitative and qualitative research design.

9.6 LIMITATIONS AND FUTURE RESEARCH

As a preliminary study, there is a large scope for further research. Following are some considerations for further research. Firstly, this is a cross-sectional study whereby websites were accessed for a period of one month (September 2008). Due to a rapid change of information on websites, it is worthwhile to conduct website analysis at more than one point of time—in other words, a longitudinal study. This will assist in explaining the changes of the information content at different points of

time. This may expand the scope of future study to consider other aspects such as format and presentation of items on websites. The thesis is solely examining the disclosure of sustainability information.

Secondly, this thesis could be extended by conducting a survey to obtain perceptions regarding the need and usability of sustainability information among the council's stakeholders: for example, the community, the private sector and other government agencies. This would assist in improving the decisions regarding the usefulness of reporting sustainability information on the council's website. The survey could be expanded to identify the motivations and impediments in using such information on websites. Further, based on the thesis's findings, future research should consider categorizing the stakeholders separately into either rural areas or urban areas, as different stakeholders at different localities have different views on the need and usability of sustainability information.

Thirdly, the use of the website as a potential tool for social learning could be explored. The social learning aspect was emphasized by Professor Carol Tilt during a plenary session (entitled '*Social Learning, Social Networks and the SEA Community*') in a 2008 social and environmental accounting research conference (Tilt, 2008). A special survey could be expanded to all other councils in Malaysia in order to obtain views regarding the benefits of using websites as a social learning tool. The thesis only asks one question in the interview phase related to the use of other councils' (locally or internationally) website information and its applicability to their own context. A total of 94% of the councils used other councils' website information. Therefore, a follow-up investigation would be interesting.

Fourthly, further investigation on the effectiveness of sustainable development initiatives such as MURNINet could be explored. There is no published research to date that examines this area. The finding would be able to identify the loopholes in the existing program implementation and make suggestions for further improvements. The future study could be conducted via a survey, interviews or a combination of both methods.

Finally, the thesis can be replicated to other government agencies, especially those that are directly related to the public, for example, agencies that provide water and electricity. Similarly, it is also worthwhile to extend the samples to government linked companies¹⁰² to determine the consistency (or otherwise) in findings related to the extent of sustainability information disclosure on websites. Also, the use of both content analysis and disclosure index instruments can be applied to local authorities in the ASEAN countries to compare the findings from this thesis.

9.7 CONCLUDING REMARKS

This thesis makes an original contribution to public sector accounting and the CSR literature. It provides insights into the disclosure practices of Malaysian local authorities by examining the disclosure of sustainability information on their websites. The thesis employs an institutional theory framework to motivate hypotheses about how the council's size, jurisdiction, the LA 21 program, public sector awards and type of councils influences the dissemination of sustainability information on the websites of Malaysian local authorities.

The thesis has enhanced understanding of the reform of local government in Malaysia. It is early days in the local authorities' deployment of websites. Nonetheless, these findings provide an overview of the extent of sustainability information disclosure in the public sector in Malaysia—especially the differences highlighted between councils in urban and rural areas—and can serve as a base for future studies. Most importantly, this thesis has provided evidence that websites can become a strategic tool to disseminate sustainability information globally due to their special features, such as being effective, cheap and accessible.

Institutional theory offers an explanation for the extent of sustainability reporting on the websites. It is expected the use of websites will be increased in the future with more support from management, clear directive from the government and a higher education level of the people.

¹⁰² Government Linked Companies comprises companies that are controlled by the respective State Governments and State-level agencies.

These findings may prove useful to a number of key groups in Malaysia including policy makers, government departments/agencies, academics and other groups that would like to integrate the use of websites to report sustainability information as part of public administrative service reforms in Malaysia.

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Appendix 1_1 Types of Reports Prepared by Other Countries

The different types of sustainability reporting implemented by public sector agencies in other countries are summarized in the following table.

Type of reports	Description	Country
Financial annual report	<p>Most common report for government bodies to report the use of tax money. Also includes organization's management structure, policies and past achievement.</p> <p>Performance and accountability reports.</p> <p>Additional non-financial aspects of performance such as social and environmental aspects are included in the annual report.</p> <p>Incorporation of TBL into the annual reports.</p>	<p>Canada, the UK</p> <p>The US</p> <p>Victoria, Australia</p> <p>Some city councils in Australia and New Zealand.</p>
Environmental reports	<p>This includes environmental performance, contribution to the environment through environmental impact assessment and management program issues.</p> <p>Environmental impact</p> <p>Report prepared based on the implementation of the International Organization for Standardization (ISO) 14001, EMS certification program.</p>	<p>National government department in Hong Kong</p> <p>The UK central departments and associated executive agencies.</p> <p>Japanese municipalities</p>
Sustainable Development Strategy Policy Reports—do not focus on impact but about government goals and priorities	<p>Contains strategies and policies related to sustainable development as a result from World Summits in 1992, 1997 and 2002.</p> <p>Preparation of the LA 21 strategies following the 1992 Rio de Janeiro Earth Summit</p>	<p>All government departments in Canada</p> <p>All local agencies in UK</p>
State of the Environment Reports	<p>Analyse issues and changes related to subjects such as population, vegetation and land use, soils, water, air, biodiversity, and wildlife habitats.</p> <p>Indicators related physical environment, social dimensions, economic dimensions and political dimensions.</p> <p>Mandatory reporting.</p>	<p>Ministry of Environment and Natural Resources Mexico</p> <p>National State of Environment Report</p> <p>Australia (including local governments)</p>
Sustainability Indicators/Index Reports	<p>Often used as tools to measure progress at all levels, and focus on external economic, environmental, and social conditions such as literacy rates, air quality, and infant mortality.</p> <p>Indicators of Sustainable Community created by the Sustainable Seattle Network.</p> <p>European Common Indicators (ECI)</p> <p>Achieving a better Quality of Life—define 15 Headline Indicators</p>	<p>City of Seattle, USA.</p> <p>Local councils in Europe</p> <p>The UK central government</p>
Sustainability/ TBL reports	<p>A vehicle to assess the economic, environmental, and social impact of the organization's operation, products, and services, and its overall contribution to sustainable development.</p>	<p>Public sectors in Europe, North America and Asia.</p>

(GRI, 2004)

Appendix 1_2 Descriptions of Major Sustainable Development Indicator Initiatives in Malaysia

The following table explains the major sustainable development indicator initiatives undertaken by government agencies in Malaysia.

	Goal	Main features	Implementation stage	Anchor agency	Scale
Malaysian Quality of Life Indicators	Expanding the measure of Malaysian success beyond economic achievement	A composite index showing the improvement in Malaysian Quality of Life with 1980 as the base year	Institutionalization	Macroeconomics and Evaluation Section of the Economic Planning Unit, Prime Minister's Department	National
Compendium of Environment Statistics	The integration of socio-economic information with environmental parameters	The statistics chosen are analysed according to the media-based approach accommodating the Pressure State response model	Institutionalization	Department of Statistics	National
Urban Sustainability Indicators and MURNINet	To design and test a set of urban indicators for the tracking of urban development towards sustainability	The first initiative in Malaysia linking indicators to benchmark values. MURNINet is the networked system, which will be used by local authorities to report on sustainability using the selected indicators	Testing	Federal Town and Country Planning Department	National
Malaysian Sustainable Development Indicators	Develop a national system for tracking progress towards sustainability.	Aiming to integrate sustainability elements into national level development planning	Identification	Environment Natural Resources Section of the Economic Planning Unit, Prime Minister's Department	National
Klang Valley Regional Sustainability Quality of Life Index	To develop stress ratio (spatial growth and distributional weights) for the allocation of resources for the districts within Klang Valley	Index development involving benchmarks at the district levels from a regional perspective	Formulation completed	Federal Territory Development and Klang Valley Planning Division, Prime Minister's Department	Regional

	Goal	Main features	Implementation stage	Anchor agency	Scale
Health City Indicators	Continuously create social and physical environment for healthy urban population	Based on the World Health organization (WHO) framework. The community program commenced in 1997 but its indicators development part is still at an early stage.	Identification	Department of Public Health, City councils in Kuching, Malacca and Johore	Local
Penang Report Card	Define sustainable development for Penang utilizing a bottom-up participatory approach in planning	Based on the Sustainable Seattle Model of active community-based monitoring and organized by NGO	Formulation Completed (one-off project)	Socioeconomic and Environment Research Institute	State
Sustainable Urban Development Indicators	Develop indicators to assess the improvement in urban issues such as water quality and waste management	The use of an EMS as the guiding framework	Identification	Sarawak National Resources Board	Local
Sustainable Development Indicators for the State of Selangor	Develop a state-level system for monitoring sustainability in organization of the state's administrative and legislative power	Fitness-for-purpose indicator frameworks rather than the usual definitive suite of indicators	Identification	Town and Country Planning Department of Selangor	State

(Hezri, 2004, p. 360)

Appendix 3_1 Summary of Past Studies Using Institutional Isomorphic Pressures

The following table summarizes past studies that use three types of isomorphism pressures.

Study	Coercive	Mimetic	Normative
Carpenter and Feroz (2001)— to examine the adoption or resistance by the four state governments in the US to adopt GAAP	<ul style="list-style-type: none"> powerful interests 	<ul style="list-style-type: none"> organizational printing/issue 	<ul style="list-style-type: none"> participation of accountants in the professional association
Baker and Rennie (2006)— to examine several factors that may influence the federal government's decision to adopt the full accrual accounting	<ul style="list-style-type: none"> the Office of Auditor General of Canada 	<ul style="list-style-type: none"> Other country— government document New Public Management concept—similar to private sector commercialization 	<ul style="list-style-type: none"> the Office of Auditor General of Canada the Canadian Institute of Chartered Accountants Public Sector Board
Falkman and Tagesson (2005)—to explore and explain the impact of legislation and standard setting in the Swedish municipal sector	<ul style="list-style-type: none"> External stakeholder Political rule 	<ul style="list-style-type: none"> Auditing firms 	<ul style="list-style-type: none"> Size —Mass media Size—large number of professional members
Ryan and Purcell (2004)—to develop an understanding of what motivates local government preparers of annual reports to disclose corporate governance information	<ul style="list-style-type: none"> community expectations for enhancing accountability and transparency criteria provided in annual reports' competition compliance with best practice guideline 	<ul style="list-style-type: none"> successful participants in annual reports competition 	<ul style="list-style-type: none"> Local government preparer's education background and professional association membership
Rahaman <i>et al.</i> (2004)—to explain social	<ul style="list-style-type: none"> World Bank Management and other 	<ul style="list-style-type: none"> Management and other organizational 	<ul style="list-style-type: none"> Management and other organizational

and environment reporting at Volta River Authority	organizational participants	participants	participants
Study	Coercive	Mimetic	Normative
Mack (2006)—to develop an understanding of the various influences on local authorities in Queensland to adopt TBL	<ul style="list-style-type: none"> • ratepayers, local consumers and local electors as direct resource providers, service users, and voters 	<ul style="list-style-type: none"> • awareness of other effective strategies employed by similar organizations (other local government authorities) • private sector 	<ul style="list-style-type: none"> • Interviewee's tertiary qualification in their field, long-term employment in the organization and active members of the professional association related to their job • Drive from CEO, senior management, employees' recommendation strategies
Frumkin and Galaskiewicz (2004)—to examine whether public sector organizations as compared with non-profit and business organizations are in fact more or less vulnerable to different kinds of institutional pressures	<ul style="list-style-type: none"> • regulations, licensing and accreditation 	<ul style="list-style-type: none"> • looking at the performance of other organizations 	
Bowerman (2002)—to explain factors influencing the implementation of Best Value	<ul style="list-style-type: none"> • The White Paper that introduced Best Value • funding dependency from the central government • the central government is a major user of the Business Excellence 	<ul style="list-style-type: none"> • Recognition by the central government for local authorities that use the Business Excellence Model • The criteria to become a "Beacon" authority. 	<ul style="list-style-type: none"> • The accounting professional body , CIPFA • The seminar to use the Business Excellence Model to meet the "Government's Best Value criteria".

Amran and Devi (2007)—aims to explain factors influencing CSR	<ul style="list-style-type: none"> • state • foreign organization 	<ul style="list-style-type: none"> • Industry • foreign activities • the company's size 	<ul style="list-style-type: none"> • award • internal goal • parent company • Association
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Appendix 4_1 Examples from Chapter Four

The following examples support explanation regarding descriptions which are not included in the analysis due to their repetitive message.

Example 1

BENEFITS OF LA21

To The Local Authorities/Government Agencies

- Upgrade understanding, support and co-operation between the community and the private sector through programs, which are already planned, or to be implemented.
- Able to upgrade the image of a government body that practices good transparency, responsiveness, accountability, effectiveness and efficiency.

To The Community/Individual

- Your opinion and contribution are taken into consideration in the planning and implementation of programs for the purpose of upgrading the quality of living.
- Upgrading the sense of responsibility, love, pride for the environment and to have a sense of belonging.
- Quality of life could be upgraded through cleaner, more comfortable, pleasant and safe environment.

To The Private Sector/Companies

- Give the opportunity to offer assistance, contribution and service to successfully implement programs which are already planned.
- Upgrade corporate image as one that is responsible and sensitive towards the environment and the needs of the community.
- Provide the opportunity to promote the companies' products through the sponsorship of the LA21 Program activities.

Source : C95

Example 2—Frequently Asked Questions

1. What are the differences between types of local councils in Malaysia?
2. How many local authorities are there in Malaysia?
3. Are the local authorities under the jurisdiction of the Ministry of Housing and Local Government?
4. How can the local people make any complaints or enquiries under their council's administration area?
5. What are the necessary actions that can be carried out by the local people if the councils do not discharge their duties properly?

Appendix 4_2 Methodological Issues Based on Past Studies

This section provides a review of the few past studies contributing to the development of both the content analysis and disclosure index instruments in Chapter Four. Jose and Lee (2007) used a conceptual analysis in their content analysis approach. They followed the guidelines of the Writing Centre of Colorado State University in performing the content analysis. The steps undertaken in their study were: 1) identify research questions and choose a sample of 200 companies and collect information about their environmental management policies and practices from their websites; 2) formulate a code by using literature, especially on principles set forth in different guidelines; and 3) place the information into different content categories. To ensure reliability and validity, one of the researchers acted as the primary coder of the work that was subsequently randomly spot-checked by another researcher. It is noted that Jose and Lee's (2007) study failed to explain ways to ascertain the concept's presence in the content analysis instrument they developed. However, it is also observed that the findings were presented based on frequency and percentage. Hence, it appears that there was a possibility of scoring with '1' if there was the presence of the concept, and '0' if otherwise.

Rikhardsson *et al.* (2002) analysed the social and environmental information of company websites listed on the Global Fortune 500 in 2000. They classified the environmental information into eight categories and 29 sub-categories. The category of environmental information included environmental policies, stakeholder relationship, resource consumption, emissions, financial performance, risk, product performance and external verification. On the other hand, the social information was classified into 6 categories and 25 sub-categories. The social category was comprised of: social policies, stakeholder relationship, workplace performance, human rights, supplier performance and external verification (audit). For analysis purposes, a survey form was developed based on GRI guidelines for social and environmental

reporting by Rikhardsson *et al.* (2002). This survey form contained a list of social and environment items that could be expected from corporate websites and online reports. A few measures were taken to ensure the validity of the survey form, including a pilot study and analysis of the same companies to locate and discuss any discrepancies in the category interpretation. The data collection was performed by the research team supervised by the project coordinator to overcome potential doubts and questions during the survey. The steps undertaken were as follows: 1) the site was analysed within two hours; 2) it was searched for separate environmental or social reports in Hypertext Markup Language (HTML), portable document file (PDF) and other formats; 3) if a separate report was found, it was read and, if an information category from the survey form was encountered, it was marked on the form; and 4) if the report analysis was completed, or no report existed, then a search was made around the website to find any information disclosed. The information was marked according to whether it was present in a specific report on a web page. It is noted that there was no explanation regarding ways of ascertaining the disclosure of social and environment information in the survey form developed in Rikhardsson *et al.*'s (2002) study. On the other hand, it is also observed that the findings were presented based on frequency and percentage. Hence, it appears that there was also a possibility of scoring '1' if there was a disclosure, and '0' if otherwise.

Rodriguez-Bolivar (2009) proposed a method of research (scoring system) to investigate the practices of corporate environmental disclosure of publicly listed Spanish firms on their websites. Among the aspects reviewed were: environmental disclosure on corporate websites in HTML environmental reports, sustainability reports, and environmental concerns included in the financial statements corresponding to the 2003 financial year. A score table was drawn up in which items were scored on a binary scale (0/1) in accordance with the absence or presence of each item on the website—environmental reports and sustainability reports, (if they were available on the corporate website)—of each sample firm. A content of non-financial environmental disclosures on the corporate website index consisting of 18 items was constructed based on GRI 2002 to calculate the score explained previously.

Meanwhile, Ho and Taylor (2007) investigated TBL reporting of 50 of the largest US and Japanese companies in annual reports, stand-alone reports and special website reports. Twenty disclosure criteria were developed based primarily on GRI 2002 and extensive past literature for each of the TBL disclosure categories: economy, social and environment. For each category, the value of this index for each firm was calculated by counting the number of disclosure items reported by the firm within this category.

Another reference for economic categorization in this thesis was adopted from Stowers (1999). Stowers (1999) reported economic related activities on the local authorities' websites, such as economic development, tourism, business activities, education, job, information about jurisdiction, and transportation.

To conclude, this section has explained the methodological aspects adopted from the previous studies as a guideline to construct the instruments to measure the dependent variables in Chapter Four.

Appendix 4_3 Decision Rules To Determine a 'Sentence'

The following decision rules to determine a 'sentence' are as follows:

1. Include those sentences starting with a bullet and dot point.

This rule applies regardless whether the sentence ends with a full stop or not. However, any dashes within sentences will not be counted as a sentence. By referring to Example 1 there are four sentences relating to the waste collection schedule.

Example 1

Waste collection schedule

- House-to-house collection—3 times a week
- Collection from compactor bins by the roadside—every day
- Ro-ro bin (bins which are taken away by a lorry)—every day
- Garden/bulky waste—once a week (Saturday or Sunday)

} 4 sentences

Source: C118's website

2. Headings are not counted as sentences.

This study does not count any heading as a sentence. Again referring to Example 1, the heading "waste collection schedule" is not counted as a sentence because the actions related were explained in the subsequent points.

3. Sentences starting with numbers, for example, 1), 2), 3) and also with the letters a), b), c) are counted as one sentence.

Similar to the decision rule (1) a sentence starts with a number or letter regardless of whether it ends with a full stop or not. By referring to Example 2, it can be seen that there are five sentences related to "types of bills paid at SBBS Counters".

Example 2

Types of bills paid at SBBS Counters:

- (a) C118 bills
- (b) Water bills
- (c) Telephone bills
- (d) Electricity bills
- (e) C115 Assessment bills

Source : C118's website

4. Information on contact people, designation, address and telephone number are counted as one sentence.

It is observed from the selected websites that most information about the head of department is formed together with their name, email and telephone number. Hence, this thesis only counts all such information as one sentence (refer Example 3).

Example 3

Finance Department (total = 1 sentence)

Mr ABC **Finance Director** abc@C26.gov.my 045497406

Source: C26's website

OR

Division of Park and Facilities

Head : Mr DEF

Council C 54

Level 7, No: 88

Sultan Ismail Road

20200 54

Tel : 6203594

} (total = 1 sentence)

Source: C54's website

5. If there is a table, each row will be counted as a sentence.

This rule is adopted from Hackston and Milne (1996), that is, "table (monetary and non-monetary) which provide information on the checklist should be interpreted as one line equals one sentence and classified accordingly". For example, in Example 4 there are 11 rows which represent 11 sentences.

Example 4

No.	Public Market	Lincense Value
1.	Pasar Awam Jalan 17/2	120
2.	Pasar Jalan Othman (Baru)	120
3.	Pasar Jalan Othman (Lama)	120
4.	Pasar Kg. Chempaka	120
5.	Pasar Seksyen 14	120
6.	Pasar Seri Setia	120
7.	Pasar Seri Damansara	120

8.	Pasar Taman Dato' Harun	120
9.	Pasar Pagi SS2/62	50
10.	Pasar Pagi 17/27	50
11.	Pasar Pagi Taman Medan	50

Source: C3's website

6. Pictures are excluded from sentence counting.

This thesis does not count pictures. Frost and Wilmshurst (2000) discussed some of the complications with coding pictures and argued that coding pictures is too subjective (Guthrie *et al.*, 2004). On the other hand, Unerman (2000) claimed that any content analysis study that ignores pictures is likely to result in an incomplete representation. However, Frost and Wilmshurst's (2000) position will be adopted.

7. If information is presented in a structured form, count one line as a sentence. In terms of this logic, Example 5 shows that there are three sentences based on the three separate lines.

Example 5

Tender No.	:	S0408043	} 1 sentence
Cost of Document	:	RM30	} 1 sentence
Closing Date	:	05/05/2008	} 1 sentence

Source: C26

8. Repetitive message.

As maintained by Hackston and Milne (1996), any discussion which is repeated shall be recorded as a sustainability sentence each time it is discussed.

Appendix 4_4 Content Analysis Instrument

The following table includes the complete items in the content analysis method (a combination of Table 4.2 and Table 4.3— Chapter Four)

	Categories	Measures	Source
	Environment		
1.	Environmental planning consideration		
a.	General statement and policy	<ul style="list-style-type: none"> • Presence of environmental policy and client charter • Statement about recycling, waste management, environmental protection and control, beautification of the landscape, pollution of water, air and natural resources 	JL, R, SM, GG HT, CG, SM, HM, websites
b.	Strategic rationale and driving forces	<ul style="list-style-type: none"> • Proactive approach or strategy including LA 21 environmental strategies 	JL, HT, website
c.	Planning approach	<ul style="list-style-type: none"> • Continuous process improvement such as quality management system, for example, ISO procedure for solid waste management • Predetermined targets and objectives 	JL, CG, SM, website JL, SM, GG
2.	Top management commitment to the institutionalization of environmental practice	<ul style="list-style-type: none"> • Foreword (on environmental issues) by a president or mayor or secretary 	JL, website
3.	Environmental structure and		

	organizing specifics		
a.	Department affiliation of corporate environmental function	<ul style="list-style-type: none"> • Separate (independent function) • Combined with other departments, such as Human Resources and Public Health • Internal program or activities—including LA 21 • Major services related to the environment 	JL, CG, GG JL, website R, GG, website B
b.	Management priority	<ul style="list-style-type: none"> • Top-level executive in charge, and contact details 	JL, HT
c.	Stakeholder involvement	<ul style="list-style-type: none"> • Community involvement 	JL, R, website
4.	Environmental leadership activities	<ul style="list-style-type: none"> • Promotion of environmental issues • Partnership with NGOs 	JL JL
5.	Others	<ul style="list-style-type: none"> • Financial information • Performance indicators 	HT, GG, HM, SM, FS B
	Social		
1.	Social planning consideration		
a.	General statement and policy	<ul style="list-style-type: none"> • Presence of social policy and client charter such as public health, safety, rubbish collection, drain cleaning, grass cutting and others 	E
b.	Strategic rationale and driving forces	<ul style="list-style-type: none"> • Proactive approach or strategy including LA 21 strategy 	HT
c.	Planning approach	<ul style="list-style-type: none"> • Continuous process improvement such as quality management system, for example, ISO procedure for rubbish collection • Predetermined targets and objectives 	E E
2.	Top management commitment to the institutionalization of social practice	<ul style="list-style-type: none"> • Foreword (on social issues) by a chairperson or mayor or secretary 	HT

3.	Social structure and organizing specifics		
a.	Department affiliation of corporate social function	<ul style="list-style-type: none"> • Separate (independent function) • Combined with other departments, such as City Services and Public Health • Internal program or activities—including LA 21 • Major services related to social issues • LA 21 Unit • LA 21 officer • Any special LA 21 committee 	E E R, website E Website Website Website
	Social structure and organizing specifics		
b.	Management priority	<ul style="list-style-type: none"> • Top-level executive in charge, and contact details 	HT
c.	Stakeholder involvement	<ul style="list-style-type: none"> • Community involvement 	R, HM, HC
4.	Social leadership activities	<ul style="list-style-type: none"> • Promotion of social issues • Partnership with NGOs 	E E
5.	Others	<ul style="list-style-type: none"> • Financial information • Performance indicators • Number of employees • Local employment 	R E HT, F, HM, HC HT, website
	Economy		
1.	Economic planning consideration		
a.	General statement and policy	<ul style="list-style-type: none"> • Presence of economy related policy and client charter such as licensing and business activities 	E
b.	Strategic rationale and driving forces	<ul style="list-style-type: none"> • Proactive approach or strategy including LA 21 	E
c.	Planning approach	<ul style="list-style-type: none"> • Continuous process improvement such as quality management system, for example, ISO procedure for 	E

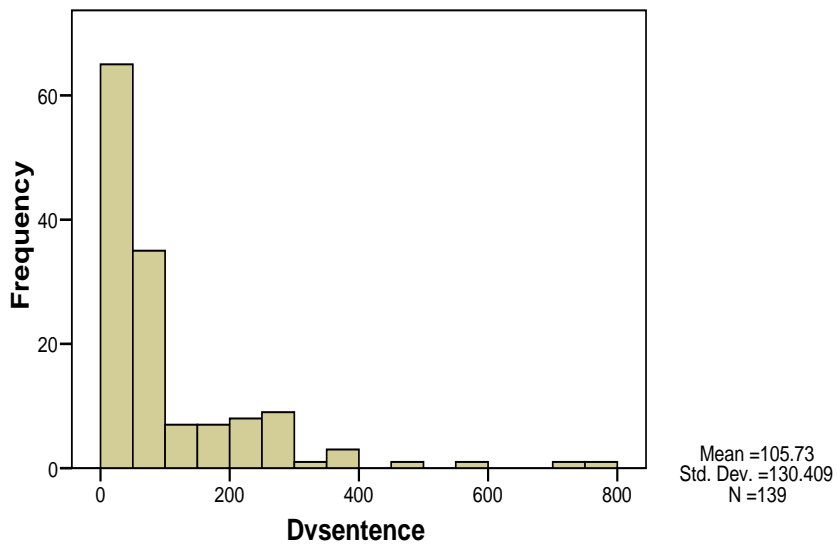
		<ul style="list-style-type: none"> licensing • Predetermined targets and objectives 	E
2.	Top management commitment to the institutionalization of economy practice	<ul style="list-style-type: none"> • Foreword (on economic issues) by a president or mayor or secretary 	E
3.	Economic structure and organizing specifics		
a.	Department affiliation of corporate economy function	<ul style="list-style-type: none"> • Separate (independent function) • Combined with other departments, such as Parking and Licensing • Internal program or activities— including LA 21, tender and quotation • Major services related to the economy 	E E S E
	Economic structure and organizing specifics		
b.	Management priority	<ul style="list-style-type: none"> • Top-level executive in charge, and contact details 	HT
c.	Stakeholder involvement	<ul style="list-style-type: none"> • Community involvement 	E
4.	Economic leadership activities	<ul style="list-style-type: none"> • Promotion of economic issues • Partnership with NGOs 	E E
5.	Others	<ul style="list-style-type: none"> • Financial information • Performance indicators 	E E

E = extension from Jose and Lee (2007); JL = Jose and Lee (2007); CG = Cormier and Gordon (2001); F = Frost et al. (2005); SM = Smith *et al.* (2007); GG = Gibson and Guthrie (1995); FS = Frost and Seamer (2002); HM = Hackston and Milne (1996); HC = Haniffa and Cooke (2005); HT = Ho and Taylor (2007); R = Rikhardson *et al.* (2002); S = Stowers (1999); B = Rodriguez-Bolivar (2009)

Appendix 5_1 Distribution Shape of the Dependent Variable

The following Figure 5.1 shows the distribution of the dependent variable (*dvsentence*) before transformation to *logdvsentence*.

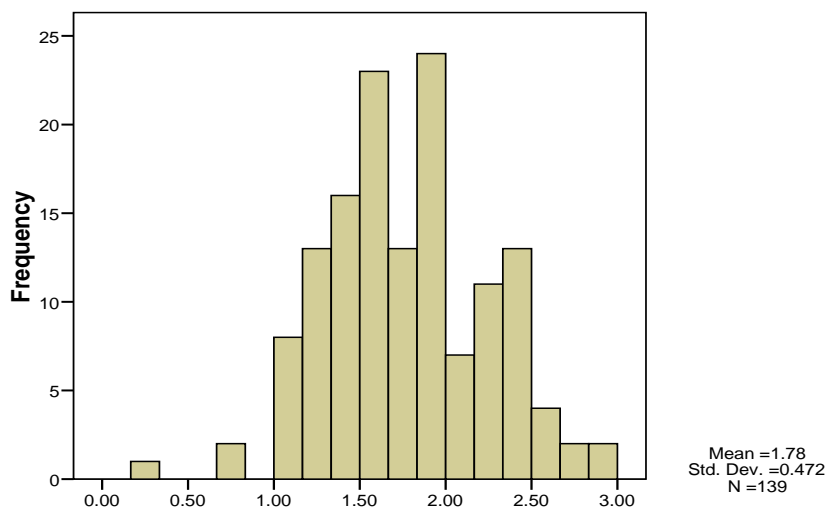
Figure 5.1 Distribution Shape of the Dependent Variable before Transformation



As can be seen from Figure 5.1 the sentence count is positively highly skewed.

Figure 5.2 displays a distribution of the dependent variable (*dvsentence*) after transformation to *logdvsentence*.

Figure 5.2 Distribution Shape of the Dependent Variable after Transformation



Logdvsentence

As can be seen from Figure 5.2 the distribution shape of the *logdvsentence* is closer to normality after the dependent variable is transformed using the logarithm base 10.

The following Figure 5.3 depicts the distribution shape of *dvindex*.

Figure 5.3 Distribution Shape of Dependent Variable (*Dvindex*)

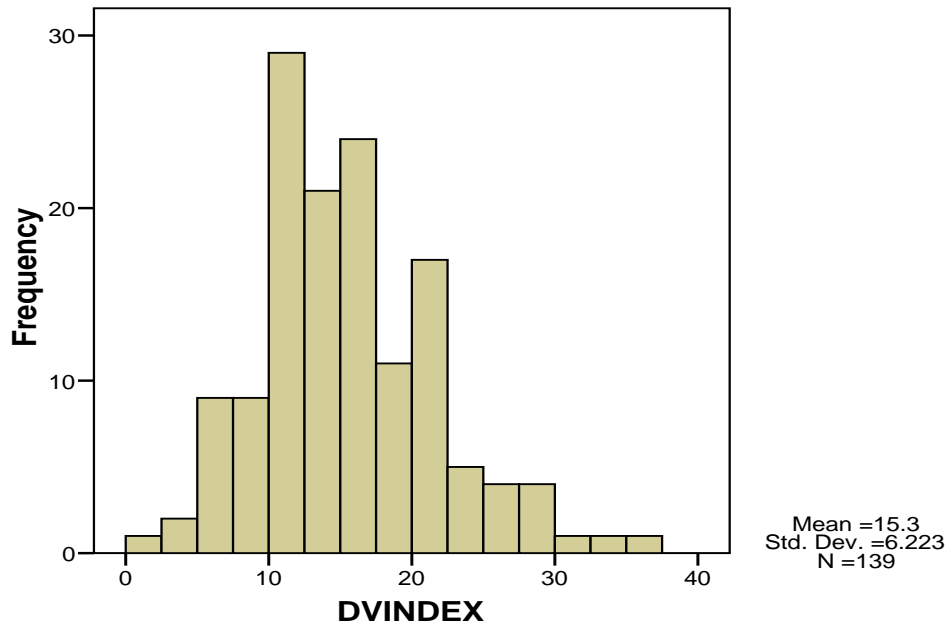


Figure 5.3 shows that the distribution of the disclosure index amount is close to normality. This indicates that the transformation is not required for *dvindex*.

Appendix 5_2 Examples from Websites

Examples 5.1 to 5.9 support results and discussions in Chapter Five.

Example 5.1 Environmental Strategies

Good Living in the Suburbs.

. . aims for healthy, clean and green suburbs.

How to promote Good Living in the Suburbs?

To achieve Good Living in the Suburbs, C118 shall:

- . . Ensure a clean and healthy environment;
- . . Improve suburban streetscapes and landscapes;

Strategies to Achieve Good Living In The Suburbs.

For a start, some of the strategies include:

- . . Promoting recycling '3R', Buyback Centres in targeted areas;
- . . Planting Bunya Raya Campaign at housing estates and villages to complement the existing landscape.

Source: C118

Example 5.2 News on Environmental Issue

Supermarkets to go 'green' come August

Thursday, July 03, 2008

117: Major hypermarkets, supermarkets and departmental stores here will go green come August in response to the 'Say No To Plastic', a campaign of 117 City Council and its LA 21 (LA21), to reduce the use of plastic bags and other plastic materials.

Starting from next month, the participating outlets, namely, Boulevard Hypermarket and Departmental Store, Servay Jaya, Parkson Grand, Giant, E-mart, GK, Sing Liang Supermarket, Nam Leong and Ng Siang Hup will reduce the use of plastic bags.

In the initial stage, the campaign would involve plastic bags, the Mayor Datuk Wee Han Wen told a press conference after a meeting with representatives from the business outlets, councillors and LA21 officers yesterday.

"The soft launch of the campaign is July 11, while the official launch will be held sometime in August to coincide with the 45th anniversary of Sarawak's independence in Malaysia. During the soft launch posters will be distributed to the participating outlets", said Wee.

"As a start, the participating outlets will allocate special counters for shoppers who bring along own shopping bags to place their purchase. Some outlets will distribute bridgeable bags and recyclable shopping bags to their shoppers", he said.

"Shoppers are encouraged to bring along their own bags (preferably cloth bags) or containers in which to place the food bought during the campaign", Wee said, although admitting that it would be quite difficult for shoppers and business outlets to quickly adjust to the new concept.

"The campaign is a win-win situation for all parties as it will help to reduce the operators' expenditure in printing and buying of plastic bags, and help to protect the environment", Wee said.

Wee said the concept had been practiced and well received in European countries.

"I understand that Australia has started to implement the concept, and it is never too late for us to start here although the concept has been practiced in Peninsular Malaysia for quite some time."

Source: C117

Example 5.3 Environmental Target and Expenditure in the Mayor's Year-End Message

For the year 2007, our emphasis concentrates on improvement to city outlook, landscaping and beautification works, cleanliness and better cleaning services.

Apart from using sanitary landfill for the management of solid waste, the Council has carried out various awareness programs, 3R buy-back campaigns and waste-recovery projects in its reduction of rubbish disposal. The Council has managed to recover 9.5% from rubbish disposed and this is not far from the national target of 11% by the end of 2010. The percentage does not include the recovery of scrapped metals.

The Council has allocated more than RM4.2 million to the maintenance of landscaping works along public areas as well as parks and recreation grounds. The protection of seafront along Taman Selera and Luak Bay Esplanade is also receiving due attention. After the development of a few well known parks like 117 City Fan and Taman Awam 117 few years back, we are able to maintain and upkeep the beautification works in these few parks and this is one of the reasons other councils are coming to learn from us on how to sustain the beauty of our parks

Source: C117

Example 5.4 Environmental Allocation in Annual Budget

Budget objective 2008.

To improve the beautification and cleanliness of C3.

Action:

To plant more trees, upgrade park facilities, land clearing and others. In doing so, RM9.55 million has been provided to manage the followings:

No	Program	2007	2008	Surplus/Deficit (RM)
1	Tree maintenance	2.00 million	2.00 million	-
2	Hard landscaping maintenance service	1.40 million	1.40 million	-
3	Soft landscape maintenance service	2.28 million	3.91 million	1.63 million
4	Supply annual flowers	0.34 million	0.34 million	-
5	Lake water treatment	2.00 million	1.65 million	(0.35 million)
6	Landscape Beauty competition	-	0.05 million	0.05 million
8	Maintenance and Improve Educational Forest Bukit Gasing	0.17 million	0.20 million	0.03 million
	Total	8.19 million	9.55 million	1.36 million

Additionally, Council will increase the monitoring on works carried out by the contractor and implement contingency plans for works which were not completed by the contractor. The cleanliness campaign and recycling program will be maintained and continued in 2008.

Source: C3

Example 5.5 Community Involvement in the Strategic Plan

The C26 Strategic Plan consists of 10 focuses :

1. Human Resource's Performance and Duties
2. ICT Plan
3. Customer Service
4. Organization excellence and effectiveness
5. Etiquette and Management
6. Communication
7. Community Participation
8. Financial Management
9. Living Quality
10. Bumiputera's Involvement

Source: C26

Example 5.6 LA 21 Programs, Activity and Action Plan

Local Action 21 Implementation

1) Ways to healthy life and community safety

Objective:

Encourage community to maintain cleanliness

Inculcate neighbourhood team spirit and sport culture

Monitor neighbourhood

Reminders for self and children's safety

Prevention of theft

Prevention of fire

Important telephone number information

Aim

To develop healthy living, peace and harmony.

Strategy

Organize healthy living campaign

- talk, exhibition and health examination
- blood donation
- build jogging track
- mountain bike competition
- football competition

Organize cleanliness and beautification campaign

- talk, exhibition and health examination
- teamwork
- donation of flowers to community
- clearing land
- monitoring of cleaning work

Organize neighbourhood campaign and crime prevention

- talk and exhibition

- dialogue with community
 - open house during festive season
 - set up of young neighbour programs
- Source: C26

Example 5.7 Example of City Characteristics

Characteristics of C115 City

A C115 Healthy City—

- provides the basic amenities for all its citizens;
- is one where real harmony exists between various ethnic groups and religious beliefs;
- is safe, secure and affordable;
- has efficient management and delivery systems and services;
- is well-planned;
- has responsible, dedicated, disciplined, caring and health-conscious citizens;
- is a dynamic City, with a vibrant and resilient economy, and ample employment opportunities for all;
- has state-of-the-art transports communication and information systems;
- is beautiful, clean, and pollution-free;
- has adequate and easily accessible recreation facilities, to meet the diverse needs of its citizens;
- is a City where the culture and arts are actively promoted and appreciated; and
- has readily available and affordable opportunities for further education.

Source : C115

Example 5.8 Example of Economic Information in the City Mayor’s Speech

On revenue collection, assessment rates collection has been the major revenue of the Council. Due to the proactive approach taken by the Rating & Valuation Department, such as the setting up of assessment rates collection counters at major shopping complexes during the peak collection period, aggressive publicity, providing additional options for paying bills like using credit cards, through banking facilities, opening counters during lunch break etc, the efforts put in have produced good results. The total collection from assessment rates to date is RM28.3 million compared to RM27.2 million last year. The actual collection compared to the expected yield is 93.3%. Through various means, the department has also recovered RM2.23 million from the outstanding assessment rates owed by various property owners. The Council is grateful to the property owners in fulfilling their obligation by paying out the assessment rates as their great co-operation has enabled the Council, in return, to provide more and better developments and services to them.

Source : C117

Example 5.9**Example of Rental Charges**

Situated on the Ground Floor of C116 and with a seating capacity of 460 persons, the Auditorium is an ideal venue to hold public seminars, talks, prize presentation ceremonies etc. The auditorium has a complete in-house sound system, lighting, is fully air-conditioned and carpeted.

Facility rental charges:

No.	Types of Usage	Week Days			Weekend/Public Holiday	
		8am-5pm or part thereof	8am- 11pm	7pm- 11pm	8am-5pm or part thereof	7pm- 11pm
1	Commercial Talks/ Seminars/Rehearsal	RM600	RM1,200	RM700	RM700	RM750
2	Charitable/Education/ Religious/Rehearsal	RM300	RM600	RM400	RM400	RM450
3	Government Agencies	RM600	RM1,200	RM700	RM700	RM750

Deposit:RM250

Booking Fee RM100

Source : C116

Appendix 5_3 Reflections on Content Analysis and Disclosure Index Instruments

The descriptive results from Chapter Five have shown that items included in both content analysis and disclosure index instruments were applicable to local government setting in Malaysia. Apart from the extension from environmental category from Jose and Lee's list (2007) to both social and economic categories, the items added from other literature and specific to LA 21 also indicated that the items chosen are valid. The originality of these two instruments was also verified earlier by a pilot test involving 30 websites accessed on April 2008.

In content analysis result (Tables 5.4 and 5.6), partnership with NGOs in both environmental and economy categories was not disclosed by any council. However, the involvement of NGOs was disclosed in the social category and discussed during interviews in Chapter Eight. It was noted during interviews that NGOs assisted in promoting the sustainable development agenda.

Each item in the disclosure index was disclosed by at least one council (Chapter 5 — Tables 5.9, 5.10 and 5.11). This indicates the validity of this tool to examine the extent of sustainability disclosure on Malaysian council's websites in the sense that all of the items were relevant. The inclusion of rental as well as, tender and quotation as stand-alone item is important because they represent main economic services or activities in the councils.

The inclusion of LA 21 items: LA 21 Unit, LA 21 officer and LA 21 committee, are all original contributions to this thesis and therefore should be given attention in future studies related to the CSR in the local government setting.

Appendix 5_4 International Logo for Recycling Program

Figure 5a highlights the international logo for recycling program (3Rs) disclosed on council's websites.

Figure 5a International Logo for Recycling Program



Appendix 5_5 Crosstabulation between Categorical Variables

A few cross tabulation analyses were performed to determine relationship between categorical variables.

Table 5a depicts the relationship between jurisdiction and the LA 21 program.

Table 5a Crosstabulation between Jurisdiction and LA 21

	Did not implement and disclose the LA 21 program	Implemented but did not disclose the LA 21 program	Implemented and disclosed the LA 21 program	Total
J1	0	0	1	1
J2	0	4	8	12
J3	0	1	0	1
J4	4	6	0	10
J5	0	0	2	2
J6	7	6	2	15
J7	11	1	0	12
J8	4	3	0	7
J9	5	4	2	11
J10	1	2	2	5
J11	0	3	0	3
J12	4	10	1	15
J13	15	2	3	20
J14	4	19	2	25
Total	55	61	23	139

It seems J2 has the highest number of councils that implemented and disclosed their LA 21 involvement on websites. This is because J2 is the pioneering state in Malaysia that has sustainable development policy for all its all local authorities.

Table 5b shows the relationship between the LA 21 program and type of councils.

Table 5b Crosstabulation between LA 21 and Type of Councils

	District Council	Municipal Council	City Council	Total
Did not implement and disclose the LA 21 program	54	1	0	55
Implemented but did not disclose the LA 21 program	29	26	6	61
Implemented and disclosed the LA 21 program	7	10	6	23
Total	90	37	12	139

The highest frequency comes from the category of councils that have implemented but did not have disclosure of LA 21 on their websites. This number is represented by 26 municipal councils and 29 district councils respectively

Table 5c describes the relationship between councils that have won public sector award and their involvement in the LA 21 program,

Table 5c Crosstabulation between LA 21 and Award

	Never won public sector award	Have won a public sector award	Total
Did not implement and disclose the LA 21 program	55	0	55
Implemented but did not disclose the LA 21 program	59	2	61
Implemented and disclosed the LA 21 program	21	2	23
Total	135	4	139

Table 5c reveals that only two award-winning councils are implementing this program, however, they do not disclose the information regarding their LA 21 involvement on the websites. On the other hand, another two award-winning councils are implementing and disclosing their involvement in the LA 21 programs on their websites. Of these four award-winning organizations, one of them has been involved since 2000, initially as one of the pilot agencies.

Table 5d presents the relationship between internal goals and type of councils.

Table 5d Crosstabulation between Internal Goals and Type of Councils

	District Council	Municipal Council	City Council	Total
Did not have internal goals on sustainability	72	30	6	110
Have internal goals on sustainability	18	7	6	29
Total	90	37	12	139

Table 5d discloses that 18 district councils, seven municipal councils and 6 city councils have sustainability information in their mission statement and organization's objectives.

Table 5e indicates the relationship between awards and type of councils.

Table 5e Crosstabulation between Awards and Type of Councils

	District Council	Municipal Council	City Council	Total
Never won a public sector award	90	36	9	135
Have won a public sector award	0	1	3	4
Total	90	37	12	139

Table 5e highlights that the number of award-winning councils is represented by one municipal council and three city councils.

Appendix 6_1 Simple regression (*logdvsentence*)

Table 6a presents the simple regression for each independent variable, that is, when the regression is performed one at a time.

Table 6a Relationship between *Logdvsentence* and Independent Variables (One at a Time)

	Predicted sign	Coefficient	p-value
Logrevenue	+	+ 0.561	0.000
Jurisdiction			0.000
LA 21			0.000
Awards	+	+ 0.809	0.001
Type			0.000
Recycling logo	+	- 0.316	0.003
Internal goals	+	+ 0.190	0.048

Table 6a also shows the predicted sign and coefficient, and its actual sign for logrevenue, internal goals, awards and a recycling logo. The coefficient + 0.561 reveals a positive association between the council's size and the extent of sustainability disclosure. This indicates that, in Malaysia, larger councils disclose more sustainability information on websites than smaller councils. The coefficient + 0.809 indicates that councils that have won a public sector award also have disclosed more sustainability reporting on their websites.

The coefficient -0.316 indicates that the councils that have a recycling logo tend to disclose less sustainability information on the websites than councils without the logo. This was previously discussed in Chapter Five, where the smaller councils were found to be more likely to have a recycling logo than larger councils. Hence, it is suggested that the reason for this unexpected sign is that the councils with the recycling logo tend to be smaller councils that are hypothesized to have a lower disclosure. The + coefficient 0.190 signifies that the councils that have internal goals have a higher level of sustainability information disclosed on the websites.

The following discussion includes the association between the mean of the independent variables and the extent of the sustainability disclosure. Table 6b provides the mean of 14 jurisdictions in Malaysia and its confidence interval, as well as their association with the extent of sustainability disclosure on the websites.

Table 6b Relationship between Jurisdiction and the Level of Disclosure (Sentences)

Dependent Variable: *logdvsentence*

Jurisdiction	Mean	95% Confidence Interval		Number of councils
		Lower Bound	Upper Bound	
J1	2.9	2.1	3.7	1
J2	2.2	1.9	2.4	12
J3	1.6	0.8	2.4	1
J4	1.7	1.4	1.9	10
J5	2.5	1.9	3.1	2
J6	1.9	1.7	2.2	15
J7	1.4	1.2	1.7	12
J8	1.7	1.4	2.0	7
J9	1.7	1.5	2.0	11
J10	1.7	1.4	2.1	5
J11	2.3	1.8	2.8	3
J12	1.9	1.6	2.1	15
J13	1.6	1.4	1.8	20
J14	1.6	1.5	1.8	25
All councils	1.8			139

As can be seen from Table 6b, J1, the federal territory council provides the highest mean for disclosure, that is, 2.9 (log). A possible explanation for this is that the sole federal council in Jurisdiction J1 is facing more direct pressure from the federal government to promote the sustainability agenda on the website. It is noted that the jurisdictions' means are estimated with different accuracy for each jurisdiction due to different sample sizes, that is, different numbers of councils in each jurisdiction. The number can be as low as one, for example in J1, or it can be as high as 25, for example in J14. It can be seen that there is overlapping in intervals for jurisdiction. Further, it is argued that different jurisdictions exert different levels of pressure on their councils in relation to the sustainable development agenda.

Table 6c displays the mean disclosure (2.3) for the councils that are implementing and disclosing their LA 21 program involvement on the websites.

Table 6c Relationship between LA 21 and the Level of Disclosure (Sentences)

LA 21	Mean	95% Confidence Interval		Number of councils
		Lower Bound	Upper Bound	
Do not implement nor disclose the LA 21 program	1.5	1.4	1.7	55
Implement but do not disclose the LA 21 program	1.8	1.7	1.9	61
Implement and disclose the LA 21 program	2.3	2.1	2.4	23
All councils	1.8			139

This mean disclosure (2.3) for the councils that implement and report LA 21 is significantly higher than the mean of disclosure (1.8) for councils that implement but do not report LA 21 program. Similarly, the mean of disclosure (1.8) for the councils that implement but do not report the LA 21 program is statistically significantly higher than the mean of disclosure (1.5) for councils that do not implement nor report the LA 21 program. As can be seen from Table 6c, there is no overlapping in the three intervals. It indicates that all these three means are significantly different to each other. Therefore, there is evidence to suggest that the LA 21 program significantly explains the extent of sustainability reporting on Malaysian local authority websites.

Table 6d provides the mean score of sustainability information disclosure on the websites in relation to the type of councils in Malaysia.

Table 6d Relationship between Type of Councils and the Level of Disclosure (Sentences)

Type	Mean	95% Confidence Interval		Number of councils
		Lower Bound	Upper Bound	
District council	1.6	1.5	1.7	90

Municipal council	2.0	1.9	2.2	37
City council	2.5	2.2	2.7	12
All councils	1.8			139

Table 6d highlights that the mean of disclosure by the city councils, 2.5, is significantly higher than the mean of disclosure by the municipal councils, 2.0, and the district councils, 1.6. This could be due to the fact that city councils and municipal councils are facing more pressure in supporting the government's policy in gearing towards the sustainable development agenda. This can be seen with regards to the directive from government for city and municipal councils in 2002 to implement the LA 21 program. As shown in Table 6d, there is no overlap in the intervals for the type of councils' means. The mean disclosure for the different type of councils is significantly different to each other.¹⁰³

¹⁰³ The upper level confidence interval for municipal council is 2.155 and the lower level confidence interval for city council is 2.241.

Appendix 6_2 Scatter Plot of Residual Value for the Dependent Variables

The difference in results as shown in dependent variables using sentence count before transformation (*dvsentence*) and after transformation (*logdvsentence*) are described by the scatter plot of residual and predicted value of the dependent variable as follows. The scatter plot of residual and predicted value for *dvindex* is also presented.

Figure 6a provides the examination of residual scatter plot for *dvsentence*.

Figure 6a Scatter plot for residual value and predicted value of *dvsentence*

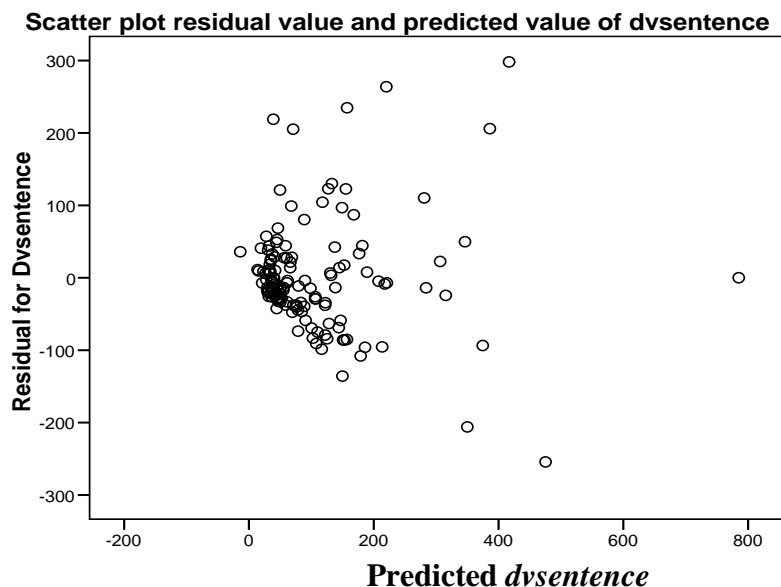
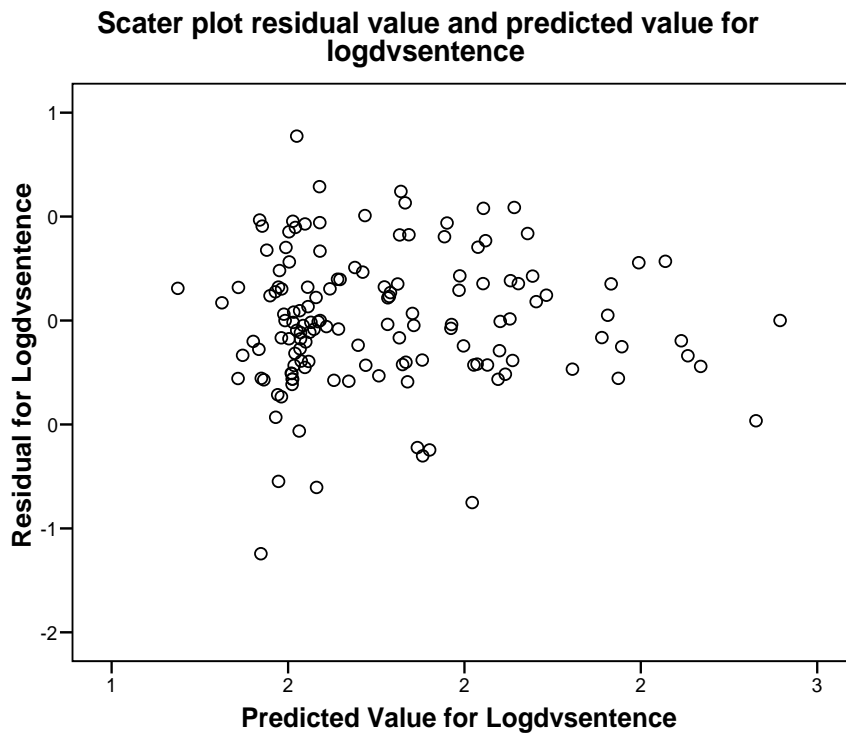


Figure 6a shows that the differences between the obtained and predicted *dvsentence* scores are closer to zero when the predicted *dvsentence* is smaller. Hence the homoscedasticity assumption is violated, that is, the residuals tend to have a higher variance where the predicted *dvsentence* is larger. As can be seen from Figure 6a, most residual values are closely clustered at zero. Thus, a log transformation is performed to allow the residual values to be more scattered and not closely clustered at zero.

Figure 6b presents the results for the examination of residual values for the *logdvsentence*.

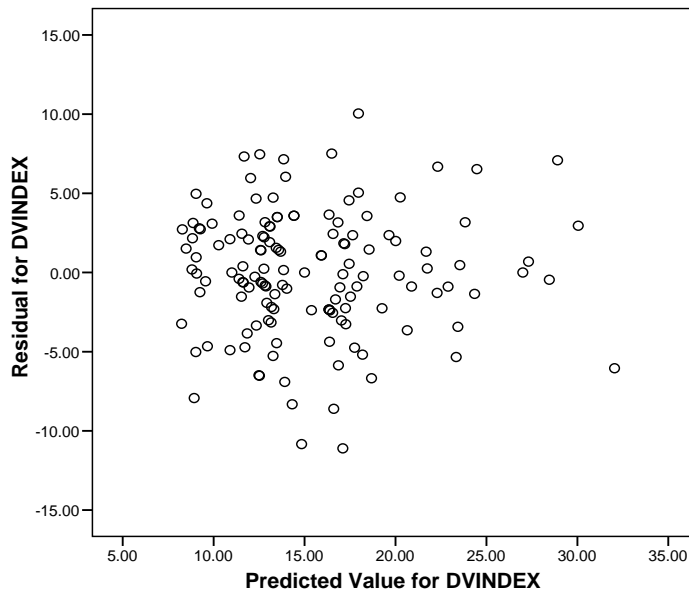
Figure 6b Scatter plot for residual value and predicted value of *logdvsentence*



After transformation, it can be seen from Figure 6b that most residual values are not clustered at zero. Instead, the points are assembled around a horizontal line through zero. Furthermore, the variance of residuals for low and high predicted values is more similar. The *dvsentence* is transformed using logarithm base 10 as there is a very high positive skewness indicated by skewness and kurtosis.

Figure 6c shows the scatter plot for the residual value of *dvindex*.

Figure 6c Scatter plot for residual value and predicted value of *dvindex*



It is clearly shown that the residual values for *dvindex* are not clustered at zero. There is no pattern in the clustering of points and the assumptions of regression appear valid. Hence, *dvindex* does not require further data transformation.

Appendix 6_3 Simple Regression (*divindex*)

Table 6e provides a summary for simple regressions using the disclosure index method.

Table 6e Relationship between *Dvindex* and Independent Variables

	Predicted sign	Coefficient	p-value
Logrevenue	+	+ 7.006	0.000
Jurisdiction			0.002
LA 21			0.000
Awards	+	+ 12.559	0.000
Type			0.000
Recycling logo	+	- 3.436	0.015
Internal goals	+	+ 5.257	0.000

When the simple regressions were performed for each independent variable separately, all of the variables (except recycling logo) are significantly associated with *dvindex* at a significant level < 0.01 . The recycling logo is also significantly associated with the *dvindex* at a significant level < 0.05 (p-value = 0.015). In terms of the coefficient and actual sign of the variables, the results are consistent with the results examined in the content analysis method. In other words, logrevenue, internal goals, and awards are in the predicted direction. As for the recycling logo, the coefficient is showing a negative relationship with the *dvindex*. The results are as follows:

- There is a positive association between the council's size and the extent of sustainability disclosure which highlights that larger councils disclose more sustainability information on the websites than smaller councils in Malaysia.
- The coefficient + 12.559 highlights that councils that have won a public sector award have higher sustainability reporting on the websites.
- The coefficient - 3.436 suggests councils with the recycling logo have a lower disclosure on the websites.

- The + coefficient 5.257 signifies that the councils that have internal goals related to the sustainable development element have a higher disclosure level of sustainability information on the websites.

Table 6f provides the mean for 14 jurisdictions in Malaysia and their association with the extent of sustainability disclosure on the websites as measured by the *dindex*.

Table 6f Relationship between Jurisdiction and the Level of Disclosure (Index)

Jurisdiction	Mean	95% Confidence Interval		Number of councils
		Lower Bound	Upper Bound	
J1	27.0	15.6	38.4	1
J2	20.4	17.1	23.7	12
J3	15.0	3.6	26.4	1
J4	11.6	8.0	15.2	10
J5	20.5	12.4	28.5	2
J6	15.8	12.9	18.7	15
J7	11.7	8.5	15.0	12
J8	17.6	13.3	21.9	7
J9	16.7	13.3	20.2	11
J10	16.6	11.5	21.7	5
J11	19.7	13.0	26.2	3
J12	15.5	12.6	18.5	15
J13	11.6	9.2	14.2	20
J14	15.6	13.3	17.9	25
All councils	15.3			139

Corresponding to the content analysis method, Jurisdiction J1 has the highest mean disclosure, that is, 27.0. This is followed by Jurisdictions J5 and J2 respectively. As indicated by the 95% confidence interval, there is an overlapping in the mean disclosure for jurisdictions.

Table 6g provides the relationship between the LA 21 program and the level of disclosure.

Table 6g Relationship between LA 21 and Level of Disclosure (Index)

LA 21	Mean	95% Confidence Interval		Number of councils
		Lower Bound	Upper Bound	
Do not implement nor disclose	12.2	10.8	13.6	55

the LA 21 program				
Implement but do not disclose the LA 21 program	15.4	14.1	16.7	61
Implement and disclose the LA 21 program	22.4	20.3	24.6	23
All councils	15.3			139

As can be seen from Table 6g, the mean of disclosure (22.4) for the councils that implement and report LA 21 is significantly greater than the mean of disclosure (15.4) for the councils that implement but do not report the LA 21 program. Similarly, the mean of disclosure (15.4) for the councils that implement but do not report the LA 21 program is significantly higher than the mean of disclosure (12.2) for councils that do not implement nor report the LA 21 program. Consistent with the content analysis method, the disclosure of involvement with the LA 21 program has a greater impact on the level of sustainability information disclosure than the implementation of the LA 21 program. The confidence interval also shows that there is no overlapping in the LA 21 program mean disclosure. Hence, this signifies that mean disclosure index values are significantly different for the three categories of LA 21 program commitment.

Table 6h presents the relationship between the type of councils and the level of disclosure.

Table 6h Relationship between Type of Councils and the Level of Disclosure (Index)

Type	Mean	95% Confidence Interval		Number of councils
		Lower Bound	Upper Bound	
District council	12.8	11.7	13.8	90
Municipal council	18.4	16.8	20.0	37
City council	24.7	21.9	27.6	12
All councils	15.3			139

Table 6h highlights that the mean disclosure of the city councils is significantly higher (24.7) than the mean disclosure of the municipal councils (18.4). As well, the mean disclosure of the municipal councils (18.4) is significantly higher than the mean disclosure of the district councils (12.8). Again, this may imply that the city

councils and municipal councils are facing greater pressure in supporting the government's policy in gearing towards the sustainable development agenda. There is also no overlapping in the mean for the type of councils as indicated by the confidence interval.

Appendix 6_4 Content Analysis for Three Council Cases

Table 6i presents the details of the disclosure for three councils using the content analysis method as identified from Figure 6.1.

Table 6i Content Analysis for Three Council Cases

	C117	C1	C40
ENVIRONMENT			
1. Environmental planning consideration			
a. General statement and policy			
Presence of environment policy and client charter	1	24	0
Statement about recycling, waste management, environmental protection and control, beautification of the landscape, pollution of water, air and natural resources	0	0	0
b. Strategic rationale and driving forces			
Proactive approach or strategy, for example, LA 21 environmental strategies	0	0	0
c. Planning approach			
Continuous process improvement such as quality management system, for example, ISO procedure for solid waste management	1	0	0
Predetermined targets and objectives	1	0	0
2. Top management commitment to the institutionalization of environmental practice			
Foreword (on environmental issues) by a president or mayor or secretary	11	39	0
3. Environmental structure and organizing specifics			
a. Department affiliation of corporate environmental function			
Separate (independent function)	1	1	0
Combined with other departments, such as Human Resources and Public Health	1	0	0
Internal program or activities, for example, LA 21	100	17	0
Major services related to the environment	1	0	0
b. Management priority			
Top-level executive in charge, and contact details	1	1	0
c. Stakeholder involvement			
Community involvement	0	0	0
4. Environmental leadership activities			
Promotion of environmental issues	13	0	0
Partnership with NGOs	0	0	0
5. Others			
Financial information	1	1	0
Performance indicators	0	0	0
Total environment	132	83	0
SOCIAL			
1. Social planning consideration			
a. General statement and policy			
General statement and presence of social policy and client charter such as public health, safety, rubbish collection, drain cleaning, grass cutting and others	1	85	0
b. Strategic rationale and driving forces			
Proactive approach or strategy, for example, LA 21 strategy	0	0	0

c. Planning approach			
Continuous process improvement such as quality management system, for example, ISO procedure for rubbish collection	0	2	0
Predetermined targets and objectives	1	0	0
2. Top management commitment to the institutionalization of social practice			
Foreword (on social issues) by a chairperson or mayor or secretary	10	29	0
	C117	C1	C40
3. Social structure and organizing specifics			
a. Department affiliation of corporate social function			
Separate (independent function)	0	2	0
Combined with other departments, such as City Services and Public Health	2	0	2
Internal program or activities, for example, LA 21	56	0	21
Major services related to social services	1	4	150
LA 21 Unit	1	0	0
LA 21 officer	1	0	0
Any special LA 21 committee	0	0	0
b. Management priority			
Top-level executive in charge, and contact details	2	2	2
c. Stakeholder involvement			
Community involvement	0	0	0
4. Social leadership activities			
Promotion of social issues	13	0	1
Partnership with NGOs	0	0	0
5. Others			
Financial information	0	0	0
Performance indicators	1	0	0
Number of employees	0	0	0
Local employment	0	22	0
Total social	89	146	176
Economy			
1. Economic planning consideration			
a. General statement and policy			
General statement and presence of economy related policy and client charter such as licensing and business activities	4	95	3
b. Strategic rationale and driving forces			
Proactive approach or strategy, for example, LA 21	0	4	0
c. Planning approach			
Continuous process improvement, such as a quality management system, for example, ISO procedure for licensing	1	5	0
Predetermined targets and objectives	1	0	0
2. Top management commitment to the institutionalization of economic practice			
Foreword (on economic issues) by a president or mayor or secretary	9	49	0
3. Economic structure and organizing specifics			
a. Department affiliation of corporate economic function			
Separate (independent function)	2	1	3
Combined with other departments, such as Health and Licensing	0	4	0
Internal program or activities, for example, LA 21, tender and quotation	22	30	53
Major services related to the economy	1	362	38
b. Management priority			
Top-level executive in charge, and contact details	2	5	3
c. Stakeholder involvement			
Community involvement	0	0	0
4. Economic leadership activities			
Promotion of economic issues	6	0	0
Partnership with NGOs	0	0	0
5. Others			
Financial information	0	1	0
Performance indicators	1	0	0
Total economy	49	556	100
TOTAL	270	785	276

Appendix 6_5 Disclosure Index for Three Council Cases

Table 6j presents details of the disclosure using the disclosure index method as identified from Figure 6.1.

Table 6j Disclosure Index for Three Council Cases

	C117	C1	C40
Environment			
General statement or policy	1	1	0
Client charter	1	1	0
Any mention about the environment in the mission statement, vision, objectives and other forms e.g. logo, motto or theme	1	0	0
Any strategy related to environmental issues i.e. recycling, solid waste management, environmental control, landscape, beautification, energy saving etc	0	0	0
Any mention about the environment as part of a continuous improvement process, such as a quality management system related to solid waste management	1	0	0
Any mention about predetermined environmental targets and objectives	1	0	0
Any mention about the environment in a foreword by chairman or secretary	1	1	0
Individual department related to the environment	1	1	0
Combined environment department and other departments e.g. landscape and town planning	1	0	0
Environmental activities or programs, for example, LA 21 activities, a beautification campaign, flower plantation campaign	1	1	0
Environmental services (landscape, drainage and sewerage)	1	0	0
Head of department of environment, and contact details	1	1	0
Promotion of environmental issues	1	1	0
Stakeholders' engagement on environmental issues by forum	0	0	0
Financial information on environmental issues	1	1	0
Materials that are recycled	1	0	0
Strategies for recycling	1	0	0
Performance indicators	1	0	0
Type of waste	0	0	0
Methods of waste management	0	0	0
	14	8	0
Social			
General statement or policy	1	1	0
Client charter	0	1	0
Any mention about social issues in the mission statement, vision, objectives and in other forms e.g. logo, motto or theme	1	0	0
Any strategy related to social issues i.e. health, staff training, safety etc	0	0	0
Any mention about social issues as part of a continuous improvement process e.g. quality management system related to rubbish collection	0	1	0
Any mention about predetermined social target	1	0	0
Any mention about social issues in a foreword by chairman or secretary	1	0	0
Individual department related to social issues	0	0	0
Combined social department and other departments	1	1	1
Social activities or programs, for example, LA 21, sport/recreational, educational, safety and health, green cutting etc	1	1	1
Social services*	1	1	1
Head of department (social related), and contact details	1	1	1
Promotion of social issues via news	1	0	1
Stakeholders' engagement on social issues by forum	0	0	0
Any special LA 21 Unit or Sustainable Department Unit	1	0	0

Any special committee of LA 21	1	0	0
Financial information on social issues	0	0	0
Number of employees	0	0	0
Local employment	0	1	0
Performance indicators	1	0	0
	12	8	5
	C117	C1	C40
Economy			
General statement or policy	1	1	1
Client charter	0	1	0
Any mention about the economy in the mission statement, vision, objective and in other forms e.g. logo, motto or theme	1	0	0
Any strategy related to economic issues, for example, LA 21	0	1	0
Any mention about economy as part of a continuous improvement process e.g. procedure on licensing	1	1	0
Any mention about predetermined economic target	1	0	0
Any mention about the economy in a foreword by chairman or secretary	1	1	0
Economy related department	1	1	1
Economic activities or programs, for example, LA 21	1	1	1
Economic service—consultation on arrears on rate assessments, payment, business licensing)	1	1	1
Head of department of Economy, and contact details	1	1	1
Promotion of economic issues	0	0	0
Stakeholders' engagement on economy issue by forum	0	0	0
Financial information	0	1	0
Tender and quotation	0	1	0
Performance indicators	1	0	0
Rental charge	0	1	1
	10	11	6
TOTAL	36	27	11

Appendix 6_6 Sensitivity Analysis Involves a Change in Measurement for LA 21 (Content Analysis Method)

In this thesis, another proxy for LA 21 is the measurement by using a dichotomous variable, that is, '1' is given if there is any information on involvement with LA 21 on the councils' websites and '0' if otherwise.

Table 6k shows p-values derived from the backward elimination procedure if the measurement of the LA 21 program is only confined to a dichotomous scale using the content analysis method.

Table 6k Backward Elimination Procedure (If Using a Different Measurement in LA 21)

Logdvsentence

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Logrevenue	0.001	0.000	0.000	0.000	0.000	0.000
Jurisdiction	0.289	0.189	0.195	0.156	0.171	
LA 21	0.022	0.016	0.012	0.011	0.007	0.014
Awards	0.434	0.316	0.295			
Type	0.832					
Recycling logo	0.180	0.188	0.187	0.250		
Internal goals	0.597	0.512				
Adjusted R square	0.499	0.506	0.508	0.508	0.507	0.488

The multiple regression results (Step 1) reveal that both the LA 21 program (p-value = 0.022) and the size of councils (p-value = 0.001) are still the key predictors in explaining the level of sustainability information disclosure on the websites using the *logdvsentence*. This indicates that a change in the measurement does not have impact on the overall result. LA 21 and size of councils consistently produce a significant result in Step 2, 3, 4, 5 and 6 regressions respectively.

Appendix 6_7 Sensitivity Analysis Involves a Change in Measurement for LA 21 (Disclosure Index Method)

Table 6l provides results for the backward elimination procedures under the disclosure index method to examine a change of measurement in LA 21.

Table 6l Backward Elimination Procedure (If Using a Different Measurement in LA 21)

dvindex

	Step 1	Step 2	Step 3	Step 4
Logrevenue	0.017	0.016	0.000	0.000
Jurisdiction	0.059	0.052	0.024	0.016
LA 21	0.000	0.000	0.000	0.000
Awards	0.083	0.082	0.072	
Type	0.388	0.382		
Recycling logo	0.906			
Internal goals	0.000	0.000	0.000	0.000
Adjusted R square	0.564	0.567	0.567	0.559

In the disclosure index method, all variables except the type of councils and a recycling program logo are significantly associated with the *dvindex*. When backward elimination procedures were performed, LA 21 and internal goals are highly significant at a p-value = 0.000. Logrevenue is highly significant at a significant level < 0.05 in Steps 1 and 2 and at a p-value = 0.000 in Steps 3 and 4. Jurisdiction is highly significant in Step 4 at a significant level < 0.05. Therefore, this result confirms the final model in the thesis.

Appendix 6_8

Alternative Explanatory Variable for Jurisdiction (Content Analysis Method)

Another variable which is tested by using a different proxy is jurisdiction, whereby '1' is given if the council belongs to the state that has the same political ruling party with the federal government and '0' if otherwise.

Table 6m provides p-values of the backward elimination procedure if measuring jurisdiction based on the political party category.

Table 6m Backward Elimination Procedure (If Using a Different Measurement in Jurisdiction)

Logdvsentence

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Logrevenue	0.000	0.000	0.000	0.000	0.000	0.000
Juris(a)	0.412	0.465				
LA 21	0.102	0.076	0.058	0.058	0.047	0.049
Awards	0.337	0.328	0.327			
Type	0.301	0.284	0.310	0.182	0.211	
Recycling logo	0.214	0.212	0.231	0.272		
Internal goals	0.618					
Adjusted R square	0.485	0.488	0.489	0.489	0.489	0.484

By using the new measurement, that is, Juris(a), as shown in Table 6m it is found that both the LA 21 program and size of councils have a significant relationship with the extent of sustainability reporting on Malaysian local authority websites. Again, this confirms that the change of measurement from 1 to 14—that represents 14 states in Malaysia—to a dichotomous variable does not provide significantly different results in using the content analysis method. LA 21 and size of councils consistently produce a significant result in Step 2, 3, 4, 5 and 6 regressions respectively in the backward elimination procedure.

**Appendix 6_9 Alternative Explanatory Variable for Jurisdiction
(Disclosure Index Method)**

Table 6n summarizes the different measurement for jurisdiction by using the disclosure index method.

Table 6n Backward Elimination Procedure (If Using a Different Measurement in Jurisdiction)

	Step 1	Step 2	Step 3	Step 4
Logrevenue	0.011	0.009	0.012	0.000
Jurisdiction	0.431	0.413		
LA 21	0.005	0.004	0.005	0.006
Awards	0.079	0.083	0.085	0.028
Type	0.156	0.158	0.140	
Recycling logo	0.707			
Internal goals	0.002	0.002	0.001	0.001
Adjusted R square	0.526	0.530	0.531	0.524

In *dvindex*, with the alternative measurement of jurisdiction, it is found that LA 21, internal goals, awards and logrevenue are highly significant in the multiple regression and the backward elimination procedures. This result is inconsistent with the main result using the disclosure index method. Thus, it is noted that jurisdiction is insignificant in both methods when the measurement is changed from a categorical variable (1 to 14) to only a dichotomous variable namely 0 and 1. Therefore, it can be mentioned that measurement of councils based on a state's political ruling party is inappropriate. This possibly due to the identification of states based on the general election result in March - considered too early used as a proxy for jurisdiction.

**Appendix 6_10 Sensitivity Analysis Involves a Change in Proxy
(region) for Jurisdiction (Content Analysis Method)**

Regression analysis was repeated using geographic region instead of jurisdiction to ensure any influence of jurisdiction on disclosure can (or not) be explained by the geographic location of the council. Region is defined to equal '1' if the council belongs to the states in the northern region, '2' is given if the council belong to the states in the central region, '3' is given if the council belongs to the states in the southern region and '4' is given if the council belongs to the states in East Malaysia.¹⁰⁴

Table 6o presents p-values of the backward elimination procedure if jurisdiction is replaced with region.

Table 6o Backward Elimination Procedure (If Using a Different Proxy in Jurisdiction)

Logdvsentence

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Logrevenue	0.003	0.003	0.002	0.000	0.000	0.000
Region	0.405	0.389	0.354			
LA 21	0.089	0.079	0.079	0.058	0.047	0.049
Awards	0.396	0.393				
Type	0.214	0.207	0.127	0.182	0.211	
Recycling logo	0.225	0.222	0.257	0.272		
Internal goals	0.875					
Adjusted R square	0.486	0.490	0.491	0.489	0.489	0.484

By using the new measurement, that is, region, as shown in Table 6o it was determined that both the LA 21 program and size of councils had a significant relationship with the extent of sustainability reporting on Malaysian local authority websites. As with jurisdiction, region in Malaysia does not affect the level of disclosure and does not provide significantly different results in using the content

¹⁰⁴ The region classification is taken from: <http://musicmall-asia.com/malaysia/map.html>

analysis method. LA 21 and size of councils consistently produce a significant result in Step 2, 3, 4, 5 and 6 regressions respectively in the backward elimination procedure.

Appendix 6_11 Sensitivity Analysis Involves a Change in Proxy (region) for Jurisdiction (Disclosure Index Method)

Table 6p summarizes the results if jurisdiction is replaced with region for the disclosure index method (see Appendix 6_10 for the definition of the region variable). This analysis is important because jurisdiction was significant for the disclosure index in the thesis and it could be this variable is significant due to different jurisdictions being in different regions and different regions within Malaysia have different characteristics in many aspects including culture and economic prosperity.

Table 6p Backward Elimination Procedure (If Using a Different Proxy in Jurisdiction)

	Step 1	Step 2	Step 3	Step 4
Logrevenue	0.044	0.014	0.012	0.000
Region	0.826			
LA 21	0.018	0.006	0.005	0.006
Awards	0.090	0.079	0.085	0.028
Type	0.117	0.137	0.140	
Recycling logo	0.616	0.665		
Internal goals	0.001	0.001	0.001	0.001
Adjusted R square	0.520	0.528	0.531	0.524

In Table 6p region is the least significant variable and hence removed first during the backward elimination process. This provides support for the coercive isomorphism hypothesised in this thesis since the significant result for jurisdiction cannot be explained by geographic region of the council. The results in Table 6p are similar to the main result in this thesis with logrevenue, LA 21 and internal goals statistically significant and recycling logo and type statistically insignificant. Whilst awards is moderately significant initially in Table 6p it becomes significant ($p = 0.028$) in the final model (step 4). Awards were moderately significant when region was included in the regression.

**Appendix 6_12 Sensitivity Analysis Involves a Change in Proxy (Msia)
for Jurisdiction (Content Analysis Method)**

Similar to Appendix 6_10, jurisdiction was replaced with another variable measuring the location of the council. This variable denoted Msia, equals '1' if the council belongs to the states in West Malaysia (Peninsular Malaysia) and '2' is given if the council belongs to the states in East Malaysia located in the northern part of the Borneo Island.

Table 6q provides the backward elimination procedure if Msia replaces jurisdiction.

Table 6q Backward Elimination Procedure (If Using a Different Proxy in Jurisdiction)

Logdvsentence

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Logrevenue	0.001	0.000	0.000	0.000	0.000	0.000
Msia	0.897					
LA 21	0.072	0.071	0.058	0.058	0.047	0.049
Awards	0.333	0.333	0.327			
Type	0.338	0.327	0.310	0.182	0.211	
Recycling logo	0.234	0.235	0.231	0.272		
Internal goals	0.737	0.745				
Adjusted R square	0.482	0.486	0.489	0.489	0.489	0.484

The new variable Msia is the least significant variable and removed first. Results are therefore the same as those in the main part of this thesis, with only logrevenue and LA 21 as significant predictors of disclosure under the content analysis method.

**Appendix 6_13 Sensitivity Analysis Involves a Change in Proxy (Msia)
for Jurisdiction (Disclosure Index Method)**

Similar to Appendix 6_10, jurisdiction was replaced with another variable measuring the location of the council for the disclosure index method. This variable denoted Msia, equals '1' if the council belongs to the states in West Malaysia and '2' is given if the council belongs to the states in East Malaysia. P-values are summarised in Table 6r.

Table 6r Backward Elimination Procedure (If Using a Different Proxy in Jurisdiction)

	Step 1	Step 2	Step 3	Step 4
Logrevenue	0.028	0.014	0.012	0.000
Msia	0.964			
LA 21	0.007	0.006	0.005	0.006
Awards	0.081	0.079	0.085	0.028
Type	0.152	0.137	0.140	
Recycling logo	0.665	0.665		
Internal goals	0.001	0.001	0.001	0.001
Adjusted R square	0.524	0.528	0.531	0.524

As in Appendix 6_11 where region replaced jurisdiction, Msia is the least significant variable and hence removed first. Therefore, results are identical to Appendix 6_11 confirming that the significance of jurisdiction is not due to the geographic location of the council.

Appendix 6_14 Regression Results for Websites Accessed on 18 January 2009

Based on the web analysis in September 2008, it was found that six websites were inaccessible at that point of time. Attempts were made to access the six websites on 18 January 2009. Out of six, only three websites were successfully accessed. Website monitoring is essential to ensure that the different points of data collection would not have an effect on the overall results. Further, Lodhia (2007, p. 95) recommended an "emphasis on the daily examination of corporate websites to capture the intricacies of web-based environmental communication". However, this thesis does not concentrate on the daily examination of the local authorities' websites due to the nature of this study involving the cross sectional analysis.

The dependent variable was calculated on the three websites which were accessed on 18 January 2009. This was to ensure that the exclusion of these websites in the overall sample in this thesis would have no impact on the overall results.

Table 6s provides the details for the three websites that were successfully accessed on 18 January 2009.

Table 6s Websites Accessed on 18 January 2009

Council	<i>Dv Sentence</i>	<i>Log dvsentence</i>	<i>Dvindex</i>	Log revenue	Jurisdiction	LA21	Internal goals	Award	Type	Recycling Logo
C140	38	1.6	10	7.09	J10	0	0	0	1	0
C141	7	0.8	4	6.51	J13	0	0	0	1	0
C142	94	2	15	6.77	J10	0	1	0	1	0

The equation from the final model is used to calculate the *logdvsentences* for the three councils namely: C140, C141 and C142. The three councils have the same characteristics: 1) they are district councils; 2) they did not implement and disclose the LA 21 program on their websites; 3) they did not have a recycling logo, and 4) they did not win any public sector awards. It is found that the actual *logdvsentences*

are 1.6, 0.8 and 2. The computation of each individual predicted *logdvsentences* is as follows:

$$\begin{aligned} \text{Logdvsentence (C140)} &= -1.49 - 0.23 + 0.49 (7.09) \pm 0.34 \\ &= 1.41 \text{ and } 2.09 \end{aligned}$$

$$\begin{aligned} \text{Logdvsentence (C141)} &= -1.49 - 0.23 + 0.49 (6.51) \pm 0.34 \\ &= 1.12 \text{ and } 1.8 \end{aligned}$$

$$\begin{aligned} \text{Logdvsentence (C142)} &= -1.49 - 0.23 + 0.49 (6.77) \pm 0.34 \\ &= 1.26 \text{ and } 1.94 \end{aligned}$$

Out of the three websites, only one website falls within the range. This is due to some missing information on a few web pages of the Council C141 website which could not be analysed completely.

However, when analysing the equation using *dvindex*, it is found that the actual indices are 10, 4 and 15.

$$\begin{aligned} \text{Dvindex (C140)} &= -22.04 - 6.16 - 4.70 - 3.47 + 6.63 (7.09) \pm 4.14 \\ &= 6.50 \text{ and } 14.78 \end{aligned}$$

$$\begin{aligned} \text{Dvindex (C141)} &= -22.04 - 4.14 - 4.70 - 3.47 + 6.63 (6.51) \pm 4.14 \\ &= 4.67 \text{ and } 12.95 \end{aligned}$$

$$\begin{aligned} \text{Dvindex (C142)} &= -22.04 - 6.16 - 4.70 - 3.47 + 6.63 (6.77) \pm 4.14 \\ &= 4.38 \text{ and } 12.66 \end{aligned}$$

This means that the three websites were not significantly different from the earlier 139 websites sampled. It appears that the length of data collection period was not likely to affect the result (Lodhia *et al.*, 2004). It is contended in this thesis that future web studies should perform this analysis to derive more valid conclusions. As a whole, the exclusion of these three websites from the main analysis does not have an impact on the main results in the thesis. They were removed from the main

analysis because the websites were accessed at a different time but, irrespective of whether they are included, similar conclusions are obtained.

Appendix 6_15 Sensitivity Analysis When Using Logpopulation as an Alternative to Logrevenue (*Logdvsentence*)

This section provides regression results using *logpopulation* as an alternative of logrevenue in the multiple regressions. Table 6t provides a summary of backward elimination procedure results and regression p-values.

Table 6t Summary of Backward Elimination Results

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Logpopulation	0.229	0.220	0.207	0.157	0.183	
Jurisdiction	0.221	0.225	0.193	0.195		
LA 21a	0.059	0.048	0.047	0.034	0.001	0.000
Awards	0.311	0.308				
Type	0.001	0.001	0.000	0.000	0.000	0.000
Recycling logo	0.181	0.176	0.221			
Internal goals	0.515					
Adjusted R square	0.450	0.453	0.453	0.450	0.432	0.428

Step 1 provides the result of multiple regressions after the logarithm base 10 transformation was performed for the dependent variable, that is, *logdvsentence*. It was found that the type of councils is a very significant variable that explained the extent of sustainability reporting on Malaysian local authority websites at a p-value = 0.001. As well, there was a moderately significant relationship between the LA 21 program and the *logdvsentence* at a significant level < 0.1. Other variables such as size (logpopulation), jurisdiction, internal goals, awards and a recycling logo did not explain the extent of sustainability reporting on Malaysian local authority websites.

Finally, Step 6 confirmed the key predictors for the extent of sustainability reporting on Malaysian local authority websites, being the type of councils and the LA 21 program with p-value = 0.000. This suggests that these two variables are considered determinants of sustainability reporting on Malaysian local authority websites.

Appendix 6_16 Sensitivity Analysis When Using Logpopulation as an Alternative to Logrevenue (*Dvindex*)

This section provides regression results using disclosure index (*dvindex*) whereby logpopulation is used as an alternative to logrevenue in the multiple regressions.

The following discussion includes the backward elimination procedure to analyse the variables that may influence the disclosure level of sustainability information on the websites, as summarized in Table 6u.

Table 6u Summary of Backward Elimination Results (Using Disclosure Index)

	Step 1	Step 2	Step 3	Step 4
Logpopulation	0.282	0.265		
Jurisdiction	0.043	0.038	0.051	0.050
LA 21	0.000	0.000	0.000	0.000
Awards	0.064	0.064	0.062	
Type	0.000	0.000	0.000	0.000
Recycling logo	0.834			
Internal goals	0.000	0.000	0.000	0.000
Adjusted R square	0.544	0.548	0.547	0.537

Step 1 of Table 6u shows the result of the multiple regressions. In the first step, when the multiple regression was conducted, it was found that LA 21, internal goals and the type of councils were significantly related to the extent of sustainability reporting on Malaysian local authority websites at a p-value = 0.000. Meanwhile, jurisdiction is also having a significant relationship with *dvindex* at a significant level < 0.05 (p-value = 0.043). Awards were found to be moderately significantly related to the disclosure level at a p-value = 0.064. It seems that only the council's size and the recycling logo did not explain the extent of the disclosure level on the websites.

From Step 1, it can be seen that a recycling logo is the most insignificant independent variable; therefore, it was excluded in the Step 2 regression. It was revealed that LA 21, internal goals and the type of councils were highly significant at

a p-value = 0.000. Jurisdiction was also significant at a significant level < 0.05 and awards were moderately significant at a p-value = 0.064.

The final regression (Step 4) confirmed the key predictors that explain the extent of sustainability reporting on the websites under the disclosure index method. LA 21, internal goals and the type of councils were highly significantly related with the *dvindex* at a p-value = 0.000. Jurisdiction, as well, had a moderately significant relationship with the *dvindex* at a p-value = 0.050.

Appendix 6_17 Relationship if Excluding Size of Councils in the Regression

Table 6v shows the exclusion of size of councils in the regression in both content analysis and disclosure index methods.

Table 6v Relationship if Excluding Size in the Regression

	Content analysis	Disclosure index
	p-value	p-value
Jurisdiction	0.219	0.057
LA 21	0.044	0.000
Award	0.293	0.059
Type	0.000	0.000
Recycling logo	0.135	0.730
Internal goal	0.493	0.000

Table 6v shows that the type of councils becomes significant when excluding size of councils in the regression. The other significant results are also consistent with results in the thesis using both methods.

Appendix 7_1 Permission Letter



School of Accounting
GPO Box U1987
PERTH WA 6845

__ February 2009

RE: APPLICATION TO CONDUCT RESEARCH ON "SUSTAINABILITY REPORTING ON MALAYSIAN LOCAL AUTHORITY WEBSITES"

The above subject matter is hereby referred.

I am a Doctoral Candidate at the School of Accounting, Curtin University of Technology, Perth, Australia. In Malaysia, I am a lecturer attached with MARA University of Technology, Sarawak Branch. Currently I am on full time study leave. I am conducting research on Sustainability Reporting on Malaysian Local Authority websites. This research is towards fulfilling my PhD thesis and has also been approved by the Economic Planning Unit, Prime Minister's Department of Malaysia (please refer attachment).

This is an independent study under Curtin University of Technology and all the information collected will be treated as confidential. To gather important information to assist this research, the interviews will be conducted with the relevant officers in local authorities on the reasons underlying the reporting or non-reporting of sustainability development information on the websites.

I have chosen your organization because I found that the sustainability information disclosure on your website is very relevant to the overall result of my study. I will be based in Selangor from 7 to 14 April 2009 and would appreciate being able to visit your organization during this time. I have identified _____ from the Department of _____ to participate in my interview. The interview session is concerned with the experiences and perceptions and is **NOT** an assessment of the officer's skills or knowledge. A formal letter will be sent later to confirm about the date and the details of the interview.

If you would like further information about the study, please feel free to contact me on +614 16970249 or by email: corina.joseph@postgrad.curtin.edu.au fax: +61 08 9266 7694. Alternatively, you can contact my supervisor, Dr. Robyn Pilcher on +61 08 9266 2879 or email: r.pilcher@curtin.edu.au. I look forward to your response and answering any question regarding the research topic.

Thanking you in advance for your assistance.

Yours faithfully,

Corina Joseph (13817390)
Doctoral Candidate
School of Accounting

Curtin Business School
Curtin University of Technology
GPO Box U1987
Perth, WA 6845
Email: corina.joseph@postgrad.curtin.edu.au

Appendix 7_2 Interview Guide



School of Accounting
GPO Box U1987
PERTH WA 6845

Questions for Face-to-Face Interview with the Local Government's officers in Malaysia Soalan-soalan untuk temubual dengan pegawai-pegawai Pihak Berkuasa Tempatan (PBT) di Malaysia

Name (Nama)

Position (Jawatan)

Duration of service (Tempoh perkhidmatan)

Organization (Organisasi)

Date of interview (Tarikh temubual)

1. What is your definition of sustainable development in the context of the local authority?

Apakah definisi pembangunan mampan pada anda dalam konteks PBT?

2. The following is a definition of sustainability reporting from GRI (2004).
"a vehicle to assess the economic, environmental and social impacts of the organization's operations, products, and services, and its overall contribution to sustainable development"

Do you agree or disagree and why?

Pernyataan di bawah adalah definisi mengenai pelaporan maklumat pembangunan mampan. 'GRI' (2004).

'satu alat untuk menilai impak ekonomi, alam sekitar dan sosial ke atas operasi, produk dan perkhidmatan serta sumbangan keseluruhan ke arah mencapai pembangunan mampan'.

Adakah anda bersetuju atau tidak dengan pernyataan ini? Mengapa?

3. What is your opinion of the following statement?

The local authorities should ensure the maximum usage of their websites to disclose as much information to their community to improve the level of transparency and accountability.

Do you agree or disagree and why?

Apakah pendapat anda mengenai pernyataan di bawah?

PBT seharusnya memastikan penggunaan laman web secara maksima bagi mendedahkan maklumat kepada komuniti untuk meningkatkan tahap ketelusan dan akauntabiliti.

Adakah anda bersetuju atau tidak dengan pernyataan ini? Mengapa?

4. It has been said that the most popular means of communicating corporate social responsibility (CSR) information is via the local government webpage.

Do you agree or disagree and why?

Telah dinyatakan bahawa satu kaedah yang paling popular untuk melaporkan maklumat mengenai tanggungjawab sosial adalah melalui laman web kerajaan tempatan.

Adakah anda bersetuju atau tidak dengan pernyataan ini? Mengapa?

- 5a. Who was involved in the decision making related to the sustainable development agenda in your organization?

- 5b. What impact, if any, do sustainability reporting requirements have on the day to day operation of your organization?

Siapakah yang terlibat di dalam membuat keputusan mengenai program pembangunan mampan di dalam organisasi anda?

Apakah kesan-kesan sekiranya ada, keperluan pelaporan pembangunan mampan di dalam operasi harian di dalam organisasi anda?

6. What are the reasons for disclosing or not disclosing sustainability information on the website?

Apakah sebab-sebab untuk melaporkan atau tidak melaporkan maklumat mengenai pembangunan mampan di dalam laman web organisasi anda?

7. To what extent do the factors such as size of councils, jurisdiction and others influence the sustainability reporting on your organization's website?

Sejauh manakah faktor-faktor tertentu seperti saiz PBT, kerajaan negeri dan lain-lain mempengaruhi pelaporan maklumat mengenai pembangunan mampan di laman web organisasi anda?

8. Does your organization refer to other websites on the reporting of sustainability information? If yes, which organization?

Adakah organisasi anda merujuk kepada laman web yang lain untuk melaporkan maklumat mengenai pembangunan mampan? Jika ya, sila nyatakan organisasi tersebut.

9. If 'yes' to Question 8, how did the information accessed assist you?

Jika 'ya' untuk Soalan 8, bagaimanakah maklumat tersebut telah membantu organisasi anda?

10. What are the activities or processes involved in sustainability reporting on the website?

Nyatakan proses serta aktiviti yang terlibat dalam pelaporan maklumat pembangunan mampan di laman web?

11. Are there any other organizations, for example, professional organizations and NGOs that assist you in promoting the sustainable development agenda?

Adakah terdapat organisasi lain sebagai contohnya organisasi profesional dan organisasi bukan kerajaan membantu anda di dalam mempromosikan agenda pembangunan mampan?

General comment:

Are there any other comments you would like to make in regards to the matters raised in the interview?

Lain-lain komen:

Adakah komen-komen lain dari anda mengenai perkara-perkara yang dibincangkan semasa temubual?

Appendix 7_3 Participation Information Statement



School of Accounting
GPO Box U1987
PERTH WA 6845

PARTICIPANT INFORMATION STATEMENT

Sustainability reporting on Malaysian local authority websites

Purpose of Research

The purpose of this study is to gather opinions about the reasons underlying the reporting or non-reporting of sustainability development information on the local authority websites in Malaysia. Subsequent to analysis of all websites, a few issues arose which need clarification. The interview also aims to determine why certain categories of sustainability information are being widely reported and others are not.

Your role

The study is being conducted by Corina Joseph. The study involves obtaining information from the top executives and relevant officers who are directly involved in sustainability reporting activities. Permission will be sought from individual participants for the interviewer to use a voice recorder in addition to transcribing the answers to the particular questions. It is envisaged that no more than 60 minutes will be required of the interviewee.

Consent to Participate

Participation in the interview process is completely voluntary: you are not obliged to participate and – if you do participate – you can ask the interview to be stopped at any time.

I (the participant) have read and understand the Participant Information Statement, and any questions I have asked have been answered to my satisfaction. I understand that my participation is voluntary and I agree to participate in this research, knowing that I may withdraw at any time. I have been given a copy of the Participant Information Statement to keep.

Confidentiality

1. Corina Joseph is the only person involved in the research.
2. Confidentiality of all documentation/interview material is preserved.
3. Resulting reports and papers will conceal the identity of the councils and any personnel interviewed.
4. Once collated, a copy of the information will be distributed to interviewed councils and again all identities will be concealed.

Further information

For further information about the study, contact Corina Joseph on 04 16970249 or by email: corina.joseph@postgrad.curtin.edu.au. or the supervisor, Dr. Robyn Pilcher on +618 9266 2879 or email: r.pilcher@curtin.edu.au

This research has been reviewed and given approval by Curtin University of Technology Human Research Ethics Committee (Approval number ACC – 1- 09). If needed, verification of approval can be obtained either by writing to the Curtin University Human research Ethics Committee, C1 - Officer of Research and Development, Curtin University of technology, GPO Box U 1987, Perth 6845 or by telephoning + 618 9266 2784 or emailing hrec@curtin.edu.au.

Appendix 7_4 Consent Form



School of Accounting
GPO Box U1987
PERTH WA 6845

Sustainability reporting on Malaysian local authority websites

PARTICIPANT CONSENT FORM

I, _____
[name]

[address]

- freely choose to participate in this study and understand that I can withdraw without compromise at any time.
- agree to allow the interviewer to use a digital voice recorder to assist in the provision of a true and accurate record of the interview.
- also understand that the research study is strictly confidential.
- hereby agree to participate in this research study.

Signature:

Name:

Date:

Appendix 7_5 Data Analysis and Representation

The following table presents guidelines in analysing qualitative data used in this thesis.

Data analysis and representation	Approach in this thesis
Data managing	Create and organize files for data. Backup files were also prepared for each interview. The transcription is stored in both soft and hard copies.
Recording	The transcription is read through texts and the margin notes were prepared from the initial cases. This process took quite some time since the researcher had to carefully listen to the digital recorder a number of times to ensure completeness. Also, this is to obtain the general overview of the findings and to understand the underlying meanings. At the same time, the unusual and useful quotes were searched to be incorporated in the write up.
Describing	The case and its contexts were described. <i>Question-by-question matrix</i> and <i>memoig</i> are used for data display and data reduction. Data display is an organized, compressed assembly of information that permits conclusion drawing and action (Miles and Huberman, 1994, p. 11). Data reduction is the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear in written-up field notes or transcriptions (Miles and Huberman, 1994, p. 10). One of the data reduction techniques is 'memoig' that allows a researcher to write a short note in the form of memo.
Classifying	The voluminous data was reduced to categories. The categorical aggregation was used to establish themes and patterns.
Interpreting	Use interpretation in presenting and analysing the overall results. This is done by making comparison and contrasts with patterns predicted from theory and literature (based on <i>question-by-question matrix</i>). Researcher is open to possibilities to see contrary or alternative explanations for the findings. This as well involved examining themes across cases to detect themes that were common to all cases (<i>pattern matching</i>). This process assists to improve the internal validity of the research.
Representing,	In-depth picture of the case (or cases) using narrative,

visualizing	tables, and figures is presented. They show the relationship between analysis of information, for example, based on type of isomorphism and display categories for reporting (or not) the sustainability information on the websites.
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Appendix 8_1 Brief Description of Respondents' Working Position

The following table illustrates descriptions of the interviewees' position in their organizations.

	Position	Description
1	LA 21 officer/sustainable development officer	<ul style="list-style-type: none"> • Compiles the information regarding the LA 21 program implementation from working committees and various departments that involved in the program. • Head of the LA 21 Unit.
2	Assistant Town Planning Officer/Assistant Town Planner	<ul style="list-style-type: none"> • Assists the Town Planner in processing the application to plan the town based on the Town and Country Planning Act 1976 (Act 172). • Assists in coordinating the sustainable development programs such as LA 21 and MURNINet. • Assists in updating the Geographical Information System database for the council.
3	Planning officer/Town Planner	<ul style="list-style-type: none"> • Processing the application to plan the town based on the Town and Country Planning Act 1976 (Act 172). • Updating the Geographical Information System database for the council. • Head of the Town Planning Department/Division.
4	Community Officer	<ul style="list-style-type: none"> • In charge of the community based program in councils. • Prepares the report required by the council as well as the state and federal ministry.
5	Head of IT Unit	<ul style="list-style-type: none"> • Manages the IT Unit and is involved in decision making regarding IT related matters, for example, policy, IT staff and purchase of IT hardware and software. • Also closely works with the webmaster to maintain and update council's website.

		<ul style="list-style-type: none"> • Ensures the security of the systems used in the councils. • Provides IT advice to councils.
	Position	Description
6	Secretary/Administrative manager	<ul style="list-style-type: none"> • Reports to council's president. • The chief administrative officer (CAO) of municipal and district councils. • In charge of overall administrative of the local authority. • Directly responsible for implementing the policy decisions made by the council through department heads who report to him.
7	Head of Public Health Division	<ul style="list-style-type: none"> • Ensures cleaning of rubbish and work sweeping is carried out on daily basis.
8	Head of Environmental Health	<ul style="list-style-type: none"> • In charge of environmental programs, for example, recycling and solid waste management. • Prepares environmental report for stakeholders.
9	Enforcement Assistant	<ul style="list-style-type: none"> • Ensures all the small traders or hawkers comply with rules and regulations stipulated by councils via inspection. • Gives ratings to food outlets.
10	Technician	<ul style="list-style-type: none"> • Assists in processing plans, for example, structural and engineering plans. • Assists in providing feedback to any complaints about drains and roads.
11	Webmaster	<ul style="list-style-type: none"> • Updates and maintains the website. • Responds to any emails, suggestions or enquiries from the public.

Appendix 8_2 Summary of Responses to Questions 1 to 5, 10 and 11

This section provides detail responses and interpretations for Questions 1 to 5, 10 and 11.

Responses to Question 1

Q1) What is your definition of sustainable development in the context of the local authority?

Six councils (38%) adopted the common definition of the World Commission of Environment and Development (The Bruntland Report, 1987), that is, "sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs". The result may be explained by the fact that this definition is also used by the Ministry of Housing and Local Government and can be seen from the Ministry's web page.

Five councils (31%) emphasized either one or more of the aspects of the environment, social issues and the economy in their explanation about sustainable development. This means the three elements of sustainability are considered in the councils' actual development process.

Council C10

Of course "sustainable development" involves the element of nature. When the development is well-planned and [therefore] sustained, we will be able to do zoning, for example, industrial zone, housing zone and others. In this way, we will be able to control the pollution. In terms of the social context, we provide the housing area for the people, [hence] moving in line with the economic context (Assistant Community Officer).

Council C82

In the local authority context, sustainable development means the development that is achieved in line with the current demands but, at

the same time, still maintaining the physical, social and economic development (Assistant Information Officer).

From these comments, it is clear that the sustainable development includes the need to fulfil the social and economic development requirements whilst ensuring the protection of the environment.

Four councils (25%) related the concept of sustainable development to the roles of the local authority that is, providing services and educating the community about sustainable development.

Council C135

Last year we organized the Community Based Environmental Education program twice ... involved all the village people, the government agencies and NGOs ... let them learn, let them get the idea; let them know about sustainable development ... when they [participants] went back home they would spread the news. Basically, that is our [council's] commitment. Besides that, in our councillors' meeting we will let the councillors know how a council plays an important role to educate the public (Secretary).

Council C137

Sustainable development in the context of local authority is that we have [council has] a few things which need to be focused, done and improved. We deal directly with the public; therefore it is the council's responsibility to deal with issues such as scavenging work, public health, repairs to infrastructure and others especially in town areas. These are the expectations from the public generally in town areas which differ from the rural community. Therefore, sustainability of the town is something that should be achieved to make town a healthier place to live (Secretary).

These interview responses suggest that sustainable development is also perceived as being the responsibility of the local authorities to ensure the people achieve a high quality level of life. Another role played by the local authorities is to provide an awareness of sustainable development to the people in its area of jurisdiction. This can be done by encouraging the participation of stakeholders in the council's educational program inside and outside the councils. As detailed by Council C 137, people in town or city areas have a higher expectation in terms of the council's quality of service delivery than in rural areas. This is associated with the socio-

economic status of the people that contributes to the choice of governments' policy implementation, such as, the sustainable development program implementation (Cheng, 1994).

It seems that the concept of sustainable development is understood similarly by the councils. It can be deduced that the meaning of the sustainable development concept is quite broad from the local authority's perspective in Malaysia. The discussion on the definition of sustainable development in Malay is further developed in Section 9.4.2.

Only one city council – Council C 116 (6%) acknowledged that the understanding of sustainable development is limited due to the interviewee's minimal involvement in the sustainable development activity implementation. This was because, as the Head of the IT department, the interviewee was responsible for IT matters in all areas of the council, including website reporting. However, Council C 116's sustainability disclosure on the website is high (484 sentences, 24 index items) and it is one of the more active councils involved in the sustainable development program. These can be seen in the subsequent positive comments made by this council in this section. It gives the impression that the concept of sustainable development is not extensively widespread among all staff in Malaysian councils. Only staff who are directly involved in the sustainable development program implementation appreciate the meaning of sustainable development.

Responses to Question 2

Q2) The following is a definition of sustainability reporting from the GRI (2004): "A vehicle to assess the economic, environmental and social impacts of the organization's operations, products, and services, and its overall contribution to sustainable development". Do you agree or disagree and why?

Thirteen councils (81%) agreed with this definition. It was suggested that reporting is a yardstick for performance measurement and also for sharing of information. This is consistent with CPA Australia (2007) and ACCA (2005) who highlight that sustainability reporting aims to improve the organization's performance and to advance sustainable development.

Council C118

I definitely agree with this definition ... sustainability reporting of any organization contributes to the overall environmental protection and preservation which directly involves the local communities ... I believe the stakeholders, meaning the ratepayers, the local authority itself, the state government and any other interested parties [should] have the right to know what is being reported (Administrative Manager).

Council C135

I agree, because once you do it [the reporting], you record and you publish it [the information]. People know and can judge from there. Therefore, that [the reporting] is a yardstick for performance measurement (Secretary).

These responses comply that the dissemination of sustainability information is important to the stakeholder which, in turn, promotes transparency. It is contended here that the reporting of sustainability information may also become a legitimating activity for the council to communicate with the interested stakeholders especially for city council. This relates to the role of voters in influencing the choice of government's policy implementation (see Section 3.2.1) and the coercive pressure exerted by higher authorities that influence the extent of website reporting by district councils (Section 8.8.2).

Three councils (19%) disagreed with the GRI (2004) definition of sustainability reporting. The councils considered the implementation of the sustainable development activity has more impact than the reporting aspect. One of the reasons for this is that successful implementation of the sustainable development program is highly dependent on the involvement from various groups, such as, NGOs, private sector and government agencies. This finding differs from the quantitative phase where disclosure did matter and implementation did not in determining the extent of sustainability disclosure on websites. Further implications are discussed in Section 9.4.3.

Responses to Question 3

Q3) What is your opinion of the following statement? "The local authorities should ensure the maximum usage of their websites to disclose as much information to their

community to improve the level of transparency and accountability.” Do you agree or disagree and why?

As stated in Chapter Two, a website is an alternative reporting medium or channel to the traditional annual report that can be utilized to communicate an organization's sustainability information. At the corporate level, by increasing the Internet use, awareness of CSR and accountability with respect to social and environmental impacts would be improved (Adams and Frost, 2006). In the local authority context, the website is used for information and publicity/marketing (Gill and Yates-Mercer, 1998).

From the interviews, it was found that 12 councils (75%) supported the reporting of sustainability information on their websites and four councils (25%) did not. Hence, the answers vary, dependent upon the councils' reporting preference.

Two councils (13%) agreed that websites should be used at the maximum level to share information, particularly with the public, to improve the level of transparency and accountability and to ensure that the information is up-to-date and precise.

There were two councils (13%) that had conflicting answers to this question. They both agreed but then explained why they did not do it. This finding is consistent with Unerman and Bennett's (2004) study that factors, such as a lack of technology, infrastructure, education and/or logistics necessary to utilize company websites, may cause the online corporate sustainability information to be not accessible to some user groups.

Noticeably, the following comments demonstrate a lack of human resource capacity in relation to the council's website. Surprisingly, these comments are made by larger councils that disclose more sustainability information. Council C117 disclosed 270 sentences in the content analysis method and 36 items in the disclosure index method. Council C118 disclosed 250 sentences in the content analysis method and 28 items in the disclosure index method.

Council C117

Actually, in terms of website reporting, it is easier for the public to access, especially at present, as Malaysians have already been exposed to using the Internet ... In my opinion, this information is good to be reported on the website. But, in this council we only have one IT officer. That's why some information is not being reported; we [are] just reporting on an annual and monthly basis. There is a lack of infrastructure and capacity in this council (LA 21 officer).

Council C118

Yes, I definitely agree with this [the website reporting] ... because local government operates on the trust given by the people in the local authority area ... so whatever we do, it has to be transparent, accountable and we have to make available the information on whatever medium, for example, the Internet. We have only one assistant information analyst and are more or less a "one-man show" (Administrative Manager).

In contrast, one council which has a strong IT department, that is, equipped with more than 500 computers in the council and assisted by several IT staff, has a different view on this issue. Notably, this council regarded human attitude as a barrier to the information technology implementation which, in turn, discouraged website reporting in the council.

Council 26

Yes, we would want to do that (be transparent and accountable). We don't want to be tied up with human problems as we want to concentrate more on our tools. The problem is not with the technology or process, but it is human attitude. If compared to handling all kinds of people, I think the system is much easier to deal with. Humans are very complex, whereas the system will do what you ask it [the system] to do (Director of ICT Department).

This comment raises an issue experienced by various councils. There is a perception that the barrier to discharging accountability via the website is associated with human factors, for example, lack of specialized staff or staff unwilling, through lack of motivation, to participate.

There were four councils (25%) that disagreed with the statement in Question 3. These were mainly associated with reasons for not using the website to report sustainability information (refer Section 8.5).

Responses to Question 4

Q4) It has been said that the most popular means of communicating corporate social responsibility (CSR) information is via the local government webpage. Do you agree or disagree and why?

This question was designed from findings of Mohd-Ali *et al.*'s (2006) study. Nine councils (56%) agreed with this statement. These responses are consistent with prior literature (see, for example, Lodhia, 2005; Ho and Taylor, 2007; Rowbottom and Lymer, 2009) which highlight the special features of websites, such as being fast, cheap and accessible to a wider group of audiences.¹⁰⁵

Two councils (13%) acknowledged the advantage of using the websites. At the same time, these councils also appreciate the use of other media for disclosing the sustainability information. The usage of websites to communicate CSR or sustainability related information is very much determined by the preference of the councils to use this medium as the main way or one of the ways.

In addition, one city council out of five councils (20%) disagreed with this question due to the overall level of Internet penetration in Malaysia.

Council C115

I don't really agree because Internet usage is still quite low (Head of Environmental Health Division).

The comment made by Council C 115 implies a general view regarding the use of Internet in Malaysia and not necessarily related to the sustainability reporting on Malaysian local authority websites. Later sections in this chapter provide positive views from Council C 115 specifically on sustainability reporting. In addition, Council C 115 has high disclosure (396 sentences, 31 index items) and is highly regarded by other councils in Malaysia due to its commitment towards achieving sustainable development (Section 8.7). Here, they are merely expressing a known fact about Internet accessibility.

¹⁰⁵ This response explains the reasons for the highest level of economic disclosure in Chapter Five, Section 5.6.

The following response indicates that at present there is a different view of CSR, and the use of the website, between the public and private sectors. It is perceived that the concept of CSR is more applicable in the private sector than in the public sector, particularly in local government.

Council C3

It might be the case ... We are talking about the accountants that serve the corporate sector. I think they [the accountants] have the frame of mind about the ICT and its advantages. Definitely ... because the corporate social responsibility is concerned with big companies ... but nothing to do with the small trader, hawkers and council staff. That is a raw perception that we have at this moment. So, you might have the results i.e. [website as] the best way of communicating. People who don't use computer and don't have access to the Internet for information will give different answers (LA 21 officer).

Despite having superior features such as: accessibility, effectiveness and increased storage size, the usability of the website varies based on different features of each organization. For example, smaller versus larger councils; private versus public sector organizations and user versus non-user groups. This has implications for policy makers, local authorities and the community - all of which are discussed in detail in Chapter Nine.

Responses to Question 5(a)

Q5(a) Who was involved in the decision making related to the sustainable development agenda in your organization?

Chapter Two revealed that the involvement of accountants in sustainability reporting in the public sector is minimal. Based on the interviews, it appears that none of the respondents have an accounting background. This confirms the minimal participation of accountants in relation to related sustainable development activity (Burritt and Welch, 1997a; Bowerman and Hutchinson, 1998; Frost and Seamer, 2002; Parker, 2005; Farneti and Guthrie, 2007; Qian and Burritt, 2007). This minimal involvement of accountants may potentially have implications for accounting degree education in Malaysia and will be discussed in Section 9.4.3.

The earlier quantitative phase found the commitment to the LA 21 program is reflected in the disclosure of involvement with the program on websites rather than implementation of the program. The reasons for emphasizing implementation of the sustainable development activity relative to disclosure will be discussed in Chapter Nine. Hence, it is crucial to identify the decision makers of the sustainable development agenda in local authorities.

A variety of responses were provided by the councils in relation to this question. Most of the decisions are made by committees comprised of councillors and top management, that is, the mayor or president. Most of the matters would be approved in the full council meeting. A full council meeting is held every month in the larger councils, with smaller councils holding four meetings per year.

Council C129

The council has the policy makers, [that is], the councillors. We have various standing committees: the public health environment, development project and finance, social work and traffic control and others. The councillors in the standing committee have to make a decision about the policy. The secretary has to make a decision in relation to day to day operations (Secretary).

At certain councils there is also involvement by associations and other organizations in relation to the sustainable development agenda. This is perceived to improve the decision making process in the council.

Council C80

We have the action plan committees. We have five, namely: 1) cleanliness and recycling; 2) economy and tourism; 3) health and safety; 4) social development; and 5) beautification. Each committee is comprised of a council member, and representatives from associations and government agencies (Head of Division).

It is also noted that the councils that are actively implementing the LA 21 program have a special secretariat to compile the information relating to the program. In this context, 'secretariat' refers to a special unit which is in charge of coordinating the LA 21 program and maintaining the database of sustainable development activities. Each department involved in the sustainable development agenda, such as the Environment Department, the Community Development Department and the Health and Safety Department, prepare a report and submit it to the LA 21 Unit for

compilation. It appears that the report is very much department oriented and not linked to other departments within the council. Following on from Mohamed-Osman *et al.*'s (2008) study, it is observed that this highly departmentalized nature of many local authorities in Malaysia is not effective in terms of integrating policy delivery.

Council C2

I am acting as the secretariat; we have the main steering committee and sub-committee. The decision is made by the chairman in the main steering committee. We have three working committees, economy, social and environment, to support the main steering committee. I compile all the information and report to the main steering committee (LA 21 officer).

This question was further extended in the interviews to determine the extent of the accountant's involvement in the decision making. There is evidence to suggest the result from the interviews is consistent with past literature; that is, accountants are not the main decision makers in the sustainable development agenda. The accountants are involved in determining and controlling the funds, which is the traditional role of the government's accountant. Further, it is important to ensure that the sustainability development expenditure does not exceed the expenditure target. The expenditure target is the Treasury's estimated base level of resource needed by each public sector agency to implement existing programs in the same manner as in the preceding year. This is in accordance with the principle of the budgeting technique currently applied in Malaysia, that is, the Modified Budgeting System (MBS). This management technique was introduced in 1988 through Treasury Circular Number 11 and Treasury Circular Number 8 in 1990. Although the accountant is not the main decision maker in the sustainable development agenda, it is important for the accountant to comply with the relevant financial procedures in relation to the program implementation.

Responses provided by four councils (25%) were that the accountants are mainly in charge of the budget to implement the sustainable development activity, including the LA 21 program.

Council C10

Their [accountants] duty is to determine the budget for the activities (Town Planner).

Council C26

We just submit the expenditure claim to them [accountants] ... they will comply with the financial procedure and pay us [department] back (Senior Officer).

Decision makers related to sustainable development are categorized as being internal (top management) or external (council members and representation from associations and government). This shows the importance of partnerships between various groups in the sustainable development program implementation, for example, the LA 21 program. Meanwhile, the accountant is perceived to have minimal involvement and only responsible for controlling the sustainable development program implementation expenses. This is possibly due to their lack of expertise in handling the sustainability related issues such as environmental pollution. In other words, the accountants are just playing a supporting role in the sustainable development agenda in the councils.

Responses to Question 5(b)

Q5(b) What impact, if any, do sustainability reporting requirements have on the day to day operation of your organization?

This question is analysing a notion from Farneti and Guthrie (2007) that "sustainability did not have significant impact on the day to day operation of the several organizations". The answers for this question differ based on the level of sustainability reporting implementation in the local authorities. There are impacts in terms of more accountability to the public, reduction of costs, better provision of services, allocation of funds received for the activity or program implementation, and that also then becomes part of the routine responsibilities of the council.

The councils that are actively implementing a sustainable development program indicated the positive impact from reporting the implementation. The first positive impact is that it directly or indirectly informs the public about the implementation of such a program. This, in turn, may assist in promoting the council's image and encouraging the private sector's involvement in the council's activity. This is

considered as an ideal way to publicize the council's commitment to achieving sustainable development.

Council C2

Yes, before we [department] came out with the report, nobody knew what we were doing. Now we are famous, and we have won a few awards, for example, the environmental award under the Department of Environment ... I will do it [the reporting] every year so that people know we are very active in the council. We are proud of this achievement.

Whenever there is any road tour, my team will set up the booth and share this information with the public. We welcome the participation of the private sector to contribute funding to the program implementation. In order to achieve ISO certification, the private sector has to do one community based project. We [department] become the mediator between the people, NGOs and the private sector (LA 21 officer).

The second positive impact is that the reporting may assist in planning, which, in turn, facilitates better service provision for the public. It gives the impression that sustainability reporting contributes to the decision making process in the council. As well, deficient planning requires more monitoring action in the long run.

Council C115

Yes, of course. For example when there is an issue about the recreational facilities ... The open space should be sufficiently provided to the people for recreational activities. If the facilities are not enough based on the report prepared, there should be the follow up action on this matter. The impact is that people have more space for recreation, and also in terms of facilities, for these to be distributed equally in the community's area within the city (Town Planner).

Another positive impact is that sustainability reporting helps in reducing the costs related to sustainable development activity. At the same time, this may create awareness among the community about the council's objective to be cost effective in implementing the sustainable development program.

Council C115

Yes, it [the impact of reporting] helps in minimizing the wastage cost. It is important for the people to know that our aim is in line with the Ministry's objective, that is, to reduce waste by 20% by 2020. As for now, we [council] have reduced the wastage cost by 12%. At the same time, the awareness of the people regarding recycling has been improved (Head of Environmental Health Division).

Another point of view expressed by a council is that the report prepared for the Ministry is just an indication of certain activities or program implementation. This reflects that the reporting is part of the routine responsibility of the officer in charge in the council. The information includes general organizational matters as well as specific issues, such as the development project in the council's jurisdiction area.

Council C129

Partly it [the impact of reporting] is just a requirement; the level of impact is just an indicator of how safe the environment is in the area and what the rate of housebreaking is and the rate of any incident. That [the reporting] is just an indicator (Head of Division for Public Health).

The website reporting requires commitment from the IT staff. One point of view was provided by the Head of the ICT Division that certain skills and knowledge are required before uploading information on the website.

Council C116

The impact is that we [department] need to be updated regularly. We need to get the latest information from the management. Most of the time we are only uploading information and sometimes it [the information] has no meaning. [Hence], we need to be aligned with them [the management] so that we can answer the community. So our duty is not just putting up information, sometimes we need to refer to the webmaster. We need to have an understanding regarding the development projects as we need to respond to people that ask us directly instead of our webmaster (Head of ICT Division).

One council highlighted that there was a need for sustainability reporting as a result of funding requirements by the Ministry to carry out the LA 21 program. Each year, the councils need to submit a report of the LA 21 program implementation to the Ministry. Failure to do so impacts the allocation amount awarded in the subsequent year.¹⁰⁶

¹⁰⁶ See the discussion of coercive isomorphism in Section 8.8.2.

Council C135

Right. The impact is money. If we [council] don't do it [the reporting] this time ... next round they [the Ministry] don't give us [council] money or they [the Ministry] will give us [council] less (Secretary).

Generally, the positive impacts indicated that councils wanted to appear legitimate and were using the website as a legitimating tool. As per the original ministerial edict, the website is used to fulfil expectations of stakeholders, for example, NGOs, community, private sector and other government agencies. In other words, local authorities are trying to bridge the communication gap between interested stakeholders. The councils would like to be acknowledged as: an award winning organization¹⁰⁷; a highly responsible and accountable organization and an 'obedient' organization.

Responses to Question 10

Q10) What are the activities or processes involved in sustainability reporting on the website?

The first process highlighted by 10 councils (63%) is very simple, that is, the report or information will be directly sent or emailed to the IT department or webmaster.

Council C115

There is no special procedure, I will email the information to the webmaster and he [webmaster] will upload the information for me (Head of Environmental Health Division).

Council C80

There is no special process; it is just passed to the IT department because IT controls the website matters. If the IT department allows me to upload by myself, I will include many things ... if they [IT Department] give the authority to me, I really welcome it. Sometimes I upload by myself because they are too slow. I think it would be more effective if the council's website was managed by [the individual] relevant departments (Head of LA 21 Unit).

¹⁰⁷ See the discussion of normative isomorphism in Section 8.8.1.

In short, the presence of the IT Department is important in ensuring the success of website reporting. Meanwhile, other responses are related to the reasons for not using websites to disclose sustainability information (Section 8.5).

Responses to Question 11

Q11) Are there any other organizations, for example, professional organizations and NGOs that assist you in promoting the sustainable development agenda?

Interview responses revealed there is involvement from stakeholders, for example, the NGOs and the private sector, in relation to the activity implementation. This contradicts the websites' analysis whereby more than 90% of the councils did not disclose community or NGO involvement in the sustainable development activity implementation. It appears that several councils chose to be silent about their LA 21 program implementation, which, in turn, contributed to the overall level of sustainability information disclosure on websites.¹⁰⁸

When responding to this question, eight councils (50%) indicated that there exists participation from NGOs, for example, the Environment Protection Society, the Red Crescent and the Rotary Club. This confirms that there exists pressure from the interest groups which does not affect the disclosure of sustainability information, but does affect the involvement in sustainable development activity.

Council C117

We have a lot. Since we conducted the sustainable development program, the actively participating organizations are Budi Suci and the Red Crescent. Last year, the Red Crescent opened up one centre and promoted 3R. They help to promote sustainable development. They voluntarily report to us the amount of collection, and then the neighbourhood association also assists us (LA 21 officer).

Three councils stated that there is also participation from the private sector in the councils' sustainable development activity implementation. These mainly involve public listed companies in Malaysia. Their participation is very much needed, mainly for funding purposes. The contribution involves both monetary and non-monetary terms.

¹⁰⁸ See Chapter Five, Section 5.4.1.

Council C115

From the private sector, we normally get involvement from Maybank and Shell (Head of Environmental Health Division).