

**Voluntary Environmental
and
Social Accounting Disclosure Practices
in the
Asia-Pacific Region**

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Abstract

Through the juxtaposition of political economy theory and an in-depth empirical analysis, this study provides further insights into the understanding of variables that explain variations in voluntary environmental and social accounting disclosures (VESAD) across national and regional boundaries. Factors from three classes of Thomas (1991) classification schema, the organizational attribute (organizational size and economic performance), business environment (industry type) and societal variable (culture, political and civil, system, legal system, level of economic development and equity market) categories, were included in this project.

Listed companies' annual reports were surveyed using content analysis and disclosure index from seven countries in the Asia-Pacific region: Australia, Singapore, Hong Kong, the Philippines, Thailand, Indonesia and Malaysia. The dependent variable, the extent of VESAD information, was measured by four different measurement bases; these were number pages, sentences and words and disclosure index score. Different measurement bases were used to compare and contrast findings from statistical tests to examine if this lead to conflicting or comparable conclusions.

Descriptive and univariate analysis indicated that under all four measurement bases the country of origin was an important determinant of VESAD practices in the Asia-Pacific region. Multiple regression and path analysis showed that organizational size, industry type, culture, political and civil, and legal systems were statistically significant in explaining variations both directly and indirectly. The level of economic development was also found to be of important but only indirectly. It is concluded from these findings that social and political pressures placed on companies by the interaction of these significant variables compel firms to provide VESAD information to meet social expectations and to avoid possible government regulation to preserve their own self interests and survival. Economic performance and equity market factors were of no significant statistical influence.

Empirical results using data measured by the three units of measurement for content analysis were minimal. Differences were noted however when contrasted against disclosure index scores. It was concluded from these results that content analysis and disclosure indices measured different concepts, the latter measuring largely a subset of the former. The consequence of this finding, is that researchers, when deciding on whether to measure the dependent variable by content analysis or a disclosure index, will need to define more the relevance of the measurement to be adopted to the research question underlying the study. Determination of the unit of analysis to utilize when adopting content analysis is less complicated as each technique provides essentially the same results.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction to Purpose of Research Study and Question

Some leading economic doctrines of the earlier and mid-twentieth century (see for example Friedman, 1962) emphasized the central objective of firms to be one of profit maximization. Changing social attitudes over the past several decades, associated with the formal development of a number of public pressure groups (such as Greenpeace), have resulted in alterations to previously conceived single-minded directives of corporations to maximize their profits (Neu, Warsame and Pedwell, 1996, p.1).

One symbolic method companies may have utilized during the twentieth century in response to changing attitudes is voluntary environmental and social accounting disclosure (VESAD) practices (see for example Patten, 1991, 1992; Gray, Kouhy and Lavers, 1995a). This phenomenon is described as a process of communication through which the environmental and social ramifications of an enterprise's activities, programs and operations on stakeholders and the relevant public at large are transmitted (see for example Gray, Owen and Maunders, 1987). VESAD information is released by entities to preserve their self-interests in the face of pressures for social expectations and to avoid potential government regulatory actions (Guthrie and Parker, 1990, p.167). Organizations have provided details outlining their interactions with the natural environment and social system in which they operate since at

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least the late 1880's (see for example Guthrie and Parker, 1989; Hogner, 1982; Lewis, Parker and Sutcliffe, 1984). Environmental and social accounting research has shown increases in the amount of VESAD information provided by companies in the decades since the 1960's (Gray, Owen and Adams, 1996, p.143).

The apparent correlation between changes in social expectations, growth of pressure groups and greater release of VESAD information by entities suggest some association between the phenomena. Little empirical research however, (see for example Guthrie and Parker, 1990; Gray et al, 1995a; Neu et al, 1996) has been conducted to examine specific determinants which may help to assist in explaining why companies release VESAD information.

Furthermore, the extant accounting literature investigating VESAD practices has been generally limited to nation-specific investigation of largely industrialized countries (see for example Guthrie and Parker, 1990; Gray, Owen and Adams, 1996; Niskala and Pretes, 1995). Variations across national and regional boundaries of VESAD practices have been noted in the limited international comparative literature covering these phenomena (Gray et al, 1996, p.142). As early as 1979 (see for example Shreuder, 1979) there were calls for greater scrutiny of international comparisons of VESAD practices and theory. Roberts (1991, p.69) commented in regard to national variations, "...more needs to be known regarding the reasons for disclosures (or lack of disclosures)...are disclosures made in response to pressures from shareholders, environmental groups, employees or Governments, what is the

link (if any) between external reporting and internal decision making or other types of voluntary information disclosure?”.

This research study will rectify these gaps in the literature. Utilizing Thomas’ (1991) classification scheme, possible explanatory factors at the organizational attribute, business environment and societal variable levels will be empirically tested. Explanatory elements in this project are included to represent the different social, economic and political spectrum observed across nation boundaries. Through the interaction of these variables, sociopolitical and economic pressures may therefore, explain variations in the amount of VESAD information presented in annual reports across national boundaries.

This thesis examines companies in seven countries in the Asia-Pacific region: (1) Australia; (2) Singapore; (3) Hong Kong; (4) Philippines; (5) Thailand; (6) Indonesia; and (7) Malaysia. As with the majority of other VESAD information studies (see for example Ernst and Ernst, 1976 et seq; Guthrie and Parker, 1990; AlNajjar, 1996; Gray et al, 1995a; Hackston and Milne, 1995) annual reports are scrutinized for details related to five specific themes of VESAD. These five themes are (1) environment; (2) energy; (3) human resources and safety; (4) products and customers; and (5) community. These themes are defined broadly as follows: -

- (1) Environment - activities that relate to the operations of the firm which have a direct or indirect bearing on the natural environment and how a company deals with this interaction;
- (2) Energy - reaction of the organization to efficient and effective use

of natural resources, their effect on the surrounds and society and approach by company to preserve these sources;

- (3) Human resources and safety - cover the aspects of a firm's activities that effect and involve the well being of employees;
- (4) Products and customers - reflection of the concerns of the company to production of items of given quality and standard and maintenance of customer satisfaction above and beyond that of a *caveat emptor* attitude; and
- (5) Community - covers the socially orientated activities performed by entities to relate to and benefit the general public and society as a whole (see for example Teoh and Thong, 1984; Gray et al, 1995a).

Items of VESAD found in the annual reports are measured using the three units of analysis (pages, sentences and words) associated with content analysis and a disclosure index. These four different measurement bases are adopted to examine if their usage leads to a potential difference resulting in variations in conclusions drawn from the research study.

Having briefly introduced the purpose of this study, the proceeding section details the specific research question and objectives of this project.

1.2 **Research Questions**

The primary aim of this study, can be summarized in the overall research question :-

What are the factors that explain the disclosure or non-disclosure of VESAD information in the annual reports of listed companies operating in certain nations in the Asia-Pacific region ?

The various specific research sub-questions are :-

- (1) To what extent do listed companies in Australia, Singapore, Hong Kong, the Philippines, Thailand, Indonesia and Malaysia provide different levels of VESAD information in their annual reports ?
- (2) To what extent do listed companies in Australia, Singapore, Hong Kong, the Philippines, Thailand, Indonesia and Malaysia provide different levels information in their annual reports pertaining to the different themes of VESAD ?
- (3) Are organizational attributes, business environment and societal variables, important factors in explaining differences in the extent of disclosure or non-disclosure of VESAD information by listed companies across national boundaries ?
- (4) Which are the most prominent variables in explaining any differences or similarities in the amount of VESAD information provided?
- (5) Are organizational attributes, business environment and societal variables important factors in explaining the disclosure or non-disclosure by listed companies of information pertaining to specific themes of VESAD across national boundaries ?
- (6) Which are the most prominent organizational attributes, business environment and societal variables in explaining any differences or similarities in the disclosure or non-disclosure of specific themes of VESAD ?

(7) Does the measurement technique¹ applied in regard to the dependent variable, extent of VESAD information contained in annual reports, result in different findings ?

(8) Does the measurement of the dependent variable when applying different units of analysis under content analysis² result in different findings ?

As discussed below, this study provides an important comparative examination of VESAD practices in the Asia-Pacific region. There has been insufficient research conducted on VESAD practices amongst organizations operating in the Asia-Pacific region. Factors at the organizational attribute, business environment and societal variable levels are empirically tested to identify possible explanations for variations across national boundaries amongst VESAD practices.

1.3 Importance of the Study

The study of VESAD practices is an important issue with corporations being held more accountable by a wider audience (Neu et al, 1996, p.1). According to Hackston and Milne (1995, p.1), corporations can no longer subscribe blindly to the doctrine stated by Friedman (1962) that the sole social responsibility of corporations is to maximize profits. Thus it is necessary to

¹ This study applies both content analysis and a disclosure index in measuring the amount of VESAD information provided. Both techniques have been used in VESAD research. Thus this project will directly compare both methods to empirically test for any differences in findings.

² Prior research has generally applied one of three units of analysis; that is pages, sentences and words (see for example Gray, Kouhy and Lavers, 1995b). Little empirical research (see for example Hackston and Milne, 1995) has been conducted to test if these units of measurement leads to different results. This study will apply all three units of content analysis to rectify this gap in the literature.

study how companies react to sociopolitical and economic pressures and utilize VESAD details to legitimize the operations of the firm. Furthermore, research is necessary to establish what are the consequences of disclosing VESAD information and the determinants underlying the release of such details. This study focuses centrally on the respective determinants of VESAD information.

The major contributions this study provides to research are as follows :-

- (1) Previous research and literature into VESAD practices have largely been one-nation specific with extensive focus being on the industrialized nations of the United States and United Kingdom (Gray et al, 1995a, p.50). Prior research and literature has failed to define relevant deterministic factors to explain noted regional and national variations (Roberts, 1991, p.61). This research study seeks to rectify this gap in the literature with a cross regional examination of VESAD practices of organizations listed on the stock exchanges of one of seven Asia-Pacific nations. Evidence gathered from these organizations is empirically tested to examine the relevant influence of a wide range of organizational attributes, business environment and societal variables. This step is important to develop a greater understanding of companies' VESAD details in annual reports.

- (2) This research study investigates the VESAD practices of companies from a number of non-English nations from different economic levels. Australian companies have been investigated quite extensively in the past (see for example Deegan and Rankin, 1996; Kelly, 1981; Guthrie and Parker, 1989, 1990) whilst there have been some limited studies of Hong Kong,

Singapore and Malaysian corporations (see for example Teoh and Thong, 1984; Andrews, Gul, Guthrie and Teoh, 1989; Ho, Ng and Ng, 1994). As for companies operating in the Philippines, Thailand and Indonesia, there have been no published studies on these issues to the knowledge of the author.

(3) Political economy theory forms the underlying theoretical framework for this project. This theory has a long history has only recently been applied to VESAD research (Gray et al, 1996, p.46). Gray et al (1995a, pp.47-48) argues this theory offers important insights. Originally recommended by Cooper and Sherer (1984), empirical research using political economy theory has been limited (see for example Guthrie and Parker, 1990). Empirical findings from this study will extend prior research and provide evidence as to the viability of this theoretical perspective.

(4) From a methodological perspective, results from this study will assist our understanding of the validity of comparing results pertaining to VESAD based on content analysis or a disclosure index. These two methods have often been used in VESAD research (see for example Hackston and Milne, 1995; Gray et al, 1995b; AlNajjar, 1995, 1996; Wiseman, 1982). Research however, has not been conducted to examine if differences in findings may be primarily due to the research technique applied. This study uses and compares both methods.

(5) Finally, further from a methodological viewpoint, past studies have used either the number of words, sentences or pages as the unit of measurement for content analysis (see for example Hughes, Anderson and Golden, 1996; Deegan and Rankin, 1995). Gray et al (1995b, p.72) commented that each unit of measurement had a different application which may provide different interpretations of findings. As yet only very limited attempts have been made to establish whether different measurement units provide significantly different results (see for example Gray et al 1995b; Hackston and Milne, 1995). By testing the different units of measurement across a wide range of listed companies from diverse nations, this study provides insights regarding the unit of analysis.

1.4 Assumptions and Limitations

As with any research project, this study has a number of assumptions and limitations. A major assumption of this study is that VESAD practices is contained within an organization-society relationship which encompasses more than just that of conventional financial accounting. By assuming an organization-society relationship, this investigation is adopting a broad perspective. In adopting this perception, a number of leading mainstream accounting theories (such as costly contracting theory) are not adopted in this study. Adoption of the organization-society relationship provides support for the use of political economy and contingency theories in this study.

In utilizing a modern liberalism perspective of political economy theory (from a Bourgeois point of view) this study assumes organizations successfully operate in a socio-political and economic environment that allows the pursuit of one's self-interests whilst maintaining community equality. One attribute Clark (1991, pp.34-35) used to distinguish between different points of view on this theoretical framework in developing his fourfold typology of political economy was the dichotomy between individualism and community. Classical liberalism for instance emphasizes individual self-interests whilst the radical viewpoint champions community equality (see for example Resnick and Wolff, 1983; Caparaso and Levine, 1992). The middle of the road approach undertaken in modern liberalism political economy toward this dichotomy is essentially unresolved (Clark, 1991, p.100) and it is beyond the scope of this study to provide such a solution. By adopting this assumption the level of resolution of this study is marginally limited. The central focus of this study however, is to examine the influence and interaction of a wide spectrum of variables. This requires a broad-based point of view as offered by the modern liberalism perspective. The loss of possible explanations from using narrower theoretical strands with a higher level of resolution is therefore, deemed to be minimal and largely irrelevant in the context of the objectives of this study.

By deciding to focus on annual reports, it is assumed these documents are the most valuable mechanism used by organizations to convey such information. Although some research studies have questioned the applicability of measuring corporate social disclosures using annual reports (see for example Preston, 1981; Zeghal and Ahmed, 1991), there is justification in focusing on

annual reports. These documents are statutory requirements, produced regularly and also represent what is probably the most important form in terms of the organization's construction of its own social imagery (see for example Hines, 1988; Neimark, 1992).

The five cultural dimensions of Hofstede (1980, 1992) are measured using the original scores for the respective nations under consideration. It may be argued that Hofstede's (1980) original scores would have changed over time. However, evidence from several studies that have recalculated Hofstede's (1980) scores have found no significant changes in two of the nations (Australia and Singapore) to be examined in this study (see for example Harrison, 1992; Williams and Tower, 1998). Further, other studies have utilized Hofstede's (1980) original scores (see for example Ahmed, 1995; Douppnik and Salter, 1995; Eddie, 1996).

One assumption of this research study is the belief that Hofstede's (1980) definition of and approach to culture is an appropriate operational form. Cross-cultural research has been often criticized because of difficulty in applying standard operational definitions to clarify culture (Harrison, 1992). Expressions of norms, values and customs reflecting typical behavioural traits are commonly used to describe characteristics of culture. Support for applying Hofstede's (1980) definition of culture to this research study is found within much of the established literature. For instance, the limited set of societal values identified by Hofstede (1980) is consistent with Kluckholm and Streadbeck (1961) and Parsons and Shils (1951). Moreover, Hofstede's (1980)

work is being increasingly applied by accounting and organizational researchers (see for example Chow, Shields and Chan, 1989; Gray 1988; Perera, 1989; Fechner and Kilgore, 1994).

Another assumption is the use of each respective nation in this study as appropriate proxies for representing culture. Two reasons are offered to support this approach. Firstly, previous cross-cultural research have used these seven countries as proxies for culture (see Harrison, 1992). Further this approach is consistent with Hofstede (1980) and Rohner (1984). They argued that though a particular nation has a number of subcultures, the majority of these still share common traits with others, which make their members recognizable "as belonging to that society" (see Hofstede, 1980, p.26). The second reason stems from the scores calculated by Hofstede (1980) for all societal values in regard to the seven nations. The extreme differences suggest "the collective programming of the mind distinguishes one human group from another" (Hofstede, 1980, p.26); hence between Singapore and Australia. This belief is consistent with the operational definition of culture used in the research study.

Finally, this study acquires information from seven nations that differ in one primary factor - language. This study is limited to measuring VESAD practices as communicated in the English sections of annual reports. As pointed out by Yamagami and Kokubu (1991, p.33) companies from nations with a non-English first language may fail to disclose important details and/or the precise interpretation when translating comments into the English sections

of the annual reports. However, there is no overwhelming empirical evidence to suggest that limiting the analysis to English sections will lead to significant deficiencies in the measurement of the dependent variable. Also, this study is concerned with the measurement of the amount of space devoted to VESAD issues rather than precise meanings and interpretations. Thus, despite not being able to measure the exact amount of VESAD as written in non-English sections, examination of the English section only is sufficient to gather a reasonably accurate value to indicate any variations. Furthermore, for pragmatic reasons, due to financial constraints it is beyond the resources of the author to translate the non-English sections of the respective annual reports to gather their precise meaning.

1.5 Thesis Outline

The central emphasis of Chapter One was to provide an overview of the research project. Key objectives and importance of this study were also indicated. The latter discussion in the chapter focused on the respective assumptions and limitations of this project. Chapters Two and Three details the theoretical framework used in this study. The former focus on political economy theory that forms the underlying theoretical strand whilst the latter concentrates on Thomas (1991) classification scheme. An in-depth literature review on VESAD practices is covered in Chapter Four. Central emphasis is on international comparative studies of VESAD practices but other findings concerning this issue are also outlined. Chapter Five scrutinizes the international classification literature to determine a set of societal variables

that are examined in this study to explain differences in VESAD practices. The conceptual schema and testable hypotheses for this project are then developed in Chapter Six.

The respective research methods adopted in this study are outlined in Chapter Seven. Of particular emphasis is the approaches utilized in measuring the level of VESAD information presented in annual reports of listed corporations in the Asia-Pacific region. Descriptive analysis of the data points from the annual reports surveyed is shown in Chapter Eight. Initial statistical testing in the form of univariate analysis is also reviewed in this chapter. Chapter Nine explains the screening techniques undertaken to 'clean the data' in order to define the most appropriate multiple regression model for this study.

The results from multiple regression analysis are presented in Chapter Ten with those from path analysis detailed in Chapter Eleven. Scrutiny of all findings and their application on the derived hypotheses are shown in Chapter Twelve. The implications of results from this study are also presented in this chapter. Finally, Chapter Thirteen reviews the entire project and its major findings concluding with suggestions for future research directions.

CHAPTER TWO

DEVELOPMENT OF THEORETICAL FRAMEWORK

2.1Overview

There is a lack of consensus in the accounting profession and the theoretical accounting literature about the motivations behind why companies' management provides VESAD information (Hackston and Milne, 1995, p.1). It is beyond the scope of this thesis and particularly this chapter to totally rectify this dilemma. The central theme of this and the proceeding chapter is to develop the overarching theoretical framework for this thesis. The emphasis of the analysis in these two chapters is to evaluate the appropriateness of Bourgeois political economy theory as the relevant theoretical framework to be used in this study for investigating the influence of different levels of explanatory variables. This theory is adopted in this thesis since it offers broad overarching views which allow for the introduction of wider systematic factors which can be used to interpret and explain the VESAD phenomenon (Gray et al, 1996, p.47). Initial scrutiny in this chapter focuses on an overview of prior theoretical perspectives that have been applied in VESAD research.

2.2Prior Theoretical Frameworks Applied in VESAD Research

Gray et al (1995a, p.48) argue that there are two significantly different theoretical approaches to VESAD. One approach is seen as an addendum to

conventional accounting activity. That is, the assumptions and preconceptions connecting much of mainstream accounting research can be translated to encompass VESAD practices. According to these theories, the financial community (that is investors, creditors) is considered the principal user of VESAD information (Mathews, 1993, p.21). Such writers as Puxty (1986, 1991) and Tinker, Lehman and Neimark (1991) have argued that the exploration of VESAD practices has been grounded on the assumptions and preconceptions centred in this domain (Gray, Owen and Adams, 1996, p.23).

A second and more recent approach, which is adopted by this study, arises from criticisms of the former. This approach attempts to place VESAD practices in the centre of an examination into the role of information between organizations and society, not just the financial community (see for example Preston, 1983; Patten, 1992; Roberts, 1992). Gray et al (1995a) suggest the latter approach is wider and a more ambitious perception of VESAD practices.

In attempting to identify the most appropriate theoretical base applicable for this research study, it was important to develop the necessary framework for the literature analysis. Writers such as Dillard (1991, p.10) consider that Burrell and Morgan's (1979) fourfold typology of social science approach, provides a useful context for the analysis of accounting research. Burrell and Morgan (1979, pp. 22-24) propose that social science research is carried out within four research paradigms. These paradigms are referred to as :

- the functionalist view;
- the radical-structuralist view;

- the radical-humanist view; and
- the interpretative view.

Burrell and Morgan (1979, p.22) argue that each of these paradigms is unique in terms of ontology, epistemology and the perception of human nature. Differences between the paradigms were also noted in regard to the methodological approaches adopted by each. The major features of their model are illustrated in Table 2.1.

Table 2. 1 :Burrell & Morgan’s (1979) Social Science Research Paradigms

Research Paradigm	View of Reality	Main Features	Theoretical Examples
Functionalist	Is an objective and measurable premise which may be studied independently	(1) Society is cohesive and well structured (2) Research issues cover the explanation of observed behaviour, seeking to define cause-effect relationships and generalist laws through the adoption of a scientific approach	(1) Costly contracting theory (2) Contingency theory
Radical Structuralist	An independently observable object reflecting the domination of powerful groups in society	Accounting perpetuates the ‘existing order of things’	Accountability-regulation studies
Radical Humanist	Is a subjective notion that cannot be scientifically examined	(1) Society (and this includes accounting) reflects the dominance of power groups (2) Society is constantly redefined	Critical theory
Interpretive	Is shaped and influenced by various (including accounting) factors	(1) Accounting is influenced and influences the environment (2) Reality is defined as uncertain and problematic	(1) Accountability theory (2) Legitimacy theory (3) Stakeholder theory (4) Political economy theory

Source: Adapted from Burrell and Morgan (1979, pp.22-24)

Mathews (1987, p.35), applying Burrell and Morgan’s (1979) theoretical framework, argued the major theories of VESAD practices come from the functionalist, interpretive, and radical humanist paradigms.

Studies from the functionalist paradigm are usually based on neoclassical economics theory or classical management theories of people (see for example Cooper, 1980; Cooper and Sherer, 1984; Gray, 1992; Hopper and Powell, 1985; Tinker, 1980). For example, studies using market prices to measure the value of VESAD, implicitly rely on the efficient market hypothesis (see for example Freedman and Jaggi, 1988; Cooper, 1988). Similarly, studies solely considering the usefulness of reports for investors ignore the possibility of other users (Hopper and Powell, 1985, p.431).

The interpretive paradigm considers human nature important and recognizes the existence of the social world and a pluralistic set of users of corporate social disclosures (Tilt, 1994, p.48). Research under this paradigm is considered to be a “middle of the road” approach, in that the status quo is neither rejected nor reinforced (Gray et al, 1987, p.202). This means that the current organizational structure of society (that is capitalism) is accepted as given and no in-depth discussion is made regarding the desirability of such a structure.

Several theories attempt to explain the phenomenon of social accounting in the interpretive paradigm. First, ‘social contracting theories’ argue that companies have a social contract with society to perform certain tasks within the bounds of justice (Mathews, 1987, p.23). Second is ‘legitimacy theory’, which explains behaviour when companies respond to demands of divergent interest groups and act to legitimize their actions (see for example Patten, 1991, 1992; Guthrie and Parker, 1989). Another theory contained within the

interpretative paradigm is accountability theory. Tower (1991, p.40) contends that this theory perceives annual reports as a valuable feedback mechanism in which management's accountability may be judged by respective stakeholder groups. In the context of VESAD, Tilt (1994, p.49) argued that a core contribution of accountability theory was introducing the notion of law and a companies' compliance with it (see for example Gray, 1991, 1992; Gray et al, 1988).

The radical-humanist paradigm suggests that society reflects the basic organizing principles and institutional structures within it, such as a capitalist structure (Tilt, 1994, p.49). The dominant theory of social accounting under this paradigm is critical theory which rejects market related solutions, and considers that the structure of society shapes all that goes within it (see for example Cooper, 1980; Cooper and Sherer, 1984; Mathews, 1987; Tinker, 1980). Like the interpretive approach it recognizes a pluralistic set of recipients; however, they are seen to be in constant conflict, and reflect the amount of power they wield (Puxty, 1986, p.96). Radical theorists believe research that accepts the nature of society as given, is merely a reflection of the power of large institutions. Hopper and Powell (1985, p.460) argued however, that this does not necessarily mean the structure of society is socially advantageous.

Using the respective paradigms of social science research as defined by Burrell and Morgan (1979) a number of possible theories were critiqued for suitable application to this research study. These included; (1) contingency

theory; (2) costly contracting theory; (3) accountability theory; (4) critical theory; and (5) political economy theory. Table 2.2 summaries the major findings of a critique of the five theories listed above.

Table 2. 2: Research Theories: An Overall Critique

Basis of Analysis	Contingency Theory	Costly Contracting Theory	Accountability Theory	Critical Theory	Political Economy Theory
Conceptual Validity	Questions from extensive evaluations have arisen in respect to conceptual robustness. Limited application in accounting research, but still appears a suitable theory especially in cross-national studies.	Widely used and accepted in accounting research but various assumptions are questionable and fly in the face of the nature of corporate social reporting.	Lacks the necessary framework for explaining why management may disclose socially responsible information. Provides reasonable guidance for normative (or moral) value judgements but little for empirical research.	This theory is considered attractive to only a minority group and as such has received little attention. Critiques have sometimes suggested that this theory is well defined and based on strong theoretical claims.	Is developed along strong conceptual grounds. Few conceptual criticisms. Main criticisms arise over cross-disciplinary application and depth to which factors such as power and state should be considered.
Methodological Value	Doubts surround the weak research design and problems identifying and measuring contingent variables. It is suggested that these problems can be overcome if caution is taken, historical case analysis is applied. It is particularly useful in international accounting studies.	Enjoys considerable respect for its methodological value but it still has problems in terms of measurement of various proxies for variables such as manager's utility.	Lacks ability to replicate and generalize results that are difficult to arrive at when attempting to measure social performance.	Generally defers any heavily statistical research in favour of historical case study analysis.	Questions arise over research design with specific reference to the lack of closeness between conceptual assumptions and evidence gathers. Some care must be also taken when selecting proxies to measure particular variables.
Prior Empirical Research	Lacks strong empirical evidence but this may be associated with the developing nature of this theory	Has a strong positive base and has been used in much empirical research.	Evidence is considered to be lacking and very subjective in nature.	Evidence considered to be subjectively biased lacking generalisability and replication.	Empirical research has supported assumptions, through the use of various analysis techniques.
Past Application To VESAD Practices	Limited	Considerable. Conclusions are questionable however,.	Considerable	Limited	Considerable
Relevance to this thesis	Medium	Low	Low	Low	High

Based on the review of the literature pertaining to theories listed above, it is felt that contingency and political economy theories are the most appropriate approaches in developing a theoretical framework for this research study. The central supporting factors for the application of these theories are: -

- (a) both are broad based theories developed from general systems theory that allows greater freedom and interpretation of the understanding of the effects of a number of wider systematic factors at different levels of analysis;
- (b) contingency theory has been the underlying framework of many international accounting studies which will provide valuable insights into factors that may explain VESAD practices; and
- (c) political economy theory provides a valuable linkage to explain why corporations are motivated to release VESAD information.

For a greater discussion on the other theories discussed in Table 2.2 see Appendix A.

The next section briefly details general systems theory upon which contingency and political economy theories are based. A critique of contingency theory follows, outlining the key features utilized from Thomas' (1991) model which are incorporated into the theoretical framework of this study. Following that is an in-depth critique of political economy theory outlining its applicability as the major underlying basis for this research project.

2.3 General Systems Theory

General systems theory was derived as a means of attempting to prevent an increasing tendency in social science research to apply reductionist reasoning to issues (see for example Gray et al, 1996). This theory provides a valuable framework in which one examines issues from a broad context. Metaphysical, planetary, physical, human, non-human etc systems within which we act can be conceived using this theory (see for example Thomas 1991). Attempts to achieve specified solutions possibly lead to constrained thinking. Thus if the focus is reduced as such, important factors affecting the system under consideration are excluded (Gray et al, 1996, p.33).

Kast and Rozenberg (1974, p.101) defined a system as “an organized unitary whole, composed of two or more components or subsystems and delineated by identifiable boundaries from its environmental suprasystem”. Gray et al (1996, p.13) expanded on this by suggesting that a system is “a conception of a part of the world that recognizes explicitly that the part is (a) one element of a larger whole with which it interacts; and (b) also contains other parts which are intrinsic to it”. Gray et al (1996, p.33) argued that in accounting research, many investigations have been restricted to consideration of relationships between companies and limited stakeholder groups within an economic domain. They (p.33) further suggested the influences of systemic factors from other systems (such as culture, political, legal and natural environment) have been virtually ignored and effectively assumed away. One general systems based theory which has been applied in prior accounting research and attempts

to encompass a broader spectrum of possible explanatory variables is contingency theory.

2.4Contingency Theory

Under contingency theory, an enterprise interacts with, adapts to and seeks to control its environment in order to survive (Thomas, 1991, p.40). Burrell and Morgan (1979, p.46) illustrated this when stating “contingency theory postulates that the effectiveness of the organization in coping with the demands of its environment is contingent upon the elements of (its) various subsystems.....being designed in accordance with the demands of the environment with which they interact”. An entity’s financial reporting system is one such subsystem (Emmanuel, Otley and Merchant, 1990, p.47). The use of the phrasing ‘environment’ in describing contingency theory implies companies are potentially influenced by a number of variables. For the purposes of this study contingency theory is merely applied to define a classification scheme in order to categorize independent variables. Thomas (1991) developed one applicable approach using contingency theory.

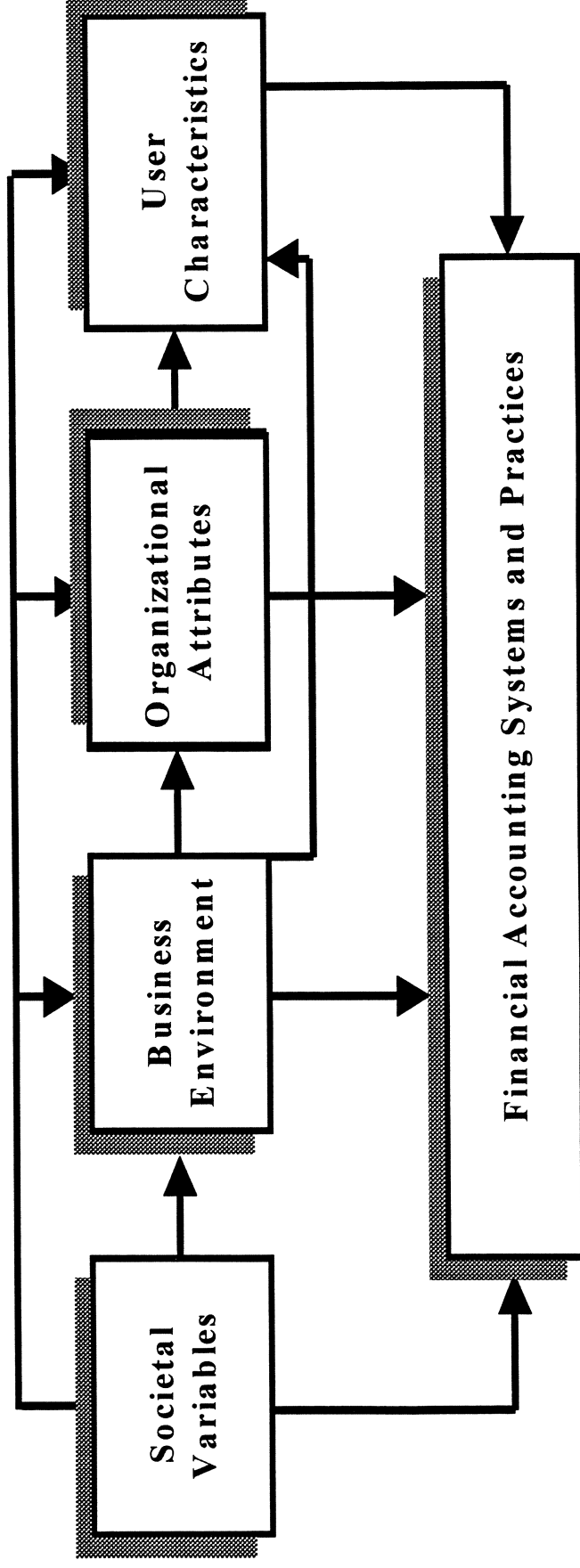
2.4.1 *THOMAS’ (1991) THEORETICAL FRAMEWORK*

Thomas (1991) postulated that there were four classes of contingent variables that affected corporate financial reporting systems. These four classes of variable were defined as follows :

- (a) User characteristics - the preferences of stakeholders for information forms and their processing capabilities due to different decision models, styles and cognitive traits;
- (b) Organizational attributes - the resources available to an enterprise and the means by which these are organized;
- (c) Business environment factors - elements which influence the degree of uncertainty facing a given industry within which an organization operates;
and
- (d) Societal variables - factors to which all enterprises within a particular country are subject and which vary between nations (Thomas, 1991, pp. 42-44).

An outline of Thomas' (1991) contingency model is reproduced in Figure 2.1. For the purposes of this study however, variables pertaining to user characteristics are not considered as it focuses on an entirely different set of issues and are thus beyond the scope of the project. All other variables empirically tested and reported in this thesis are categorized into the three remaining categories of Thomas (1991).

Figure 2. 1: Thomas' (1991) Theoretical Framework



Source : Thomas (1991, p.41)

Thomas (1991, p.42) suggests that all classes of contingent variables have a direct relationship to the corporate financial reporting system. However, some of the classes also have indirect influences on the corporate financial reporting system via the interrelations between the four levels of variables. Thomas (1991, pp.45-46) postulated that the four sets of contingent variables would influence a number of characteristics of an organizations corporate financial reporting system. He classified these characteristics as follows:

- (1) The disclosure, classification, presentation, valuation and measurement requirements of different countries. These may be affected by, for example, the method of ownership of the means of production, the extent and concentration of private ownership, the pattern of company financing, the use of accounting information in economic planning and control, etc;
- (2) The frequency of reporting (in the sense that the amount of information disclosed in interim reports varies), the method of measuring events (e.g. financial versus non-financial measures), cost allocation methods (that is expending versus capitalization, period of amortization) the element of information (for example forecasts), the degree of aggregation and decentralization (for example consolidated accounts and segmental reporting), and the disclosure of special purpose reports, such as value added statements, employment reports and other forms of social accounting; and
- (3) The method of reporting (for example statements, charts and diagrams) its cognitive complexity (that is readability) and the disclosure of certain special purpose reports, such as simplified accounts. These attributes may be related to user characteristics and the other sources of information that are available (Thomas, 1991, pp.45-46).

The framework developed by Thomas (1991) is considered an important contribution as it provides a suitable means of classifying the independent variables of this project. The next step in developing the overarching theoretical framework applied to this research project under a political economy theory banner is to provide the necessary linkage between the two theories. This can be found in the form of institutional theory.

2.5 Institutional Theory

Institutional theory is the pivotal link allowing the classification scheme developed by Thomas (1991) using contingency theory to be incorporated in a political economy framework. Despite the apparent inconsistencies between institutional and contingency perspectives, theorists working within each recognize the interrelations between the two theories (Gupta, Dirsmith and Fogarty, 1994, p.264).

Like contingency theory, institutional theory stresses that an organization's survival is dependent upon respective influencing factors. The former theory emphasizes that these variables are generated from the environment in which the firm operates. By contrast, institutional theory stresses a corporation is dependent on external constituents, namely in the form of social pressures. According to institutional theory, interacting organizations are linked by symbiotic relations that can create institutional pressures limiting the set of rational choices firms can use in demonstrating legitimacy to the public (Oliver, 1988, p.546; Meyer and Rowan, 1977, p.340). Carpenter and Feroz (1992, p.620) further state that this theory implies that the interests, objectives and actions of those external to any given organization will have critical importance in understanding accounting choice. Hence, institutional theory argues that firms will have to comply with social norms, values and culture in order to remain in operation (see for example Meyer and Rowan, 1977; Meyer, Marshall and Associates, 1978; DiMaggio and Powell, 1991; Scott, 1987).

Drazin and Van de Ven (1985, pp.516-517), when using contingency theory in regard to organizational structure, recognized that many internal coordination and control practices may become institutionalized over time and thus may be unresponsive to the task technology the organization uses. The impact of external and internal contingencies has also been recognized in institutional theory. Scott (1987, pp.507-509) has observed that contingency and institutional theory explanations, when applied separately, offer only an incomplete understanding of the influence of factors on organizations.

Mearsheimer (1990a, 1990b, 1994) asserted that the assumptions and concepts of institutional theory are strongly derived within political economy theory. DiMaggio and Powell (1983, p.157) suggest that the institutional isomorphism adds a “much needed perspective on the political struggle organizational power and survival”. John Meyer and his students developed this view of institutionalism. The institutional perspective adds a stronger emphasis to the reliance on an organization to comply with social constraints, expectations and requirements to survive rather than the additional political influences as defined in political economy theory. Irrespective of the differences in perspective, political economy and institutional theory share common assumptions. Furthermore, both stress the influence of external factors on the actions and decisions undertaken by organizations in order to remain in existence. Political economy theory however, is still considered the most appropriate framework for this research study, providing a wider application to different organizations than institutional theory. The latter theory is viewed

to best suit descriptions of accounting choices by government bodies (see for example Gupta et al, 1994; Carpenter and Feroz, 1992; Priest, 1997).

Support for the application of the classification schema devised by Thomas (1991) within a theoretical framework emphasizing a political economy perspective is derived from a commonality shared with institutional theory. In general terms, all three theories emphasize conditions organizations must meet in order to survive though from different points of view. Further, both are developed from general systems theory that allows a more general view and introduction of wider systemic factors to explain actions of corporations. The next step in developing the theoretical framework of this study is to identify the most appropriate strand of political economy theory to be used.

2.6 Political Economy Theory

Political economy theory focuses on an organizational-society nexus in regard to environmental influences (Scott, 1991, p.52) within a wide theoretical framework based on general systems theory. This theory suggests that the economic domain cannot be studied in isolation from the political, social and institutional framework within which the economy takes place (Gray et al, 1996, p.47).

One definition of political economy theory is: -

... [p]olitical economy is the study of the interplay of power, the goals of power wielders and the productive exchange system. As a framework, political economy does not concentrate exclusively on

market exchanges. Rather it first of all analyses exchanges in whatever institutional framework they occur and second, analyses the relationships between social institutions such as government law and property rights, each fortified by power and the economy, that is the system of producing and exchanging goods and services (Jackson, 1982, p.74).

The study of political economy typically involves individual researchers following their instincts about productive ways to expand on the way we think about specific political and economic phenomena (Banks and Hanushek, 1995, p.1). Political economy research is the study of rational decisions in a context of political and economic institutions (Gamble, 1995, p.516). Baron (1995, p.11) explains that the central tenant of political economy theory is that a comprehensive understanding of economic phenomena requires knowledge of the political institutions, actors and incentives present in the decision-making process. Conversely, these same political variables are best studied with a 'rational actor' orientation of economics that continually examines the economic consequences of political choices (Gamble, 1995, p.516). It is a problem orientated field of study and deals with values as well as with the analysis of how economic, political and social systems work (Lippit, 1996, p.2). Gamble (1995, p.516) explained that political economy theory draws on different disciplines and asks fundamental questions about the way in which contemporary societies are organized and how they might be improved.

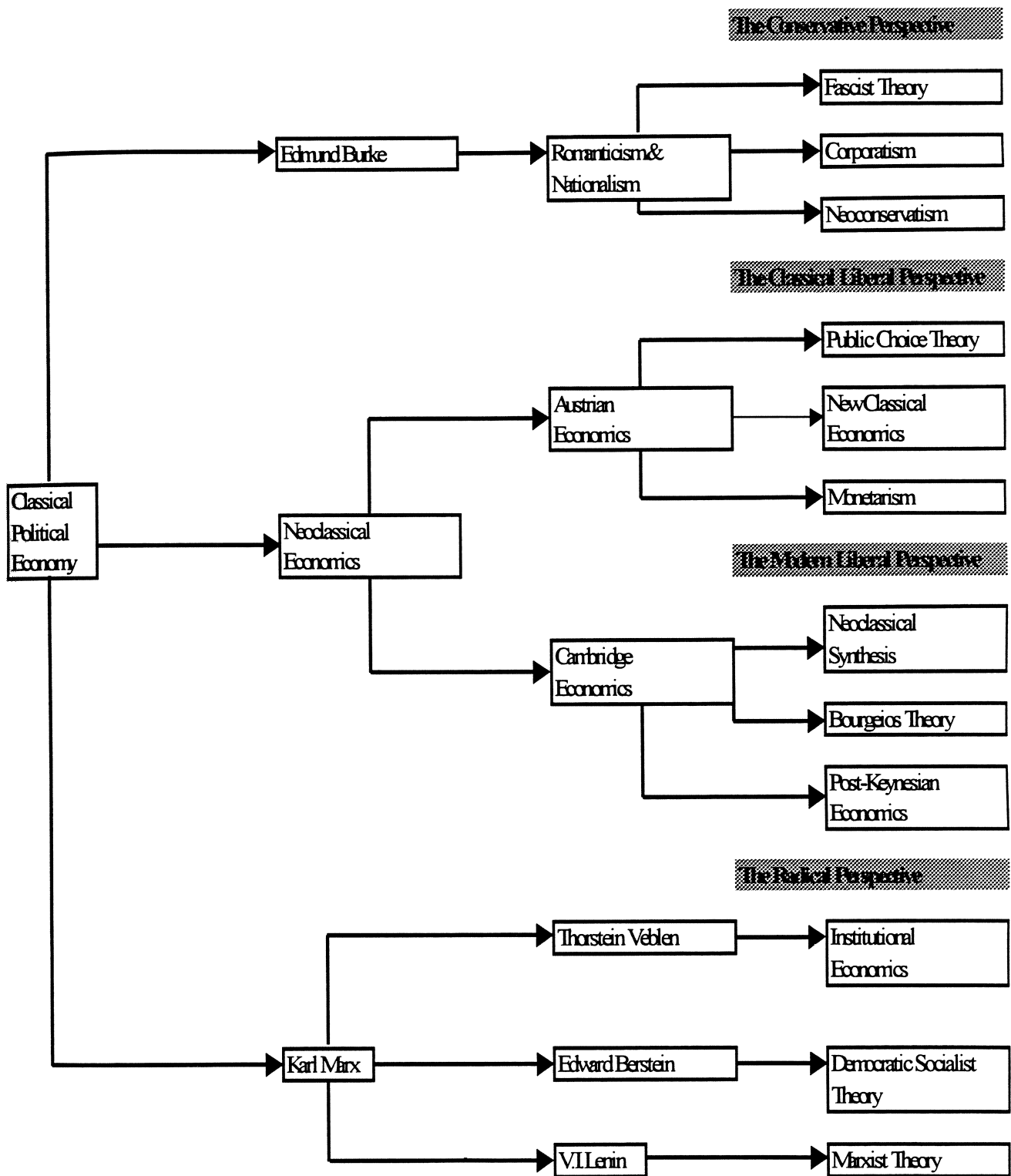
2.6.1 ***HISTORICAL HIGHLIGHTS OF POLITICAL ECONOMY THEORY***

Political economy theory has a lengthy history spanning several centuries (Murphy and Tooze, 1991, p.1). During the nineteenth century, classical political economy was seen as the distinctive approach to policy and decision

making (Banks and Hanushek, 1995, p.1). During the second half of the nineteenth century, with the development of the concept of marginal utility, two distinct disciplines (namely political science and economics) began to emerge from under the umbrella of classical political economy theory (Baron, 1995, p.23). Thus by the end of the nineteenth century professional bodies and academic institutions devoted solely to these two new disciplines were prevalent and the emphasis on the study of political economy theory greatly diminished (Murphy and Tooze, 1991, p.2).

The notion of political economy and the study of this concept did not again achieve significance till the mid-twentieth century (Gamble, 1995, p.519). Banks and Hanushek (1995, p.2) stated that this modern approach to political economy theory has provided substantial advances and it promises far greater insights than previously considered. They (p.2) further argue that two key features of modern political economy theory stand-out. First, this new view of political economy provides a rational way to cross-fertilize the separate disciplines of political science and economics, and essentially imports approaches and thinking across disciplinary lines. Second, the integration of the two disciplines allows for the application of two lines of analysis. That is, researchers by this approach can utilize different methodological methods and techniques in examining questions across a wide spectrum upon which a number of interacting variables may cause an impact. Figure 2.2 illustrates the development of political economy theory over the past two centuries and the linkages to the various schools of thought.

Figure 2. 2: Historical Diagram of Political Economy Theory



Source: Clark (1991, p.25)

Initial efforts in the resurgence of political economy theory tended to be quite unbalanced resulting in a number of criticisms (Riezman and Wilson, 1995, p.81). Lippert (1996, p.2) suggested the unbalanced approach may be directly related to the separation of political economy into two distinct disciplines. He (1996, p.2) argued that the distinction into two separate bodies of inquiry had allowed researchers to develop a high degree of specialization. Such specialization had obvious and considerable advantages. For example, by restricting the scope of inquiry, a wide range of analysis became more tractable. Such specialization, though assisting in providing insights, did provide lopsided and biased perspectives. Thus early modern political economy theory models applied were overly simplistic and lacked the fundamental connections and understanding to generate highly successful and accepted conclusions (Banks and Hanushek, 1995, p.2).

Despite the early criticisms, proponents of modern political economy theory have defended their synthesis between the two disciplines stating it was still in the evolving stages (see for example Murphy and Tooze, 1991; Gamble, 1995). Lippert (1996, p.3) argues that recent advancements have shifted toward a more balanced treatment of the various points of each discipline.

2.6.2

FORMS OF POLITICAL ECONOMY THEORY

The nature of modern political economy theory however, is one that encompasses a broad spectrum of approaches (Gamble, 1995, p.516). In attempting to identify the most appropriate form of political economy theory

for this research project, the fourfold typology of this discipline by Clark (1991) is utilized. Clark (1991, pp.34-35), argued that the variants of political economy theory could be categorized into four major perspectives based on distinctions between two separate dichotomies. One dichotomy was between equality and hierarchy, the other being individualism versus community. Based on these two dichotomies of values, Clark (1991, p.36) composed a four quadrant diagram to represent the major perspectives which is reproduced in Figure 2.3.

Figure 2. 3: Diagrammatic View of Clark’s (1991) Fourfold Typology

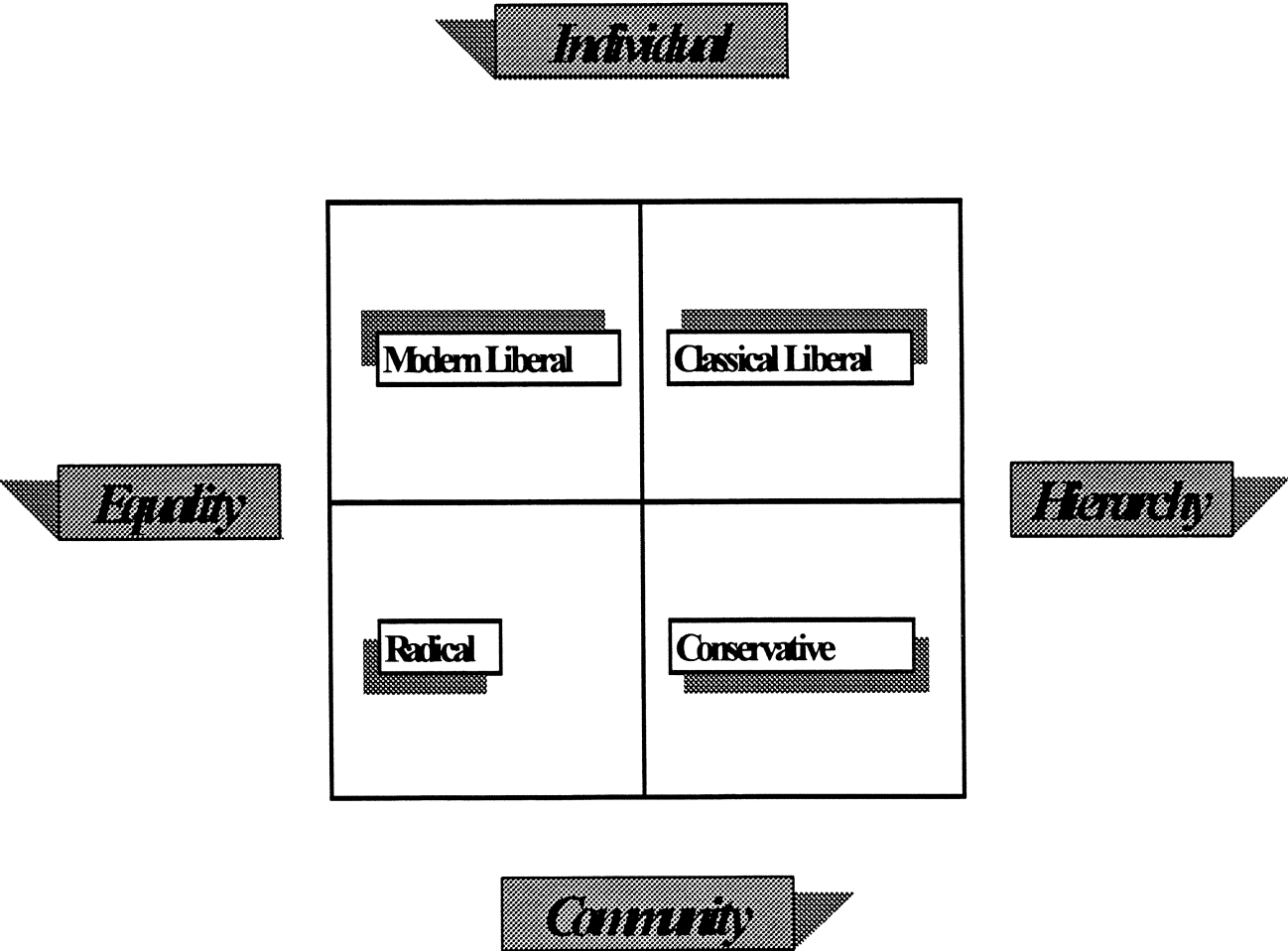


Table 2.3 further illustrates these four major point of views in political economy theory as well as the key distinguishing features of each in regard to human nature, society, government and equality.

Table 2. 3: Clark’s (1991) Four Perspectives of Political Economy Theory

Name of Perspective	Key Features				Example of Theories Under This Perspective
	Human Nature	Society	Government	Equality	
Classical Liberal	Self-interested; capable of acting autonomously to satisfy own needs.	Aggregate of individuals; no goals of its own; permits individuals to achieve own goals.	Created by individuals to protect rights; government should not intervene.	Equal opportunity for all individuals to participate in economic activities.	(1) Public Choice (2) New Classical Economics (3) Monetarism
Conservative	Driven by strong directions from social organizational structure.	An organic structure based on a natural hierarchical order; society structure determines individual’s interests and behaviour.	Designed to maintain the natural order of society; must enforce and protect the rights of society as a whole thus protecting the individual.	Equal on in formal status as citizens of the community.	(1) Fascist Theory (2) Corporatism (3) Neoconservatism
Radical	Humans have certain biological needs and capacity to reason; conscious and behavior significantly affected by their social and natural environments.	Society has an identity and interest of its own above that and separate from the individual.	Serve in the collective interests of citizens; permits citizens to do collectively what they cannot do themselves individually	Equality not only in respect to opportunity but in regard to results; all individuals deemed to be permitted to receive same equal rewards.	(1) Institutional Economics (2) Democratic Socialist Theory (3) Marxist Theory
Modern Liberal	Humans capable of rational choice but significantly influenced by their social environment.	Society is a collection of individuals but in addition to private goals, individuals also have interests in the collective well-being.	Developed to impartially protect rights and to assist citizens to pursue collective goals which promote public interest and well being	Equality in opportunity and in justice.	(1) Neoclassical Synthesis (2) Welfare Economics (3) Post-Keynesian Economics (4) Bourgeois

Source : Clark (1991)

Banks and Hanushek (1995, p.4) argued that neo-classical, public choice and Marxian forms of political economy theory have garnered the widest level of attention and acceptance in the extant literature. From Clark's (1991) typology, these three strands of political economy theory are largely representative of the classical liberal and radical schools of thought. Clark (1991, p.100) states in respect to modern liberalism that it was also a dominant ideology throughout the greater part of the twentieth century. The conservative paradigm however, failed to gain any significant widespread support, with researchers utilizing strands of theories based on this perspective being essentially isolated (Clark, 1991, p.80).

Despite the lengthy history of political economy theory, application to accounting theory and VESAD research has only been of a recent origin (Gray et al, 1996, p.47). Neoclassical, public choice, Marxian and modern liberal (in the form of the Bourgeois strand) are the leading views used by accounting researchers to explain environmental and social accounting disclosures (see for example Mangos and Lewis, 1995; Neu, 1992; Guthrie and Parker, 1990; Arnold, 1990; Gray et al, 1995a; Gray et al, 1996).

This study adopts a modern liberalism perspective with specific reference to the Bourgeois theory as the underlying theoretical framework for this project. An in-depth critique of this theoretical strand is provided in Chapter Three. In the proceeding subsections, the remaining three (neoclassical, public choice, Marxist) theories of a political economy doctrine which have been popular in accounting theory and environmental and social accounting research are

examined. Reasons outlining why each strand was not considered relevant for this thesis are given.

2.6.2.1

NEOCLASSICAL

Neoclassical economics is a theory of efficient allocation of resources through voluntary exchange (Caporaso and Levine, 1992, p.96). It assumes that individuals are utility maximizers and firms are profit maximizers (Banks and Hanushek, 1995, p.1). Caporaso and Levine (1992, p.86) states that neoclassical political economy is a subset of the notion of efficient markets in which “the basic logic of constrained choice to circumstances in which private transactions fail to maximize welfare”. They (1992, p.86) were implying this strand of political economy is synonymous with market failure.

Neoclassical political economy relies extensively on the concept of Pareto optimality (Helms, 1983, p.28). Lippert (1996, p.3) states the analyst starts with the notion of Pareto optimality and proceeds to explore opportunities for corrective action (which is not limited to a more fully specified definition of rights) consequent to perceived failures of the market to realize the requirements of this concept.

Neu (1992, p.225) argues that the application of broader socio-economic views of political economy theory to accounting applying a neo-classical basis provides researchers with an alternative vocabulary for describing managers’ social behavior. For the purposes of this study however, the neo-classical form

of political economy theory is not implemented. It is viewed that this approach is too narrow and contains significant flaws (see for example Tinker, 1984) to allow complete examination of the impact of wider social and institutional factors which are the focus of this study. The neoclassical political economy strand limits the disclosure of environmental and social accounting information to the presence of a perceived and or existing set of market failures. Prior VESAD research (see for example Gray et al, 1995a; Guthrie and Parker, 1989, 1990; Hogner, 1982) has found that the amount of information being reported has increased over time.

2.6.2.2

PUBLIC CHOICE

Public choice theory is an attempt by theorists to place politics within the realm of economics “by portraying the political process as exchanges between rational, self interested individuals seeking to maximize utility” (Clark, 1991, p.50). Buchanan (1984, p.13) states that this approach “takes the tools and methods that have been developed to quite sophisticated analytical levels in economic theory and applies these tools and methods to the political or government sector, to politics, to the public economy”.

Helms (1983, p.28) suggests that neo-classical and public choice forms of political economy theory share a common underlying foundation in the form of Pareto optimality. Lippert (1996, p.4) argues however, that both approaches apply the concept differently. Public choice advocates assert the overwhelming predominance of opportunities for voluntary exchange and

Pareto optimality. Unlike the neo-classical perspective that seeks opportunities for corrective action, the public choice point of view focuses on the coercive and problem generating character of government's so-called corrective reform (Lippert, 1996, p.4). Simply put public choice political economy stresses that government intervention in the market should be limited to activities that see it as nothing more than a guardian of rights. Caporaso and Levine (1992, p.135) stressed this point when stating that governments are an institution "through which individuals pursue their preferences when these preferences refer to goods that are interdependent or public".

The public choice version of the political economy thesis is also rejected as being the most appropriate theoretical foundation for this research study. This theoretical approach is considered to lack sufficient rigour to satisfactorily explain the interaction of sociopolitical and economic variables this study perceives influences VESAD practices. For instance, public choice political economy theory lacks the notion of social change and pressures associated with these alterations (see for example Pollin, 1996), which this thesis believes explain variations in VESAD practices across national boundaries.

2.6.2.3

MARXIST

The Marxian approach to economics and its subsequent application to modern political economy theory perhaps forms the best known and highly developed theoretical strand to this concept (Resnick and Wolff, 1983, p.122). This form emphasizes a strong critique of capitalism (Weisskopf, 1996, p.370). The

market under Marxian political economy is viewed as a vehicle for exploitation (Pollin, 1996, p.207). Governments are considered to be corrupted agencies by this theoretical perspective, for the purpose of organizing and administering exploitation (Gamble, 1995, p.519). Marxian interpretations are described as essentialist and reductionalist, which supported a teleological view of history as moving toward a classless society (Wade, 1983, p.13). The Marxian doctrine firmly dictates that change is brought about by struggles between the classes (Gamble, 1995, p.519).

The Marxian political economy perspective is not considered relevant for the purposes of this study as it provides limited insights in voluntary disclosure practices. For example Gray et al (1995a, p.48) commented that voluntary disclosures were nothing more than droplets from the capitalism system used by companies to legitimize their operations to protect their own self interests.

2.7 **Conclusion**

Analysis in this chapter outlined the classification schema for categorizing independent variables to be included in this study. Thomas' (1991) classification model based on contingency theory was proposed as the most appropriate approach. A linkage between contingency theory and political economy theory, that forms the major overarching theoretical foundation of this project, was then established via institutional theory. A critique of several approaches to political economy theory was then developed outlining their incompatibility with this study. The critique of political economy theory

continues in the next chapter which outlines in-depth the variant of this theoretical perspective to be adopted in this thesis; this is namely the bourgeois approach under a modern liberalism perspective.

CHAPTER THREE

MODERN LIBERALISM PERSPECTIVE - BOURGEOIS POLITICAL ECONOMY THEORY

3.1Overview

The later sections of the previous chapter provided a general outline of political economy theory and four leading approaches under that theoretical perspective. This chapter continues that analysis with an in-depth scrutiny of modern liberalism paradigm. Bourgeois political economy theory, a strand under the modern liberalism school of thought, forms the major fundamental theoretical approach of this thesis. A review is also conducted on two sub-theories of this approach that assist in providing relevant insights toward the Bourgeois political economy perspective. These two sub-theories are namely legitimacy and stakeholder theories. The chapter concludes with a conceptual and methodological critique of political economy theory to further evaluate its suitability to this study.

3.2Modern Liberalism Political Economy Theory

According to the historical development of economics illustrated by Clark (1991) and reproduced in Figure 2.3, modern liberalism has its traditional roots in classical liberalism, mainly in the form of neoclassical economics. Growing dissatisfaction with classical liberalists' views however, witnessed an increasing trend in modern liberalism adopting and combining what was seen as the "most distinctive and appealing elements of the existing ideological

perspectives” (Bowles and Edwards, 1990, p.2). As noted by Clark (1991, p.87), the modern liberal point of view is of an “eclectic and hybrid nature which makes it less pure than other ideologies, but contributes greatly to its flexibility and resiliency”. Thus modern liberalism to a large degree can be seen as a combination of ideas and views which encompass a broader spectrum of the potential reality.

The modern liberal paradigm shares common elements with Marxian political economy theory. As noted by Clark (1991, p.87), “the goal of modern liberals has been to promote social justice” a theme emphasized by the Marxian (radical) school of thought. Modern liberalism also has some familiar traits with the classical perspective, but may also be distinguished from it. The classical liberalism paradigm and in particular such theories as neoclassical and public choice political economy stress individual preferences and desires as being of paramount importance (see for example Helms, 1983, Caporaso and Levine, 1992; Shand, 1989). Modern liberalism acknowledges the individual’s rights and preferences but extends the examination further by not accepting them as given. Rather this perspective questions their origins and takes into account the social and institutional framework within which individual decision making takes place (Lippert, 1996, p.6). Modern liberalism can be further discerned from the narrow views of the classical school because it is willing to incorporate variables like class and state into the analysis (Pollin, 1996, p.209). Lippert (1995, p.5) argues that by doing so, this provides for a richer theoretical framework for interpreting economic reality.

The greater flexibility of the modern liberalism paradigm suggests it is a more applicable theoretical framework for this research study than those offered by the classical liberal, conservative and radical schools of thought. This perspective attempts to overcome the narrower views under the other forms of political economy to offer a broader stanza. Furthermore, the modern liberalism paradigm is methodologically adaptable in readily drawing on a variety of empirical tools such as those developed in neo-classical economics to complete such analysis (see for example Nove, 1996; Khan, 1996; Weisskopf, 1996).

It is the view of this thesis that modern liberalism offers the most relevant framework from which to explain variations in VESAD practices and the factors responsible for such differences. Theoretically the modern liberal school of thought is a broad based perspective that is both resilient and flexible to encompass a range of explanatory factors, greater than that offered by the other paradigms of political economy. It also offers methodological advantages being adept to the application of diverse empirical techniques than what may be utilized under the radical perspective. One specific strand of modern liberal paradigm that can provide more specific insights into VESAD practices is the Bourgeois political economy theory that is examined in the next section.

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3.3 Bourgeois Political Economy Theory

The Bourgeois political economy theory is developed largely from the works of J.S.Mill and his students (Gray et al, 1996, p.47). This variant of political economy theory has been applied, though only in a limited degree, to prior VESAD research by such researchers as Ramanathan (1976), Guthrie and Parker (1990) and Gray et al (1995a). The seminal work by Ramanathan (1976) for example used the notion of Bourgeois political economy theory in deriving the concept of a social contract in that the existence of an organization is reliant on the support of society in general. If a firm is perceived to engage in undesirable social activities then endorsement of the enterprise will be withdrawn by society leading to its demise. To maintain their position in society therefore, management will release information related to their environmental and social activities. Guthrie and Parker (1990, p.166) argue that the Bourgeois political economy theory offers a number of valuable insights to explain VESAD practices.

The Bourgeois form of political economy theory concentrates on the interactions of actors within a pluralistic world (Clark, 1991, p.90). Simply put, the theory implies that there is a number of different individual, institutions and organizations within the system that relate to each other with the aim of achieving their own self interests (see for example Dahl, 1967, 1982, 1986). Thus, in respect to the operationalized definition of VESAD applied in this study (see Chapter Four), the term 'relevant publics' is utilized. This term implies in part that firms interact with a number of pluralistic actors. As such organizations are seen to attempt to construct, sustain and legitimize

“social, economic and political arrangements, institutions and ideological themes” with such bodies “which contribute to the corporation’s private interests” (Guthrie and Parker, 1990, p.166). The Bourgeois form of political economy stresses the rights of the individual (whether that be a single person or an organization) to pursue their own goals and self-interests (Clark, 1991, p.95). However, consistent with the vein of the modern liberalism point of view, the ability of the individual to achieve their self interest will be shaped by the social environment in which they exist (Gray et al, 1996, p.48).

The implication of Bourgeois political economy from the proceeding analysis is that firms will seek to achieve certain goals but in doing so must comply with social pressures and demands. This strand of theory argues that firms would attempt to respond to such social pressures in order to reach their objectives through the symbolic action of releasing information in annual reports (see for example Dowling and Pfeffer, 1975; Meyer and Rowan, 1977; Pfeffer, 1981). Symbolic meanings attached to the actions of the organization form part of the firm’s external image and persona (Neu et al, 1996, p.5). This image, in turn, influences the perceptions of external parties and systems, helping to manage the corporation’s relationship with the external environment (Elsbach, 1994, p.57). Guthrie and Parker (1990, p.166) argued therefore, that accounting reports from a political economy perspective were social, political and economic documents designed to maintain the firm’s position within the their respective systems.

Another emphasis of Bourgeois political economy is the role of the

government. Proponents of the modern liberalism paradigm have long argued that the government plays an important part in protecting the interests of individuals and allowing them to achieve such goals (see for example Okun, 1970; Anderson, 1983; Shapiro, 1986). Clark (1991, p.119) argues that government intervention is particularly advantageous in the face of market failures such as imperfect competition, externalities, instability, inequality and socially undesirable outcomes.

Under Bourgeois political economy theory, it is argued that if the activities of the organization do and/or are perceived to impede on the wider community, then the government may intervene on their behalf to protect their individual rights (Gray et al, 1995a, p.49). Such potential intervention may therefore, jeopardize the self interests and goals of the enterprise (Guthrie and Parker, 1990, p.167). In order to circumvent any action by the government with some form of regulation, companies may release information as a strategy to protect their self-interests (Gray et al, 1996, p.47).

Simplistically expressed, Bourgeois political economy theory argues that enterprise's activities are shaped by social pressures and may face possible government regulation if such activities are undesirable to the overall interests of society at large. Companies respond to the social, political and economic demands by revealing documents designed to preserve their own self interests. Such researchers as Guthrie and Parker (1990), Gray et al (1996), Hackston and Milne (1995) and Neu et al (1996) proposed that VESAD information is a subset of those documents.

3.4Sub-theories of Bourgeois Political Economy

In adopting Bourgeois political economy theory as the underlying fundamental theoretical basis for this research project two sub-theories are also considered to be of relevance. Legitimacy and stakeholder theories, like political economy theory, focus on an organization-society nexus (Scott, 1991, p.52). Gray et al (1995a, pp.53-54) suggest that legitimacy and stakeholder theories are essentially derived from and provide valuable insights toward the bourgeois political economy perspective. They (p.52) go further to argue that these theories are overlapping perspectives being different “in levels of resolution of perception rather than arguments for and against competing theories as such”.

3.4.1

LEGITIMACY THEORY

Legitimacy theory is based upon the notion that business operates in society via a social construct where it agrees to perform various socially desired actions in return for approval of its objectives, other rewards and its ultimate survival (Guthrie and Parker, 1989, p.344). Dowling and Pfeffer espoused a common definition of legitimacy in respect to an organization (1975, p.2) :-

...a condition or status that exists when an entity's value system is congruent with the value system of the larger social system of which the entity is a part. When a disparity actual or potential, exists between the two value systems, there is threat to the entity's legitimacy.

Gray et al (1996, p.46) state further that under this theory, “organizations can only continue to exist if the society in which they are based perceive the organization to be a value system which is commensurate with the society's own value system”.

Social disclosures represent one of the methods that firms can use to legitimize the activities to society, plus as a process to alter their (society's) perception (Hogner, 1982, p.248). This can be done either directly by addressing public and/or legislative concerns or indirectly by projecting an image of the company as socially aware (Guthrie and Parker, 1990, p.172). The desired effect in either case is to reduce what Miles (1987, p.48) refers to as the 'exposure' of the company to the social and political environment (Patten, 1991, p.298). Finally, because social legitimacy is an alleged function of public policy processes, it can be argued that the greater the likelihood of adverse shifts in public policy, the greater the need to attempt to influence the process through social disclosure (Patten, 1992, p.472).

Lindholm (1983, pp.20-21) summarized organizational legitimacy in the following terms :-

- Legitimacy is not synonymous with economic success or legality;
- Legitimacy is determined to exist when the organization's goals, output, and methods of operation are in conformance with societal norms and values;
- Legitimacy challenges are related to the size of the organization and to the amount of social and political support it receives with the more visible being most likely to be challenged; and
- Legitimacy challenges may involve legal, political and social sanctions.

Lindholm (1994) then identified four strategies that a corporation may adopt in seeking legitimization; all are defined in Table 3.1.

Table 3. 1: Lindbolm’s Strategies for Legitimization of Organizations

Strategy Defined	Purpose of Strategy	Example of How Strategy Can Be Applied Using VESAD Information
To educate and inform its “relevant public” about (actual) changes in the corporation’s performance and activities	Developed in response to the recognition that the “legitimacy gap” arose from the actual failure of performance by the corporation	The corporation may have failed in pollution controls in the past. Social disclosure of information pertaining to this theme may be later released to inform the relevant public to changes and implementation of policy and action
To change the perceptions of the relevant publics – but not change its actual behaviour	In response to the belief that the legitimacy gap has arisen from a misconception toward the entity of the relevant public	The reporting entity may be perceived as having inadequate pollution control. Information may be released to correct such a misconception
The company may seek to alter external expectations of its performance	Such a strategy would be chosen if the organization perceives the relevant publics have unrealistic or incorrect expectations of its responsibilities	A company may be perceived by the public to have responsibility for pollution control. The company may decide to issue social information to demonstrate their level of control
To deflect attention from an issue of concern to other issues through for example an appeal to emotive symbols	This strategy would be chosen for the chief purpose of manipulation	An organization with problems associated with pollution performance may choose not to disclose social information pertaining to this, but release information illustrating involvement in environmental charities

Source: Lindbolm (1994)

The level of resolution for legitimacy theory is greater than that of political economy theory, focusing more on specific relationships of organizations and internal influences (O’Donovan, 1997, p.16).

Legitimacy theory, being derived from the Bourgeois political economy perspective, offers a number of important insights to assist in explaining the relationship of explanatory variables used in this study to VESAD practices. This theory therefore, is adopted within the overarching political economy

framework of this project to enable the evaluation and relevance of the associations between some independent variables to the dependent factor.

3.4.2

STAKEHOLDER THEORY

Stakeholder theory concentrates upon defining factors influencing the continued existence of corporations. Gray et al (1995a, p.53) states that stakeholder theory is “explicitly bourgeois in that the world is seen from the perspective of the management of the organization who are concerned strategically with the continued success of the company”. This latter theory narrows the extent of focus still further, positing that management require support or approval of stakeholders for continued survival (O’Donovan, 1997, p.16). Roberts (1992, p.597) states that the more influential the stakeholders are, the more the firm will respond to specific stakeholder needs. Thus corporations identify stakeholders and their importance to organizations, that then dictates how and what information is released (Gray et al, 1995a, p.53). Environmental and social disclosures may thus form an element of this communication between the company and its stakeholders (O’Donovan, 1997, p.16).

According to Freeman (1983, p.32) the actual word ‘stakeholder’ first appeared in the management literature in an internal memorandum at the Stanford Research Institute in 1963. Adjusting the original definition for stakeholder, Freeman (1984, p.2) stated it meant “any group or individual who can affect or is affected by the achievement of the firm’s objectives.”

Stakeholders of the firm include shareholders, creditors, employees, customers, suppliers, public interest groups and governmental bodies (Roberts, 1992, p.597).

Ullman (1985) presented a three-part model to explain correlations between environmental and social disclosures and social and economic performance.

The major tenets of this framework are shown in Table 3.2.

Table 3. 2: Three Dimensions of Ullman’s (1985) Model

Term for Dimension	General Explanation	Impact of Dimension
Stakeholder Power	Is a function of the stakeholders’ degree of control over resources required by the corporation?	The more critical the stakeholder resources are to the continued viability and success of the corporation, the greater the expectation that stakeholder demands will be addressed. If social responsibility is viewed as an effective management strategy for dealing with stakeholders, a positive relationship between stakeholder and social performance and social disclosure is expected.
Strategic Posture	Describes the mode of response of a company’s key decision makers concerning social demands.	The more active the strategic posture the greater the expected social responsibility activities and disclosures.
Economic Performance	Refers to the organization’s past and present economic performance.	Economic performance directly affects the financial capability of organizations to institute socially responsible programs. Therefore, given certain levels of stakeholder power and strategic posture, the better the economic performance of a company, the greater its social responsibility activity and disclosures.

Empirical research into VESAD practices applying stakeholder theory has been limited. Roberts (1992) used measures of stakeholder power, strategic posture toward social responsibility and economic performance to predict cross-sectional variations in one activity - VESAD information. His (1992) research concluded that the views, needs and wants of various stakeholders do manifest themselves in increased environmental and social disclosures in corporate annual reports (see also O’Donovan, 1997, p.16).

Stakeholder theory is considered a highly relevant theory to be utilized in this research study. It encompasses the organization-society view of the role of VESAD in which this project is attempting to capture. Furthermore, it is a derivative of the political economy theory and assists in providing further insights into the influence of factors that may effect VESAD practices in the Asia-Pacific region.

3.5 Conceptual and Methodological Review

Like any theoretical frameworks, modern political economy theory is not free from conceptual and methodological criticisms. Proponents of modern political economy theory however, strongly defend this framework as it provides a robust and rigorous explanation of the influence of external factors on practices of organizations. Gamble (1995, p.516) stated that as one of the oldest approaches in social science research, political economy theory has been rediscovered and redefined many times. He (pp. 516-517) goes further to argue that modern political economy theory has a very diverse application spanning several disciplines and many different literatures.

An endearing feature of the modern liberalism perspective of political economy theory is “its flexibility and resiliency” (Clark, 1991, p.87). This characteristic however, has lead to criticisms of this perspective. Clark (1991, p.100) states that “because it encompasses values taken from conflicting ideologies...[it] lacks a clear and coherent vision of the public interest and therefore, possesses no firm criterion by which to assess the performance of

either the market or the government”. Using Figure 2.2 as a reference, some authors (see for example Arnold, 1990; Heilbroner, 1980; Shand, 1989) have questioned modern liberalism theories suggesting their inadequacy in resolving effectively the dilemma between one pursuing their own self interests whilst maintaining equality across the community. In specific reference to the Bourgeois strand of political economy theory, Arnold (1990, pp.179-180) argues that this viewpoint fails to take in the underlying factors that result in the development of self-interests of various institutions within the system. That is, the Bourgeois political economy takes such things as given. This point is illustrated by Gray et al (1995a, p.53) stating “the bourgeois perception is exercised by relationships between the interest groups of pluralism without explicit recognition of the way in which the forces of the system (capitalism) construct the self-interests as group interests”.

It is beyond the scope of this study to resolve the dilemma facing the modern liberalism (and Bourgeois) political economy between equality of the many and self-interests of each individual. Furthermore it is acknowledged that in adopting this viewpoint, ideals such as the role of the state and distribution of power must be accepted as given, thus limiting the degree of resolution. Nonetheless proponents of modern liberalism and related theories of political economy under this perspective argue however, that it still remains a valid and appropriate approach to dealing with an extremely complex and diverse area (see for example Shapiro, 1986; Rosenblum, 1989). Gray et al (1995a, p.53) argue that the Bourgeois political economy point of view is merely a different way of looking at the same issues from another level of resolution. Lippit

(1996, p.5) indicates that other perspectives of political economy theory is too narrow. He (p.5) states for example that the classical liberalism position centred on maximizing one's self interests fails to take into consideration broader concerns such as the impact of institutional structures (see also Neu, 1992; Mangos and Lewis, 1995; Kosnick, 1987). Conversely the radical approach neglects to fully address issues related to the real world (Lippert, 1996, p.5).

The central focus of this study however, is to examine the influence and interaction of a wide spectrum of variables. This requires a broad-based point of view as offered by the modern liberalism perspective. The loss of possible explanations from using a narrower theoretical strand with a higher level of resolution is therefore, deemed to be minimal and largely irrelevant in the context of the objectives of this study. The willingness of the modern liberalism perspective to consider the wider issues neglected by other viewpoints, enables it to provide a far richer theoretical framework for interpreting economic reality (Cook, 1991, p.101).

Much of the methodological criticism of political economy theory stems from the historical period during which attempts were made to reconstitute the two separate disciplines of economics and political science (see for example Bowles and Edwards, 1990; Gamble, 1995). Banks and Hanushek (1995, p.3) state that such interdisciplinary differences lead to ineffective adaptation of methodological approaches. Caporaso and Levine (1992, p.31) argue that to overcome these idiosyncrasies between disciplines, the emphasis should be on

the analytical tools founded in economics. Gamble (1995, p.517) says that economic analytical techniques offer “the kind of precision and rigour which political science has offered in the past”.

It is acknowledged that the research methods applied in relation to political economy research are still within their infancy. This therefore, provides some limitations to the depth of analysis that can be applied in this study. Through careful selection of relevant proxies, procedures and techniques, the impact of such limitations will be minimal. The broader standpoint of modern liberalism political economy and its related theories allows for the adoption of the more accepted methods from economics thus giving it a relevant methodological foundation. It is felt therefore, that despite questions regarding methodology, application of economic based research techniques and methods within a Bourgeois political economy framework is suitable for this study.

Empirical research using political economy theory in relation to VESAD practices has been limited (see for example Guthrie and Parker, 1990; Gray et al, 1995a). Guthrie and Parker (1990, p.173) concluded that their empirical findings support the Bourgeois political economy perspective as a theoretical basis for explaining VESAD practices. Studies applying legitimacy theory however, have received some attention from empirical researchers (see for example Patten, 1991, 1992, 1997; O'Donovan, 1997; Guthrie and Parker, 1989; Hogner, 1982). Research adopting stakeholder theory is still largely developmental, though positive results have been noted (see for example Roberts, 1992).

Despite some conceptual and methodological concerns toward political economy theory and limited empirical research, it is felt this perspective offers valuable theoretical insights into VESAD practices. It draws upon a wider view of disciplines in order to identify and explain the interactions of possible factors that may influence organizational decisions to disclose VESAD details. This theory therefore, seeks to introduce ‘wider, systematic factors’ into the interpretation and explanation of VESAD issues. Gray et al (1996, p.47) argue that in adopting a political economy theoretical perspective on VESAD “one is lowering the resolution to widen the focus of analysis... explicitly attempting to introduce wider, systematic factors into the interpretation and explanation of the CSR [*VESAD*] phenomenon”.

3.6 Summary

This chapter has provided an in-depth analysis of the modern liberalism perspective with an emphasis on one of the theories within this paradigm termed Bourgeois political economy that ultimately forms the underlying theoretical foundation for this research study. Bourgeois political economy theory argues that organizations will attempt to protect their own self-interests through the release of documents, of which VESAD forms a subsection (see for example Gray et al, 1996). These documents are considered to be social, political and economic tools designed to maintain the firm’s position within the respective systems (Guthrie and Parker, 1990, p.167). Enterprises are viewed to provide such information in response to social pressure and/or potential government regulation. Two sub-theories of the Bourgeois political economy approach were also scrutinized in this chapter. Conceptual and

methodological criticisms of political economy theory in general and more specifically the modern liberalism and Bourgeois perspectives were reviewed. Having developed the relevant theoretical framework to be used in this study, the next chapter analyses the extant literature related to VESAD practices.

CHAPTER FOUR

ENVIRONMENTAL AND SOCIAL ACCOUNTING DISCLOSURES - LITERATURE REVIEW

4.1Overview

Mathews (1997, p.500), from an extensive historical review of the literature pertaining to environmental and social accounting, suggested that between different periods since 1971, distinguishable trends can be noted in respect to this phenomenon. Neu et al (1996, p.3) classified empirical VESAD research into three categories. These groupings are studies seeking associations between VESAD practices and (1) a firm's actual social performance; (2) share market price of an entity; and (3) firm characteristics and external influences. This research study focuses on the third category. The literature review in this chapter outlines findings from past empirical research into VESAD practices that has examined factors at the organizational attribute, business environment and societal variable levels. Prior to discussing this past literature, a definition of VESAD is provided to effectively operationalize this phenomenon for the purpose of this study.

4.2Definition of VESAD

Voluntary disclosures are the focus of an increasing amount of attention by accounting researchers (Gray et al, 1995a, p.47). Meek, Roberts and Gray (1995, p.555) defined voluntary disclosures as those in excess of mandatory requirements. They (p.555) further stated these voluntary disclosures

represented free choices on the part of company management to provide accounting and other information deemed relevant to the needs of respective user groups. VESAD practices are considered to be but one subset of a broad spectrum of possible voluntary disclosures. Very simply, VESAD practices encompass information released by organizations on their activities that have natural environmental and/or social related consequences that affect society at large. Other forms of voluntary disclosures, not classified under the VESAD umbrella, may cover such areas as financial overviews, future forecasts and capital market data or directors' details.

Mandatory environmental and social accounting disclosures are declarations companies are required by regulation to make in annual reports. Such provisions can be found in accounting standards, company codes and practices, financial market listing requirements and/or related legislative acts. In Hong Kong for example, all companies are required by the Companies' Code to disclose in the directors' reports of annual financial statements the total monetary value of donations (whether they be in the form of cash or assets) to charitable organizations. Abstract 4 "Disclosure of Accounting Policies for Restoration Obligations in the Extractive Industries", issued by the Urgent Issues Group in 1994, directed extractive industry firms in Australia to disclose in their annual reports the monetary value of restoration obligations these organizations were required to meet. Examples of mandatory requirements in Indonesia can be found in Pernyataan Standard Akuntansi Keuangan (PSAK: Statements of Financial Accounting Standards) Numbers 29 "Accounting for Oil and Gas", 32 "Accounting for Forestry" and 33

“Accounting for Mining”. In the case of oil and gas for instance, Indonesian firms must disclose information related to the costs incurred from any clean-up operations.

Past research has applied a number of interchangeable terms to describe the action of corporations releasing information related to environmental and social accounting issues (Guthrie and Parker, 1989, p.343). Some such terms are ‘corporate social reporting’, ‘corporate social accounting’, ‘social responsibility accounting’, and ‘social disclosure’ (Parker, 1986, p.68). Narrative discussion related to each of the aforementioned terms has not drawn any serious distinction between them. Each label appears to describe the same point, that being the disclosure of environmental and social information.

Unlike the labels used to encompass environmental and social forms of disclosure, definitions of these practices have offered some variation. Essentially, the distinguishing feature between such definitions has been the theoretical perspective adopted in operationalizing this phenomenon. Gray et al (1995a, p.48) stated that from the literature two distinctive approaches have been applied to research of environmental and social accounting disclosures. The first form centred on such disclosures being an “addendum to conventional accounting activity and researched with the same assumptions and preconceptions which inform much of the mainstream (conventional) accounting research” (Gray et al, 1995a, p.48). Gray, Owen and Adams (1996, p.3) list four characteristic features of conventional (mainstream) accounting :

(1) the financial description; (2) specified (priced) economic events; (3) defined organizations or accounting entities; and (4) provision of information for specified users of that information. They (p.3) claim that this is a “narrow image of all possible interactions between the ‘world’ and the organization”.

The second perspective of VESAD challenges the initial perspective by going beyond conventional accounting placing it “at the heart of examination of the role of information in organization-society dialogue” (Gray et al, 1995a, p.48). According to Gray et al (1996, pp.3-4) environmental and social accounting can be seen as a combination of the following :-

- (1) accounting for different things (that is other than accounting strictly for economic events);
- (2) accounting in different media (that is other than accounting in strictly financial terms);
- (3) accounting to different individuals or groups (that is not necessarily only accounting to the providers of finance); and
- (4) accounting for different purposes (that is not necessarily accounting only to enable the making of decisions whose success would be judged in financial or even only cash flow terms).

This latter perspective of VESAD practices is wider than the conventional view (Gray et al, 1995a, p.48) and is adopted for the purposes of this study. Strong support for this broader approach is found in the recent extant literature (see for example, AlNajjar, 1995, 1996; Neu et al, 1996; Hackston and Milne, 1995). Gray et al (1995a, p.48) further noted that this approach has provided the major advances in understanding of this phenomenon over the past years.

Gray, Owen and Maunders (1987) provide a leading definition of purpose of environmental and social accounting disclosures under this second approach.

They (p.9) stated from an accountability standpoint that the environmental and social accounting disclosures are the :-

...process of communicating the social and environmental effects of organizations' economic actions to particular interest groups within society and to society at large. As such, it involves extending the accountability of organizations (particularly companies), beyond the traditional role of providing a financial account of capital, in particular, shareholders. Such an extension is predicted upon the assumption that companies do have wider responsibilities than simply to make money to their shareholders.

And by Mathews (1993, p.64) as :

Voluntary disclosures of information, both qualitative and quantitative made by organizations to inform or influence a range of audiences. The quantitative disclosures may be in financial or non-financial terms.

Mathews and Perera (1995, p.364) provided a broad definition stating that :

At the very least, social accounting means an extension of disclosure into non-traditional areas such as providing information about employees, products, community service and the prevention and reduction of pollution. However, the term 'social accounting' is also used to describe a comprehensive form of accounting which takes into account externalities.

The term VESAD, as used in this study, is undertaken to draw distinction between previous terms that have not separated mandatory and voluntary disclosures. Furthermore, recent literature has begun to emphasize the notion of environmental and social accounting rather than under the collective banners just using social accounting to describe this phenomenon (Lehman and Owen, 1995, p.91). VESAD therefore, was also adapted to reflect this trend.

The operationalized definition of VESAD in this study adopts a number of sentiments of the views expressed in previous meanings. The major notion embraced is an emphasis on the perception that environmental and social accounting disclosures develop within an organization-society relationship. Despite such similarities, the operationalized definition of this term as utilized in this study is considered to be quite distinct. Thus, for this study, VESAD practices are operationalized in the following definition :

Voluntary environmental and social accounting disclosures (VESAD) is defined as the information voluntarily communicated by organizations about their activities, programs and application of resources which affect the relevant public at large to meet social, political and economic demands. Disclosure of such information is facilitated to assist in the preservation of the existence of the entity and prevent possible future regulation of its disclosure practices.

The distinguishing feature of the definition of VESAD outlined above is the emphasis it places on the theoretical perspective underlying this study (that is Bourgeois political economy). VESAD is placed with an organization-society relationship consistent with recent views supporting this approach (see Gray et al, 1995a for a full discussion). The broad expansive perspective utilized in the definition allows for the exploration and examination of the relationship between the activities of corporations and their managers and the wider socio-political and economic systems within which these organizations operate.

Further in accordance with this theoretical framework, the VESAD definition implies that firms are motivated to supply VESAD information in response to such sociopolitical and economic pressures to preserve the survival of the entity. This aspect of the definition differs from others (constructed by those

such as Gray et al (1987, p.9)) as it details specific motivations for why organizations may release VESAD information.

This definition further recognizes the wide influences and pressures that can be brought to bear upon companies through use of the term 'relevant publics'. Using the doctrine of Lindholm (1994), the phrase 'relevant publics' attempts to encompass a broader spectrum of society other than users who may have an interest in the activities of the enterprise. In adopting the wording 'relevant publics', the VESAD definition from this study attempts to imply that firms may not necessarily be motivated to release VESAD details when their activities affect user groups as applied in other definitions. Rather, companies will respond in accordance to wider social, political and economic environmental influences.

4.3 Determinants of VESAD Practices

From the definition of VESAD described in Section 4.2, it implies that this phenomenon may be explained by the interaction of a number of broad sociopolitical and economic variables. Thus this study attempts to consider the influence of a number of different social, political and economic factors that may assist to explain variations in VESAD practices across national and regional boundaries.

From a substantial review of the literature, Gray et al (1995a, pp.49-50) argued tentative conclusions could be reached in respect to four determinants of environmental and social accounting disclosures. Utilizing the classification

scheme of Thomas (1991), these four influential factors (shown in italics) are outlined as:-

(a) Organizational Attributes

- *Organizational Size*

- *Economic Performance*

(b) Business Environment

- *Industry Type*

(c) Societal Variables

- *Country of Origin*

This study examined all four of the determinants described by Gray et al (1995a) but expands on the number of factors categorized in Thomas' (1991) schema as being of a societal variable origin. Other elements at the remaining two levels of Thomas' (1991) classification model were not included as the theoretical and empirical support for them were inconclusive. Organizational size, economic performance and industry type were all utilized in this study as a means of comparison with other research encompassing VESAD issues that looked at the explanatory power of these three factors. The influence of country of origin is determined through the examination of variations in VESAD practices by companies located in the seven nations included in this survey. Social, political and economic variables which vary across national and regional boundaries (and which are therefore, societal variables by definition) are then examined to identify their ability to explain any noted variations. These additional societal variables are outlined in greater depth in Chapter Five. Literature reviews of the four determinants as identified by Gray et al (1995a) are described in greater detail below.

Researchers into VESAD practices have investigated variables at the organizational attribute level quite regularly. Two key organizational attributes which have received considerable attention are organizational size and economic performance (see for example Patten, 1991, 1992; Hackston and Milne, 1995; AlNajjar, 1995, 1996; Cowan et al, 1987).

4.3.1.1

ORGANIZATIONAL SIZE

A positive association between the size of a corporation and the amount of environmental and social accounting disclosures has consistently been established by empirical research (see for example Andrews, Gul, Guthrie and Teoh, 1989; Belkaoui and Karpik, 1989; Cowan et al, 1987; Hackston and Milne, 1995; Neu et al, 1996). The majority of such studies however, have focused on industrialized nations (Gray et al, 1996, p.142). Very little research has been conducted in emerging markets and amongst Asia-Pacific nations.

Cowan et al (1987, p.113) suggest that the reason for the positive relationship between organizational size and VESAD practices may be that “larger companies tend to receive more attention from the general public and, therefore, to be under greater pressure to exhibit social responsibility”. Apart from just additional social pressure due to their size, bigger firms will possibly face greater political interventions. This point has been illustrated in the political science literature that underpins some of the perceptions of political economy theory. Andres (1985, p.218) found that the formation of corporate

political-action committees by U.S. companies were significantly associated with size. In explaining this relationship, he (p.216) noted “just being big creates political problems for a company” and “the bigger the firm the greater the perceived threat”.

The perception that increased size of the organization will generate increased public pressures on the entity is also consistent with the views of legitimacy theory (see for example Patten, 1991, 1992, 1995; Hackston and Milne, 1995). Patten (1991, p.303) states that this additional public pressure threatens the firm’s future prospects and survival. He (1991, p.298) further argued that larger firms respond to actual or potential criticism by improving their social responsibility activities which are then reported. Companies may also respond by attempting to project an image of being socially aware through disclosures to reduce or deflect further criticism (Patten, 1991, p.298).

4.3.1.2

ECONOMIC PERFORMANCE

Conflicting views exist between stakeholder and legitimacy theories on the relevance of economic performance (also commonly referred to as profitability) on the amount of environmental and social accounting information disclosed by companies. Stakeholder theory suggests that the environmental and social activities and disclosures of an enterprise are dependent in part on the financial capabilities of the organization (Roberts, 1992, p.599). He (p.599) went further to suggest that greater economic performance will affect stakeholders’ perceptions that the firm has a higher

capacity to allocate finance and resources to conduct environmental and social accounting programs and will therefore, demand increased information on their activities. This theory suggests a company is most likely to put social responsibility as a secondary consideration behind economic demands, thus the perception that such programs will most likely be enacted when performance is high (Roberts, 1992, p.599).

Contrary to stakeholder theory, legitimacy proponents express the view that environmental and social accounting disclosures are a function of social pressures and not economic (see for example Patten, 1991, 1992, 1995; O'Donovan, 1997; Guthrie and Parker, 1989). That is, corporate social disclosures are a social construct in which corporations activities are monitored through the public-policy arena rather than the market place (Guthrie and Parker, 1989, p.343). Thus economic performance is considered to be irrelevant in determining the amount of such disclosures (Patten, 1991, p.303).

Economic performance is included in this study despite the contrasting views of stakeholder and legitimacy theories due to the overriding Bourgeois political economy theoretical framework being adopted in this study. This theoretical viewpoint encompasses a broad perspective that considers the impact of economic viability and activities of an enterprise on the relevant publics. Thus it is argued under this standpoint that as the economic performance of a firm increases then the relevant public will perceive that this enterprise has greater flexibility to partake in social activities. Furthermore

firms showing increased economic viability may become more politically visible. Managers therefore, in response to greater social and political pressure, will, according to the Bourgeois political economy perspective provide greater VESAD data to avoid any backlash from the relevant public and political regulation.

Empirical research into the association between economic performance and the amount of environmental and social accounting information disclosed has also provided mixed findings. Table 4.1 summarizes the results of major studies considering this relationship since the mid-1970's.

Table 4. 1: Summary of Economic Performance Studies

Authors	Findings
Belkaoui (1976)	Positive association
Fry and Hock (1976)	No association
Preston (1978)	Weak, positive association
Spicer (1978)	Positive association but size related
Bowman (1978)	Positive association
Ingram (1978)	Positive association subject to industry
Abbott and Monsen (1979)	No association
Anderson and Frankle (1980)	Positive association
Chen and Metcalf (1980)	Positive association but size related
Freedman and Jaggi (1982)	No association
Shane and Spicer (1983)	Positive association
Cochran and Wood (1984)	Positive but weak association
Freedman and Jaggi (1986)	No association
McGuire, Sundgren and Schneeweis (1988)	Positive association
Patten (1991)	No association
Roberts (1992)	Positive association
Hackston and Milne (1995)	No association
AlNajjar (1995)	Positive association

Roberts (1992, p.610) reported that corporations exhibiting relatively strong economic performance in prior periods, were more likely to have high levels of social disclosure. This result provided some support for the premise in stakeholder theory concerning the influence of economic performance.

Some empirical studies (see for example Aupperle, 1984; Beresford and Cowan, 1979; Cowan et al, 1987; Freedman and Jaggi, 1988; Roberts, 1990; Singh and Ahuja, 1983; Zeghal and Ahmed, 1990; Hackston and Milne, 1995; Patten, 1991, 1992) have noted that organizations in given industries (especially those which are highly sensitive³ by nature) were observed to provide significantly greater amounts of environmental and social accounting disclosures than those entities in other industry classifications. These studies conclude that industry type is a pertinent variable for explaining the variations in the amount of disclosure on these issues between organizations (AlNajjar, 1996, p.6).

Legitimacy theory offers a strong theoretical foundation to explain the influence of industry type on disclosure of environmental and social accounting issues. With this theory, industries can be seen by society have a given profile. Those industries that are thought have a high profile will be subject to greater public scrutiny and pressure on their legitimacy (Patten, 1991, p.303). Companies within this echelon will therefore, respond by providing more environmental and social accounting details than low profile entities, to appease public pressure and avoid possible additional regulation (Hackston and Milne, 1995, p.8).

³ Industries that are highly sensitive are described as those that appear to have a direct influence on the appearance, well-being, activities and/or safety of the natural environment and relevant publics at large. Such sensitive industries are oil, mining, petroleum, chemical and transport. Mining is considered sensitive for instance because of its potential affect on physical look of the environment and possible health problems to surrounding communities via contamination of the water and land.

The past literature has classified a number of industries within the high profile category. Dierkes and Preston (1977, pp.4-5) suggested extractive industries were subject to greater social scrutiny. Patten (1991, p.303) included petroleum, chemical and forest and paper product industries in a high-profile grouping. Entities in the automobile, airline and oil industries were all considered by Roberts (1992, p.601) to be very sensitive to public pressure. Finally, Hackston and Milne (1995, p.17) included all the above industries into the high profile classification in addition to agriculture and liquor and tobacco.

The effect of industry type on VESAD practices in the Asia-Pacific region has received little empirical attention. Strong theoretical support and past empirical findings (though in other countries from other regions), however, support the use of this variable in this study.

4.3.3

SOCIETAL VARIABLES - COUNTRY OF ORIGIN

The first classification category defined by Thomas (1991) was societal variables. This section provides a literature review on one such factor, the country of origin. Studies into environmental and social accounting disclosure practices have noted that the country in which an organization is reporting, and the domicile country of parent entity appear to significantly influence this phenomenon (see for example Andrews et al, 1989; Guthrie and Parker, 1990; Roberts, 1990; Teoh and Thong, 1984). Very few detailed international comparative surveys of VESAD practices have been undertaken (Gray et al, 1996, p.142). The importance of country of origin to environmental and social

accounting disclosure practices has largely been inferred through direct comparison of descriptive data on companies operating in different countries from nation-specific research projects. Very limited rigorous statistical tests have been conducted to examine country of origin influences.

The majority of studies on VESAD practices have generally been of companies in Anglo-American (United States, Canada, United Kingdom, Australia and New Zealand) and European industrialized nations (Andrew et al, 1989, p.371). Studies of VESAD in Asian nations, such as Yamagami and Kokubu's (1991) research in Japan, have only recently been undertaken. Gray et al, (1996, p.142) provided three explanations for the primary focus on industrialized countries. First, it in part is attributed to the national location and orientation of researchers who in the main come from the industrialized nations. Second, there appears an underlying perception that environmental and social accounting disclosures are more important to companies in these countries. Finally, it is perceived that the companies from developed nations would provide more extensive information on environmental and social accounting disclosure matters than their counterparts in emerging economies.

International comparative studies (see for example Roberts, 1991; Adams, Hill and Roberts, 1995; UNTEC, 1992) have generally been descriptive in nature. Very few attempts (see for example Guthrie and Parker, 1990) have been made to identify the factors to explain across national boundaries. Also there has been a lack of rigorous statistical tests conducted to establish if

differences observed amongst the descriptive results were significant. Empirical research of potential explanatory variables has been minimal.

Guthrie and Parker (1990) undertook one of the most detailed international comparative studies of VESAD practices that in part incorporated the above criticisms. Their study surveyed the practices of companies in three different industrialized nations; namely the United States, United Kingdom and Australia. A major contribution of the Guthrie and Parker (1990) study was that it empirically demonstrated statistically significant differences in VESAD practices across national boundaries in terms of theme, location and form of disclosure in the annual reports by companies. A further important contribution of their study was the application of both a user utility and political economy perspective in an attempt to explain the differences observed. From their deductive reasoning, Guthrie and Parker (1990, p.171) concluded that “a political economy theory of social disclosure is both viable and may contribute toward our understanding of observed developments in national reporting practices”.

Despite the significance of Guthrie and Parker’s (1990) research their findings are somewhat limited. First, they examined companies from nations with similar levels of economic development. Second, the nations examined are generally speaking of similar cultural compositions. Finally, each nation has similar institutional structures. Guthrie and Parker (1990, p.172) allude to the exploratory nature of their study saying “these deductions can only be viewed as preliminary inferences which await confirmation or refutation by further

empirical observation of social disclosure practices”. This research study has taken note of the limitation of the Guthrie and Parker (1990) paper and broadened its focus to take in these additional potential explanatory variables. A political economy perspective is applied in an attempt to explain the possible different practices of companies operating across nations with more diverse cultural, institutional and economic conditions than in the Guthrie and Parker (1990) study.

4.3.4

INTERNATIONAL TRENDS

A review of leading nation-specific studies and international comparative research indicates variations in environmental and social accounting disclosure practices across national boundaries. Tables 4.2 (United States, Canada, United Kingdom and Japan), 4.3 (Australia, New Zealand and South-East Asia) and 4.4 (Europe) summarize the key details from these studies.

Table 4. 2: Environmental and Social Accounting Disclosure Studies - USA, Canada, UK and Japan

Country	United States	United States	United States	Canada	United Kingdom	United Kingdom	United Kingdom	Japan
Survey	Ernst and Ernst (1978)	Guthrie and Parker (1990)	AINajjar (1996)	KPMG (1993)	Guthrie and Parker (1990)	Gray et al ⁴ (1995a)	Gray et al (1995a)	Yamagami and Kokubu (1991)
Date (Year)	1977	1983	1990	1993 ^a	1983	1983 ^b	1991 ^b	1985 ^c
Sample Size	500	50	451	98	50	100	100	49
Sample Criteria	Fortune 500 Companies	Largest Listed Companies	Fortune 500 Companies	In Largest 100 Companies	Largest Listed Companies	Largest Listed Companies	Largest Listed Companies	Largest Listed Companies
% Disclosing:								
Environment	50	53	36	68	14	7	75	11
Energy	53	43	N/A	N/A	2	1	15	N/A
Human Resources and Safety	42	75	56	N/A	98	65	100	35
Products and Customers	29	35	29	N/A	10	4	10	83
Community	29	63	51	N/A	96	10	62	28
Others ^d	22	0	N/A	N/A	0	5	15	67
Overall	90	85	81	N/A	98	72	100	N/A

a Information has been estimated off bar charts. b Information has been estimated off line charts.

c Information is the average of disclosure in three different publications : (1) English version reports; (2) Public relations document; and (3) Operating report.

d Other includes information considered to be environmental and social in nature but does not fit the definitions of the other themes.

Additional sources : Gray et al (1996, p.148); Hackston and Milne (1995, p.36). N/A = Not Available - Study did not consider the issue.

⁴ The study by Gray et al (1995a) was a longitudinal research paper reporting data for a twelve-year span beginning in 1979. Information for the years 1983 and 1990 were included in this table to illustrate changes in VESAD practices in the United Kingdom across time.

Table 4. 3: Environmental and Social Accounting Disclosure Studies - Australia, New Zealand and South-East Asia

Country	Australia	Australia	Australia	Australia	Australia	New Zealand	New Zealand	New Zealand	Malaysia	Singapore and Malaysia
Survey	Trotman (1979)	Trotman (1979)	Trotman (1979)	Pang (1982)	Guthrie and Parker (1990)	Roberston (1978)	Ng (1985)	Hackston and Milne (1995)	Teoh and Thong (1984)	Andrew et al (1989)
Date (Year)	1967	1972	1977	1980	1983	1975-76	1985	1992	1980	1983
Sample Size	100	100	100	100	50	100	32	47	100	119
Sample Criteria	Largest Companies	Largest Companies	Largest Companies	70 Largest Companies and 30 Random	Largest Companies	Largest Companies	Largest Companies	Largest Companies	40 Public 60 Private	Listed Companies
% Disclosing:										
Environment	6	18	35	19	21	17	13	23	10	2
Energy	1	0	10	12	4	3	88	6	N/A	N/A
Human Resources and Safety	17	30	43	61	93	50	28	79	26	22
Products and Customers	3	3	4	18	0	3	3	41	12	5
Community	5	19	23	23	29	8	19	30	9	3
Others ^d	5	13	34	20	18	2	3	19	N/A	N/A
Overall	26	48	69	79	56	54	100	83	29	26

^d Other includes information considered to be environmental and social in nature but does not fit the definitions of the other themes.

Additional sources : Gray et al (1996, p.157); Hackston and Milne (1995, p.36).

N/A = Not Available - Study did not consider the issue.

Table 4. 4: Environmental and Social Accounting Disclosure Studies - Europe

Country	Germany Roberts (1991)	Germany Adams et al (1995)	Sweden Roberts (1991)	Sweden Adams et al (1995)	France Roberts (1991)	France Adams et al (1995)	Switzerland Roberts (1991)	Switzerland Adams et al (1995)	Netherlands Roberts (1991)	Netherlands Adams et al (1995)
Survey										
Date (Year)	1988/1989	1992	1988/1989	1992	1988/1989	1992	1988/1989	1992	1988/1989	1992
Sample Size	40	25	15	25	25	25	15	25	15	25
Sample Criteria	Largest Companies	Largest Companies	Largest Companies	Largest Companies	Largest Companies	Largest Companies	Largest Companies	Largest Companies	Largest Companies	Largest Companies
% Disclosing:										
Environment	80	100	80	88	52	56	60	76	60	64
Energy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Human Resources and Safety	95	100	60	100	76	100	60	100	53	100
Products and Customers	N/A	72	N/A	72	N/A	56	N/A	60	N/A	56
Community	N/A	40	N/A	0	N/A	24	N/A	35	N/A	16
Others ^d	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Overall	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

^d Other includes information considered to be environmental and social in nature but does not fit the definitions of the other themes.

Additional source : Gray et al (1996, pp.172, 191, 205).

N/A = Not Available - Study did not consider the issue.

Based on the descriptive information presented in Tables 4.2, 4.3 and 4.4, the percentage of companies providing at least one piece of environmental and social accounting information had grown over time. For example in a series of studies over a ten-year period by Trotman (1979) on Australian companies the percentage rose from 26% to 69%.

Another striking feature of this upward growth in reporting trend is the shift in disclosure leadership from the United States to European countries. During the 1970's America appeared to lead the way in environmental and social accounting disclosures amongst industrialized nations. This early domination may be explained in part by emphasis of researchers in the United States to these issues (see for example Belkaoui, 1980; Chan, 1979; Estes, 1976; Johnson, 1979; Nikolai, Bazley and Brummett, 1979). By the late 1980's and early 1990's however, European studies were indicating that companies in these countries had overhauled their American counterparts. Gray et al (1995a, p.62) suggested that increases in environmental and social accounting disclosures (both mandatory and voluntary) of United Kingdom companies are possibly due to more intensive government pressure and activities directed toward these concerns. Similar arguments may be applied to upward trends in other European nations.

Studies of industrialized nations (that is United States, Canada, United Kingdom, Australia, New Zealand, Japan and those countries of Western Europe) shown in Table 4.2, 4.3 and 4.4, indicate the overall percentage of companies providing at least some environmental and social accounting

disclosures is greater than or near to 60% in most cases (in a number of cases greater than 80%). For the studies covering emerging economies (that is Singapore and Malaysia) the figure was less than 30%⁵.

Other studies of companies in emerging economies support the observation that the level of environmental and social accounting disclosure is greater in companies in industrialized nations. Abayo, Adams and Roberts (1993, p.154) in a study of Tanzanian companies concluded the annual reports of entities from emerging economies are likely to contain disclosures of a poorer quality, insufficient quantitative data and possible inaccuracies. In a survey of Polish companies Stepien (1994, pp.4-5) found that environmental issues were given a low priority in external reporting. A recent survey by the United Nations (1995) covered environmental reporting of transnational corporations in India, Malaysia and the Philippines. Their results showed that the quantity and quality of information reported was minimal and what little disclosure that did exist was often one-off statements linked to formal policy (United Nations, 1995, p.18).

4.3.4.1

THEMES OF VESAD

Overall, human resources and safety is the theme that appears to gain the highest degree of attention from companies irrespective of the nation in which they operate. The studies in Tables 4.2, 4.3 and 4.4 show that generally over

⁵ Results from this study found that the percentage of companies in Singapore and Malaysia providing at least one disclosure on environmental and social accounting issues was far higher than 30%.

40% of companies surveyed provided details on human resource and safety issues. The percentage of companies disclosing energy related issues is minimal in the majority of nations (being no greater than 12%) apart from the United States where surveys (see for example Ernst and Ernst, 1978; Guthrie and Parker, 1990) indicated a figure closer to 50%. The percentage of companies disclosing information on the remaining three themes clearly vary across national and regional boundaries according to the data in Tables 4.2, 4.3 and 4.4. For instance, in terms of environmental issues a greater percentage of companies in the United States and Europe provide environmental details (greater than 50%) compared to their counterparts in the Asia-Pacific (less than 35%).

4.3.4.2

AMOUNT OF DISCLOSURE

Another area of potential variation across national boundaries in environmental and social accounting disclosure practices pertains to the amount of information provided by companies. Table 4.5 illustrates the amount of information supplied in annual reports as found by several key studies.

Table 4. 5: Amount of Pages⁶ of VESAD in Annual Reports

	United States	United Kingdom	United Kingdom	United Kingdom	Australia	Australia	New Zealand
Study	Guthrie and Parker (1990)	Guthrie and Parker (1990)	Gray et al (1983)	Gray et al (1991)	Guthrie and Parker (1990)	Guthrie (1983)	Hackston and Milne (1995)
Amount in Pages	1.26	0.89	0.50	2.00	0.70	0.68	0.75

Source: Hackston and Milne (1995, p.21)

The results in Table 4.5 indicate that Australian and New Zealand companies provided fewer details in their annual reports than their counterparts in the United Kingdom and United States. Guthrie and Parker (1990, p.163) found significant differences between the average number of pages for companies in the United States, Australia and the United Kingdom.

Further evidence of the differing trends in the amount of disclosure by corporations can be seen when breaking the amount of disclosure down into subcategories. Table 4.6 summarizes a breakdown from two studies of the number of companies supplying the quantity of information in relevant subcategories.

Table 4. 6: Subcategories of the Amount of Disclosure

	Guthrie and Parker (1990)						Andrew et al (1989)	
	Australia (56)*		United Kingdom (98)		United States (85)		Singapore/Malaysia (31)	
No. of Pages	No. Companies	%	No. Companies	%	No. Companies	%	No. Companies	%
0.00 - 0.25	12	21	28	29	26	30	14	45
0.26 - 0.50	20	36	26	27	12	15	5	16
0.51 - 0.75	12	21	7	6	12	15	0	0
0.76 - 1.00	2	4	9	9	9	10	5	16
>1.00	10	18	28	29	26	30	7	23

* - Figures in parenthesis are the total number of companies providing at least one disclosure.

⁶ Measurement of VESAD issues may be calculated using the number of pages, sentences or words. Discussion on the potential differences in these measurement units is provided in Section 6.3.

Table 4.6 indicates that a higher percentage of Singapore/Malaysian entities reported between 0.00 and 0.25 pages of environmental and social accounting information than other countries. Conversely, the percentage of corporations supplying more than 1.00 page of detail was relatively the same. The spread of percentages of companies in Singapore and Malaysia in the different categories from the Andrew et al (1989) study suggests that the level of information supplied is either quite low or quite high. This trend was not replicated for entities in the Guthrie and Parker (1990) study for organizations in Australia, the United Kingdom and United States. A higher percentage reported between 0.51 - 0.75 pages of environmental and social accounting than in Singapore/Malaysia.

4.4 Summary

A review of nation-specific and the limited international comparative VESAD studies show clear variations across national and regional boundaries with respect to such features as the number of companies disclosing, the theme reported upon by firms and the quantity of information provided in annual reports by corporations. There is a clear need for more research in this area to determine if these variations are in fact significant and to identify factors that may explain any variations observed. An endeavour of this research study is to address these limitations in the literature by expanding the empirical observations in the Asia-Pacific region. Chapter Five begins this process with the identification of five additional forms of societal variables that may assist to explain variations across national boundaries in VESAD practices.

CHAPTER FIVE

IDENTIFICATION OF SOCIETAL VARIABLES

5.1Overview

The prior literature on environmental and social accounting disclosures suggests country of origin is an important determinant of these practices (see for example Guthrie and Parker, 1990; Roberts, 1991, 1992; Andrew et al, 1989). Discussion however, has failed to allude to other societal variables that may assist to explain these variations across international boundaries. This chapter reviews the international comparative (classification) literature to identify relevant societal variables, which are factors that may assist to explain variations across national and regional boundaries. These factors are then empirically tested.

5.2International Comparative Research - Classification Studies

Accounting objectives, standards, policies and techniques differ among various countries (Belkaoui, 1985, p.28). It is difficult to identify the patterns and influential factors involved which differentiate respective nations (see for example Mueller, 1967; Zeff, 1971; Radebaugh, 1975; Nair and Frank, 1980; Nobes, 1992). One prominent analytical method is to classify nations into zones of influence (Choi and Mueller, 1992, Chap. 2; Enthoven, 1980, p.76) based upon respective accounting practices and/or societal variables (Nobes,

1992, p.72). Two central methodologies, deductive and inductive have been applied in international classification studies.

5.2.1

LEADING DEDUCTIVE CLASSIFICATION STUDIES

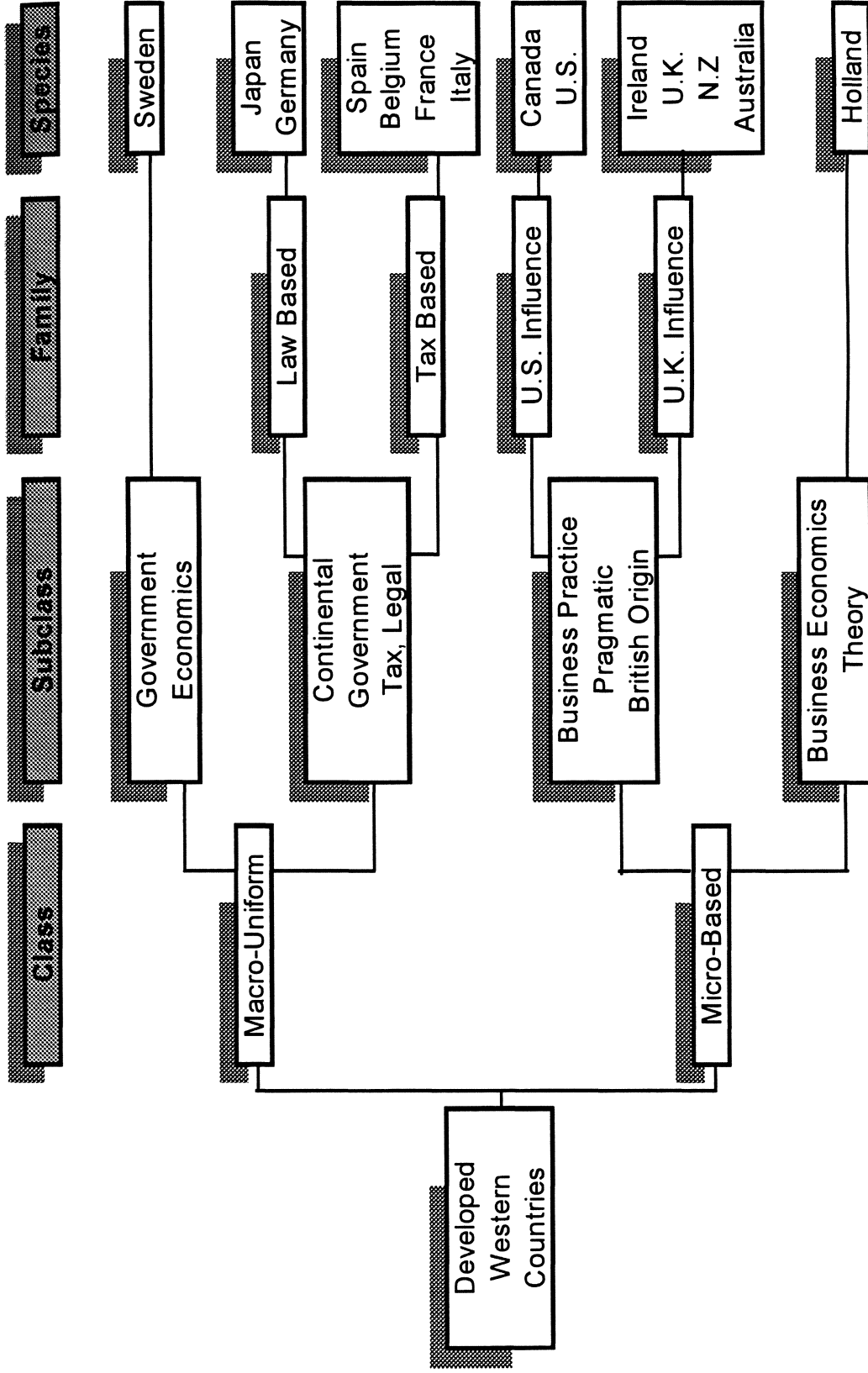
Roberts (1995, p.639) identified two variants associated with the deductive approach. The first variant relies upon extrinsic classifications of accounting; that is accounting in different countries is classified in terms of factors which influence the nature and practice of accounting in those nations (p.639). Mueller (1968) who produced a ten-group classification bases an example of this approach on business environments. The ten areas were as follows: -

- (1) United States/Canada/The Netherlands
- (2) British Commonwealth (excluding Canada)
- (3) Germany/Japan
- (4) Continental Europe (excluding Germany, The Netherlands, and Scandinavia)
- (5) Scandinavia
- (6) Israel/Mexico
- (7) South America
- (8) Developing nations of the Near and Far East
- (9) Africa (excluding South Africa)
- (10) Communist nations.

Based upon the classifications of Mueller (1968) it is likely that Australia, Singapore, Malaysia and Hong Kong would be contained in Group 2 and Thailand, Indonesia and the Philippines in Group 8.

The environmental work of Mueller (1968) was adapted and extended by Nobes (1983). The work of Nobes (1983) was based on a hypothetical classification of the evolutionary nature of measurement practices in developed Western nations (Radebaugh and Gray, 1997, p.68). Nobes (1983) developed his hierarchical scheme by distinguishing countries based on a number of factors. These factors included the political, legal, tax and economic systems. Nobes' (1983) classification scheme is shown in Figure 5.1.

Figure 5. 1: Nobes' (1983) Classification Scheme



Nobes (1984) empirically tested his classification scheme through judgement analysis of measurement and valuation practices in fourteen developed nations. He identified nine factors that were likely to predict which countries could be grouped together (Radebaugh and Gray, 1997, p.69). These factors are listed in Table 5.1.

Table 5. 1: Nobes' (1983) Differentiation of Accounting Systems

	<i>Differentiation Factor</i>
1	Type of users of the published accounts of the listed companies
2	Degree to which law or standards prescribe in detail and exclude judgement
3	Importance of tax rule in measurement
4	Conservatism/prudence (e.g. valuation of buildings, stocks, debtors)
5	Strictness of application of historic cost (in the historic cost accounts)
6	Susceptibility to replacement cost adjustments in main or supplementary accounts
7	Consolidation practices
8	Ability to be generous with provisions (as opposed to reserves) and to smooth income
9	Uniformity between companies in application of rules

Source: Radebaugh and Gray (1997, p.70).

Later empirical work by Douppnik and Salter (1995, p.198) provided broad support for the hierarchical classification scheme developed by Nobes (1983). From a database of information collected from a survey of accounting practices in 50 countries, Douppnik and Salter (1995) applied hierarchical cluster analysis. The broadest clusters formed from this analysis, termed 'micro-based' and 'macro-based' were "broadly consistent with the two classes of accounting system hypothesized by Nobes" (Douppnik and Salter, 1995, p.198). Of the countries included in this study, all but Indonesia were included in the Douppnik and Salter (1995) research. For the six relevant nations included, all but Thailand were grouped under the micro-based classification.

The second variant under the deductive approach is based on biological classification and its method of numerical taxonomy (Roberts, 1995, p.640). That is countries are clustered into groups based on a given factor and how it scores on a scale measuring that variable. Gray (1988, p.11) for example proposed “culture area classification in the context of combinations of accounting values”. Table 5.2 illustrates the area classifications generated by Hofstede (1988) using culture.

Table 5. 2: Gray’s (1988) Cultural Areas

<i>More Developed Latin</i>	<i>Less Developed Latin</i>	<i>More Developed Asian</i>	<i>Less Developed Asian</i>	<i>Anglo</i>
Belgium	Colombia	Japan	Indonesia	Australia
France	Ecuador		Pakistan	Canada
Argentina	Mexico		Taiwan	Ireland
Brazil	Venezuela		Thailand	New Zealand
Spain	Costa Rica		India	UK
Italy	Chile		Malaysia	USA
	Guatemala		Philippines	South Africa
	Panama			
	Peru			
	Portugal			
	Salvador			
	Uruguay			
<i>Germanic</i>	<i>Asian-Colonial</i>	<i>Nordic</i>	<i>Near Eastern</i>	<i>African</i>
Austria	Hong Kong	Denmark	Arab Countries	East Africa
Israel	Singapore	Finland	Greece	West Africa
Germany		Netherlands	Iran	
Switzerland		Norway	Turkey	
		Sweden	Yugoslavia	

Source: Gray (1988, p.6)

Countries examined in this thesis are outlined in bold.

Under Gray’s (1988) analysis, Singapore and Hong Kong are grouped together in Asian-Colonial; Australia is grouped separately in Anglo; and Malaysia classified along with Indonesia, Thailand and the Philippines in Less Developed Asian.

A second distinct approach to classification (inductive method) relies on intrinsic tests of divergence and resemblance; that is accounting in nations is classified in terms of the nature of accounting practices in those countries (Gray, S., 1988, p.2). A number of researchers (see for example da Costa et al, 1978b; Frank, 1979; Nair and Frank, 1980; Goodrich, 1982) have applied factor analysis to Price Waterhouse Index (PWI) data (1973, 1975, 1979) on accounting practices to produce clusters or groupings of countries. They classified countries based on measurement and disclosure issues (see Table 5.3).

Table 5. 3: Nair and Frank's (1980) Measurement and Disclosure Groupings

Measurement Groupings						
<i>Group 1</i>	<i>Group 2</i>	<i>Group 3</i>	<i>Group 4</i>	<i>Group 5</i>		
Australia	Argentina	Belgium	Bermuda	Chile		
Bahamas	Bolivia	Denmark	Canada			
Fiji	Brazil	France	Japan			
Iran	Colombia	West Germany	Mexico			
Jamaica	Ethiopia	Norway	Philippines			
Malaysia	Greece	Sweden	United States			
Netherlands	India	Switzerland	Venezuela			
New Zealand	Italy	Zaire				
Nicaragua	Pakistan					
Eire	Panama					
Rhodesia	Paraguay					
Singapore	Peru					
South Africa	Spain					
Trinidad	Uruguay					
United Kingdom						
Disclosure Groups						
<i>Group 1</i>	<i>Group 2</i>	<i>Group 3</i>	<i>Group 4</i>	<i>Group 5</i>	<i>Group 6</i>	<i>Group 7</i>
Belgium	Australia	Bahamas	Bermuda	Argentina	Denmark	Italy
Bolivia	Ethiopia	West Germany	Canada	India	Norway	Switzerland
Brazil	Fiji	Japan	Jamaica	Iran	Sweden	
Chile	Kenya	Mexico	Netherlands	Pakistan		
Colombia	Malaysia	Panama	Eire	Peru		
France	New Zealand	Philippines	Rhodesia			
Greece	Nigeria	United States	United Kingdom			
Paraguay	Singapore	Venezuela				
Spain	South Africa					
Uruguay	Trinidad					
Zaire						

Source: Nair and Frank (1980, pp.433, 436)

The analysis by Nair and Frank (1980) did not consider Indonesia, Thailand and Hong Kong. Of the remaining four nations involved in this study, under both the measurement and disclosure groupings Singapore, Australia and Malaysia are classified (in Group 1 for measurement and Group 2 for disclosure practices). The Philippines meanwhile were separated in Group 4 for measurement and Group 3 for disclosures.

A review of the major studies in the international classification literature provides valuable insights. These studies illustrate clearly that nations can be formed into broad country groupings. It is imperative to note however, that the classification of a given country in a relevant grouping depends upon the environmental or societal factors being used as the basis for judgement. Subsequently the grouping of nations can alter if the basis of judgement (that is the environmental or societal factor) is changed. Furthermore, these studies help define relationships between societal variables and accounting disclosure and measurement practices. It should further be noted that these studies are still largely in their infancy and therefore, an additional richness of this research study is that it will provide further empirical evidence to support relationships formed in this form of accounting literature.

The extant international classification literature highlighted five societal variables regularly applied in the grouping of nations. These were (1) culture; (2) political and civil system; (3) legal system; (4) level of economic development; and (5) equity market. Table 5.4 provides a summary of the studies in the classification and comparative literature in which these factors were identified.

Table 5. 4: Studies Considering Leading Societal Variables

Authors	Culture	Political and Civil System	Legal System	Level of Economic Development	Equity Market
Seilder (1967)	√	---	√	---	---
Mueller (1967)	---	√	---	√	---
Mueller (1968)	---	√	√	√	√
Abu-Jbarah (1972)	---	---	---	√	---
AAA (1977)	√	---	---	√	√
DaCosta et al (1978)	√	√	√	√	---
Frank (1979)	√	---	---	√	√
Nair and Frank (1980)	√	---	---	√	√
Nobes (1983)	---	√	√	√	---
David and Brierley (1985)	---	---	√	---	---
Goodrich (1986)	---	√	---	---	---
Gray (1988)	√	---	√	---	√
Salter and Doupnik (1992)	---	---	√	---	---
Doupnik and Salter (1995)	√	---	√	√	√
Ahmed (1995)	√	---	---	√	√
Zarzeski (1995)	√	---	---	---	√
Total/ Percentage	9/16 56.25%	5/16 31.25%	8/16 50.00%	10/16 62.50%	8/16 50.00%

Legend:

√ = Variable was considered by the study

--- = Variable not considered by the study

From Table 5.4, it can be seen that for four of the five societal variables, 50% or more of the studies analyzed considered these factors to be influential with respect to the

development of accounting systems and practices. The percentage of studies considering the political and civil system was still relatively high being greater than 30%. Having discussed in general terms the identification of the respective societal variables, the proceeding sections examine each in turn in greater depth.

5.3.....Culture

Cross-cultural research has been criticized for being beenatheoretic with regard to culture. That is, culture is treated as “a given”, or “as a packaged unexamined variable” (Rohner, 1984, p.111). To overcome such difficulties culture must be unbundled into underlying characteristics (Bhagat and McQuaid, 1983, p.655; Child, 1981, p.304; Harrison, 1992, p.3). Hofstede’s (1980) seminal work permits specific examination of cultural characteristics for the purpose of this research study (Harrison, 1992, p.3; Chow et al, 1989, p.2; Soeters and Schreuder, 1988, p.75).

Culture defined by Hofstede (1980, p.26) is "the collective programming of the mind which distinguishes the members of one human group from another". Hofstede (1980) utilized data previously collected from an attitude survey of employees of various subsidiaries of IBM in forty-nine nations and four sub-regions. From this work, Hofstede (1980) defined four bi-polar cultural dimensions. These are defined as follows: -

- (1) Strong versus Weak Uncertainty Avoidance
Uncertainty avoidance measures the way society copes with unknown future events with differing anxiety levels, needs for security and dependence upon experts. A society with weak uncertainty avoidance exhibit higher levels of confidence and surety in the face of uncertainty and demonstrates less anxiety. Such societies are more likely to undertake risk. By contrast in strong uncertainty avoidance societies, individuals are uncertain and nervous in the face of situations without rigid and structured rules. To create security strong uncertainty avoidance societies establish or search for absolute truth by technology, law and religion (Frankle, Hofstede and Bond, 1991, p.168).

- (2) **Large versus Low Power Distance**
 The second value dimension is defined as the acceptance of individuals of inequality among member of the society perpetuated over time. Measurement of the power distance is based on perceptions of the relationship between subordinates and their superiors. Individuals seen as equals in respect to physical and intellectual attributes represent low power distance societies. Societies in which individuals accept and maintain inequalities between others represent large power distance societies (Hofstede and Bond, 1988, p.6).
- (3) **Individualism versus Collectivism**
 This cultural dimension refers to the degree to which people in a society prefer to integrate as a group. At one extreme of the scale where society demonstrates individualism, ties between individuals of the society are loose. Each individual is concerned with preserving themselves and immediate family. Focus is therefore, on 'I' in contrast to 'We'. If the society indicates a preference for collectivism, individuals integrate with group, clans or extended families. Interests are toward preserving the group. Opinions and beliefs of the individual are subsequently governed by the group's dynamics (Hofstede, 1980, p.13).
- (4) **Masculinity versus Femininity**
 Masculinity stands for a preference in society for achievement, heroism, assertiveness, and material success. Femininity, on the other hand stands for a preference for relationships, modesty, caring for the weak, and quality of life. The fundamental issue addressed by this dimension is the way in which society allocates social roles to sexes (Fechner and Kilgore, 1994, p.268).

In response to questions of bias in the work of Hofstede (1980), Bond (1987) developed a measure of culture based on Chinese values. Bond (1987) found four cultural values. Of the four cultural values defined by Gray (1980), Bond (1987) found three were highly correlated to three of his Chinese values. Uncertainty avoidance was the only factor of Hofstede (1980) which was found not to be present amongst the Chinese values.

Like uncertainty avoidance, a fourth value developed by Bond (1987), termed Confucian Dynamism, was also viewed to be uniquely independent. Based on the work of Bond (1987), Hofstede (1992) added a fifth dimension based on Confucian Dynamism. This was termed :-

- (5) **Long- versus Short-term Orientation**
 Long-term orientation is associated to a future-oriented mentality while short-term orientation reflects a static, tradition-oriented mentality. Specifically the former positive pole demonstrates characteristics of persistence, ordering of relationships and thrift. By contrast, characteristics of short-term orientation are personal steadiness, protecting of face and respect for tradition (Hofstede and Bond, 1988, p.160).

For the purposes of this study, the five cultural values defined by Hofstede (1992) (uncertainty avoidance, individualism, power distance, masculinity and long-term orientation) are all operationalized. There is no prior theoretical or empirical research to warrant the exclusion of any of these five cultural values. Furthermore, this study is encompassing nations with different cultural domains and influences. Hence, in order to evaluate the effect of culture completely and to capture as much of the broad cultural spectrum present in the seven study nations as possible it is necessary to observe all five values.

Gray (1988) derived, from a review of accounting literature and practice, four identifiable accounting subcultural values that are related to societal values. These accounting subcultural values are described by Gray (1988, p.8) as follows: -

- (a) **Professionalism versus Statutory Control**
A preference for the exercise of individual professional judgement and the maintenance of professional self-regulation as opposed to compliance with prescriptive legal requirements and statutory control;
- (b) **Uniformity and Flexibility**
A preference for the enforcement of uniform accounting practices between companies and for the consistent use of such policies over time as opposed to flexibility in accordance with the perceived circumstances of individual companies;
- (c) **Conservatism and Optimism**
A preference for a cautious approach to measurement so as to cope with the uncertainty of future events as opposed to a more optimistic, laissez-faire, risk-taking approach; and
- (d) **Secrecy and Transparency**
A preference for confidentiality and the restriction of disclosure of information about the business only to those who are closely involved with its management and financing as opposed to a more transparent, open and publicly accountable approach.

Gray (1988, pp.9-10) postulated a number of hypotheses with these accounting subcultural values. These hypotheses suggest that of the cultural dimensions, uncertainty avoidance and individualism are the most influential dimensions in respect to the accounting subcultural values (Perera, 1989, p.45). The relationships of greatest importance to this research study involve the interaction with the accounting subcultural value of secrecy.

Gray (1988, p.11) specifically predicted that nations higher in terms of secrecy would have a lower level of disclosure. Furthermore, he hypothesized that nations with a lower level of disclosure would be expected to have high levels of the following cultural values : power distance, uncertainty avoidance, long-term orientation and a low measure of individualism (Gray, 1988, pp.11-12). Conversely, countries with a high level of disclosure would have a lower level of power distance, uncertainty avoidance, being more individualist and have a short-term orientation (Radebaugh and Gray, 1993, p.45).

Gray and Vint (1995) examined the relationship of Hofstede's (1980) national culture values to the accounting subculture of secrecy. They (p.41) concluded that "overall, these empirical results support the hypothesis that culture is a significant factor influencing accounting disclosure practices". The strongest relationships were found in regard to uncertainty avoidance and individualism. Eddie (1996a), examining the effect of culture, in relation to consolidated disclosures, also found the same results. Work by Williams and Tower (1998) on differential reporting observed that uncertainty avoidance and power distance were key explanatory factors of variations in managers' perceptions toward this issue. Individualism was found to be of less significance.

Table 5.5 indicates that the dispersion of cultural values scores for the five dimensions defined by Hofstede (1980, 1992) are relatively large in several cases. For example in the case of uncertainty avoidance the scores calculated range from the very low of 8 for Singapore (which is the lowest score of all countries) to a high of 64 for Thailand. Scores for the other countries are spread evenly between these two extremes.

Table 5. 5: Hofstede's (1980, 1992) National Culture Value Scores

Nation	Hofstede's Societal Values									
	Uncertainty Avoidance		Individualism		Power Distance		Masculinity		Long-Term Orientation	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank ⁷
Australia	51	17	90	49	36	13	61	35	31	16
Singapore	8	1	20	13	74	40	48	24	47	11
Hong Kong	29	4	25	16	68	37	57	32	98	1
Philippines	44	10	32	21	94	47	64	39	57	9
Thailand	64	22	20	13	64	31	34	10	46	10
Indonesia	48	12	14	6	78	43	46	22	58	7
Malaysia	36	8	26	17	104	50	50	26	35	15

Source: Gray and Vint (1995); Bond (1988)

Power distance also shows a relative spread though in the main the scores are toward the upper end of the scale apart from Australia. Scores for individualism and long term orientation are quite close for six of the countries apart from those for Australia (individualism) and Hong Kong (long-term orientation) which are at the extremes of the scales. Finally, for masculinity, all scores appear to be relatively closely clustered.

The influence of culture on VESAD practices has not been previously tested empirically. If culture is an important factor in explaining variations in VESAD practices across national boundaries, then the diversity in scores calculated by Hofstede (1980, 1992) for nations in the Asia-Pacific region should demonstrate any relationship.

5.4..... Political and Civil System

Various authors have suggested that accounting practices and procedures are influenced by the nature and form of political and civil systems of a nation (see for example Belkaoui, 1985, Iqbal, Melcher and Elmallah, 1997). Others see accounting as a vehicle

⁷ For the Bond (1988) study only 20 nations were surveyed and ranked.

for perpetuating and evaluating ones political and civil ideologies (Arpan and Radebaugh, 1985, p.20).

Belkaoui (1985, p.44) has hypothesized that there is a negative relationship between accounting freedom to disclose and political freedom. That is, as the level of political and civil violations and repression increases the extent of reporting and disclosure by organizations will decrease. The degree of political freedom in a given country is generally assumed to depend on the degree of political rights, the civil liberties and the type of political system (Gastil, 1990, p.30). Violations of political rights and civil liberties associated with various forms of political structure restrict political freedom in general and therefore, may act as a hindrance to full and fair disclosure (Lin, 1993, p.23).

Empirical research testing the relationship of political and civil systems to accounting practices has been relatively limited. Goodrich (1986) tested this relationship comparing a set of five accounting groups, based on a statistical methodology of accounting practices to political science groupings. He (1986, p.10) also drew upon national groupings related to similarities in political attitudes and membership and voting records in international organizations. Goodrich (1986, pp.24-25) made the following conclusion from his analysis :-

There would appear to be little significance between the derived accounting group and socio-economic factors....Furthermore, political attitudes as measured by United Nations voting do not seem to coincide with the accounting groups. However, political factors, like political system types and international organizational membership, are significantly linked to the accounting groups.

Gastil (1989, p.19) defines civil liberties “as the rights of the individual against the state and the rights to freedom of expression and a fair trial”. This definition encompasses such things as the freedom of assembly and demonstration and freedom of speech and

religion (Lin, 1993, p.25). Gastil (1990, p.30) further defined political rights as the ability to play a part in determining laws and the government of the community. This concept captures such things as political competitiveness, freedom to organize multiple political parties, the right of political opposition and self-determination by major sub-groups (Lin, 1993, p.113).

From a set of variables measuring civil liberties and political rights, Gastil (1993) developed a seven-point index for both these factors. Table 5.6 illustrates these respective levels.

Table 5. 6: Gastil’s Measure of Civil Liberties and Political Rights

Level of Gastil’s Index for Civil Liberties		Level of Gastil’s Index for Political Rights	
Level		Level	
One	For states where the rule of the law is not mistaken and which include various news media and possible and evident freedom of expression	One	For states where almost everybody has both rights and opportunities to participate in the political process, to compete for political office, and to join freely formed political parties
Two	For states where civil liberties are less effective than in states ranked (1) because of violence and ignorance or lack of sufficient or free media of expression created either by special laws that restrain rights or authoritarian civil tradition or by the influence of religion	Two	For states where the effectiveness of the open electoral processes is reduced by factors such as extreme poverty, a feudal social structure, violence, or agreements to limit opposition
Three	For states where civil liberties exist but are hampered by serious imperfections such as repeated reliance on martial law, jailing for sedition or suppression of publications	Three	For states where the effectiveness of the open electoral processes is reduced by non-democratic procedures, such as coups
Four	For states where there are broad areas of freedom and free publication along with broad areas of expression	Four	For states where there is either a constitutional block to the full democratic significance of elections or the power distribution is not affected by the elections
Five	For states where civil liberties are often denied and complaints of violation are ignored because of weak government-controlled or frequently censored media	Five	For states where either elections are closely controlled or limited or the results have very little significance
Six	For states where the rights of the state and the government are given legal priority over the rights of groups and individuals, although a few individuals are allowed considerable freedom	Six	For states where either there is no operational electoral system or opposition candidates are not allowed to compete
Seven	For states where citizens have no rights vis-a-vis the state and where internal criticism is only known to the outside world because of the government’s condemnation of it	Seven	For states which may be characterized as tyrannies with little legitimacy either in a national tradition or a modern ideology

The levels are scaled such that a score of one comes closest to: (a) the ideals of freedom of expression, assembly and demonstration, religion and association for civil liberties; and (b) competitive parties or other political groupings, and the opposition political party

has an important role. As the rating moves away from one the features noted for an ideal state (as defined a rating of one) gradually diminish (Lin, 1993, pp.112-113).

Table 5.7 provides a summary of the civil liberties and political rights ranking applicable to the seven nations involved in this study. Three time periods are shown (1978, 1988 and 1994) to illustrate the shifts in democracy over time within the Asia-Pacific region.

Table 5. 7: Civil Liberties and Political Rights Ranking Asia-Pacific Nations

Nation	Civil Liberties Ranking			Political Rights Ranking		
	1978	1988	1993	1978	1988	1993
Australia	1	1	1	1	1	1
Singapore	5	5	5	5	4	5
Hong Kong	N/A	N/A	2	N/A	N/A	5
Philippines	5	3	4	5	2	3
Thailand	4	3	5	6	3	3
Indonesia	5	5	6	5	5	7
Malaysia	3	5	5	3	4	4

Source: Gastil (1978, 1988); Freedom House (1993) N/A = Not available
Appendix B outlines the method used to calculate each score.

The values indicated in Table 5.7 show that there is a range of political and civil systems that exist amongst the seven nations involved in this study. Australia appears to be the nation with the most amounts of political freedom and civil liberties. Whilst at the other end of the scale, both Singapore and Indonesia have the least amount of political freedom and civil liberties. The remaining four nations vary between the extremes set by Australia, Singapore and Indonesia. If the hypothesis that a political and civil system is an influential factor of accounting disclosure practices then the variation in levels of this factor in the seven nations under investigation should aid in drawing out any possible distinction.

5.5.....Legal System

The legal system is part of an institutional framework within which an accounting system interacts (Iqbal et al, 1997, p.22). A nation's system of law can impact accounting practices in a number of ways (Mueller et al, 1994, p.6). Companies' Codes, found in most countries, contain laws regulating business activities including the keeping of accounting records and publication of financial statements (Belkaoui, 1985, p.48). Salter and Douppnik (1992, p.3) suggest that the effect of the legal system on accounting practices is not determined by the number of accounting rules but by the extent that accounting rules are determined by law.

David and Brierley (1985) identified three major families of legal systems : (1) Roman-Germanic (Code) law, Common law and Socialist law⁸. Roman-Germanic law is European in origin (Nobes and Parker, 1988, p.30). This form of law is characterized by rules being formulated by legal scholars, based on ideas of justice and morality (Salter and Douppnik, 1992, p.6). These rules of law form a detailed framework within which any legal issue can be resolved. Accounting standards, practices and procedures in nations with Roman-Germanic law are extensively codified in company law or commercial codes (Arpan and Radebaugh, 1985, p.19) Such rules are set largely by national legislators (Mueller et al, 1994, p.6).

Common law is largely British in origin (Alhashim and Arpan, 1992, p.10). In contrast to the Roman-Germanic approach, primarily judges developed Common law as they resolved specific disputes (Salter and Douppnik, 1992, p.3). A legal rule under Common

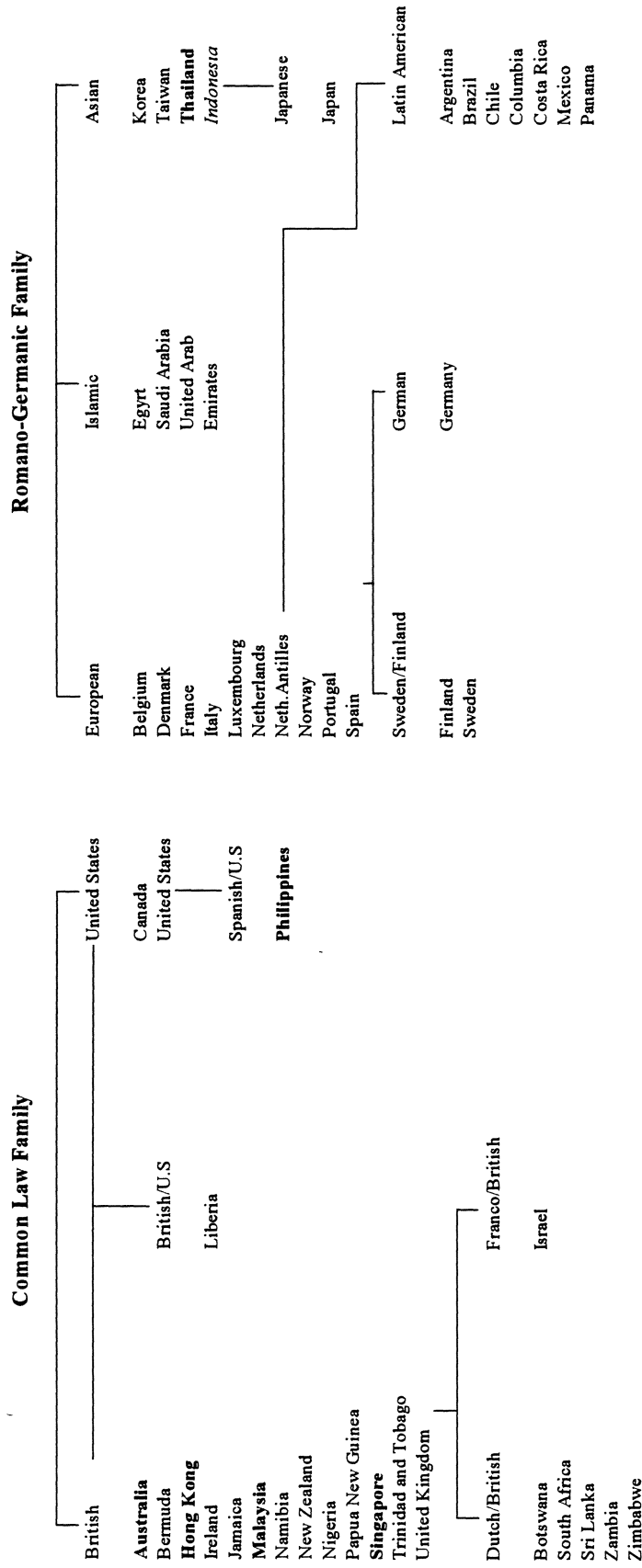
⁸ Given that the former Soviet Union and its various satellites are not included within the scope of the current research study, discussion of Socialist law is not considered further.

law seeks to provide a solution to the case at hand rather than formulate a general rule of conduct for the future. This system does not traditionally prescribe a large number of detailed, all enhancing requirements of business entities (Salter and Doupnik, 1992, p.7).

Accounting practices under Common law systems are largely determined by accountants themselves and thus tend to be more adaptive and innovative (Mueller et al, 1994, p.6).

Based on the work of David and Brierley (1985), Salter and Doupnik (1992) developed a hierarchical classification of legal systems for fifty nations. The resulting hierarchy is presented in Figure 5.2.

Figure 5. 2: Hierarchy Classification of Fifty Nations By Legal Systems⁹



Source : Salter and Douppnik (1992, p.9)

⁹ Indonesia is not originally included in the classification by Salter and Douppnik (1992). A review of the Indonesian legal system however, suggests it is based on Dutch-Germanic principles with adjustments for local Asian interpretations (World Factbook, 1995). Thus this nation is classified with Thailand, Korea and Taiwan.

From Figure 5.2, Australia, Singapore, Hong Kong, Malaysia and the Philippines are classified in the Common-law family. The origins of law in the Philippines are strongly influenced by the United States whereas the other four countries have British heritage. Classified within the Roman-Germanic family are Thailand and Indonesia. Though not shown in Figure 5.2, Indonesia should be classified in this family. There is strong evidence (see for example Craig and Diga, 1996) that supports this finding with laws being significantly influenced by a former Dutch colonial heritage (see also World Factbook, 1995).

Empirical research into the effect of legal systems on accounting practices is limited. An extensive study by Salter and Douppnik (1992) and Douppnik and Salter (1995) found the emergence of two major classes of accounting systems whose national members differ significantly on the basis of the type of legal system. To test the relationship between legal system and accounting practices, Douppnik and Salter (1995, p.195) coded nations on a binary scale according to the classification system originally provided by David and Brierley (1985). The dependent variable (accounting practices) was measured using a practitioner survey of 100 accounting issues¹⁰ (55 disclosure and 45 measurement) across fifty nations.

¹⁰ Douppnik and Salter (1995) do not provide details of the issues examined. Thus it is unknown if they examined VESAD items.

5.6Level of Economic Development

Conceptual studies of accounting and environment have identified economic factors as important determinants of the development of accounting and reporting practices (see for example Mueller, 1967; Radebaugh, 1975; Choi and Mueller, 1984; Arpan and Radebaugh, 1985). Consequently a number of economic variables have been used to assess their impact on accounting practices (see for example Frank, 1979; Nair and Frank, 1980; Belkaoui, 1983; Cooke and Wallace, 1990; Adhikari and Tondkar, 1992). These studies however, have not focused on the Asia-Pacific region.

One factor which has received extensive recent attention is the level of economic development (see for example Douppnik and Salter, 1995; Ahmed, 1995; Cooke and Wallace, 1990; Adhikari and Tondkar, 1992). It is suggested that the degree of industrialization has a positive impact on the level of disclosures and reporting practices in a given nation (Douppnik and Salter, 1995, p.197). The argument follows that in most nations, as agricultural finance is provided through a government subsidy and credit program, the level of disclosure required to outside investors is relatively low (Ahmed, 1995, p.92). When an agricultural country gradually becomes industrialized, the need for alternative sources of finance arises as the government can no longer finance the demand for additional funds from the industrial sector (Adhikari and Tondkar, 1992, p.77). One way of obtaining funds for the industrial enterprises is to seek outside finance through capital markets, where the success depends to a large extent on the level of information disclosed to the potential investors (Choi, 1973, p.161).

Empirical research examining the influence of the level of development on accounting practices has produced inconclusive results. Adhikari and Tondkar (1992, p.103) and Ahmed (1995, p.100) found no association between the respective variables. By contrast, Cooke and Wallace (1990, p.108) and Doupnik and Salter (1995, p.205) indicated that the level of development was a significant explanatory variable of noted variations in accounting practices. This study will strive to provide further insights on this issue.

5.7Equity Markets

Barrett (1977, p.4) hypothesized that differences in the extent of accounting information disclosure between countries may be explained by the variation in the degree of efficiency of the equity market. He (p.23) found that the quality of corporate disclosure (as measured by an index) in the United Kingdom and the United States was much higher than that in Sweden, Netherlands, Germany, France and Japan. Barrett (1977, p.22) suggested that the higher level of disclosure in the United Kingdom and the United States of America, could be explained by the relative higher level of efficiency of these nations' capital markets. Two alternative measures of the impact of the equity market have been recorded in the extant literature: (1) size of the equity market; and (2) efficiency of the equity market. Both measures are described below.

5.7.1

SIZE OF THE EQUITY MARKET

Ndubiza (1992, p.153) argued that the level of efficiency, both in information processing and risk sharing, is dependent to a large extent on the size of the

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Ndubiza (1992, p.153) argued that the level of efficiency, both in information processing and risk sharing, is dependent to a large extent on the size of the

capital market. As the size of the capital markets increases, both potential and existing buyers and sellers interested in shares and other securities exert pressures on companies to disclose more information (Gray et al, 1984, p.11). A strong equity market with a diverse group of shareholders has generally been viewed as conducive to the production of sophisticated information (Doupnik and Salter, 1995, p.196). Capitalization as a percentage of the GDP has been used to represent the market size. Prior empirical research has shown a positive relationship between the equity market size and activity to accounting disclosure practices (Adhikari and Tonkar, 1992, p.103; Ahmed, 1995, p.100; Doupnik and Salter, 1995, p.205).

5.7.2

TURNOVER OF THE EQUITY MARKET

It has been suggested that raw size is not the only factor associated with the equity market that influence disclosure practices (Ahmed, 1995, p.92). There are many companies listed on a Stock Exchange that may be inactive (Doupnik and Salter, 1995, pp.195-196). This phenomenon exists in many developing nations where companies are listed on the Stock Exchange principally to take advantage of the incentives provided by governments for capital market development (Khambata and Khambata, 1989, p.87). Consequently it is argued that the level of activity of the market is also important in determining the disclosure practices of companies. Doupnik and Salter (1995, p.196) state that as the level of activity of a market increases this implies a greater sensitivity amongst investors seeking appropriate portfolio returns. In response to the investors' activity and potential fears of losing

scarce investment capital, there may be an incentive for firms to provide greater details to the market.

Empirical studies have commonly measured the level of activity in the equity market as the trading volume divided by market capitalization (Ahmed, 1995, p.93). However, Douppnik and Salter (1995, p.205) failed to show any significant relationship between the turnover of the equity market and amount of disclosure.

5.8 Summary

A review of the literature in Chapter Four indicated that past theoretical and empirical research have provided an incomplete picture to explain variations in VESAD practices across national boundaries. This chapter rectifies this gap by identifying a set of five societal variables that may assist in explaining variations in VESAD practices. These societal variables were : (1) culture; (2) political and civil system; (3) legal system; (4) level of economic development; and (5) the equity market. Theoretical research has suggested that each societal variable listed above may be influential in determining disclosure practices. Empirical studies have generally supported the theoretical predictions. It should be noted however, that virtually no research has been conducted in the Asia-Pacific region related to these factors. The next chapter draws upon all the discussion provided so far to formulate a relevant conceptual schema. From the construction of the schema a set of testable hypotheses are formulated.

CHAPTER SIX

CONCEPTUAL SCHEMA AND HYPOTHESIS DEVELOPMENT

6.1 Overview

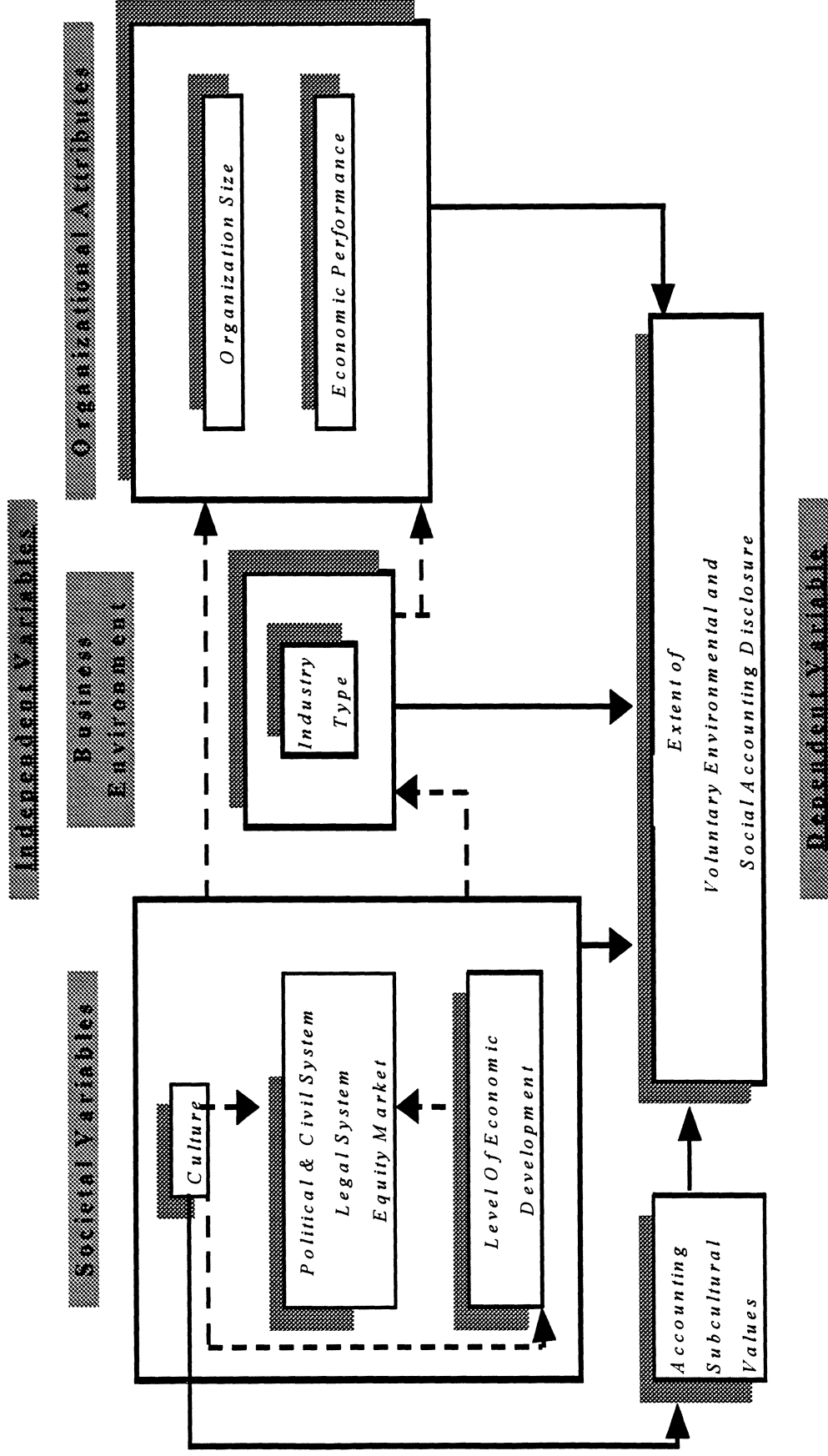
The basic format of the conceptual schema derived for this project is based on the classification scheme of Thomas (1991) drawn within a political economy theory framework. Direct relationships between the independent and dependent variable is established within the schema. A number of indirect associations are also derived between the relevant factors based on past literature. Applying the conceptual schema as the central backdrop, a set of testable hypotheses was formed with reference to the prior literature.

6.2 Conceptual Schema

Bourgeois political economy theory was outlined in Chapter Three as forming the overarching theoretical framework underlining this research study. This theory is selected on the premise that it defined VESAD practices within an organizational-society relationship that offers valuable insights into this phenomenon. Furthermore, Bourgeois political economy theory allows for the examination of the influence of wide external systematic factors in an effort to explain variations in VESAD practices across national boundaries. In adopting a Bourgeois political economy perspective, two derivatives of this theory are also utilized. Legitimacy and stakeholder theories provide valuable insights

into the effects of factors at the organizational attribute and business environment levels.

The conceptual schema shown in Figure 6.1 is constructed in line with the contingency theory framework developed by Thomas (1991). This classification scheme was adopted to assist in effectively categorizing the independent variables in this study. Three distinct levels of variables (that are (1) societal variables; (2) business environment; and (3) organizational attributes) are shown. At the organizational level, two variables are included based on past literature that indicated an influence on VESAD practices. These two factors are defined as organizational size and economic performance (see for example Patten, 1991, 1992; Hackston and Milne, 1995; Roberts, 1992). Industry type is the sole variable at the second or business environment level that has been identified from the prior literature (see for example Patten, 1991, 1992). Finally, from the review of the literature on international comparative studies as presented in Chapter Five, five forms of societal variables are imported from that research. It is hypothesized that these variables will influence the VESAD reporting practices of companies in different nations.



An important feature highlighted in Figure 6.1 concerns the relationship between the classes of independent variables and the dependent factor. The conceptual schema is constructed so as to indicate that each factor at the respective levels of the model has a direct relationship with the dependent variable. However, business environment and societal variables have potentially an additional indirect relationship to the dependent variable. The dotted arrow lines illustrate all indirect relationships. In the case of business environment variables this indirect relationship is formed due to these factors also influencing organizational attributes. Societal variables have the greatest degree of indirect influence on the dependent factor, as elements classified in this grouping also affect variables at the lower two levels (Thomas, 1991, p.42).

The final important characteristic of the conceptual schema that needs to be highlighted is the possible relationships between the various societal variables. Culture in this schema is seen to influence all the remaining societal variables. A range of other studies considering the effect of environmental factors on accounting practices have indicated that culture has an overarching influence on all other societal variables (see for example Schweikart, 1985; Harrison and McKinnon, 1986; Robson, 1991). Doupnik and Salter (1995, p.193) supported this view that “culture permeates the various systems that constitute the institutional structure....”.

The conceptual schema incorporates the features of Gray’s (1988) theoretical framework relating cultural dimensions to accounting practices to recognise

the overarching influence of this societal variable. As outlined in Section 5.3 Gray (1988) proposed in his seminal work that cultural factors affected accounting practices via two mechanisms. These mechanisms were: - (1) via interaction with accounting subcultural values; and (2) indirect influence via an impact on the institutional system (such as legal and educational systems). In addition, Frankle, Hofstede and Bond (1991, p.169) proposed that culture also had a bearing on a nation's economic development. Empirical work conducted by them (1991, p.174) supported their hypothesis. In light of Gray's (1988) work and empirical findings of Frankle, Hofstede and Bond (1991), the conceptual schema indicates culture may affect VESAD practices either via the accounting subcultural values (in particular secrecy) or through associations with remaining societal variables.

The level of economic development is also seen to influence the political and civil system, equity market and legal system. The influence of economic system on institutional factors has been well documented by a number of authors (see for example Belkaoui, 1985; Arpan and Radebaugh, 1985; Nobes, 1984; Ahmed, 1995). The link between the level of economic development and other institutional factors can best be illustrated in respect to the equity market. It is felt that as the level of economic development shifts from an agricultural to industrialized society, this will require firms to acquire additional financing from alternative sources. Thus the growth in the equity market can be associated with an increase in the level of economic development (see for example Ahmed, 1995; Adhikari and Tondkar, 1992; Douppnik and Salter, 1995). A direct relationship between the level of

economic development and the political and civil system, equity market and legal system is thus formed.

Having constructed and outlined the major points of the conceptual schema, the next section of this chapter details the development of hypotheses.

6.3Hypothesis Development

This section formulates a set of testable hypotheses utilizing the Figure 6.1 conceptual schema. Hypotheses related to organizational attributes are developed first, followed by those in the business environment and societal variable categories.

6.3.1 *ORGANIZATIONAL ATTRIBUTE - ORGANIZATIONAL SIZE*

The theoretical arguments concerning the influence of organizational size on the voluntary disclosure (including VESAD) practices has been well documented (see for example Meek, Roberts and Gray, 1995; Gray et al, 1995a; Hackston and Milne, 1995; Hossain, Tan and Adams; 1994). The directional relationship between size and VESAD practices is thought to be positive. In the specific case of Bourgeois political economy (more specifically legitimacy theory) a positive association is proposed because as a firm becomes larger it faces greater social pressure to legitimize its operations and to avoid regulation (see for example Pattern, 1991, 1992; Hackston and Milne, 1995). Thus larger firms will provide more VESAD details. Empirical

research has gone some way in supporting these theoretical claims concerning organizational size. However, little research has been conducted in the Asia-Pacific region to substantiate these claims. This study seeks to provide some insights on this issue in this region. In line with the analysis concerning this factor, a hypothesis is formed :

H₁ : There is a positive association between the size of the organization and the extent of VESAD information presented in annual reports of listed companies in the Asia-Pacific region.

6.3.2 ORGANIZATIONAL ATTRIBUTE - ECONOMIC PERFORMANCE

The second organizational attribute is economic performance. A hypothesis in respect to this factor is formulated as follows :-

H₂ : There is a positive association between the economic performance of the organization and the extent of VESAD information presented in annual reports of listed companies in the Asia-Pacific region.

The positive association stated in the hypothesis H₂ is based on prior Bourgeois political economy and stakeholder theories and empirical research into disclosure practices including those related to VESAD (Roberts, 1992, p.599). Roberts (1992, p.599) elaborates from a stakeholder theory perspective that in order for a firm to undertake social activities and therefore, be able to provide such disclosures, then they must first have excess funds for this undertaking. These excess funds are thus developed from sustained economic performance. As economic performance is increased, companies have a greater economic capacity to undertake social endeavours and make respective disclosures. Empirical research by Roberts (1992, p.608) supported his claims.

Arguments have been put forward by legitimacy theory to claim that the type of industry affects disclosure practices (see for example O'Donovan, 1997; Patten, 1991). This theory contends that social pressure varies across different industries (Hackston and Milne, 1995, p.8). Firms operating in those industries that occupy a high sensitive public profile (for example petroleum and oil) will face greater public pressure and expectations than their counterparts in less sensitive industries (for example retail and services). To legitimize their position within the public perception, firms in a high profile industry will disclose more VESAD details. The testable hypothesis is presented as follows:-

H₃ : There is a significant association between the industry type of the organization and the extent of VESAD information presented in annual reports of listed companies in the Asia-Pacific region.

Empirical research has supported the theoretical arguments. Patten (1992, p. 472) in an examination of oil and petroleum firms found that they disclosed more VESAD information than other industries. One feature of such research has been the failure to identify specific industry types that are likely to be more prone to disclosing more information. Consequently, the hypotheses formed for this study are presented in a general format without providing specific identification of a directional relationship or industry type that may be more prone than others.

Culture is included in this study, as the effect of this factor has not previously been investigated in respect to VESAD practices. The theoretical framework developed by Gray (1988) proposed a number of relationships concerning the effect of cultural values on accounting practices through a set of accounting subcultural values (see Section 5.3 for a more in depth discussion). The relationship of greatest importance to this research study links the national culture factors to disclosure practices via the accounting subcultural value of secrecy. Table 6.1 outlines the proposed directional effects from Gray (1988) of the five cultural values developed by Hofstede (1980) on accounting disclosure practices.

Table 6. 1: National Cultural Values and Accounting Disclosure Practices

National Culture Value	Uncertainty Avoidance	Individualism	Power Distance	Masculinity	Long-Term Orientation
Predicted Sign of Influence on Disclosure Practices	Negative	Positive	Negative	Positive	Negative

Source: Gray (1988); Eddie (1996)

Based on Table 6.1, the following hypotheses are presented in respect to the affect of national culture values on VESAD practices in Table 6.2 :-

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Based on Table 6.1, the following hypotheses are presented in respect to the affect of national culture values on VESAD practices in Table 6.2 :-

Table 6. 2: National Culture Value Hypotheses

National Culture Value	Hypothesis	Description
Uncertainty Avoidance	H ₄	There is a negative association between the level of uncertainty avoidance and extent of VESAD information presented in the annual reports of listed companies in the Asia-Pacific region.
Individualism	H ₅	There is a positive association between the level of individualism and extent of VESAD information presented in the annual reports of listed companies in the Asia-Pacific region.
Power Distance	H ₆	There is negative association between the level of power distance and extent of VESAD information presented in the annual reports of listed companies in the Asia-Pacific region.
Masculinity	H ₇	There is a positive association between the level of masculinity and extent of VESAD information presented in the annual reports of listed companies in the Asia-Pacific region.
Long Term Orientation	H ₈	There is a negative association between the level of long term orientation and extent of VESAD information presented in the annual reports of listed companies in the Asia-Pacific region.

Considering uncertainty avoidance for example, Gray (1988, pp.7-8) proposed that a preference for secrecy was consistent with high levels of this cultural dimension, with a need to restrict information so as to avoid possible conflicts, restrict the uncertainties of competition and preserve security. Management therefore, would be more inclined to limit the amount of voluntary information, therefore, VESAD details released, as they consider the cost to be too great. By contrast, in a more open environment (that is where uncertainty avoidance is low) there is likely to be a greater social expectation for information. In response to the social public pressure and expectation firms will release more details, one form being VESAD information.

Similar arguments for the remaining four cultural dimensions can be formulated. High power distance is consistent with the restriction of information to preserve power inequalities (Gray and Vint, 1995, p.36). In societies where the scores for power distance are low, wider interest groups (such as employees and unions) are viewed to have the ability to demand

greater information. This perception develops from the standpoint that the distribution of power amongst groups in low power distance societies is more evenly distributed. To avoid social backlash and possible regulation, firms would release more VESAD details. In communities in which there is a perception of more openness (that is an individualistic country), management will face more intensive public pressure to provide details of the companies' activities (Shying, 1995, p.61). Therefore, firms in a highly individualistic country will most likely response by releasing more VESAD information to pacify social expectations and pressures.

Gray (1988, p.8) suggested that social information is closely related to feminine traits in society. Communities with a lower masculine bias were more likely to be caring and conscious of the effects of a company's activities on society. Therefore, in respect to this cultural factor, firms operating in a more masculine nation are likely to face less social expectations and demands for information. Thus, the higher a nation is in terms of masculinity, the less VESAD details are likely to be produced in the annual report. Finally, for long-term versus short-term orientations, it is hypothesized that secrecy is more consistent with the former state than the latter (Williams, 1994, p.121). Thus in societies in which long-term orientation is preferred VESAD practices will decrease.

6.3.5

SOCIETAL VARIABLE - POLITICAL AND CIVIL SYSTEM

Prior conceptual literature relating political and civil systems to accounting practices has proposed a negative relationship (Belkaoui, 1985, p.44). Gastil

(1990, pp.30-31) stated that as political and civil violations and repression increase, influence and effectiveness of social interest bodies (for example environmental bodies, charity groups) and human resource organizations (such as trade unions) diminish. Power and influence thus becomes centralized toward one party or even to the point of a few key individuals. The impact on organizations under a repressive regime is that they face less social expectations and pressure, only having to justify their operations to a select group (Iqbal et al, 1997, p.21). In a more open community with greater freedom, firms will need to show greater cause to why they should be allowed to continue to operate. Thus, to prevent possible regulations brought about by social interest groups corporations in the less repressed society will have greater incentives to provide VESAD details.

Empirical research supporting the influence of political systems on disclosure practices has been limited. Goodrich (1986, p.56) concluded that a relationship did exist between political systems and accounting practices. Based on the above analysis, the following hypothesis is formed in regard to political and civil systems: -

H₉: There is a negative association between the level of political and civil repression and the extent of VESAD information presented in the annual reports of listed companies in the Asia-Pacific region.

Application of this factor to this study is important for two reasons. First, there is strong theoretical support for the inclusion of the variable to VESAD research. Second, the limited empirical work on this factor has been minimal

at best, particularly in the Asia-Pacific region, thus requiring further investigation.

6.3.6

SOCIETAL VARIABLE - LEGAL SYSTEM

Recent empirical research (see for example Douppnik and Salter, 1995) has provided support for theoretical presumptions that the form of legal system present is a significant environmental factor influencing accounting practices (Radebaugh and Gray, 1997, p.35). Based on this evidence the following hypothesis is proposed: -

H₁₀: There is a significant association between the type of legal system and the extent of VESAD information presented in annual reports of listed companies in the Asia-Pacific region.

Globally there are two main legal systems, Roman-Germanic Law and Common Law (Iqbal et al, 1997, p.21). Under Roman-Germanic legal systems, accounting practices, procedures and disclosure requirements are relatively regimented within the bounds of statutory law (Choi and Mueller, 1984, p.42). Conversely for Common Law legal systems, accounting standards, practices and procedures are not embedded as deeply within legal requirements (Arpan and Radebaugh, 1984, p.19).

Using a political economy theory perspective, it is considered that a firm under a Roman-Germanic legal system would face less social pressure to provide additional information than for Common Law. Under the former system, due to the close ties between accounting and legal systems, firms may feel that that by complying with the necessary legal requirements all external obligations and requirements have been fulfilled. Common Law countries are

likely to exert greater levels of social pressure beyond that manifested in the legal system. That is, by Common Law there is a reduction in the emphasis on structuring societal behaviours, values and norms within the 'letter of the law'. Corporations therefore, must provide information beyond that stipulated in legislation to meet social expectations. If organizations fail to meet these social guidelines, their existence may be threatened with possible regulation that threatens the self-interests of the entity. As such firms in a Common Law system face incentives to provide additional details.

Inclusion of the legal system as a possible explanatory variable in this study for VESAD variations is important for a number of reasons. Empirical research (see for example Doupnik and Salter, 1995) has indicated this factor significantly influences disclosure practices. However, this element has not been specifically researched with respect to VESAD. There is a variation of legal systems across the Asia-Pacific. Thus if this factor is an important explanatory variable as hypothesized, then it will assist to explain differences in VESAD practices across this region.

6.3.7 *SOCIETAL VARIABLE - LEVEL OF ECONOMIC DEVELOPMENT*

VESAD studies focusing on companies operating in emerging markets has been relatively limited compared to industrialized nations (Gray et al, 1996, p.142). This thesis bridges the gap by examining a number of companies operating in emerging markets.

The literature surrounding the level of economic development has implied a likely positive association between increases in this factor and accounting disclosure practices (Ahmed, 1995, p.92). Adhikari and Tondkar (1992, p.77) stated that as a nation shifts from an agricultural based society through industrialized to high technology, accounting disclosures increase as organizations are forced to seek finance from a greater diversity of user groups with different needs and information requirements. Empirical research by Ahmed (1995, p.100) and Douplik and Salter (1995, p.204) both concluded that this variable was significant in influencing accounting disclosure practices. Therefore, the following hypothesis is advanced: -

H₁₁: There is a positive association between the level of economic development and the extent of VESAD information presented in annual reports of listed companies in the Asia-Pacific region.

As the level of economic development increases, firms are likely to face greater social demands to justify their operations. Public pressure groups (such as unions, consumer bodies) are also likely to have greater access to resources with an increase in the level of development which could lead to more intensive demands for regulation if expectations are not met.

6.3.8

SOCIETAL VARIABLE - EQUITY MARKET

As noted in Section 5.7, there are two elements of the equity market that possibly affect the extent of VESAD practices amongst firms operating in the Asia-Pacific region.

Prior literature suggests that there is a positive association between the size of the equity market (measured as a percentage of gross domestic product (GDP)) on accounting disclosure practices (Doupnik and Salter, 1995, p.196). That is, as the percentage of the equity market to the nation's GDP grows then the amount of accounting disclosure will increase (see for example Adhikari and Tondkar, 1992). Ahmed (1995, p.92) noted that as the size of the stock markets increased more suppliers of finance are introduced into the market. The addition of these new financial suppliers results in a widening set of interests and expectations about activities of firms. Furthermore, as the equity market becomes a bigger element of GDP, its importance to society and profile increases. Thus society will place an increased emphasis of the activities on the market to ensure that firms operating in that sector are abiding by the requirements of society at large. If not then firms may face regulatory pressures. The following hypothesis is formed in respect to the discussion above on equity market size: -

H₁₂: There is a positive association between the size of the equity market and the extent of VESAD information presented in annual reports of listed companies in the Asia-Pacific region.

Researchers (see for example Ndubiza, 1992; Doupnik and Salter, 1995) have advanced an alternative argument concerning the effects of the equity market on disclosure practices. This view focuses on the level of turnover (defined as

the trading volume as a percentage of market capitalization) of the market. This second factor may also have a positive association with accounting disclosure practices (Ndubiza, 1992, p.154). Equity market turnover is seen as an important element because greater average turnover implies potentially more participants in the market with different information needs, requirements and expectations (Doupnik and Salter, 1995, p.196). Subjected to this additional scrutiny and demand to comply with more extensive social demands, organizations will deflect any possible regulatory pressures by providing more VESAD details. Limited empirical research concerning the turnover of the equity market has shown no association to the extent of disclosure practices (see for example Doupnik and Salter, 1995). Nonetheless this factor is applied in this study as little research has been conducted into its possible effect, particularly in respect to the Asia-Pacific region and VESAD studies. The following hypothesis concerning this factor is formulated as follows :-

H₁₃ : There is a positive association between the turnover of the equity market and the extent of VESAD information presented in annual reports of listed companies in the Asia-Pacific region.

6.4 Summary

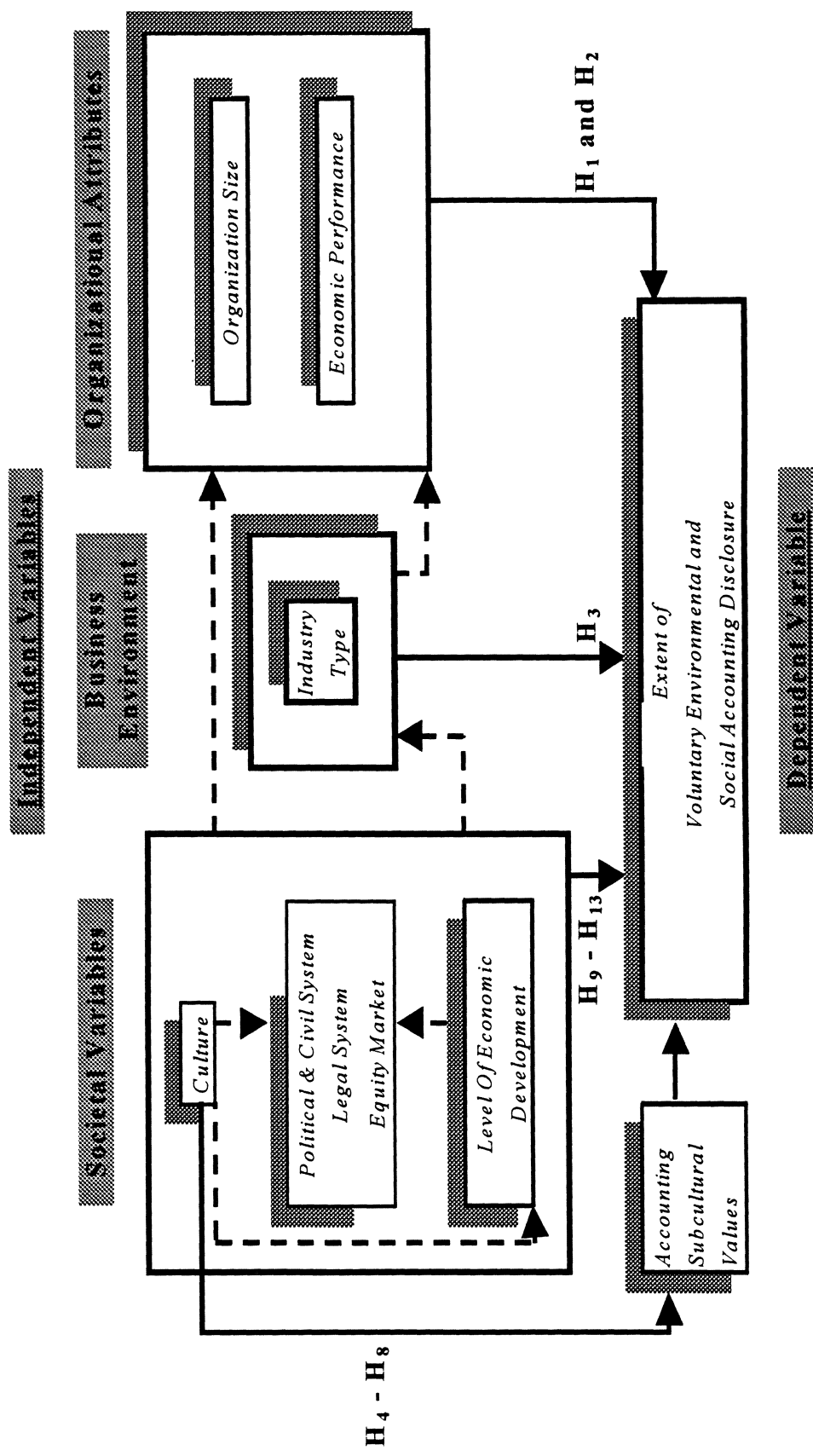
This chapter initially focused on construction of a conceptual schema showing the respective associations between the independent and dependent variables of this research study. Factors were classified into one of three levels of Thomas'(1991) theoretical framework on contingency theory. Proceeding sections then concentrated on formulating a set of testable hypotheses for each

of the independent variables identified as potentially having a significant influence on VESAD practices across the Asia-Pacific region. Table 6.3 provides a summary of all hypotheses formed.

Table 6. 3: Summary of Hypotheses

Variable	Hypothesis	Description
Organizational Attributes		
Organizational Size	H ₁	There is a positive association between the size of the organization and the extent of VESAD information presented in annual reports of companies in the Asia-Pacific region.
Economic Performance	H ₂	There is a positive association between the profitability of the organization and the extent of VESAD information presented in annual reports of companies in the Asia-Pacific region.
Business Environment		
Industry Type	H ₃	There is a significant association between the industry type of a company and the extent of VESAD information presented in annual reports of companies in the Asia-Pacific region.
Societal Variables		
Culture		
Uncertainty Avoidance	H ₄	There is a negative association between the level of uncertainty avoidance and extent of VESAD information presented in the annual reports of companies in the Asia-Pacific region.
Individualism	H ₅	There is a positive association between the level of individualism and extent of VESAD information presented in the annual reports of companies in the Asia-Pacific region.
Power Distance	H ₆	There is negative association between the level of power distance and extent of VESAD information presented in the annual reports of companies in the Asia-Pacific region.
Masculinity	H ₇	There is a positive association between the level of masculinity and extent of VESAD information presented in the annual reports of companies in the Asia-Pacific region.
Long Term Orientation	H ₈	There is a negative association between the level of long-term orientation and extent of VESAD information presented in the annual reports of companies in the Asia-Pacific region.
Political and Civil System	H ₉	There is a negative association between the level of political and civil repression and the extent of VESAD information presented in the annual reports of companies in the Asia-Pacific region.
Legal System	H ₁₀	There is a significant association between the type of legal system and the extent of VESAD information presented in annual reports of companies in the Asia-Pacific region.
Level of Economic Development	H ₁₁	There is a positive association between the level of economic development and the extent of VESAD information presented in annual reports of companies in the Asia-Pacific region.
Equity Market Factors		
Size	H ₁₂	There is a positive association between the size of the equity market and the extent of VESAD information presented in annual reports of companies in the Asia-Pacific region.
Turnover	H ₁₃	There is a positive association between the turnover of the equity market and the extent of VESAD information presented in annual reports of companies in the Asia-Pacific region.

These hypotheses were based on the conceptual schema and prior literature. Figure 6.2 illustrates the conceptual schema as shown in Figure 6.1 but extends it by highlighting each proposed hypothesis.



The first six chapters of this thesis have presented the theoretical framework and research hypotheses for this project. Chapter Seven focuses on the research methods applied in this study. In particular discussion concentrates on the measurement of the dependent variable using content analysis and a disclosure index. This review outlines a gap in the literature that will be examined by this research study to provide additional insights into the VESAD phenomena.

CHAPTER SEVEN

SELECTION OF COUNTRIES, DOCUMENTATION, COMPANIES AND MEASUREMENT APPROACHES

7.1 Overview

Emphasis in this chapter is to scrutinize the research methods adopted in this study. Initial sections analyze the approach used to select the countries, documentation and companies that are surveyed. A review of the technique used to measure the dependent variable is then outlined. This study focuses on the application of a disclosure index and content analysis to VESAD studies. Despite potential contradictions in use of each approach, little research has been conducted to establish if differences arise due to the two methods. This study seeks to rectify this gap by comparing and contrasting findings from measurements by a disclosure index to those using different units of measurement in content analysis. Final sections of this chapter evaluate and describe the methods utilized for measuring all the independent variables.

7.2 Selection of the Nations and Companies

This section outlines the methodology applied in selecting the nations and the companies that were surveyed in this research project.

representative measure of the extent of VESAD. For pragmatic reasons (that is the enormous expense of translation) it was beyond the scope of this thesis and the researcher to directly translate non-English sections for precise meanings.

- The accounting professions in all seven countries are members of the International Accounting Standards Committee in which all members are encouraged to voluntarily follow IASC standards and improve accounting harmonization.
- Each country is a member of the Asian Pacific Economic Cooperation (APEC) group. This group encourages corporations within the region to compete on an equal basis (Eddie, 1996, p.10).

7.2.2

ANNUAL REPORTS

Measurement of the extent of VESAD practices included in this study was based on the 1995 annual reports. The 1995 annual reports were gathered, as these were the latest information available from organizations at the time of data collection. Furthermore, a larger number of reports were obtainable for this year than any previous time period¹¹.

¹¹ A number of companies responding to the request for annual reports indicated they could only provide those for 1995 as they no longer held any stock of reports for previous years.

Only one year of annual reports were surveyed as it was deemed that sufficient details could be measured from this source. Any variations due to the independent factors applied in this research could be adequately observed from using one single year rather than a longitudinal survey. Also, difficulties were found in trying to obtain information from companies other than for the most recent financial year of 1995. This was particularly evident for organizations in the Philippines, Thailand and Indonesia. Thus, if a longitudinal study was applied, it was felt the number of nations would have had to be reduced from seven to four. This reduction would have meant a loss in the variation of societal variables, thus lowering the scope of this study.

The 1995 financial year for a company was defined as a twelve month period with an ending balance date between June 30th 1995 and March 31st 1996. These dates were selected to ensure the corporations had operated for at least half the 1995 calendar year to assist in compatibility between all annual reports reviewed. Companies not supplying an annual report showing an operating period of twelve months during the stipulated period above were excluded from this survey.

Annual reports are assumed to be an important communication tool. Strictly speaking, all forms of data reaching the public domain from a company can be considered as possibly containing VESAD information and could therefore be measured. Ideally therefore, all documents provided by enterprises may be examined. As noted by Zeghal and Ahmed (1990, p.39) however, there are practical limitations to this. Furthermore, for pragmatic reasons, it is virtually

impossible to review all public documents produced by companies surveyed in this study. Most significant amongst this pragmatic logic is that much of the information is not provided with an English equivalent.

There is justification in the literature to support the assumption that the annual report is the principal focus of reporting practices by entities (Gray et al, 1995b, p.82). Statutory requirements mean that annual reports are produced regularly and therefore, form a consistent historical picture of an entity (Gray et al, 1995b, p.82). This document can thus be seen as probably the most important document in terms of the organization's construction of its own social imagery (see for example Hines, 1988; Neimark, 1992). The annual report is an important means by which a firm can symbolically demonstrate its values and views toward relevant publics (Neu et al, 1996, p.5). In respect to this point, Tilt (1994, p.64) commented on environmental groups (considered to be one of the chief pressure groups on VESAD issues) that an annual report of a corporation was a major source of information. She (p.65) found that pressure groups used annual reports as a means of communicating a firm's social construct and image. Finally, Tay and Parker (1990, p.79) stated that "...actual reporting practices may be assessed most accurately from annual accounts". Annual reports, therefore, provides an appropriate document for analyzing the reporting practices of organizations toward VESAD issues.

Two major rules were applied in developing the population sample for this project. These were : (1) listing on the stock exchange of one of the nations involved in this study prior to and during the 1995 financial year; and (2) major company headquarters of each organization had to be located in the country of listing. The second guideline was applied to minimize external influences other than that particular to the nation in which an entity was listed.

Listed companies were selected because they provided readily available information in an appropriate useable form. In the pretesting phase (see Section 8.1 for further discussion) of this study, difficulty was found in acquiring sufficient useable data from non-listed companies. Enterprises not listed on one of the stock exchanges of the seven nations surveyed were reluctant to make details available, supplied only financial statements rather than a full annual report and/or did not have an English translated section.

One hundred listed companies from each country were randomly selected from stock market listings apart from the Philippines where only 65 firms were approached. Table 7.1 summarizes the number of companies listed on the stock exchanges of each nation at the conclusion of 1994, the number of organizations selected and as a percentage of total enterprises.

Table 7. 1: Total Listed Companies Population

Nation	Number of Listed Companies Selected	Number of Companies Listed on Stock Exchange 31/12/1994	Percentage of Companies Selected to those Listed
Australia	100	1215	8.23
Singapore	100	213	46.95
Hong Kong	100	508	19.69
Philippines	65	124	52.42
Thailand	100	361	27.70
Indonesia	100	198	50.50
Malaysia	100	431	23.20
Overall	665	3050	21.80

The number of companies approached in the Philippines was less because of a low (that is 80) number of companies listed with major headquarters in that nation within the specified time frame and difficulty in obtaining addresses.

Addresses of companies selected were obtained from a range of hard copy business directories on organizations in the Asia-Pacific region or from the World Wide Web sources. Each company was then sent a letter requesting their English version annual report published for the 1995 financial year. A copy of the letter requesting the annual reports is shown in Appendix C.

7.3 Dependent Variable Measurement

The dependent variable in this study is the extent of VESAD information provided by companies in their annual reports. A review of the prior literature indicates two major techniques regularly utilized to measure the dependent variable. These are disclosure indices (see for example Ernst and Ernst, 1976 et seq; Wiseman, 1982; Chow and Wong-Boren, 1987; AlNajjar, 1995, 1996);

and content analysis (see for example Hackston and Milne, 1995; Gray et al, 1995a; Guthrie and Parker, 1990).

Table 7.2 provides a summary of the different methods this thesis applied in measuring the dependent variable. This table outlines the name given to each form of measurement unit and technique applied in measuring the dependent variable which was used when statistical tests were utilized.

Table 7. 2: Dependent Variable Measures

Abbreviated Name	Measurement Form	Unit of Measurement
VESADInd	Disclosure Index	Dichotomous Scale
CAPages	Content Analysis	Pages
CASent	Content Analysis	Sentences
CAWords	Content Analysis	Words

Below is a more in depth discussion on disclosure indices and content analysis focusing on the development of the specific measurement techniques used in this research study.

7.3.1

DISCLOSURE INDEX

Disclosure indices have been widely used in voluntary disclosure studies, and to a certain extent VESAD studies (see for review Hughes and Anderson, 1995; AlNajjar, 1995, 1996). An important justification for using this methodology lies in the recognition that the dependent variable (that is information disclosure) which the researcher is attempting to capture, is not amendable to direct measurement (Marston and Shrives, 1991, p.198).

Use of disclosure indices in research has been widely accepted, largely without much adverse comment. Marston and Shrives (1991, p.198) suggested that the lack of comment is “possibly due to the pervasiveness of economic indices in everyday life”. In constructing respective disclosure indices, researchers have adopted and tailored existing indices to meet their own perceived needs. For example, in the context of VESAD practices, many indices have adopted the work of Ernst and Ernst (1976) which formed the cornerstone of much research in the United States during the late 1970’s and early 1980’s (Hughes and Anderson, 1995, p.2). For each item within the disclosure index, a dichotomous score of zero for a non-disclosure and one for disclosure is usually assigned. A percentage score is then calculated.

The precise approach used in calculating the percentage score will depend upon the structure of the index. For instance, if the index contains no subsections the number of items divides the overall item score. If the index has subsections then the score can be calculated as previously outlined, or individual scores for each subsection can be calculated, then summed and divided by number of subsections.

Weighting of items in the index may also be undertaken (Chow and Wong-Boren, 1987, p.534). Unweighted scores appear to find more favour amongst researchers for several reasons (Marston and Shrives, 1991, p.203). First, the assigning of weights is considered to be highly subjective. In addition, it has been suggested that companies better at disclosing “important” items are also better at disclosing “less important” items. Thus companies would be ranked

the same way regardless of whether items are weighted or unweighted (Firth, 1980, p.11). Chow and Wong-Boren (1987, p.539) found almost identical results using either weighted or unweighted disclosure scores.

A disclosure index offers a valid and useful method for measuring the dependent variable in this project. Prior extant literature using a disclosure index argue this technique is an effective means of codifying qualitative information that can then be empirically tested for associations with potential explanatory variables.

7.3.2

CONTENT ANALYSIS

Content analysis is usefully defined by Abbott and Monsen (1979, p.504) as :-

... a technique for gathering data that consists of codifying qualitative information in anecdotal and literary form, into categories in order to derive quantitative scales of varying levels of complexity.

Krippendorff (1980, p.21) states that “content analysis is a research technique for making replicable and valid inferences from data according to their context”. One of the principal characteristics of content analysis is that the data collected should meet tests which suggest that they are “objective, systematic and reliable” (Krippendorff, 1980, p.21). Content analysis further implies that definitions employed have to be precise and unique, designed such that independent judges can identify clearly what is and what is not VESAD, thus complying with the objective criterion (Gray et al, 1995b, p.81). The systematic criterion meanwhile requires a set of exhaustive rules that determine the category of corporate social disclosure and relevant subcategories in a mutually exclusive and all-embracing manner (Hackston

and Milne, 1995, p.13). Replication is usually achieved by outlining an interrogation instrument (that is a checklist) which is supported by various decision rules, plus confirmation by an independent examiner.

Some debate surrounding content analysis pertains to the 'unit of analysis' used by researchers (Gray et al, 1995b, p.83). Gray et al (1995b, p.83) noted that the preferred units of analysis in written communication were words, sentences, and pages. They also (1995b, p.84) commented that words have the advantage of lending themselves to more exclusive analysis (that is one can categorize more easily). Gray et al (1995b, p.84) further suggest from a pragmatic perspective, words offer the advantage that databases may be scanned for specified words. Zeghal and Ahmed (1990, p.42) justified their use of words as the unit of measurement because "it provided a greater amount of detailed description". Kassarian (1977, p.10) recommended the application of words in business research as it allowed the analysis to be more precise and defined upon identification of the subject matter being sought. Deegan and Rankin (1997) also supported the use of words.

Hackston and Milne (1995, p.,11) are critical of the application of words because it is an ambiguous measure, leaving the researcher pondering which individual word is a corporate social disclosure and which is not. Ingram and Frazier (1980) used sentences as the unit of analysis. They (p.617) chose this method stating "... the sentence was selected as the unit of analysis for the final research since a sentence is easily identified, is less subject to interjudge variations than phrases, classes and themes, and has been evaluated as an

appropriate unit in previous research”. Sentences overcome the problems of allocation of portions of pages and remove the need to account for, or standardize, the number of words (Hackston and Milne, 1995, p.13). Furthermore, sentences are a more natural unit of written English to count than words (Hughes and Anderson, 1995, p.17). In reference to contrasting sentences to pages, Shields and Boer (1997, p.150) considered “a sentence to be a conventional unit of speech and writing, but the portion of the page measurement as not”.

The final unit of analysis, pages, tends to be the most readily applied unit of measurement. Pages reflect the amount of total space given to a topic and this by inference implies the importance of that topic to the organization (Krippendorff, 1980, p.27). Second, from a pragmatic sense, pages are an easier (and more reliable) unit to measure by hand (Guthrie and Parker, 1989, p.347; 1990, p.163). Conversely, use of pages as the unit of measurement has been criticized because of differences in terms of sizes of articles, margins and typefaces between and in annual reports (Hackston and Milne, 1995, p.12). Gray et al (1995b) considered this problem but found little effect due to the size of the articles, margins and typefaces. Another central argument against the use of pages is the potential loss of detailed information.

The theoretical literature does not provide an overwhelming justification for the choice of any of the three units of analysis. Furthermore, there is little empirical research conducted to indicate significant differences between each method or which provides the most appropriate basis of measurement.

Hackston and Milne (1995) empirically tested for differences using all three units of measurement. Their study surveyed 47 New Zealand companies. From an examination of the raw numbers using the respective units of analysis Hackston and Milne (1995, p.18) reported that “the derived page measurement grossly overestimates the amount of disclosure”. A correlation matrix between each unit however, found each was highly correlated suggesting convergent validity. Hackston and Milne (1995, p.21) concluded overall further from their findings that “the measures of the dependent variable made no significant difference to the regression results”.

7.3.3

CHOICE OF MEASUREMENT TECHNIQUE

In adopting either a disclosure index or content analysis to measure the extent of VESAD practices, researchers have not generally stated explicitly why they selected one method over another. Nonetheless, researchers have implied in their discussion that they are attempting to measure the amount of disclosure irrespective of which approach is used. AlNajjar (1995; 1996) used a disclosure index to measure the VESAD practices amongst companies in the United States. He (1995, p.13) inferred that the objective of his research was to establish the determinants of why the amount of VESAD practices increased. Blacconiere and Patten (1994, p.368) also adopted a disclosure index. They (p.369) explained that this scheme was a measure of the quantity of disclosure. Conversely, a number of studies applying content analysis (see for example Cowan et al, 1987; Guthrie and Parker, 1989, 1990; Patten, 1991; Gray et al, 1995a, 1995b) have assumed that the counting of words, sentences or pages is a better representation of the amount of disclosure. These studies

assume that the amount of space devoted to VESAD practices is a measure of the emphasis placed by managers on such practices.

Conceptually, a disclosure index is only considering the number of VESAD practices relative to a set number or benchmark of possible disclosures defined from past literature and common practice. Judgement of the emphasis management places on VESAD issues is constrained by the researchers' perception of what are and what are not appropriate disclosure practices. In contrast to this, content analysis is not limited to any preconceived notions to the extent of a disclosure index. The researcher does evolve a checklist instrument concerning what should be a VESAD practice and what is not. With content analysis the researcher is not constraining management in the amount of disclosure they may provide on a given subject. Under a disclosure index however, management either report on the issue or not and are evaluated as such.

The contrast between these two approaches can have serious implications for researchers. Consider for example the scenario that is depicted in Table 7.3.

Table 7. 3: Illustration of Impact from Differences in Measurement

Company Name	Economic Performance of Company Measured by Return on Assets	No. of Items In Disclosure Index On VESAD	No. of Items Company Reported On VESAD	Overall Disclosure Index Score	No. of Words In Annual Report Related to VESAD	No. of Sentences In Annual Report Related To VESAD	No. of Pages In Annual Report Related to VESAD
Alpha Ltd	0.10	10	2	0.20	300	20	2.5
Bravo Ltd	0.14	10	5	0.50	100	30	1.5
Charlie Ltd	0.18	10	8	0.80	200	10	0.75

Based on the values shown in Table 7.3 related to the disclosure index, Charlie Ltd would be considered to be the best company reporting on VESAD issues relative to Bravo Ltd and Alpha Ltd. By contrast, if the researcher used the number of pages as the measurement base, ranking of the enterprises would be reversed with Alpha Ltd being regarded most highly.

In respect to the impact on explanatory variables, scrutiny of the economic performance for each company in this simple example can be undertaken. Statistical tests can obviously not be applied in this scenario but examination by the naked eye can still illustrate the point. If the disclosure index alone was reviewed then the researcher would conclude that as the economic performance of a firm increases then there is a positive impact on the amount of VESAD information released. Conversely if one analyses only the amount of VESAD disclosure as measured by content analysis, using pages as the unit of analysis, a negative relationship would be implied.

Between the units of analysis for content analysis different ranking and conclusions related to economic performance may be made. With words as the unit of analysis, Bravo Ltd would be ranked lowest and conclusions on the effect of the independent variable inconclusive. These findings contrast for those related to hypothetical values of measurements taken in terms of sentences and pages.

The scenario provided in Table 7.3 would seem highly unlikely to occur but it does illustrate the potential problems researchers may encounter when

applying different measurement bases. Little research has empirically examined the consequences of using the various measurement bases in VESAD research. This research study will provide additional insights on this debate by measuring the dependent variable using a disclosure index and the three units of analysis under content analysis. Findings will then be compared to identify any contrasting results.

7.4 Dependent Variable Measurement Instrument

Having indicated the various techniques to be used to measure the dependent variable in this study, discussion now focuses on the precise instruments developed for this study.

7.4.1 *MEASUREMENT INSTRUMENT - DISCLOSURE INDEX*

The VESAD disclosure index (herein referred to as the VESADInd) was constructed following three basic steps (see for example Meek et al, 1995; Hossain et al, 1994; AlNajjar, 1995, 1996):

- (1) a review of the major literature covering voluntary disclosures and VESAD practices;
- (2) a review of the mandatory rules as listed in the various accounting standards, Companies Acts (or equivalent) and the stock market listing requirements in the respective countries so as to eliminate non-voluntary items; and

- (3) distribution of the preliminary VESAD list to accounting firms and accounting regulatory boards operating in each country for verification.

The steps undertaken above were used to ensure that each item contained in the VESADInd was independent of the others. This was important so that any issue identified in annual reports as containing VESAD properties could be classified into one single grouping to prevent potential double counting. Furthermore, as this study sought voluntary environmental and social accounting disclosures, the procedures outlined above were employed to eliminate any possible mandatory items.

From an initial review of the literature, the original VESADInd comprised fifty-five items divided into five subcategories or themes. These themes were environment, energy, human resources and safety, products and customers and community. Categorization of items into these five themes were consistent with much of the past literature related to VESAD practices (see for example Guthrie and Parker, 1990; AlNajjar, 1995; Hackston and Milne, 1995; Gray et al, 1995a).

This initial list was then distributed to accounting firms, national standards setting boards and accounting academics in the seven selected countries. Comments received from these reviewers led to the pruning of the list to forty-seven items. Six of the eight items removed were withdrawn from the original fifty-five element list as they were consider to be either :- (a) too ambiguous; or (b) overlapped with descriptions of other components. These six items are

listed as follows :- (1) environmental other; (2) employee training; (3) statements on fair business practices; (4) customer satisfaction; (5) research and development activities; and (6) funding of sporting events.

The other two items removed from the list were deemed to be mandatory requirements. The first item related to environmental liabilities was felt by some reviewers of the list to constitute a contingent liability as defined in accounting standards of the majority of the countries in this study. To avoid any confusion between these terms the item was deleted. Furthermore, Australian requirements state that firms in the extractive industry must disclose costs of site restoration. As a consequence the item termed Restoration Obligations in the original list was removed¹².

Scoring of the index was based on a binary coding system where a disclosure of an item was given a score of one and if not disclosed then a score of 0. The scores for each firm were unweighted and based on the proposition that each item of the VESAD score was equally important and thus equally weighted. Weighting was not applied for the VESADInd because past empirical research has shown that there is no significant difference in applying weighting to an index or not (Marston and Shrivess, 1991, p.203). Moreover, weighting of the index contains an overly subjective element (Cooke, 1989, p.115).

¹² It has been commented that removal of items which were mandatory in one or a few of the countries surveyed, unduly penalized companies operating in nations where the item was non-mandatory. Statistic tests indicated however, that adjusting the disclosure index for the unique features of individual nations did not result in any difference.

The VESADInd score calculated for each company covered in this study was determined by : (a) summing the score for each theme and dividing by the number of items applicable to that category; and (b) adding the scores for each theme and dividing by five. This method of calculating the VESADInd score was undertaken to prevent bias toward any one theme¹³. That is, if an item was deemed irrelevant to a specific company, this item was not included in the denominator value.

As with previous studies (see for example Cooke, 1989, 1991; Hossain et al, 1994; Meek et al, 1995) the entire annual report of each company was read in-depth in order to determine the relevancy of disclosed items to the firm. Each organization was examined in relation to such matters as its structure, areas of operation, principal lines of business, company governance and organizational goals and policies. An example of an item that was potentially irrelevant was the breakdown of employees by line of business or geographical area. If a Singaporean entity for instance operated solely in Singapore and was a manufacturing entity¹⁴ producing just one product then the firm was not scored in relation to two aforementioned aspects. Another example involved several companies that were solely pursuing exploration of oil and gas deposits. These companies were not producing any products or services. As such these entities were not penalized for failing to disclose consumer

¹³ A second method of calculating the VESADInd score could have summed all items disclosed, divided by the maximum number of items possible for the company in question. This procedure was not adopted as it potentially biased the score toward themes with larger numbers of items. Statistical tests using this alternative approach showed no differences from findings based on the technique employed throughout this thesis.

¹⁴ It is assumed in this example that the company does not have a sales department or distribution line etc.

information. A copy of the VESADInd used in this study is reproduced in Appendix D.

7.4.2 *MEASUREMENT INSTRUMENT - CONTENT ANALYSIS*

Consistent with the VESADInd used in this study and prior literature (see for example Cowan et al, 1987; Gray et al, 1995b), the proforma guidelines (see Appendix E) used to measure the amount of words, sentences and pages devoted to VESAD practices in annual reports was divided into five themes. Supplementing this measurement proforma, was a checklist instrument. This instrument (see Appendix F) outlined the criteria by which information contained in the annual reports of companies was classified as being of a VESAD nature. Furthermore, the checklist instrument provided guidelines in categorizing sections viewed in annual reports to be a VESAD issue into the relevant theme. The checklist was designed so as provide common meaning so that anyone applying the same criteria would find highly similar findings as the author.

Definitions applied in the checklist instrument were derived from a strenuous review of the prior literature related to VESAD practices (see for example Ernst and Ernst, 1976 et seq; Cowan et al, 1987; Belkaoui and Karpik, 1989; Guthrie and Parker, 1989, 1990; Patten, 1991, 1992, 1995; Gray et al, 1995a; Hackston and Milne, 1995; Gray et al, 1996). Attempts were made to ensure each definition was unambiguous and mutually exclusive of others so as to eliminate any overlapping of interpretations.

Two independent reviewers were employed to critique the language and clarity of meaning of the initial checklist instrument. Based on comments from this review, minor modifications were made to the checklist. For example, the original checklist provided too much ambiguity between the meanings of what constituted an environmental consideration and environmental policy. More specific language was applied in the subsequent draft to give greater distinction to these and other issues that needed greater clarity. A copy of the original checklist was distributed to select accounting academics from each of the seven selected nations for their comments. From the remarks received, adjustments were further made to the checklist instrument to reflect some factors specific to the Asia-Pacific region nations investigated. For instance in Hong Kong there is mandatory disclosure requirements related to charitable donations in the directors' report. Clearer distinction was made in the checklist instrument to reflect this.

7.5 Pretesting of Dependent Variable Measurement Instruments

Prior to analyzing 1995 annual reports, both the disclosure index and content analysis measurement instruments were pretested using fourteen 1994 annual reports (that is two from each nation). The author and two independent professional accountants conducted this pretesting in two phases. Due to the time constraints of the independent coders, they were only asked in the case of content analysis to measure the amount of VESAD practices in respect to sentences. It was felt that measurement using just sentences would be

sufficient to gauge the effectiveness of the measurement proforma and checklist instrument. All annual reports considered in this pretesting phase were not included in the final data sample.

During the first phase, seven 1994 annual reports (one from each country) was reviewed by each coder. Once this review had been completed a meeting was held between all coders to discuss and resolve any disagreements. There were only six disputes for the VESADInd. All disputes concerning this instrument were resolved as small misinterpretations on the part of coders rather than being significant deficiencies with the index. The examiners disputed ten lines representing less than 1% of the total lines read. Seven lines were resolved without a need for adjustment to the checklist instrument. Clarification was made in relation to the remaining three.

Upon advice of the independent coders in the first pretesting phase, no changes were made to the VESADInd. Several changes were made to the VESAD checklist instrument in light of items identified by the reviewers as being potentially important. For example, in Thailand the Thai King was seen to be highly influential whilst in the Philippines the Catholic church appeared to be of relevance as a number of statements were made in acknowledgement of this institutional body. The reviewers felt the checklist instrument should reflect such items as they may highlight important insights upon further investigation. Clarity in the checklist was incorporated to ensure that disclosures reflecting these influences were properly allocated.

The second pretesting phase followed a similar process with the remaining seven 1994 annual reports reviewed plus the original batch. This additional review of the original batch was used to ensure validity after the adjustments to measurement instruments. In the second review only 6 lines out of 2145 lines read were disputed when applying content analysis and 5 points out of a possible 658 for the VESADInd. These minute disparities did not warrant changes to the measurement instrument. At the conclusion of this pretesting, it was decided the disclosure index and content analysis had been developed adequately to proceed with the review of the 1995 annual reports.

7.6 Measurement of Independent Variables

Discussion in this section concentrates on outlining the measurement techniques applied in respect to each of the independent variables. Table 7.3 provides a summary of key terms and characteristics related to each independent variable.

Table 7. 4: Independent Variable Measures

Independent Variables	Abbreviated Title	Expected Sign	Measurement Technique
Organizational Attributes			
Organizational Size	LogAssets	Positive	Natural log of total assets
Economic Performance	ROA	Positive	Return on Assets Ratio
Business Environment			
Industry Type	IT X ¹⁵	Not Applicable	ISIC classifications
Societal Variables			
<i>Culture</i>			
Uncertainty Avoidance	Uncav	Negative	Original calculated scores of Hofstede (1980)
Individualism	Ind	Positive	Original calculated scores of Hofstede (1980)
Power Distance	PD	Negative	Original calculated scores of Hofstede (1980)
Masculinity	Mas	Positive	Original calculated scores of Hofstede (1980)
Long-Term Orientation	LTO	Negative	Original calculated scores of Bond (1987)
Political and Civil System	PCS	Negative	Gastil (1993) scores
Legal System	Legal	Not Applicable	Dichotomous scale - 1 = Common Law; 0 = Roman-Germanic
Level of Economic Development	LED	Positive	per capita GDP (in \$US)
<i>Equity Market</i>			
Size of Market	EMSize	Positive	Total market capitalization of percentage of GDP
Turnover of Market	EMTurn	Positive	Trading volume as percentage of market capitalization

Abbreviated names were formed for each independent variable for use in the respective statistical tests. Information reproduced from computer printouts is extensively supplied in the appendices of this thesis. Use of abbreviated names is required to enhance understandability when attempting to relate text discussion in the main body of the thesis to the appendices. The expected sign of the coefficients for each of the independent variables is based on the testable hypotheses formed and prior literature. The final column in Table 7.4 indicates the technique to be used in this study to measure each independent

¹⁵ The X indicates that the industry type variable has a number of categories ranging in number.

factor. Following sections provide a more in-depth analysis of the measurement basis to be applied for each explanatory variable.

7.6.1

ORGANIZATIONAL ATTRIBUTES

A variety of measurement techniques have been applied to both organizational size and profitability for the purposes of research of disclosure practices. The proceeding sub-sections outline the procedures adopted for this study and reasons supporting the respective selections.

7.6.1.1

ORGANIZATIONAL SIZE

Different measures of corporation size have been used in prior research. For example, Chow and Wong-Boren (1987, p.538) measured an organization's size in terms of the market value of the equity plus the book value of debt. Cooke (1991, p.176) measured size as the number of shareholders, total assets and turnover, whereas Hossain, Perera and Rahman (1993,p.6) measured size as the log of market capitalization. Cooke (1991, p.176) points out that "...size can be measured in a number of ways and there is no overriding theoretical reason to select one (measure) rather than another".

The measure of corporation size adopted in this study is the natural log of the total assets presented in the annual reports. This measurement technique was adopted because it has been applied regularly in VESAD research (see for example AlNajjar, 1995, 1996; Patten 1991, 1992; Hackston and Milne, 1995;

Gray et al, 1995a). Furthermore, it was a value that was readily obtained for all companies surveyed. The total asset figures in the seven study nations measured were converted to US dollars using the spot exchange rate at the time the financial year ended for each company. Conversion into US dollars was undertaken to ensure compatibility. The natural log of the annual total assets was taken to avoid skewness¹⁶ (see for example AlNajjar, 1995; Hackston and Milne, 1995).

7.6.1.2

ECONOMIC PERFORMANCE

As with organizational size, there appears to be no dominant theoretical foundation supporting the application of one specific technique to measure economic performance. Generally, studies have commonly used return on assets, return on equity and return on sales to measure this variable (see for example AlNajjar, 1995; 1996; Roberts, 1992; Meek et al, 1995; Cowan et al, 1987).

For the purposes of this study, economic performance is measured using return on assets which is viewed as a relevant technique based on its application in other studies involving VESAD (see for example Hackston and Milne, 1995; Roberts, 1992)¹⁷. In measuring the return on assets this project further followed the methodology applied by Hackston and Milne (1995). In that

¹⁶ Scatterplots of total assets of firms from the seven nations prior to logs being applied revealed a strong negative skewness thus indicating the need for the transformation.

¹⁷ Returns on equity measures were also taken. Statistical tests using this approach showed no significant differences to analysis measuring the return on assets as a proxy for economic performance. Due to the similarity in findings only those for return on assets are discussed explicitly in this thesis.

study five-year averages (1991-1995) were taken to measure the accounting based return on assets for each organization. It is argued that measuring this ratio over an extended period provides a more reliable measure of corporate performance than a single year measure (Hackston and Milne, 1995, p.16). Where data was unavailable for the full five-year period, an average for each enterprise surveyed is calculated for those years that were available¹⁸. This procedure is also consistent with other studies (see for example Bowman and Haire, 1976; Abbott and Monsen, 1979; Cowan et al, 1987).

7.6.2

BUSINESS ENVIRONMENT - INDUSTRY TYPE

Different approaches have been used to classify companies. Dierkes and Preston (1977, pp.4-5) suggested extractive industries were subject to greater social scrutiny. Patten (1991, p.303) included petroleum, chemical and forest and paper product industries in a high-profile grouping. Entities in the automobile, airline and oil industries were all considered by Roberts (1992, p.601) to be very sensitive to public pressure. Finally, Hackston and Milne (1995, p.17) included all the above industries into the high profile classification in addition to agriculture and liquor and tobacco. AlNajjar (1995, p.33) based his classifications on the International Standard Industry Classification codes of the United States, whilst in a later study he applied the

¹⁸ It was feared that if organizations were asked to supply annual reports for more than two years (see Appendix C) this would potentially lead to a reduction in the response rate with firms declining to reply as they had to absorb such costs as mailing. Nonetheless five-year ROA and ROE values could generally be calculated as the annual reports received contained five-year summaries of key financial data. In the event that such summaries were not available, several databases (for example Globalstat) were scanned to assist in the calculation of necessary numbers.

26 industry groupings defined by the Fortune 500 magazine (AlNajjar, 1996, p.6).

Again there appears to be no overarching theoretical foundation upon the technique to apply in measuring industry type. To avoid any inconsistency between individual national classification schemes of industry in the seven study countries, it was decided for this study to use the International Standard Industrial Classification of All Economic Activities (ISIC-1968) as reported by the International Labour Office (1993). Eddie (1996a, 1996b) applied this classification scheme in his research covering companies in ten Asia-Pacific region nations. The ISIC has ten mutually exclusive divisions that allowed for one-digit coding. These divisions are :-

- (1) Agriculture, Hunting, Forestry and Fishing (Agriculture)
- (2) Mining and Quarrying (Mining)
- (3) Manufacturing
- (4) Electricity, Gas and Water (Utilities)
- (5) Construction
- (6) Wholesale and Retail Trade and Restaurants and Hotels (Retail)
- (7) Transport, Storage and Communication (Transport)
- (8) Financing, Insurance, Real Estate and Business Services (Finance)
- (9) Community, Social and Personal Services (Services)
- (10) Activities not Adequately Defined (Other)¹⁹

For the purposes of this thesis, the companies were classified into one of the

¹⁹ This category is giving a score of '0' for coding purposes.

ISIC groupings after reading each annual report completely and establishing the major operating activity of that firm. As described in Section 9.2.3, these categories were reclassified into four summary groups.

7.6.3

SOCIETAL VARIABLES

The five societal variables examined in this research study are measured by a variety of techniques. This section outlines the method of measurement deemed most appropriate for each societal variable.

7.6.3.1

CULTURE

Culture has been operationalized in a number of different ways and various measurement techniques have been applied to consider this phenomena (see for example Hofstede, 1980; Rohner, 1984). In this study measurement of the national culture values is based on the original scores calculated by Hofstede (1980) (that is for uncertainty avoidance, individualism, power distance and masculinity) and Bond (1987) (for long-term orientation). Table 7.4 provides a summary of the scores calculated by Hofstede (1980) and Bond (1987) for each study country that are applied in this project.

Table 7. 5: Hofstede (1980) and Bond's (1987) Cultural Scores

Nation	Hofstede's Societal Values				
	Uncertainty Avoidance	Individualism	Power Distance	Masculinity	Long-Term Orientation
	Score	Score	Score	Score	Score
Australia	51	90	36	61	31
Singapore	8	20	74	48	47
Hong Kong	29	25	68	57	98
Philippines	44	32	94	64	57
Thailand	64	20	64	34	46
Indonesia	48	14	78	46	58
Malaysia	36	26	104	50	35

This approach is used for a number of reasons: -

- This study is seeking national scores for cultural factors;
- Scores for the respective cultural values have been calculated for all the countries used in this study;
- This study applies the framework of Gray (1988) which utilizes the work of Hofstede (1980); and
- Empirical research has indicated that the use of these scores provide applicable results (see for example Williams and Tower, forthcoming; Vint and Gray, 1995; Eddie, 1996).

7.6.3.2

POLITICAL AND CIVIL SYSTEM

Measurement of the political and civil system for the seven nations used in this study is based on the overall index score from the work of Gastil (1995). This index has been used in other research and empirically tested (see for example Lin, 1993; Belkaoui, 1983). Furthermore, scores for Gastil's indices have been determined annually over an extended period for all countries involved in this study by Freedom House. Table 7.6 indicates the values used

in this study to measure the political and civil system in each nation. These scores were based on assessments made in relation to 1995.

Table 7. 6: Political and Civil Index Scores 1995

Nation	Political Index Score	Civil Index Score	Combined Score
Australia	1	1	2
Singapore	5	5	10
Hong Kong	5	2	7
Philippines	2	3	5
Thailand	3	3	6
Indonesia	7	6	13
Malaysia	4	5	9

Source: Freedom House (1995)

An overall index score is calculated for each nation by combining the respective country scores for both the political and civil index values given by Gastil for the 1995 year. For example, Gastil (1995) gave Australia a score of one under his political index and the same for the civil score. Hence by adding the scores together, the combined political and civil system total is two. The combined score is utilized as this is seen as a better reflection of the overall influence of this factor (Lin, 1993, p.56).

7.6.3.3

LEGAL SYSTEM

In this research project, the legal system is measured using a binary code based on the work of Salter and Doupnik (1992, p.9). Countries, which are classified in the Common Law family by this hierarchy classification, are given a code of one; those from the Roman-Germanic family zero. Doupnik and Salter (1995) have empirically applied this approach to twenty nations. Of the nations covered in this study, Doupnik and Salter (1995) included

Australia, Singapore, Philippines and Malaysia in their research. They (p.204) reported that legal system was a significant influence on disclosure practices. Table 7.7 shows how the legal systems in each of the seven study nations were scored on the dichotomous scale (see Figure 5.2 for further information).

Table 7. 7: Rating of Legal Systems

Nation	Australia	Singapore	HongKong	Philippines	Thailand	Indonesia	Malaysia
Score	1	1	1	1	0	0	1

Legend:

1 = Common Law legal system family

0 = Roman-Germanic Law legal system family

7.6.3.4

LEVEL OF ECONOMIC DEVELOPMENT

The level of economic development has been measured using a variety of techniques with no strong theoretical arguments dictating the use of any one particular approach. In line with their argument relating the development of accounting practices to shift from an agricultural based society to a manufacturing and then technological one, Adhikari and Tondkar (1992, p.84) measured the level of economic development in terms of the relative contribution of the agricultural sector to the nation's GNP. This method has been applied by other studies such as Ahmed (1995).

For the purposes of this study, the GDP per capita (see for example Muller, 1988, 1995) measures the level of economic development. Economic theory argues that as an nation becomes more industrialized there is an increase in the natural output in the prosperity of an economy that leads to increased well-being of the public (see for example Baumol and Blinder, 1988; Gordon,

1990). This well being is reflected in higher wages and standards of living. GDP per capita is commonly quoted as an appropriate measure of the increased prosperity and development of an economy (see for example Gordon, 1990). Application of this method provides a suitable surrogate with adequate variation across the seven-study nations to indicate any influence of this factor on VESAD practices. Data on the GDP per capita of each of the nations involved in this study was collected from a variety of sites located on the World Wide Web. All figures used relate to 1995.

7.6.3.5

EQUITY MARKET

Size of the equity market equity has commonly been measured as the average total capitalization of the market over a given period as a percentage of the gross national product (see for example Ahmed, 1995; Doupnik and Salter, 1995).

The turnover of the market is measured often by the annual average trading volume of a nation's stock exchange as a percentage of that market's total capitalization. Both these approaches have been empirically utilized. Based on this past support for these measurement techniques they are both used for this study. Data for these measures were acquired from World Wide Web sources, the World Bank and International Monetary Fund, which supplied data on the stock markets of the seven study nations for 1995.

7.7 Summary

Outlined in this chapter were : (a) procedures for selection of the countries, documents and companies to be surveyed in this study; and (b) the approaches to be used to measure the dependent and independent variables. Of particular importance was the review of disclosure indices and content analysis. For the purposes of this study, both techniques will be applied to measure the extent of VESAD so as to rectify a gap in the extant literature related to these approaches. Chapter Eight continues the review of the research methods with a review of the analytical tools adopted in this project and the procedures undertaken to clean the data prior to the use of statistical analysis.

CHAPTER EIGHT

STATISTICAL TESTS AND CLEANING DATA

8.1 Overview

This chapter continues the focus of Chapter Seven with a review of the essential research methods used in this thesis. Initial focus in Chapter Eight is on the various statistical techniques to be utilized in analyzing the collected data and test the relevant hypotheses. Four main approaches will be used. These are independent t-tests and one-way ANOVAs, both forms of univariate analysis, combined with more sophisticated multivariate tools in the form of multiple regression analysis and structural model equationing. The latter half of the chapter describes methods harnessed to cleanse the data to ensure that it did not contain missing values, outliers or violated the assumptions of multivariate analysis.

8.2 Statistical Tests

An important determinant of the appropriate statistical tools to be used in social science (and thus accounting research) is the scale of measurement²⁰. Interval scale was the level applied in this study thus allowing for the use of

²⁰ There are four general scales of measurement ; (1) nominal; (2) ordinal; (3) interval; and (4) ratio. For a full discussion on the attributes of each scale see Lehman (1995), Grimm (1993) and Kiess (1989).

parametric forms²¹ of statistical tests. Following is a brief outline of four parametric techniques used in this study to analyze the data. These are (1) independent t-tests; (2) one-way ANOVAs; (3) multiple regression analysis; and (4) path analysis.

8.2.1

INDEPENDENT T-TESTS

Independent t-tests are an important parametric technique that is used in this study to determine if there are any significant differences between the amount of disclosure on VESAD and related themes reported by companies from one nation compared to another. The independent t-test formula is defined as

$$t = (X_1 - X_2) - (\mu_1 - \mu_2) / E_{(X_1 - X_2)}$$

where t = test for independent groups

$(X_1 - X_2)$ = difference between the two means

$(\mu_1 - \mu_2)$ = difference between what the predicted sample means

$E_{(X_1 - X_2)}$ = standard error of the difference between the two means (Kieess, 1989, p.237).

The purpose of independent t-tests is to determine if the observed variation between means of the two non-related samples arise through chance or is representative of a true difference between the populations (Shavelson, 1996, p.344). In applying the independent t-test it is assumed that: (a) scores in the populations are randomly applied and independent of each other; (b) distribution is normal; and (c) variances of the scores between the two populations is equal (Lehman, 1995, p.273).

²¹ Kieess (1989, pp.454-455) describes parametric tests as those that generally assume scores for populations sampled are normally distributed and equal variances.

Analysis of variance (ANOVA), developed by Sir Ronald Fisher, is used to compare the means of two or more samples to establish whether the observed differences are the product of chance or a systematic occurrence (Shavelson 1996, p.371). The distinction between a one-way and two-way ANOVA is that in the former there is one independent variable whilst two in the latter (Grimm, 1993, p.258). An ANOVA focuses on a comparison between the differences within groups to the variance between groups (Lehman, 1995, p.273). Simplistically, a one-way ANOVA may be defined as total variability = within-group variability plus between-group variability (Shavelson, 1996, p.379). The F-statistic, a mathematical distribution that is indicative of the aforementioned formula, is used to determine if the observed variation is significant or not. If the observed F-statistic is not significant then it is concluded that there is variation in the means across the groups tested (see for example Kiess, 1989; Grimm, 1993).

Multiple linear regression is engaged when the variation of the dependent variable is thought to be explained by the presence of more than one independent variable (see for example Davis and Cosenza, 1985; Gay and Diehl, 1992). The generalized form of a multiple linear regression equation/model is as follows: -

$$Y = a_0 + a_1X_1 + a_2X_2 + \dots + a_kX_k$$

where Y = the dependent variable

X = the independent variable(s)

a = the coefficients to be estimated

k = (1,2,.....,p) where p = the number of independent variables (Cohen and Cohen, 1983).

The objective of multiple regression analysis is to arrive at the best set of coefficients for the independent variables that bring the dependent values predicted from the equation as close as possible to the actual values observed (Tabachnick and Fidell, 1996, p.128).

8.2.4 *STRUCTURAL MODELING EQUATIONS – PATH ANALYSIS*

Under path analysis, simple bivariate correlations are utilized to estimate relationships in a system of structural equations (Hair et al, 1995, p.621). The method is based on specifying relationships in a series of regression like equations (portrayed graphically in a path diagram) that can then be estimated by determining the amount of correlation attributable to each effect in each equation simultaneously (Ullman, 1996, p.709).

The relationship between two variables under path analysis can be deemed significant by considering the critical ratio or standardized regression weights. The critical ratio is the parameter estimate of the model's standard error. If the appropriate distribution assumptions are met, this statistic has a normal distribution under the null hypothesis that the parameter has a population value of zero. If in absolute values the critical ratio is above two, then the

estimate is significantly different from zero at the 0.05 level (Ullman, 1996, p.711). Consequently, it may be concluded that there is a significant relationship between the two variables in question. The standardized regression weight meanwhile is commonly referred to as the beta values as in the case of multiple regression analysis. This latter measure acts as a confirmation tool for the critical ratio. If the standardized regression weight is larger than 0.10 or greater, one can again conclude a significant effect present between the variables (Hair et al, 1995, p.623).

Before making final conclusions related to any model tested, it is important to gauge the goodness of fit. To assess the overall goodness of fit of the model, one should examine both absolute and parsimonious fit measures. Absolute goodness of fit of the model considers the relationship between the sample covariance matrix and the estimated population covariance matrix. The absolute goodness of fit of a model may be identified from Chi-squared values and goodness of fit index (GFI). For Chi-squared values, the minimum acceptable level is often viewed to be 0.05, though more conservative levels of 0.10 and 0.20 are considered valid (Hair et al, 1995, p.651). The GFI calculates a weighted proportion of variance in the sample covariance matrix accounted for by the estimated population covariance matrix (see for example Bentler, 1983; Tanaka and Huba, 1989). Hair et al (1995, p.651) indicate that GFI values above 0.90 indicate a high level of absolute goodness of fit.

A ratio of the Chi-squared to the degrees of freedom is a method used to gauge the parsimonious goodness of fit. Ullman (1996, p.748) indicated as a rule of thumb that if the value is less than two then this indicates a good parsimonious

fit for the model. Hair et al (1995, p.652) suggested also that the recommended levels were between 1.0 and 2.0. Another common technique is the adjusted goodness of fit index (AGFI). Similar to the GFI, the AGFI adjusts the former by taking into consideration the number of parameters estimated in the model (Ullman, 1996, p.750). An acceptable level for the AGFI is given at 0.9 (Hair et al, 1995, p.652).

8.3Cleaning of the Data

Tabachick and Fidell (1996, p.57) argue that prior to the main data analysis being run a number of important issues needed to be resolved. These issues includes: - (a) a review of the data to ensure accuracy; (b) classification of any missing values; (c) review of the data to ensure that assumptions underlying the statistical technique being applied are not violated; and (d) identification of outliers. All of the points outlined above by Tabachick and Fidell (1996) are reviewed in greater depth below.

8.3.1

RELIABILITY OF THE FINAL CODING

Prior to the final coding of the annual reports, the measurement instruments to be used in this study were extensively pretested using 1994 annual reports. To further ensure the reliability and accuracy of these instruments additional testing was conducted using independent persons.

Unlike the pretesting phase when only one independent person (a qualified accountant) was utilized, four individuals were used in this latter phase. These four independent persons comprised: (1) a qualified accountant (not the same person used in the pretesting); (2) an academic staff member; (3) a recent graduated university student with a commerce degree majoring in accounting; and (4) a manager of manufacturing company with prior accounting experience. Gray et al (1995b, p.85) point out that in using content analysis for research, one must seek shared meaning in respect to the measurement instrument used. It was upon this basis that diversity in the occupations, experience in accounting issues and business knowledge was sought amongst the independent coders.

Once the independent coders had agreed to participate, a stratified random sample of four annual reports from each country was selected. Names of the independent coders were known only to the author so as to prevent any contact between them that could have biased results. Once the individual coders had analyzed all reports, the author then completed the process by scoring the reports himself. Results from all the coders covering the twenty-eight annual reports were then collected for testing of reliability.

Table 8.1 provides a summary of the amount of pages, sentences, words or disclosure index items that were reviewed by each independent coder and the number of disputes arising with at least one coder having a difference of opinion.

Table 8. 1: Pretesting Reconciliation

Measurement Form	Total Number of Units	Total Number Considered VESAD	Total Number Disputed	Percentage of Total Number of Units Not Disputed
Pages	392	23.52	0.674	99.83
Sentences	4321	423	57	98.68
Words	81666	10237	1219	98.51
Disclosure Index	1316	142	26	98.02

A simple means of assessing the reliability is to examine the number of disputes as a percentage of the total possible coding decisions for each measurement technique. The agreement percentage for each measurement base was greater than 98%. By this measure it would appear that reliability of the measurement technique is relatively high. Such a ratio however, is not completely accurate as stated by Hosti (1969, p.140) because it ignores the possibility of co-occurrences from chance that may overstate the reliability coefficient.

To overcome the extent of inter-coder agreement arising from chance, Scott's (1955) *pi*, and Krippendorff's (1980) α is used as in the pretesting phrase. Both of these statistical tests are designed to examine the degree of uniformity between the coding of the same document by different individuals, minimizing similarities due to chance. The higher the score for Scott's (1955) *pi*, and Krippendorff's (1980) α , the higher the degree of shared meaning in the measurement tool being applied being replicated amongst different coders.

An acceptable level for Scott's (1955) *pi*, and Krippendorff's (1980) α is above 0.8 (Krippendorff, 1980, p.45). Table 8.2 provides a summary of the scores calculated for these statistical tests for the four measurement bases.

Table 8. 2: Scott's (1955) pi , and Krippendorff's (1980) α Scores

	Pages	Sentences	Words	Disclosure Index
Scott's (1955) pi	0.972	0.931	0.957	0.867
Krippendorff's (1980) α	0.939	0.892	0.918	0.834

The values calculated for both Scott's pi and Krippendorff α coefficient is considered to be within acceptable levels. It is therefore, concluded that the coding of the reports by the author is statistically reliable.

8.3.2 *MISSING DATA AND ASSUMPTIONS OF STATISTICAL TESTS*

After a final proofread of a print-out of the data set, frequencies were run for all plausible categories to identify any missing data. Information pertaining to five companies was found to have missing data cells. Survey data for these companies were re-examined and the missing data entered.

Tests to examine the assumptions of statistical tests used in this study were conducted for each approach individually but to avoid extensive repetition only results related to multiple regression analysis is described explicitly. Many of the results related to multiple regression analysis may however, be applied to the other statistical tests (that is independent t-tests, one-way ANOVA's and path analysis).

The initial multiple regression model in this study incorporating all the independent variables and predicted directional signs is illustrated in Equation 8.1.

Equation 8.1:

$$\text{Dependent Variable (Measured by content analysis or disclosure index)} = a_1 + b_1 \text{LogAsset} + b_2 \text{ROA} + b_3 \text{IT1} + b_4 \text{IT2} + b_5 \text{IT3} - b_6 \text{Uncer} + b_7 \text{Ind} - b_8 \text{PD} + b_9 \text{Mas} - b_{10} \text{LTO} - b_{11} \text{PCS} + b_{10} \text{Legal} + b_{11} \text{LED} + b_{12} \text{EMSize} + b_{13} \text{EMTurn} + e$$

where :

LogAsset = natural log 1995 end of year assets

IT1 = industry classification - dummy variable with 1 = resource industry, 0 = other

IT2 = industry classification - dummy variable with 1 = manufacturing industry, 0 = other

IT3 = industry classification - dummy variable with 1 = finance industry, 0 = other

ROA = return on assets, 5 year average to 1995

Uncer = uncertainty avoidance

Ind = individualism

PD = power distance

Mas = masculinity

LTO = long term orientation

PCS = Gastil score for political and civil system

Legal = legal system - dummy variable with 1 = Common Law, 0 = Roman-Germanic Law

LED = level of economic development - per capita GDP

EMSize = market size based on market capitalization as percentage of GDP for each country

EMTurn = market efficiency based on turnover as percentage of capitalization

A major problem of multiple regression analysis is multicollinearity that occurs when there is high correlation between variables (see for example Hair et al, 1995; Tabachnick and Fidell, 1996). To assess the relationship between the independent variables more closely with the aim of reducing multicollinearity, a correlation matrix was constructed as shown in Table 8.3.

Table 8. 3: Correlation Matrix for Independent Variables

Variable Name	Log Asset	IT1	IT2	IT3	IT4	ROA	Uncav	Ind	PD	Mas	LTO	PCS	Legal	LED	EMSize	EmTurn	
Log Asset	1.000	-0.1232	-0.1814	0.3678	-0.0199	-0.1375	-0.0914	0.0901	-0.0039	0.0970	0.0699	0.0784	-0.0539	0.0360	0.1212	0.0228	
IT1		1.0000	-0.3847	-0.2146	-0.2361	-0.0536	0.2331	-0.1564	0.1622	-0.1430	-0.2359	-0.2360	-0.0282	-0.0076	-0.1485	-0.0515	
IT2			1.000	-0.4156	-0.4572	-0.0353	-0.1403	0.0830	-0.1920	0.0225	0.1495	0.1376	0.1444	-0.1047	-0.0231	-0.0515	
IT3				1.0000	-0.2550	-0.0353	-0.1226	0.0822	-0.0376	0.1147	0.1019	0.1076	-0.0197	0.0384	0.1053	0.0029	
IT4					1.0000	0.1275	0.0740	-0.0364	0.1196	-0.0067	-0.0630	-0.0541	-0.1287	0.0959	0.0616	-0.0148	
ROA						1.0000	-0.0577	0.0462	-0.0505	0.0117	0.0822	0.0713	0.1203	-0.1098	-0.0926	-0.0996	
Uncav							1.0000	-0.8073	0.6904	-0.5011	-0.9298	-0.9381	-0.3755	0.3548	-0.3600	-0.0181	
Ind								1.0000	-0.4070	0.1962	0.7480	0.8086	0.1483	-0.5361	0.3974	-0.0901	
PD									1.0000	0.0004	-0.6266	-0.6108	-0.5694	0.4098	-0.0476	-0.4425	
Mas										1.0000	0.4953	0.4244	0.0960	0.2281	0.2914	-0.1367	
LTO											1.0000	0.9887	0.2616	-0.2375	0.4159	0.0198	
PCS													1.0000	-0.2450	0.4752	0.0194	
Legal														1.0000	-0.7006	-0.2726	
LED															1.0000	0.3460	
EMSize																1.0000	0.4925
EmTurn																	1.0000

Farrar and Glauber (1967, p.102) concluded that harmful levels of multicollinearity were not present until bivariate correlations reached 0.8 or above. Based on the Farrar and Glauber's (1967) recommended limits, findings shown in Table 8.3 suggest high levels of correlation between the cultural variables of individualism and long-term orientation and political and civil systems. As a result of these findings the two cultural variables were excluded from the multiple regression equation. These two factors were removed as it was felt that three cultural variables still remaining in the equation could still be evaluated (and as such the effects of culture as a determinant on VESAD practices). If the variable measuring the influence of political and civil systems were excluded however, this would have led to the exclusion of entire societal variable rather than a subset from the study.

As a consequence of the findings from the correlation matrix the following multiple regression equation was drafted: -

Equation 8.2:

$$\text{Dependent Variable (Measured by content analysis or disclosure index)} = a_1 + b_1 \text{LogAsset} + b_2 \text{ROA} + b_3 \text{IT1} + b_4 \text{IT2} + b_5 \text{IT3} - b_6 \text{Uncer} - b_7 \text{PD} + b_8 \text{Mas} - b_9 \text{PCS} + b_{10} \text{Legal} + b_{11} \text{LED} + b_{12} \text{EMSize} + b_{13} \text{EMTurn} + e$$

where :

LogAsset = natural log 1995 end of year assets

IT1 = industry classification - dummy variable with 1 = resource industry, 0 = other

IT2 = industry classification - dummy variable with 1 = manufacturing industry, 0 = other

IT3 = industry classification - dummy variable with 1 = finance industry, 0 = other

ROA = return on assets, 5 year average to 1995

Uncer = uncertainty avoidance

PD = power distance

Mas = masculinity

PCS = Gastil score for political and civil system

Legal = legal system - dummy variable with 1 = Common Law, 0 = Roman-Germanic Law

LED = level of economic development - per capita GDP

EMSize = market size based on market capitalization as percentage of GDP for each country

EMTurn = market efficiency based on turnover as percentage of capitalization

Multiple regression analysis on the main data set based on Equation 8.2 was then conducted. Results from these tests found that power distance and equity

market size were excluded from the model for exceeding the tolerance default limits established under the SPSS statistical program. Exclusion of these factors from the model indicated problems with multicollinearity. Based on these findings, power distance and equity market size were also removed from the equation. Hence equation 8.3 was formed :-

Equation 8.3 :

$$\text{Dependent Variable (Measured by content analysis or disclosure index)} = a_1 + b_1 \text{LogAsset} + b_2 \text{ROA} + b_3 \text{IT1} + b_4 \text{IT2} + b_5 \text{IT3} - b_6 \text{Uncer} + b_7 \text{Mas} - b_8 \text{PCS} + b_9 \text{Legal} + b_{10} \text{LED} + b_{11} \text{EMTurn} + e$$

where :

LogAsset = natural log 1995 end of year assets

IT1 = industry classification - dummy variable with 1 = resource industry, 0 = other

IT2 = industry classification - dummy variable with 1 = manufacturing industry, 0 = other

IT3 = industry classification - dummy variable with 1 = finance industry, 0 = other

ROA = return on assets, 5 year average to 1995

Uncer = uncertainty avoidance

Mas = masculinity

PCS = Gastil score for political and civil system

Legal = legal system - dummy variable with 1 = Common Law, 0 = Roman-Germanic Law

LED = level of economic development - per capita GDP

EMSize = market size based on market capitalization as percentage of GDP for each country

Again it was felt that exclusion of power distance and equity market size would not distract, but rather enhance the results of this study, as their elimination would assist to reduce multicollinearity. Furthermore, both variables are again subsets of the one societal factor (that is power distance with culture and market size with the equity market) and their exclusion still leaves at least one other measure to examine the influence of the societal variable in question.

Collinearity diagnostic tests were conducted using the SPSS statistical package based on the work of Belsely, Kuh and Welsch (1980) on Equation 8.3. Findings from these tests (see Appendix G) found no significant collinearity; thus for the purposes of this study, the main multiple regression analysis tests were based on Equation 8.3.

Finally, the three major underlying assumptions (normality, linearity and homoscedasticity) of multiple regression analysis were examined. Conclusions drawn on these three assumptions are drawn from a series of graphical tables. Normal probability plots (see Appendix H) show clearly that for measures of the dependent variable the distribution of residuals was strongly centred along the diagonal axis thus indicating no substantial or systematic departures. As such the regression variate meets the normality assumption.

Scatterplots of the residuals as detailed in Appendix I support the conclusion of linearity as there is no distinctive patterns showing otherwise. The negative trends of the residuals in these scatterplots however, suggest the possibility of heteroscedasticity in the multivariate analysis. The general perspective of this negative trend suggests that the model is not capturing all the variance and that some unknown interaction term or other variable could be added. Overall it is considered that the problem of heteroscedasticity is not a serious dilemma for the overall conclusions of the study. Nonetheless in drawing conclusions, caution must be taken in interpreting results in the light of potential heteroscedasticity.

8.3.3

OUTLIERS

An important aspect of screening data sets is the identification of outliers (Tabachnick and Fidell, 1996, p.67). These outlying factors need to be identified as they distort the results leading to inaccurate interpretations. To identify multivariate outliers for this study in relation to Equation 8.3,

Mahalanobis distance scores were calculated. These scores are the distance of a case (in this study a firm) from the centroid of the remaining cases (Hair et al, 1995, p.152). The centroid is the point created by the means of all the variables (Tabachnick and Fidell, 1996, p.67).

With eleven degrees of freedom, Mahalanobis scores had to exceed a value of 31.264 at the 0.1% confidence level to be considered a multivariate outlier. Tests were run on the data set using Equation 8.2 for this statistic applying all four different measures of the dependent variable. The vast majority of cases did not approach the critical limit of 31.264. One case however, was found to have a value of approximately 250-260 for the four different regressions. The survey data related to this case was re-examined to assist in explaining this anomaly. It was subsequently found that data had been incorrectly entered initially. Correction to this case was therefore, made and tests for Mahalanobis distance scores re-run. To assist further with the identification of outliers which may significantly influence the multiple regressions, Cook's distance scores and leverage points were calculated on results on the second re-run after adjustment of the case identified as an outlier in the first run for Mahalanobis distance scores. Results for Cook's scores and leverage points were all found to be below the accepted cutoff values of 1.00 and 0.067^{22} respectively. Based on the results of these tests it was concluded that no multivariate outliers existed within the data set (see Appendix J for further details).

²² This cutoff score is calculated using the formula $2p/n$ where $p = 12$ and $n = 356$.

8.4 Summary

Four types of statistical tests that form the backbone of the analysis in this study were outlined in this chapter. These include independent t-tests, one-way ANOVA's, and multiple regression and path analysis. Another major aim was to detail the steps taken in this research study to ensure that the data collected and the statistical models developed were free as possible from any factors that may distort the results. Initial steps focused on testing of the research instruments used to measure the dependent variable. Results from tests found that the instrument was highly reliable. Further analysis of the data was conducted to identify any missing values, assumptions underlying statistical tests that were broken and outliers. From this extensive review, it was concluded that the data used in the analysis was free from any elements that may distort the findings. Findings of statistical analysis based on the final data set are outlined in the next three chapters. Descriptive and univariate results are the focus of Chapter Nine.

CHAPTER NINE

DESCRIPTIVE AND UNIVARIATE ANALYSIS

9.1 Overview

Analysis in this chapter initially focuses on descriptive characteristics determined from a scrutiny of annual reports from 356 companies in the seven Asia-Pacific countries. Discussion then draws attention to variations in VESAD practices across the national boundaries of the seven study countries in reference to three aspects. These are :- (1) comparison of the percentage of companies surveyed in each nation providing at least one form of VESAD; (2) review of the average number of words, sentences, pages and disclosure index scores recorded for companies in each country providing details on at least one VESAD issue; and (3) breakdown of companies reporting practices in each nation by theme. Univariate statistics were then performed to identify any significant differences in these VESAD practices across national boundaries to establish if the country of origin was an important determinant.

9.2 Descriptive Analysis

This section provides a brief overview of some of the general facts and characteristics that were identified in respect to this research study. Discussion concentrates on three aspects :- response rates; key demographic characteristics; and industry breakdown. Based on the details outlined in the following three sections it is concluded that the sample collected were

representative of the total population in each nation. This is due to the favourable response rate received, diversity of companies with different demographic details and distribution of entities across firms in a variety of industry classifications.

9.2.1

RESPONSE RATE

This study requested annual reports for the 1995 financial year from 665 companies operating in the seven study nations. From Table 9.1 the individual response rate for each nation varied. Thailand had the lowest rate with 28.00% of companies sent a request letter supplying annual reports. Conversely 95.00% (the highest response rate) of Australian organizations provided the requested documents. The response rate for each nation, and that overall, is considered to be representative of the Asia-Pacific region.

Table 9. 1: National Response Rates

Nation	Number of Corporations Approached	Number of Corporations Responding	Response Rate – Percentage
Australia	100	95	95.00
Singapore	100	77	77.00
Hong Kong	100	48	48.00
Philippines*	65	20	30.77
Thailand	100	28	28.00
Indonesia	100	34	34.00
Malaysia	100	54	54.00
Total	665	356	53.53

* Only 65 companies were approached in the Philippines. This was due to the small number of firms listed on that stock exchange prior to 1995 which had their main headquarters located in the Philippines.

The overall response rate of received annual reports was 53.53%. This compared favourably with other reported response rates for studies where foreign corporate annual reports were requested. Eddie (1996, p.11) for example achieved a response rate of 60.13%. His study covered corporations

operating in 10 nations in the Asia-Pacific. Of the seven nations used in this study, Eddie (1996) had a response rate of 65.72%. Two studies of Japanese corporations by Cooke (1991, p.178; 1993, p.526) had a 24% and 25% response rates respectively. A survey of Swedish corporate annual reports by Cooke (1989, p.114) resulted in an overall response rate of 81%.

9.2.2

KEY DEMOGRAPHIC CHARACTERISTICS

Table 9.2 provides a summary of the key financial demographic information related to the 356 companies that sent reports. Appendix K expands on Table 9.2 with a breakdown of the same characteristics by the seven study nations involved in this study.

Table 9. 2: Key Financial Demographic Details

Demographic Detail	Mean (US\$)	Standard Deviation (US\$)	Minimum (US\$)	Maximum (US\$)	F-Statistic	Sign. Of F-stat
Total Annual Sales	2076 billion	3917 billion	0.00	93900 billion	1.985	0.067
Total Annual Profit	6.48 million	165.40 million	-160 million	1.33 billion	2.202	0.042*
Total Annual Operating Profit	80.29 million	20.19 million	-110 million	1.60 billion	1.132	0.343
Annual Total Assets	2.044 billion	8.08 billion	94403	85.50 billion	0.530	0.786
Annual Total Liabilities	757.26 million	4.48 billion	-13989	82.90 billion	0.673	0.672
Shareholders Equity	492.21 million	118.03 million	-420.00 million	12.30 billion	3.649	0.002*
Return on Assets	0.09	0.52	-0.54	9.71	1.585	0.133

* Significant at the 5% confidence level

ANOVA tests were applied to determine if there were any significant differences between the means of the key demographic details (as listed in

Table 9.2 and Appendix K) across the seven study nations. The results as shown in Table 9.2 reveal that there were only significant differences in respect to total annual profit and shareholders' equity. Statistical significance of variance in regard to shareholders' equity was deemed irrelevant for the purposes of this study as this characteristic was not used in regard to any further statistical tests. Differences in regard to total annual profit are important to note as this characteristic may effect the ROA values calculated. If economic performance is found to be a significant explanatory factor in this study, then variations in annual profits across national boundaries could provide valuable insights.

9.2.3

INDUSTRY BREAKDOWN

Organizations surveyed in this study were not originally selected based on an industry type criterion. VESAD studies have argued that the type of industry is associated with such disclosures (see for example Hackston and Milne, 1995; Patten, 1992). Table 9.3 shows the distribution of the industry type of the corporation responding based on the ISIC coding, by each respective nation. Overall manufacturing corporations (ISIC coding 3) was the most prominent industry type (44.49%) followed by finance organizations (ISIC coding 8) (20.00%).

Table 9. 3: Classification of Surveyed Entities by Country and ISIC Code

ISIC Major Area Country	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[0]
Australia	4	23	31	2		16	8	9	2	
Singapore	1	1	34		3	11	6	20	1	
Hong Kong	1		19	1	2	7	5	13		
Philippines	2	2	5	1		2	3	5		
Thailand	3		17		1	2		5		
Indonesia	3	2	21			2	1	5	1	
Malaysia	4	3	25		1	8	3	9	1	
Total	18	30	152	4	7	48	26	66	5	

Legend: -

- [1] Agriculture, Hunting, Forestry and Fishing (Agriculture)
- [2] Mining and Quarrying (Mining)
- [3] Manufacturing
- [4] Electricity, Gas and Water (Utilities)
- [5] Construction
- [6] Wholesale and Retail Trade and Restaurants and Hotels (Retail)
- [7] Transport, Storage and Communication (Transport)
- [8] Financing, Insurance, Real Estate and Business Services (Finance)
- [9] Community, Social and Personal Services (Services)
- [0] Activities not Adequately Defined (Other)

Given that five of the ten ISIC classification divisions had less than 20 corporations in the sample, it was decided that redistribution was required to provide more relevant numbers for statistical testing. Following the procedure adopted by Eddie (1996), the new industry groups were formed as follows; Industry 1 (Ind1) = ISIC codes [1], [2], [4] and [5]; classified as the resource group; Industry 2 (Ind2) = ISIC codes [3]; categorized as the manufacturing group; Industry 3 (Ind3) = ISIC codes [8]; termed the finance group; and Industry 4 = ISIC codes [6], [7], [9] and [0]; referred to as the services group. Table 9.4 shows the redistribution of the ISIC codes for companies in each nation.

Table 9. 4: Distribution by Country after Reclassification

Country	Ind1	Ind2	Ind3	Ind4	Total
Australia	29	31	10	25	95
Singapore	5	34	20	18	77
Hong Kong	4	19	13	12	48
Philippines	5	5	5	5	20
Thailand	4	17	5	2	28
Indonesia	4	21	5	4	34
Malaysia	8	25	9	12	54
Total	59	152	67	78	356

Legend:

Ind1 = Resource Group

Ind2 = Manufacturing Group

Ind3 = Finance Group

Ind4 = Services Group

Table 9.4 shows that Industry 2 (Manufacturing Sector) is still the largest but the remaining three industry types are now relatively evenly distributed. This redistribution is important, as it will assist in the multiple regression analysis conducted in Chapter Nine when testing for industry effect. One of the industries will be designed as a base and not included in the regression. The remaining three will be used as dummy variables and their intercepts will be considered relative to this intercept (Eddie, 1996, p.15). This procedure is consistent with Doran and Guise (1984, p.152).

9.3 VESAD Practices Across the Asia-Pacific

In Chapter Three discussion on the variations of VESAD practices across national boundaries was examined from three different perspectives. These were: -

- (1) number and percentages from the survey population in each nation providing details on at least one VESAD practices;

- (2) a breakdown of the themes of VESAD that were discussed by companies providing at least one disclosure in their annual reports; and
- (3) the amount of information disclosed by companies from each nation on VESAD practices in annual reports.

The remainder of this section considers these three perspectives in relation to listed companies operating in the Asia-Pacific region.

9.3.1

COMPANIES REPORTING VESAD PRACTICES

Table 9.5 summarizes a national breakdown of the number of companies from each country that provided at least one detail on VESAD issues in their annual reports. This figure as a percentage of the total number of companies surveyed in each country is also shown. Overall, of the 356 firms whose annual reports were included in this study, 259 or 72.75% provided at least one piece of VESAD information²³.

²³ Independent t-tests were conducted to examine the significant differences in the key demographic details of firms making at least one disclosure on VESAD to those making none. Results of these tests revealed no statistically significant differences between the two groups in regard to demographic features.

Table 9. 5: National Breakdown of VESAD Practices

Country	Number Companies Surveyed	Number of Companies Reporting at Least One VESAD Issue	Percentage of Companies Reporting at Least One VESAD Issue
Australia	95	78	82.11
Singapore	77	38	49.35
Hong Kong	48	37	77.08
Philippines	20	19	95.00
Thailand	28	18	64.29
Indonesia	34	29	85.29
Malaysia	54	40	74.07
Overall	356	259	72.75

In terms of raw numbers, Thailand had the lowest number of companies providing at least one detail of VESAD; that is 18. By contrast 78 Australian organizations showed information in their annual reports toward this phenomena. Examination of the raw number of companies providing data can however be misleading. Thus examination of the number of companies providing at least on disclosure as a percentage of the total surveyed from each country provides better insights. Of Filipino companies surveyed, 95.00% showed in their annual reports at least one piece of reference to VESAD issues. Conversely less than half of the Singaporean entities (49.35%) examined provided any details. Percentages for the organizations in the remaining five study nations were close to the mean average for all entities.

The percentage of companies providing at least one disclosure on VESAD practices in their annual reports for each nation was similar to other nation-specific and international comparative studies as listed in Tables 4.2, 4.3. and 4.4. Findings from this research indicate that as a percentage, the number of companies providing at least one disclosure does not differ substantially from studies covering other regions of the world.

Comparison of results in Table 9.5 to those from studies listed in Table 4.3 shows that the percentage of companies in Singapore, Malaysia and in part Australia reporting VESAD details has grown over time. This is particularly true for Malaysian based companies. Andrews et al (1989) reported that less than 30% of Singapore and Malay companies considered this phenomenon in their annual reports. The findings in this study were 49.35% of Singapore entities and 74.07% for Malaysia. In respect to Australia, Guthrie and Parker (1990) observed that 56% of organizations made at least one disclosure on VESAD issues. For this study, 82.11% of entities surveyed reporting on at least one issue. An implication of these findings would suggest that companies' attitudes toward VESAD issues may be shifting toward a greater emphasis over time.

9.3.2

THEMES OF VESAD IN ASIA-PACIFIC

Prior research has indicated that human resources and safety is the major theme of VESAD practices reported by companies (see for example Guthrie and Parker, 1990; Gray et al, 1995a; Gray et al, 1996). Findings from this study of companies in the Asia-Pacific are very similar to that prior research of industrialized countries. Table 9.6 shows that the overall percentage of firms disclosing this theme for this study is 74.90%. Little variation was noted in respect to this theme across national boundaries with more than 60% of companies showing details in their annual reports pertaining to human resources and safety. Energy was another theme that appeared consistent with

prior literature with consideration of this issue being very low for companies in each country (Hackston and Milne, 1995, p.19).

Table 9. 6: National Breakdown of Reporting Practices By Theme

Country	Environment		Energy		Human Resources and Safety		Products and Customers		Community	
	No.	%	No.	%	No.	%	No.	%	No.	%
Australia	40	51.28	5	6.41	64	82.05	42	53.85	24	30.77
Singapore	8	21.05	2	5.26	27	71.05	25	65.79	24	63.16
Hong Kong	7	18.92	0	0.00	23	62.16	17	45.95	23	62.16
Philippines	8	42.11	2	10.53	15	78.95	17	89.47	11	57.89
Thailand	11	61.11	3	16.67	14	77.78	15	83.33	13	72.22
Indonesia	10	34.48	2	6.90	23	79.31	15	51.72	13	44.83
Malaysia	13	32.50	0	0.00	28	70.00	24	60.00	20	50.00
Overall	97	37.45	14	5.41	194	74.90	155	59.85	128	49.42

* The denominator for calculation of the percentages is the number of companies in that country reporting on at least one VESAD issue.

Patterns of disclosure relating to the other three themes of VESAD for each survey nation indicate both consistencies and irregularities with prior literature. For instance, Guthrie and Parker (1990, p.164) reported few companies placed an emphasis on products and customers. They found that only 10% and 35% of United Kingdom and United States entities respectively reported on this issue, with no companies disclosing from Australia. Findings from this study suggest the opposite with more than 45% of companies from each country providing some information on products and customers. It is worthy to note however, that a study of Japanese companies by Yamagami and Kokubu (1991) reported a percentage of 83%. Given that Japan is classified as an Asian nation and six of the countries in this study are predominantly from this grouping, the high figure related to product and customer disclosure amongst this cultural background contrasts significantly to other studies which have centred on countries of an Anglo-American heritage.

Findings from this study on environmental and community issues appear contrary to prior literature that generally indicated these themes are ranked highly by business enterprises (see for example Patten, 1991; Guthrie and Parker, 1990; Hackston and Milne, 1995; Gray et al, 1995a). In the case of Singapore and Hong Kong only 20.05% and 18.92% of companies respectively reported on environmental issues. Conversely the percentage of Thai (61.11%) and Australian (51.28%) companies reporting on this theme was quite higher. In relation to community issues however, Australian companies (30.77%) appeared to rank this as an issue of low concern. Thai firms (72.22%) again reported a high incidence rate in regard to this theme.

9.3.3

AMOUNT OF DISCLOSURE

Another important point to consider when examining for variations across national boundaries is the amount of disclosure provided by companies in their annual reports toward VESAD issues. Table 9.7 provides a summary of the average amount of VESAD issues reported by companies that provided at least one piece of information on this phenomena. Averages supplied in Table 9.7 relate to the three different units of measurement for content analysis and the scores for the disclosure index, all applied in measuring the dependent variable in this study.

Table 9. 7: National Breakdown of Quantity of Disclosure

Country	Average Number of Pages	Average Number of Sentences	Average Number of Words	Average VESADInd Score
Australia	0.64	17.65	369.69	0.11
Singapore	1.29	26.58	554.38	0.08
Hong Kong	0.44	9.62	229.00	0.08
Philippines	1.13	21.05	552.46	0.16
Thailand	1.61	29.50	735.01	0.13
Indonesia	0.70	11.31	270.55	0.11
Malaysia	0.44	12.03	278.01	0.08
Overall	0.79	17.31	390.23	0.10

* All averages were computed for companies providing at least one disclosure on VESAD issues.

Results in Table 9.7 show considerable variation in the amount of disclosure provided by companies from the seven study nations. Hong Kong and Malaysian based companies provided the smallest amounts of disclosure. Irrespective of the measurement unit applied in application of content analysis, Thai companies reporting at least one VESAD issues supplied on average the highest amount of disclosure. Other countries in which companies supplied high amounts of disclosure were Singapore and Philippines. It is interesting to contrast results for Singapore that had one of the lowest percentages of surveyed companies disclosing on VESAD issues (see Table 9.5) but one of the highest for average amounts of disclosure (see Table 9.7). Statistical tests of the key demographic characteristics between Singapore companies disclosing and those not on VESAD practices, indicated significant differences between the size and economic performance of these two groupings. This result may indicate that in respect to Singapore companies, these two organizational attributes are central determinants of VESAD reporting.

Table 9.8 complements Table 9.7 and Table 9.5 by combining the features of these two previous tables in showing a breakdown of the number of companies

disclosing VESAD details within predetermined ranges for the amount of disclosure. A further breakdown is provided by nation. Ranges selected in Table 9.8 were largely arbitrary except for pages that were based a prior literature such as Hackston and Milne (1995) and Guthrie and Parker (1990) which used these scales.

Table 9. 8: Distribution of Company Frequencies in Different Ranges

	Australia		Singapore		Hong Kong		Philippines		Thailand		Indonesia		Malaysia	
Pages	No.	%*	No.	%	No	%	No.	%	No.	%	No.	%	No.	%
<0.25	39	50	12	32	25	68	5	26	4	22	14	48	23	58
0.25<x<0.75	20	26	4	11	3	8	6	32	6	33	9	31	11	28
0.75<x<1.25	11	14	10	26	5	14	0	0	1	6	2	7	3	8
>1.25	8	10	12	32	4	11	8	42	7	39	4	3	3	8
Sentences	No.	%	No.	%	No	%	No.	%	No.	%	No.	%	No.	%
<5.00	24	31	9	24	20	54	1	5	1	6	9	31	18	45
5.00<x<15.00	30	38	7	18	9	24	8	42	6	33	16	55	12	30
15.00<x<25.00	9	12	8	21	4	11	3	16	3	17	1	3	6	15
>25.00	15	19	14	37	4	11	7	37	8	44	3	10	4	10
Words	No.	%	No.	%	No	%	No.	%	No.	%	No.	%	No.	%
<200	40	51	18	47	27	73	4	21	5	28	16	55	24	60
200<x<350	16	21	8	21	2	5	4	21	3	17	9	31	5	13
350<x<500	5	6	4	11	2	5	3	16	1	6	0	0	5	13
>500	16	21	8	21	5	14	8	42	9	50	4	14	6	15
VESADInd Score	No.	%	No.	%	No	%	No.	%	No.	%	No.	%	No.	%
<0.05	18	23	20	53	20	54	0	0	4	22	5	14	17	43
0.05<x<0.10	26	33	10	26	11	30	4	21	4	22	12	41	8	20
0.10<x<0.15	18	23	5	13	4	11	7	37	3	17	6	21	8	20
>0.15	16	21	3	8	2	5	8	42	7	39	6	21	7	18

* The denominator for calculation of the percentages is the number of companies in that country reporting on at least one VESAD issue.

Comparison of Tables 9.5, 9.7. and 9.8 provide some interesting insights into VESAD practices in the Asia-Pacific region. Considering Hong Kong, Indonesian and Malaysian companies again, according to Table 9.5 a relatively high number of companies surveyed reported at least one form of VESAD. Findings from Table 9.7 indicate however, that despite firms reporting on VESAD practices, they devote little space to the phenomena compared to their counterparts in the other four study nations. Conversely, the percentage of Thai and Singapore companies that provided at least one

disclosure was lower (64.29% and 49.35% respectively) but the quantity of reporting provided was high (for instance 29.50 and 26.58 sentences). Results in Table 9.8 suggest that the percentage of companies providing more extensive information on VESAD issues came from those countries with high overall amounts of disclosure. For instance, Thai, Filipino and Singapore companies provided on average the highest amounts of VESAD disclosure. Their counterparts in Indonesia, Hong Kong and Malaysia supplied the lowest amounts. Considering the number of sentences as way of demonstration, over 35% of companies from the three former nations provided more than twenty-five sentences on VESAD. For organizations in the other three nations, 10% or less of companies were in this highest bracket.

It is difficult to fully explain or reconcile this interesting observation without more statistical tests. However, one may argue from a political economy perspective that firms in the different nations are faced with different social, political and economic conditions that dictate their actions. Firms in Indonesia, Malaysia and Hong Kong may face circumstances that dictate a need to provide some form of disclosure on VESAD so as to mediate and accommodate sectional interests. As suggested under political economy theory however, disclosure may be minimal as the preparers perceive revealing too much may be against their self-interests. By contrast, conditions under which Singapore and Thai enterprises operate may be different such that they do not feel obligated to reporting on VESAD practices till certain circumstances arise. At this point such firms may feel it is in their better interests to disclose more detail to avoid potential regulation. To identify explanations for these

observations further, additional empirical work outlined in Chapters Ten and Eleven must be examined.

9.3.3.1

AMOUNT OF DISCLOSURE BY THEME

Table 9.9 illustrates a breakdown of the average amount of information supplied by companies from each nation by themes.

Table 9. 9: Amount of Disclosure by Nation and Theme

	Australia	Singapore	Hong Kong	Philippines	Thailand	Indonesia	Malaysia
CAPages							
Environment	0.167	0.040	0.025	0.144	0.233	0.202	0.025
Energy	0.006	0.004	0.000	0.010	0.052	0.007	0.000
Human Resources and Safety	0.306	0.482	0.209	0.200	0.244	0.196	0.182
Products and Customers	0.077	0.379	0.102	0.317	0.318	0.048	0.058
Community	0.081	0.383	0.103	0.459	0.762	0.071	0.175
CASent							
Environment	4.372	1.156	0.676	1.684	5.278	2.036	0.750
Energy	0.154	0.211	0.000	0.263	0.722	0.321	0.000
Human Resources and Safety	8.051	10.026	4.189	5.263	4.889	4.643	3.475
Products and Customers	2.346	7.289	2.595	6.421	5.333	1.679	2.150
Community	2.731	7.895	2.162	7.421	13.278	2.750	5.650
CAWords							
Environment	91.807	29.40	18.248	43.133	126.223	51.033	17.446
Energy	3.047	6.563	0.000	5.443	18.555	8.6875	0.000
Human Resources and Safety	168.01	190.514	92.330	135.925	114.700	110.500	83.118
Products and Customers	50.961	144.964	64.895	167.363	130.727	37.725	49.457
Community	55.861	182.937	53.527	200.596	345.136	62.071	127.983
VESADInd							
Environment	0.153	0.024	0.039	0.125	0.135	0.094	0.043
Energy	0.007	0.007	0.000	0.011	0.032	0.009	0.000
Human Resources and Safety	0.161	0.125	0.125	0.157	0.141	0.186	0.126
Products and Customers	0.165	0.116	0.144	0.303	0.170	0.141	0.130
Community	0.086	0.107	0.083	0.205	0.191	0.121	0.096

Findings in Table 9.9, further confirm the notion raised in Table 9.7, that the overall amount of VESAD disclosure varies across national boundaries. In the context of environmental issues Thai and Australian companies provided on

average (irrespective of measurement base) much higher levels of disclosure than their counterparts in the five remaining study nations. Reporting of energy issues was very limited amongst companies from all the seven study nations. As a result of the low amounts of disclosure concerning this theme, no distinctive patterns across national boundaries can be noted.

Human resource and safety disclosures reveal some interesting trends. For all three bases under content analysis, Singapore and Australian companies provide nearly twice as much detail as their counterparts in other countries in the Asia-Pacific region. When a disclosure index is applied however, Indonesian and Australian companies on average disclosed information on a higher number of items within the measurement instrument than counterparts in the other five nations. Singapore companies performed virtually on par with their counterparts in Hong Kong and Malaysia, but below those enterprises in Thailand and the Philippines when the dependent variable was measured using a disclosure index.

Cross-national patterns pertaining to products and customers provide further interesting details. In respect to amount of pages, sentences or words devoted to this issue, Singapore, Filipino and Thai enterprises provided nearly twice as much space in their annual reports than companies from the remaining four study countries. Measurement of the dependent variable via the disclosure index reveals that Filipino and Thai companies had the highest scores. Singapore enterprises did not fare as highly on this scale as when measuring amount by content analysis. Australian firms, on products and customers,

scored highly in relation to the disclosure index. This contrasts to a low amount of disclosure in terms of pages, sentences and words.

Finally, Thai companies provided nearly twice as much disclosure on community issues than firms from any other one nation. Filipino and Singapore organizations, plus those from Malaysia, also provided a large amount of disclosure on community issues relative to their counterparts in Australia, Hong Kong and Indonesia. Thai and Filipino entities again were regarded highest when using a disclosure index. The differences amongst companies from the remaining five study nations appeared less distinct when using the measure for the dependent variable.

9.4 Univariate Analysis for Country of Origin Effects

Discussion in Section 9.3.3 indicated a number of variations in the amount of VESAD information detailed by companies in their annual reports, across national boundaries within the Asia-Pacific region. Univariate analysis is used to establish if country of origin is an important determinant of the amount of VESAD information discussed by enterprises in the Asia-Pacific region. Analysis focuses on both the overall amount of VESAD details shown and the respective themes.

Table 9.10 summarizes the findings of a series of independent t-tests on the mean averages for companies reporting on at least one VESAD issue measured using pages, sentences, words and VESADInd. Independent t-tests are used to identify if the unrelated samples from each nation come from the same population. That is, if the means for samples from say Australia and Singapore do not differ significantly this implies samples from the two nations come from the same population. It will then be concluded VESAD practices do not differ between the respective nations. If all the samples from the seven study nations were found to be of the same population, this would infer that the country of origin is not a significant determinant of VESAD practices.

Table 9. 10: Independent T-Tests of Country of Origin Effects²⁴

	Singapore	Hong Kong	Philippines	Thailand	Indonesia	Malaysia
CAPages						
Australia	0.018*	0.300	0.067**	0.004*	0.794	0.287
Singapore		0.014*	0.738	0.565	0.150	0.011*
Hong Kong			0.010*	0.003*	0.305	0.996
Philippines				0.376	0.226	0.009*
Thailand					0.062**	0.003*
Indonesia						0.292
CASent						
Australia	0.114	0.079**	0.589	0.087**	0.216	0.234
Singapore		0.004*	0.487	0.741	0.020*	0.019*
Hong Kong			0.005*	0.000*	0.603	0.532
Philippines				0.249	0.028*	0.090**
Thailand					0.003*	0.008*
Indonesia						0.868
CAWords						
Australia	0.192	0.153	0.179	0.019*	0.369	0.359
Singapore		0.058**	0.993	0.489	0.014*	0.016*
Hong Kong			0.004*	0.001*	0.636	0.586
Philippines				0.367	0.020*	0.028*
Thailand					0.006*	0.005*
Indonesia						0.941
VESADInd						
Australia	0.016*	0.049*	0.079**	0.426	0.832	0.031*
Singapore		0.854	0.001*	0.012*	0.081**	0.841
Hong Kong			0.000*	0.018*	0.107	0.998
Philippines				0.374	0.044*	0.000*
Thailand					0.362	0.376
Indonesia						0.008*

* Significant at 5% confidence level

** Significant at 10% confidence level

The results from Table 9.10 generally confirm the previous findings from Section 9.3 that across the seven Asia-Pacific nations there are variations in VESAD practices. Irrespective of which measurement unit applied under content analysis was utilized, the VESAD practices of companies from a number of different nations were significantly different in terms of the amount of information provided. For instance, Australian and Thai enterprises on average differed significantly in regard to the overall amount of disclosure provided. Other significant differences were noted between (a) firms from Singapore to those in Hong Kong and Malaysia; (b) Hong Kong to Filipino

²⁴ Though not shown in detail in the main text, Mann-Whitney U tests were also conducted. These are shown in Appendix M. Results from these latter tests are highly similar to those for independent t-tests.

and Thai entities; (c) organizations in the Philippines to their counterparts in Malaysia; and (d) companies from Thailand to those in Indonesia and Malaysia.

Additional significant differences across national boundaries can be noted. Such variations however, were not consistent across all three units of measurement for content analysis. For example, the amount of disclosure on VESAD issues was significantly different between Australian and Filipino entities when measuring by pages. Such statistical differences though were not found when measurement was applied to the number of sentences or words. Other cases in which there were significant differences in the amount of information provided on VESAD but limited to one or two units of analysis are listed as: - Australia - Singapore (pages); Australia - Hong Kong (sentences); Indonesia - Singapore (sentences); Indonesia and Philippines (sentences and words); Hong Kong and Philippines (words); and Hong Kong and Thailand (words).

Results of independent t-tests using VESADInd scores produced some interesting contrast to those found using the three units of analysis for content analysis. As discussed above, there were significant differences between the amount of disclosure provided by firms from different countries irrespective of the unit of analysis used. Statistically significant differences common when measuring the dependent variable by a disclosure index or content analysis was found only in relation to Hong Kong to Filipino and Thai, and Filipino to Malaysian companies. In respect to measurement using a disclosure index,

significant differences were also noted in regard to Australian companies and their counterparts in Singapore, Hong Kong, the Philippines and Malaysia; Singapore firms to those in the Philippines, Thailand and Indonesia; and between Filipino and Indonesian organizations.

Further independent t-tests were conducted on the amount of disclosure made by companies in the seven nations on the five respective themes of VESAD identified in this study. Results from these additional statistical tests are outlined in Appendix L. With regard to environmental disclosures, there appeared a number of significant differences between the amount of disclosure by companies on this issue across national boundaries. In particular, clear significant differences were noted in respect to organizations from the following nations; Australia to Singapore, Hong Kong and Malaysian companies; Singapore to Thai enterprises; Hong Kong firms to those in the Philippines and Thailand; and Malaysian entities to Filipino, Thai and Indonesian.

In contrast to environmental concerns, few significant differences were noted in the amount of disclosure on energy or human resource and safety matters. For disclosures related to energy, only significant differences related to the extent of disclosure by Thai and Filipino companies and those in Hong Kong and Malaysia were consistently found for the different approaches used to measure the dependent variable. Thai and Australian firms also contrasted significantly on the amount of disclosure on this theme. Given the low amount of disclosure on energy issues overall, caution is noted when interpreting the

results from independent t-tests related to this category. In the case of human resources and safety, significant differences in the amount of disclosure were found only to consistently exist between Malaysian corporations and those operating in the Philippines and Australia.

Clear significant differences, irrespective of the measurement base for the amount of disclosure on product and customer issues, was present between Filipino firms and those operating in Australia, Hong Kong, Indonesia and Malaysia. Further statistically significant results were noted in relation to the extent of disclosure between Thai enterprises and their counterparts in Australia and Indonesia on this theme. Finally for community disclosure, the independent t-tests suggested that Filipino and Thai companies on average provided significantly different amounts of details in their annual reports compared to Australian and Hong Kong firms. Differences were also present between organizations in the Philippines and Thailand to those in Singapore, Indonesia and Malaysia but not across all the measurement bases for the dependent variable. The significant difference though was noted in three out of the four cases of measurement.

9.4.2

ONE-WAY ANOVAS

The final univariate tests conducted to examine the effect of country of origin was the use of one-way ANOVA's designed to analyze the variance across two or more means to see if there are any reliable differences amongst them. ANOVA tests were conducted on means recorded for all the different measurement techniques. These results are shown in Table 9.11.

Table 9. 11: Results of ANOVA Tests

	Sum of Squares	Mean Squares	F-Ratio	F-Probability
Overall				
CAPages	35.1891	5.8649	3.7374	0.001*
CASent	10563.0406	1760.5068	3.3017	0.004*
CAWords	5577635.618	929605.9364	2.7227	0.014*
VESADInd	0.2047	0.0341	4.0687	0.001*
Environment				
EnvPages	35.556	9.781E-02	2.423	0.026*
EnvSent	10630.247	109.028	3.814	0.001*
EnvWords	5618165	48059.124	3.147	0.005*
EnvInd	10.735	0.145	5.111	0.000*
Energy				
EnPages	0.553	4.454E-03	2.953	0.008*
EnSent	204.795	0.968	1.698	0.120
EnWords	144460.0	618.052	1.532	0.167
EnInd	0.581	2.855E-03	1.767	0.105
Human Resources and Safety				
HRSPages	64.408	0.128	0.701	0.649
HRSSent	30137.986	131.259	1.561	0.158
HRSWords	14996402	49419.025	1.173	0.320
HRSInd	5.161	2.068E-02	1.433	0.201
Products and Customers				
PCPages	59.196	0.351	2.144	0.048*
PCSent	15906.188	84.243	1.909	0.079**
PCWords	11269870	52360.626	1.668	0.128
PCInd	12.203	8.908E-02	2.665	0.015*
Community				
ComPages	77.641	1.029	5.026	0.000*
ComSent	39692.472	226.754	2.065	0.057**
ComWords	24778255	171854.0	2.526	0.021*
ComInd	11.878	6.442E-02	1.957	0.071**

* Significant at 5% confidence level

** Significant at 10% confidence level

The results in Table 9.12 indicate that for the overall amount of VESAD information provided, as measured by the four approaches, the means for all seven study nations are all significantly different at the 5% confidence level. This results supports the independent t-tests which suggested a high degree of variation in the amount of VESAD shown by companies operating in the seven different nations in the Asia-Pacific region.

The additional one-way ANOVAs related to the respect themes of VESAD further support the findings from independent t-tests. Variations in the mean amount of disclosure by firms on environmental, products and customers and community issues using all four measurement based (apart from for products and customers measured by words) were consistently found to be significant at the 5 or 10% confidence levels. For the extent of energy and human resource and safety disclosure made, variations in the means as measured by pages was the only approach found to be statistically significant.

9.5 Summary

This chapter focused extensively on identifying possible variations in the VESAD practices of companies operating in the seven study nations in the Asia-Pacific region and statistically testing for differences. Analysis of VESAD practices across national boundaries was undertaken at three different levels. Differences were noted in respect to the number of companies from each country providing at least one disclosure on a VESAD practice, the themes being reported and the amount of disclosure in annual reports. Univariate analysis statistically indicated substantial differences in VESAD practices in terms of the extent of disclosure across national boundaries for companies operating in the seven study nations. The significance of these variations in the amount of disclosure was particularly evident in regard to environmental, products and customers and community issues. Based on these findings, it is concluded that in the Asia-Pacific region the country of origin is an important determinant of VESAD practices. The next step in this study is to

determine the factors that explain these noted differences across national boundaries.

CHAPTER TEN

MULTIVARIATE ANALYSIS - MULTIPLE REGRESSIONS

10.1 Overview

Descriptive analysis in Chapter Nine indicated a number of variations in VESAD practices across national boundaries for companies operating in the Asia-Pacific region. Univariate tests were conducted to examine for country of origin effects. Conclusions from this analysis supported the earlier findings from a descriptive examination.

This chapter expands on this earlier statistical discussion using multivariate analysis through multiple regressions. The objective of this analysis is to determine the influence of key organizational attributes, business environment and societal variables that may assist to explain the noted differences in VESAD practices amongst the companies surveyed in the seven study nations.

10.2 Multiple Regressions - Total VESAD Scores

Tables 10.2 through 10.5 tabulate the details of four multiple regressions that contained all the independent variables as listed in Equation 9.3. The only factor differentiating each model is the methodology carried out to measure the dependent variable (the extent of VESAD information reported in the annual reports). The methodology applied to measure the dependent variable in each case is listed as follows :-

- (1) Table 10.1 - content analysis; number of pages;
- (2) Table 10.2 - content analysis; number of sentences;
- (3) Table 10.3 - content analysis; number of words; and
- (4) Table 10.4 - disclosure index.

General comments applicable to all four models are that each was statistically highly significant, with the F-statistic for each significant at the 1 % confidence interval. The explanatory power of each model varied from a low of 12.46% for the model in which the dependent variable was measured by the number of pages, to a high of 23.25% when a disclosure index was used. Specific scrutiny of each model is described in the following sections.

10.2.1 REGRESSIONS OF TOTAL VESAD SCORES MEASURED BY PAGES

A number of independent variables in Table 10.1 have a significant influence on the extent of VESAD information. The number of pages in this case measured the dependent variable.

Table 10. 1: Multiple Regression - Pages

CAPages = a ₁ + b ₁ LogAsset + b ₂ ROA + b ₃ IT1 + b ₄ IT2 + b ₅ IT3 - b ₆ Uncav + b ₇ Mas - b ₈ PCS + b ₉ Legal + b ₁₀ LED + b ₁₁ EMTurn + e					
Multiple R :	0.38948	ANOVA	df	Sum of Squares	Mean Square
R-square	0.15169	Regression	11	72.19344	6.56304
Adjusted R-square	0.12457	Residual	344	403.72311	1.17361
Std.Error	1.08333	F-statistic	5.59216	Sign. of F	0.0000
Variable	B	SE B	Beta	t	Sign.t
Organizational Attributes					
LogAsset	0.218751	0.033879	0.351544	6.457	0.0000*
ROA	0.067639	0.114426	0.030437	0.591	0.5548
Business Environment					
IT1	-0.016412	0.191651	-0.005278	-0.086	0.9318
IT2	-0.147522	0.155594	-0.063111	-0.948	0.3437
IT3	-323470	0.189162	-0.109353	-1.710	0.0882**
Societal Variables					
Uncer	-0.020893	0.008155	-0.546063	-2.562	0.0108*
Mas	-0.10995	0.004701	-0.202336	-2.339	0.0199*
PCS	-0.170065	0.067786	-0.448690	-2.509	0.0126*
Legal	0.256513	0.138640	0.170293	1.850	0.0651**
LED	0.000025	0.000015	0.184746	1.663	0.0972**
EMTurn	-1.687055	1.357198	-0.078831	-1.243	0.2147
Constant	-1.376120	1.288890		-1.068	0.2864

* Significant at 5% confidence level

** Significant at 10% confidence level

Where:

LogAsset = natural log 1995 end of year assets

IT1 = industry classification - dummy variable with 1 = resource industry, 0 = other

IT2 = industry classification - dummy variable with 1 = manufacturing industry, 0 = other

IT3 = industry classification - dummy variable with 1 = finance industry, 0 = other

ROA = return on assets, 5 year average to 1995

Uncer = uncertainty avoidance

Mas = masculinity

PCS = Gastil score for political and civil system

Legal = legal system - dummy variable with 1 = Common Law, 0 = Roman-Germanic Law

LED = level of economic development - per capita GDP

EMTurn = average market turnover as percentage of market capitalization

In respect to organizational attributes, the size of the firm was found to be statistically significant at the 5% confidence interval. The directional sign of the factor was positive which was as predicted. Industry 3 (Finance Sector), with a negative directional sign was also found to be statistically significant but only at the 10% confidence level. This finding implies that firms in the

finance sector provided statistically less information on total VESAD than counterparts in other industry groupings.

At the 5% confidence interval, three societal variables in Table 10.1, uncertainty avoidance, masculinity and political and civil systems were statistically significant in explaining the number of pages of VESAD provided. For two of these factors (uncertainty avoidance and political and civil systems) the directional signs of the coefficients were as expected. Masculinity had a negative sign when it was predicted to be positive. The legal system and level of economic development were also found to be statistically moderately significant in this model at the 10% confidence level. Directional signs for each factor were positive which was as expected for the level of economic development.

The other factors (economic performance, Industry 1, Industry 2, and the equity market variable turnover) in Table 10.1 were statistically insignificant. Apart from the equity market turnover the directional signs for these non-significant elements were as predicted.

10.2.2 REGRESSIONS OF TOTAL VESAD SCORES MEASURED BY SENTENCES

Results from Table 10.2, in which the number of sentences measured the dependent variable, differed somewhat from findings in Table 10.1 when pages were used. Firm size was found to be highly significant at the 5% confidence level with a positive directional sign. The coefficient in Table 10.2

for economic performance was positive as predicted but not significant at either the 5% or 10% confidence levels. The business environment coefficients for industry type were all insignificant in Table 10.2.

Table 10. 2: Multiple Regression - Sentences

CASent = a ₁ + b ₁ LogAsset + b ₂ ROA + b ₃ IT1 + b ₄ IT2 + b ₅ IT3 - b ₆ Uncav + b ₇ Mas - b ₈ PCS + b ₉ Legal + b ₁₀ LED + b ₁₁ EMTurn + e					
Multiple R :	0.43937	ANOVA	df	Sum of Squares	Mean Square
R-square	0.19304	Regression	11	32059.48974	2914.49907
Adjusted R-square	0.16724	Residual	344	134014.45127	389.57689
Std.Error	19.73770	F-statistic	7.48119	Sign. Of F	0.0000
Variable	B	SE B	Beta	t	Sign.t
Organizational Attributes					
LogAsset	4.879981	0.617250	0.41819	7.906	0.0000*
ROA	2.145710	2.084781	0.051688	1.029	0.3041
Business Environment					
IT1	4.936325	3.491770	0.084983	1.414	0.1584
IT2	-2.061361	2.834825	-0.047208	-0.727	0.4676
IT3	-4.303590	3.446410	-0.077883	-1.249	0.2126
Societal Variables					
Uncer	-0.290637	0.148582	-0.406638	-1.956	0.0513**
Mas	-0.198444	0.085650	-0.195492	-2.317	0.0211*
PCS	-2.685245	1.235012	-0.379254	-2.174	0.0304*
Legal	3.222511	2.525942	0.114524	1.276	0.2029
LED	0.000384	0.000273	0.153271	1.415	0.1581
EMTurn	-24.054747	24.727337	-0.060171	-0.973	0.3313
Constant	-47.297151	23.482798		-2.014	0.0448

* Significant at 5% confidence level

** Significant at 10% confidence level

Where:

LogAsset = natural log 1995 end of year assets

IT1 = industry classification - dummy variable with 1 = resource industry, 0 = other

IT2 = industry classification - dummy variable with 1 = manufacturing industry, 0 = other

IT3 = industry classification - dummy variable with 1 = finance industry, 0 = other

ROA = return on assets, 5 year average to 1995

Uncer = uncertainty avoidance

Mas = masculinity

PCS = Gastil score for political and civil system

Legal = legal system - dummy variable with 1 = Common Law, 0 = Roman-Germanic Law

LED = level of economic development - per capita GDP

EMTurn = average market turnover as percentage of market capitalization

Directional signs for all societal variables in Table 10.2 paralleled those in Table 10.1. Uncertainty avoidance, masculinity and political and civil systems were again statistically significant though in the case of uncertainty avoidance

at the 10% confidence level rather than 5% as in Table 10.1. Legal system and the level of economic development were not influential in explaining the variation in VESAD practices. Findings related to the latter two societal variables in Table 10.2, contrasted to results in which the dependent variable was by pages (see Table 10.1 in Section 10.2.1).

10.2.3 REGRESSIONS OF TOTAL VESAD SCORES MEASURED BY WORDS

Results applying the number of words as the measurement unit of the dependent variable (see Table 10.3) produced results that virtually mirrored those for Table 10.2. Again all directional signs for all coefficients in Table 10.3 were as predicted apart for those related to masculinity and equity market turnover.

Table 10. 3: Multiple Regressions - Words

CAWords = a ₁ + b ₁ LogAsset + b ₂ ROA + b ₃ IT1 + b ₄ IT2 + b ₅ IT3 - b ₆ Uncav + b ₇ Mas - b ₈ PCS + b ₉ Legal + b ₁₀ LED + b ₁₁ EMTurn + e					
Multiple R :	0.42442	ANOVA	df	Sum of Squares	Mean Square
R-square	0.18013	Regression	11	18439095.86	1676281.44
Adjusted R-square	0.15392	Residual	344	83923898.94	243964.822
Std.Error	493.92795	F-statistic	6.87100	Sign. of F	0.0000
Variable	B	SE B	Beta	t	Sign.t
Organizational Attributes					
LogAsset	113.525723	15.446439	0.393385	7.350	0.0000*
ROA	41.093038	52.170803	0.039872	0.788	0.4314
Business Environment					
IT1	73.194422	87.380118	0.050756	0.838	0.4028
IT2	-83.892797	70.940330	-0.077386	0.838	0.4028
IT3	-96.019788	86.244998	-0.069992	-1.113	0.2663
Societal Variables					
Uncer	-7.448826	3.718216	-0.419783	-2.003	0.0459*
Mas	-3.717038	2.143366	-0.147491	-1.734	0.0838**
PCS	-71.759971	30.905668	-0.408233	-2.322	0.0208*
Legal	65.208466	63.210661	0.093344	1.032	0.3030
LED	0.005215	0.006790	0.083877	0.768	0.4430
EMTurn	-487.723944	618.791517	-0.049140	-0.788	0.4311
Constant	-985.210950	587.647435		-1.677	0.0945

* Significant at 5% confidence level

** Significant at 10% confidence level

Where:

LogAsset = natural log 1995 end of year assets

IT1 = industry classification - dummy variable with 1 = resource industry, 0 = other

IT2 = industry classification - dummy variable with 1 = manufacturing industry, 0 = other

IT3 = industry classification - dummy variable with 1 = finance industry, 0 = other

ROA = return on assets, 5 year average to 1995

Uncer = uncertainty avoidance

Mas = masculinity

PCS = Gastil score for political and civil system

Legal = legal system - dummy variable with 1 = Common Law, 0 = Roman-Germanic Law

LED = level of economic development - per capita GDP

EMTurn = average market turnover as percentage of market capitalization

The only notable differences in findings between Tables 10.2 and 10.3 were in relation to uncertainty avoidance. In Table 10.3, the co-efficient for this societal variable was statistically significant at the 5% confidence level. This contrasted with the model shown in Table 10.2 where the coefficient was critical at the 10% confidence level. The coefficient for masculinity in Table 10.3 also contrasted with that recorded in Table 10.2. In Table 10.3, the

coefficient for this variable was significant at the 10% confidence level rather than the 5% as in Table 10.2.

10.2.4 REGRESSIONS OF TOTAL VESAD SCORES MEASURED DISCLOSURE INDEX

Results of the model based on Equation 9.3 with the dependent variable being measured using a disclosure index is shown in Table 10.4. As in all previous models (see Table 10.1, 10.2 and 10.3), the coefficient for organizational size was again statistically significant at the 5% confidence level with a positive directional sign as predicted (see Table 10.4). The other remaining organizational attribute, economic performance was also found to be influential, though at the 10% interval. Directional sign of the coefficient (that is positive) for economic performance, was consistent with that predicted.

Table 10. 4: Multiple Regressions - VESADInd Scores

VESADInd Scores = $a_1 + b_1\text{LogAsset} + b_2\text{ROA} + b_3\text{IT1} + b_4\text{IT2} + b_5\text{IT3} - b_6\text{Uncav} + b_7\text{Mas} - b_8\text{PCS} + b_9\text{Legal} + b_{10}\text{LED} + b_{11}\text{EMTurn} + e$					
Multiple R :	0.50627	ANOVA	Df	Sum of Squares	Mean Square
R-square	0.25631	Regression	11	0.80740	0.07340
Adjusted R-square	0.23253	Residual	344	2.34267	0.00681
Std.Error	0.08252	F-statistic	10.77815	Sign. Of F	0.0000
Variable	B	SE B	Beta	T	Sign.t
Organizational Attributes					
LogAsset	0.024636	0.002581	0.486637	9.546	0.0000*
ROA	0.015167	0.008716	0.083891	1.740	0.0827*
Business Environment					
IT1	0.008314	0.014599	0.032866	0.570	0.5694
IT2	-0.001053	0.011852	-0.005539	-0.089	0.9292
IT3	-0.033460	0.014409	-0.139034	-2.322	0.0208*
Societal Variables					
Uncer	-0.000799	0.001218	-0.150712	-0.656	0.5123
Mas	0.000334	0.003361	0.028778	0.099	0.9209
PCS	-0.009761	0.003964	-0.316551	-2.463	0.0143*
Legal	0.025691	0.034120	0.209642	0.753	0.4520
LED	-0.023411	0.022787	-0.120925	-1.027	0.3050
EMTurn	-0.051604	0.358513	-0.029638	-0.144	0.8856
Constant	-0.315807	0.279490		-1.130	0.2593

* Significant at 5% confidence level

** Significant at 10% confidence level

Where:

LogAsset = natural log 1995 end of year assets

IT1 = industry classification - dummy variable with 1 = resource industry, 0 = other

IT2 = industry classification - dummy variable with 1 = manufacturing industry, 0 = other

IT3 = industry classification - dummy variable with 1 = finance industry, 0 = other

ROA = return on assets, 5 year average to 1995

Uncer = uncertainty avoidance

Mas = masculinity

PCS = Gastil score for political and civil system

Legal = legal system - dummy variable with 1 = Common Law, 0 = Roman-Germanic Law

LED = level of economic development - per capita GDP

EMTurn = average market turnover as percentage of market capitalization

Similar to the results in Table 10.1, Industry 3 in Table 10.4 was found to have a significant influence in explaining the variations in VESAD practices at the 5% interval. The directional sign (negative) for Industry 3 in Table 10.4 was consistent with results in Table 10.1.

A striking contrast between the results in Table 10.4 to Tables 10.1 through 10.3, is the lack of significant influence amongst the societal variables on VESAD practices, with only one factor being found to be influential. This was the political and civil system. This societal variable was significant at the 5% confidence level and the directional sign was as predicted (see Table 10.4). Coefficients in Table 10.4 for uncertainty avoidance and masculinity, which had been significant under the three previous models (see Table 10.1, 10.2 and 10.3), did not even approach relevant confidence levels. The directional signs of these two societal variables in Table 10.4 were as predicted. Finding on directional sign for masculinity in Table 10.4 is particularly. In all previous models the sign had been the opposite of that expected.

All findings for legal system, level of economic development and the equity market factor in Table 10.4 were the same as for Tables 10.3 and 10.3. Directional signs for the coefficient of level of development in Table 10.4 was the reverse of that for the other models (that is Table 10.2 and 10.3).

10.2.5

SECTION BRIEF

Results in this section have indicated that a number of the independent variables empirically tested in this study assist to explain variations in VESAD practices across national boundaries. Central amongst these factors are organizational size, uncertainty avoidance, masculinity and political and civil system. The industry type, legal system and level of economic development also appear to have some limited influence. An important note in reviewing

the results in Tables 10.1 through 10.4 is that different conclusions may be developed depending upon the measurement basis being applied for the dependent variable. Implications from this observation are scrutinized in greater detail in Section 12.3. The next section examines whether the factors found to be of influence across total VESAD information provided in annual reports also explain variations in specific themes.

10.3Multiple Regressions by Theme

The following sections elaborate on earlier findings in Section 10.2 by adding another layer of analysis by concentrating on the specific themes of VESAD. This analysis will help identify reasons to explain variations in these specific domains across the national boundaries of the seven study nations of VESAD practices by companies. The five themes considered were environment, energy, human resources and safety, products and customers, and community.

10.3.1 MULTIPLE REGRESSIONS RELATED TO THE ENVIRONMENT

Four regression models based on Equation 8.3 were tested in this section with the dependent variable being environmental disclosures as measured by the four techniques applied in this study. Table 10.5 provides a summary of the findings from these regressions. For full data output of this regressions refer to Appendix N.

Table 10. 5: Multiple Regressions for Environment

Environment Disclosure Measures = $a_1 + b_1 \text{LogAsset} + b_2 \text{ROA} + b_3 \text{IT1} + b_4 \text{IT2} + b_5 \text{IT3} + b_6 \text{Uncav} + b_7 \text{Mas} + b_8 \text{PCS} + b_9 \text{Legal} + b_{10} \text{LED} + b_{11} \text{EMTurn} + e$				
Variable	Pages	Sentences	Words	Disclosure Index
Adjusted r²	0.06229	0.10665	0.08470	0.15920
Organizational Attributes				
LogAsset	Not Significant (+)	Significant 5% (+)	Significant 5% (+)	Significant 5% (+)
ROA	Not Significant (-)	Not Significant (+)	Not Significant (+)	Not Significant (-)
Business Environment				
IT1	Significant 5% (+)	Significant 5% (+)	Significant 5% (+)	Significant 5% (+)
IT2	Not Significant (+)	Not Significant (+)	Not Significant (+)	Significant 10% (+)
IT3	Not Significant (-)	Not Significant (-)	Not Significant (-)	Not Significant (-)
Societal Variables				
Uncer	Not Significant (+)	Not Significant (+)	Not Significant (+)	Not Significant (+)
Mas	Not Significant (-)	Not Significant (-)	Not Significant (-)	Not Significant (-)
PCS	Not Significant (-)	Not Significant (-)	Not Significant (-)	Not Significant (-)
Legal	Significant 10%(+)	Significant 5% (+)	Significant 5% (+)	Not Significant (-)
LED	Not Significant (+)	Not Significant (+)	Not Significant (+)	Not Significant (+)
EMTurn	Not Significant (-)	Not Significant (+)	Not Significant (+)	Not Significant (-)

The size of the entity again was found to be consistently significant in three of the models run at the 5% confidence interval for findings summarized in Table 10.5. Furthermore, the sign as noted in previous models was positive which was as predicted. Economic performance was not significant in any of the measurement models in explaining variations in differences in environmental disclosures across the Asia-Pacific region.

With respect to business environment factors, Industry 1 (resource grouping) was significant at the 5% confidence level (see Table 10.5). This is not surprising given that this grouping comprises the resources sector that would have much of their operations directly related to the natural environment. Firms in the resources group are likely to be highly visible in respect to environmental issues and therefore, are likely to respond accordingly with increased levels. Industry 2 (manufacturing sector) was found to have some

Table 10. 7: Multiple Regressions for Human Resources and Safety

Human Resources and Safety Disclosure Measures = $a_1 + b_1\text{LogAsset} + b_2\text{ROA} + b_3\text{IT1} + b_4\text{IT2} + b_5\text{IT3} + b_6\text{Uncav} + b_7\text{Mas} + b_8\text{PCS} + b_9\text{Legal} + b_{10}\text{LED} + b_{11}\text{EMTurn} + e$				
Variable	Pages	Sentences	Words	Disclosure Index
Adjusted r^2	0.06689	0.10555	0.10263	0.13234
Organizational Attributes				
LogAsset	Significant 5% (+)	Significant 5% (+)	Significant 5% (+)	Significant 5% (+)
ROA	Not Significant (+)	Not Significant (+)	Not Significant (-)	Not Significant (+)
Business Environment				
IT1	Not Significant (+)	Significant 5% (+)	Significant 10% (+)	Not Significant (-)
IT2	Not Significant (-)	Not Significant (+)	Not Significant (-)	Significant 10% (-)
IT3	Significant 10% (-)	Significant 10% (-)	Not Significant (-)	Significant 5% (-)
Societal Variables				
Uncer	Not Significant (-)	Not Significant (-)	Not Significant (+)	Significant 5% (+)
Mas	Not Significant (-)	Significant 10%(-)	Not Significant (-)	Significant 10%(-)
PCS	Not Significant (-)	Not Significant (-)	Not Significant (-)	Not Significant (+)
Legal	Not Significant (+)	Not Significant (+)	Not Significant (+)	Not Significant (-)
LED	Significant 10% (+)	Significant 5% (+)	Not Significant (+)	Significant 10%(+)
EMTurn	Not Significant (-)	Not Significant (-)	Not Significant (-)	Significant 5% (-)

Organizational size is again the only organizational attribute of significance found to explain variations in disclosure practices related to human resource and safety issues. This significance shown in Table 10.7 is strong being at the 5% confidence level for all four multiple regression models tested. The directional sign in all cases was positive indicating that as the size of the firm increased then so did the extent of disclosures on this category. This finding was as predicted. Results concerning business environmental factors varied somewhat according to the measurement base being applied. For Industry 1 (resources grouping), this category was found to be significant at the 5% confidence level when sentences was applied and 10% for words. Conversely, Industry 2 (manufacturing sector) was also significant at the 10% level but only when a disclosure index was applied to measure human resource and safety disclosures. Finally, Industry 3 (finance group) showed the largest degree of consistency irrespective of the measurement base applied to the

dependent variable. This factor was significant at the 10% confidence levels for pages and words and 5% for the disclosure index.

In Table 10.7, findings related to disclosure index measurements of the dependent variable revealed that the greatest number of significant societal variables to explain the variations. Uncertainty avoidance and the equity market turnover were all significant at the 5% confidence level. Level of economic development and masculinity were also significant but at the 10%. For uncertainty avoidance, masculinity and equity market turnover, directional signs for the coefficients, were the opposite to that predicted.

Masculinity was also found to be significant in Table 10.7 at the 10% confidence level for measurement by the number of sentences but again the directional sign was the reverse of that expected. The level of economic development was significant at the 10% confidence level for measurement by pages but improved to 5% significance under sentences. The directional sign for this factor was positive which was as predicted. Thus it is shown that as the level of economic development increases, the amount of disclosure provided by entities in their annual reports also increases.

10.3.4 MULTIPLE REGRESSIONS RELATED TO PRODUCTS AND CUSTOMERS

Of any of the five themes of VESAD specified in this study, variations in products and customers disclosure, appears to be the one in which independent variables tested were most highly significant. Table 10.8 summarizes the finding from the four multiple regression models tested related to data on this

category. A full statistical print-out for each regression model can be found in Appendix Q.

Table 10. 8: Multiple Regressions for Products and Customers

Products and Customer Disclosure Measures = $a_1 + b_1\text{LogAsset} + b_2\text{ROA} + b_3\text{IT1} + b_4\text{IT2} + b_5\text{IT3} + b_6\text{Uncav} + b_7\text{Mas} + b_8\text{PCS} + b_9\text{Legal} + b_{10}\text{LED} + b_{11}\text{EMTurn} + e$				
Variable	Pages	Sentences	Words	Disclosure Index
Adjusted r^2	0.06880	0.08101	0.06456	0.10417
Organizational Attributes				
LogAsset	Significant 5% (+)	Significant 5% (+)	Significant 5% (+)	Significant 5% (+)
ROA	Not Significant (+)	Not Significant (+)	Not Significant (+)	Not Significant (-)
Business Environment				
IT1	Significant 10%(-)	Significant 5%(-)	Significant 5%(-)	Not Significant (-)
IT2	Significant 10%(-)	Significant 10%(-)	Significant 5%(-)	Not Significant (+)
IT3	Significant 10%(-)	Significant 5%(-)	Significant 5%(-)	Significant 10%(-)
Societal Variables				
Uncer	Significant 5%(-)	Significant 5%(-)	Significant 5%(-)	Significant 5%(-)
Mas	Significant 5%(-)	Significant 5%(-)	Not Significant (-)	Significant 5%(+)
PCS	Significant 5%(-)	Significant 5%(-)	Significant 5%(-)	Significant 5%(-)
Legal	Not Significant (+)	Not Significant (-)	Not Significant (-)	Significant 10%(+)
LED	Not Significant (+)	Not Significant (+)	Not Significant (+)	Significant 5%(-)
EMTurn	Significant 10%(-)	Significant 10%(-)	Not Significant (-)	Not Significant (+)

As shown in Table 10.8, consistent with other themes of VESAD (see Table 10.5, 10.6, 10.7 and 10.9), the organizational size is statistically significant at the 5% confidence level with a positive directional sign for all regressions. Unlike its counterpart at the organizational attribute level, economic performance is insignificant despite having the expected directional sign on the coefficients. The effect of industry type is very strong in relation to products and customers disclosures. For measurement involving pages, sentences or words all industry classifications were significant at either the 5% or 10% confidence levels with negative signs on the coefficients. However, for measurement by the disclosure index, only Industry 3 (finance sector) was significant at the 10% confidence level.

The cultural factors of uncertainty avoidance and masculinity in Table 10.8 both appear to significantly explain differences in disclosure practices by firms on issues related to products and customers. Both factors were statistically significant at the 5% level for all the different forms of measurement applied to the dependent variable apart from for words in respect to masculinity. The directional signs on the coefficients were negative apart from masculinity when applying a disclosure index. Actual coefficient signs were consistent with that predicted for uncertainty avoidance but not for masculinity for the case related to the disclosure index.

Political and civil system in Table 10.8 was found to be statistically significant for all the different measures of the dependent variable at the 5% confidence levels. Further, the directional sign was consistent with the expected. The legal system, level of economic development and equity market turnover were all found to be significant factors in explaining the variations but only in isolated cases with respect to certain measurement techniques. The legal system and the level of economic development were significant at the 10% and 5% confidence levels respectively when a disclosure index was applied. For the level of economic development the coefficient had a sign opposite to that expected. Equity market turnover had a negative coefficient, the reverse of that predicted. The coefficient for this factor (see Table 10.8) was significant at the 10% confidence interval when pages and words measured the dependent variable.

The cultural factors of uncertainty avoidance and masculinity in Table 10.8 both appear to significantly explain differences in disclosure practices by firms on issues related to products and customers. Both factors were statistically significant at the 5% level for all the different forms of measurement applied to the dependent variable apart from for words in respect to masculinity. The directional signs on the coefficients were negative apart from masculinity when applying a disclosure index. Actual coefficient signs were consistent with that predicted for uncertainty avoidance but not for masculinity for the case related to the disclosure index.

Political and civil system in Table 10.8 was found to be statistically significant for all the different measures of the dependent variable at the 5% confidence levels. Further, the directional sign was consistent with the expected. The legal system, level of economic development and equity market turnover were all found to be significant factors in explaining the variations but only in isolated cases with respect to certain measurement techniques. The legal system and the level of economic development were significant at the 10% and 5% confidence levels respectively when a disclosure index was applied. For the level of economic development the coefficient had a sign opposite to that expected. Equity market turnover had a negative coefficient, the reverse of that predicted. The coefficient for this factor (see Table 10.8) was significant at the 10% confidence interval when pages and words measured the dependent variable.

10.3.5 MULTIPLE REGRESSIONS RELATED TO COMMUNITY DISCLOSURES

The final theme of VESAD examined was community disclosures. Again four multiple regression models were tested which are summarized in Table 10.9 and full statistical computer print-outs provided in Appendix R. Independent variables included in these models appear to explain the great amount of variation in disclosure practices for any of the other four themes of VESAD. The adjusted r-squared ranged from a low of 11.396% to a high of 22.412%.

Table 10. 9: Multiple Regressions for Community

Community Disclosure Measures = $a_1 + b_1\text{LogAsset} + b_2\text{ROA} + b_3\text{IT1} + b_4\text{IT2} + b_5\text{IT3} + b_6\text{Uncav} + b_7\text{Mas} + b_8\text{PCS} + b_9\text{Legal} + b_{10}\text{LED} + b_{11}\text{EMTurn} + e$				
Variable	Pages	Sentences	Words	Disclosure Index
Adjusted r²	0.17518	0.11396	0.12081	0.22412
Organizational Attributes				
LogAsset	Significant 5% (+)	Significant 5% (+)	Significant 5% (+)	Significant 5% (+)
ROA	Not Significant (+)	Not Significant (+)	Not Significant (+)	Significant 5% (+)
Business Environment				
IT1	Not Significant (-)	Not Significant (-)	Not Significant (-)	Not Significant (-)
IT2	Not Significant (-)	Not Significant (-)	Not Significant (-)	Not Significant (-)
IT3	Not Significant (-)	Not Significant (+)	Not Significant (-)	Not Significant (-)
Societal Variables				
Uncer	Significant 5%(-)	Significant 5%(-)	Significant 5%(-)	Significant 10% (-)
Mas	Significant 5%(-)	Not Significant(-)	Not Significant(-)	Not Significant (-)
PCS	Significant 5% (-)	Significant 5% (-)	Significant 5% (-)	Significant 5% (-)
Legal	Not Significant (+)	Not Significant (+)	Not Significant (+)	Not Significant (+)
LED	Not Significant (+)	Not Significant (+)	Not Significant (+)	Significant 10% (-)
EMTurn	Not Significant (+)	Not Significant (+)	Not Significant (+)	Not Significant (+)

The strength of organizational size as an explanatory factor of community disclosures is shown in Table 10.9. At the 5% confidence level, organizational size is statistically significant for each form of measurement with a positive directional sign. Profitability is also shown to have some influence (5% confidence interval and positive sign) on the community disclosures though only when a disclosure index was used. There appeared to be no statistically significant industry type effects.

Uncertainty avoidance and political and civil systems in Table 10.9, like the multiple regressions related to other VESAD themes (see Tables 10.5 through 10.8), were highly significant across all four forms of measurement. The coefficients were significant at the 5% level for all but one case related to uncertainty avoidance when a disclosure index was used. Directional signs on all coefficients for these two societal variables were negative which was as predicted.

When community disclosures were measured using pages, masculinity in Table 10.9 was of significant influence at the 5% confidence level. Likewise, the level of economic development was statistically significant at the 10% level for measurements involving a disclosure index. The directional signs on the coefficients for both these regressions were negative which was not predicted sign. Apart from these two isolated cases, the coefficients for all other remaining societal variables were insignificant.

10.3.6

SECTION BRIEF

Findings in Section 10.3 support earlier conclusions developed in Section 10.2. This latest section (10.3) indicates further that the influence of the independent variables included in this study are more prominent in explaining variations in some themes compared to others. For instance, differences in products and customer practices (see Table 10.8) across the Asia-Pacific region were explained by a number of variables. Conversely, only three (namely organizational size, industry type and legal system) elements were

significant explanatory factors for environmental disclosures (see Table 10.5). Again the significance of factors was also dependent in part on the base used to measure the dependent variable.

10.4 Summary

This chapter extended the analysis in Chapter Nine by empirically identifying a number of variables that assist to explain variations in VESAD practices and its specific themes across national boundaries. Significance of the explanatory variable appears to be contingent on the measurement base being utilized to gauge the extent of VESAD details in annual reports. This latter finding implies in part that there are differences in the nature of measurement associated with the three units of measure under content analysis and that for a disclosure index. This point is reviewed in Chapter Twelve. The next chapter continues the statistical testing of the data through path analysis.

CHAPTER ELEVEN

PATH ANALYSIS

11.1..... Overview

This chapter expands on the earlier findings from multiple regression analysis by using path analysis to examine the possible interaction between the independent and dependent variables. Path analysis provides an additional layer of analysis that can generate further insights into the effects of the variables utilized in this study on the extent of VESAD practices in the Asia-Pacific region.

In conducting the path analysis for this study, an extensive number of models based on the project's conceptual schema (see Figure 6.1) were tested²⁵. Results tabled in this chapter relate to two path diagrams that provided the most acceptable levels of goodness of fit (both overall and parsimonious) with consistent significant relationships between variables included in the models. Both models were largely similar with the discerning feature from each being alternative inclusion of two factors; these were the political and civil system and legal system.

²⁵ Due to the enormous volume of data collected (over 200 variations of models constituting approximately 400 pages) from the various models tested there is insufficient space in this thesis to present all the information. Additional details on other models available from the author.

11.2..... Development of Applicable Model Structure

In performing the multiple regression analysis as outlined in Chapter Nine, it was assumed that no relationship existed between the independent variables. Review of the prior literature of the independent factors covered in this study has suggested some interrelationships. For instance, Muller (1988, p.65; 1995, p.980) reported that the level of economic development was an important determinant of political systems. Analysis of Thomas' (1991) model further proposes a number of interactions between the different levels of variables. For instance Thomas (1991, pp.44-45) suggested that societal variables affected factors at the business environment and organizational attribute levels.

An original path diagram based on the conceptual schema shown in Figures 6.1 and 6.2 was designed and tested. This model incorporated all independent variables and defined relationships viewed as being relevant from the literature. Results that related to this path diagram indicated an extremely poor goodness of fit. Furthermore an extensive number of proposed relationships (for example the proposed relationship between cultural values and equity market factors) were found to be insignificant. After a number of reiterations and restructuring two simplified models of the original were formed²⁶. One path diagram is defined for identification purposes as the political and civil

²⁶ For a review of adjustments made to the original path diagram and subsequent models tested, refer to Appendix U.

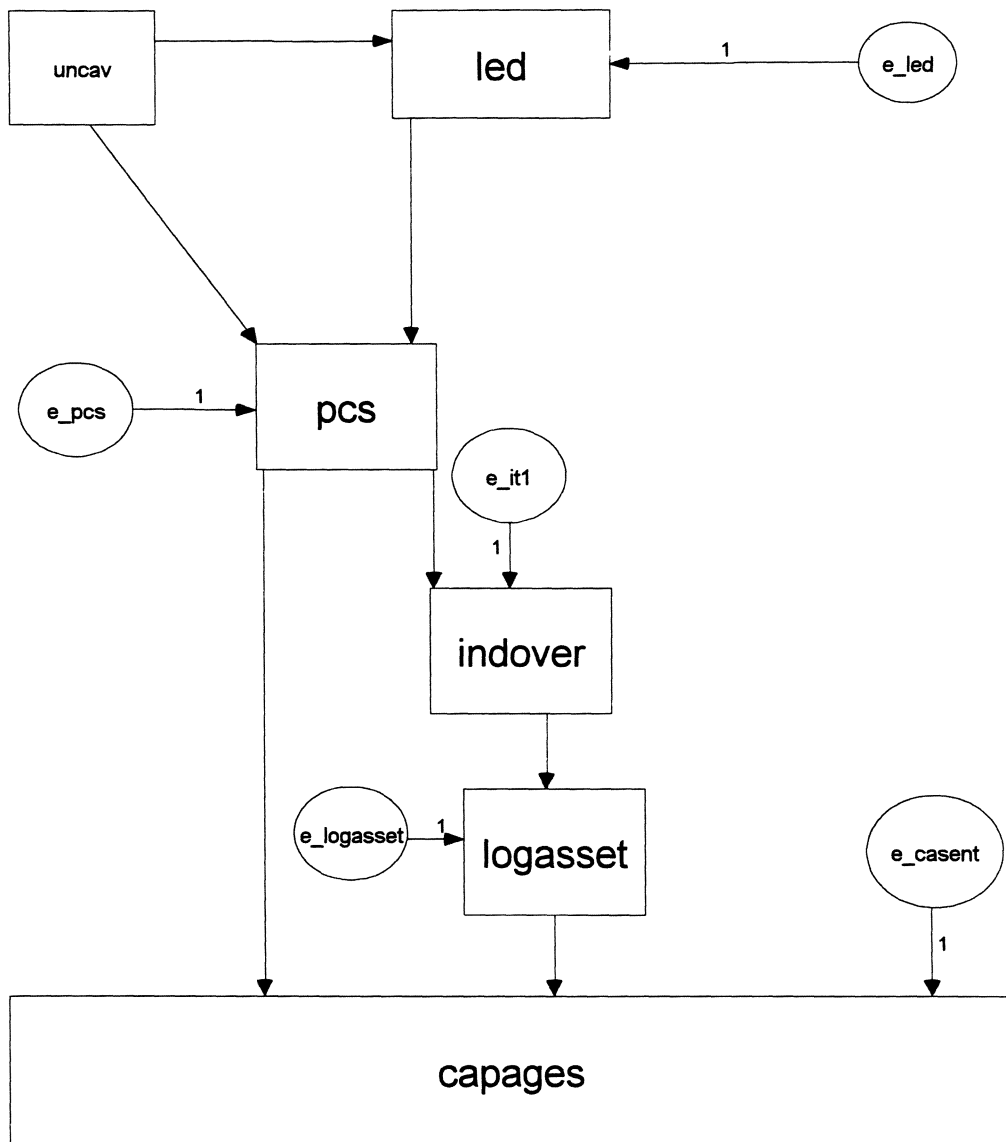
system model, the other the legal system model. Each model is described briefly below.

11.2.1

POLITICAL AND CIVIL SYSTEM MODEL

Figure 11.1 is termed the political and civil system model because of the prominence of this variable. That is, this factor was found to consistently have a positive direct and indirect relationship with the amount of VESAD information detailed. Furthermore, due to significant associations with the cultural values and level of economic development, the political and civil system acted as a 'gateway' through which these latter societal variables indirectly affected the dependant variable.

Figure 11. 1: Political and Civil System Specific Model



Legend:

uncav = Uncertainty avoidance measured by Hofstede's (1980) cultural scores

led = Level of economic development measured by GDP per capita

pcs = Political and civil system measured using Gastil's index scores

indover = Industry type measured using ISIC code

logasset = Organizational size measured by natural log of total assets

capages = Amount of VESAD information measured by pages, sentences, words and disclosure index

e- (variable name) = all items beginning with this prefix are the corresponding error term for the respective variables included in the model

The key feature of Figure 11.1 is the removal of variables related to the economic performance, legal system and the equity market (both size and turnover). Exclusion of both economic performance and equity market variables were important as it resulted in significant improvement in both the overall and parsimonious goodness of fit (refer to Appendix U for review of data related to development of the respective models). Findings related to goodness of fit from tests of the model shown in Figure 11.1 are summarized in Table 11.1. As with prior path analysis tests, adjustments for each cultural value and measurement approach of the dependent variable were made.

Table 11. 1: Goodness of Fits Results for Models Based on Figure 11.1

Cultural Value	Measurement Method Dependent Variable	Chi-square	Degrees of Freedom	Probability Level ^a	GFI ^b	AGFI ^c	Chi-square/df Ratio ^d
Uncertainty Avoidance	CAPages	16.511	8	0.036	0.985	0.960	2.064
Uncertainty Avoidance	CASent	15.532	8	0.050	0.986	0.962	1.942
Uncertainty Avoidance	CAWords	16.443	8	0.036	0.985	0.960	2.055
Uncertainty Avoidance	VESADInd	25.377	8	0.001	0.975	0.936	3.172
Individualism	CAPages	21.806	8	0.005	0.980	0.948	2.726
Individualism	CASent	16.178	8	0.040	0.985	0.960	2.022
Individualism	CAWords	19.071	8	0.014	0.983	0.954	2.384
Individualism	VESADInd	26.947	8	0.001	0.974	0.933	3.368
Power Distance	CAPages	20.344	8	0.009	0.981	0.951	2.543
Power Distance	CASent	17.123	8	0.029	0.984	0.958	2.140
Power Distance	CAWords	18.414	8	0.018	0.983	0.956	2.302
Power Distance	VESADInd	30.236	8	0.000	0.971	0.924	3.780
Masculinity	CAPages	18.900	8	0.015	0.983	0.955	2.363
Masculinity	CASent	15.390	8	0.052	0.985	0.962	1.924
Masculinity	CAWords	16.553	8	0.035	0.985	0.960	2.069
Masculinity	VESADInd	24.463	8	0.002	0.976	0.938	3.058
Long-term Orientation	CAPages	14.642	8	0.066	0.986	0.964	1.830
Long-term Orientation	CASent	13.638	8	0.092	0.987	0.966	1.705
Long-term Orientation	CAWords	14.677	8	0.066	0.986	0.964	1.835
Long-term Orientation	VESADInd	24.950	8	0.002	0.976	0.937	3.119

* All values above recommended significant levels are shown in bold. Following is a legend of values considered to be minimal level for acceptance

a :- Probability Level = recommended minimal level of 0.05;

b :- GFI = recommended acceptance above 0.90;

c :- AGFI = recommended minimal level of 0.90; and

d :- Chi-square/df Ratio = upper bound of 2.00 and lower limit of 1.00.

See Hair et al (1995) and Tabachnick and Fidell (1996) for recommend limit levels

Findings in Table 11.1 shows strong support for the validity of Figure 11.1.

The probability level, which is related to the significance of the Chi-square value, was above the minimal level of 0.05 in 25 % (5 of 20) tests conducted.

The strongest results were found in relation to the tests considering the long-term orientation cultural value. In addition, a number of the other tests (5 of 15) were approaching this limit, being 0.030 or above. GFI values in Table 11.1 were even more significant, with all cases being above the lowest

acceptable level of 0.90. Specifically, all GFI values were above 0.970 suggesting very strong support for the relevance of this model.

Results considering parsimony in Table 11.1 were also found to be generally acceptable. Again 25% of the Chi-square/df ratio were without the stricter acceptance limits of 1-2. All other values for this ratio were between 2.001 and 3.780 which was well within the more liberal limit of 5 (see for example Hair et al, 1995). The values for AGFI also provide very strong evidence that the model shown in Figure 11.1 is highly parsimonious. This is because all the figures for AGFI were above the acceptance level of 0.90 for every model related to Figure 11.1 tested. Based on all the goodness of fit results in Table 11.1, there appears strong evidence to support the claim that the model in Figure 11.1 is highly representative of the relationships between the variables included in this study.

Apart from analysis of the goodness of fit of the models, scrutiny of the critical ratios and standardized regressions weights is necessary. Due to the large number of path models tested that were relevant to Figure 11.1, there is insufficient space to illustrate or discuss them all in depth. Appendix T provides a representative sample of tests conducted. Using Appendix T as a guide, some general overview remarks are formed to summarize the results of all tests conducted based on Figure 11.1 in respect to critical ratios and standardized regressions.

Generally the vast majority of critical ratios and standardized regression weights for all models tested related to Figure 11.1 were above the minimal accepted levels (refer to Section 8.2.4 for further description on this point). These results indicated direct relationships between the size of the organization and the political and civil system. The direction of the standardized regression weights between the organizational size and dependent variable was positive, whilst that for the political and civil system was negative. Both these directions were as predicted.

All other factors in the model (industry type, level of economic development and culture values) appeared to influence the amount of VESAD information indirectly. Industry type for instance was indirectly associated via the size of the organization. The level of economic development appeared also to be an important indirect determinant but has two mechanisms by which it influenced the extent of VESAD provided. As shown in Appendix T, standardized regression weights were significant for the path linking level of economic development to political and civil system. This latter variable thus in turn affects the dependent variable directly, or indirectly via links to industry type and then organizational size. Hence the two mechanisms by which the level of economic development indirectly influences the amount of information companies report on VESAD.

Like the level of economic development, cultural values have a significant relationship with the political and civil system as indicated by the standardized

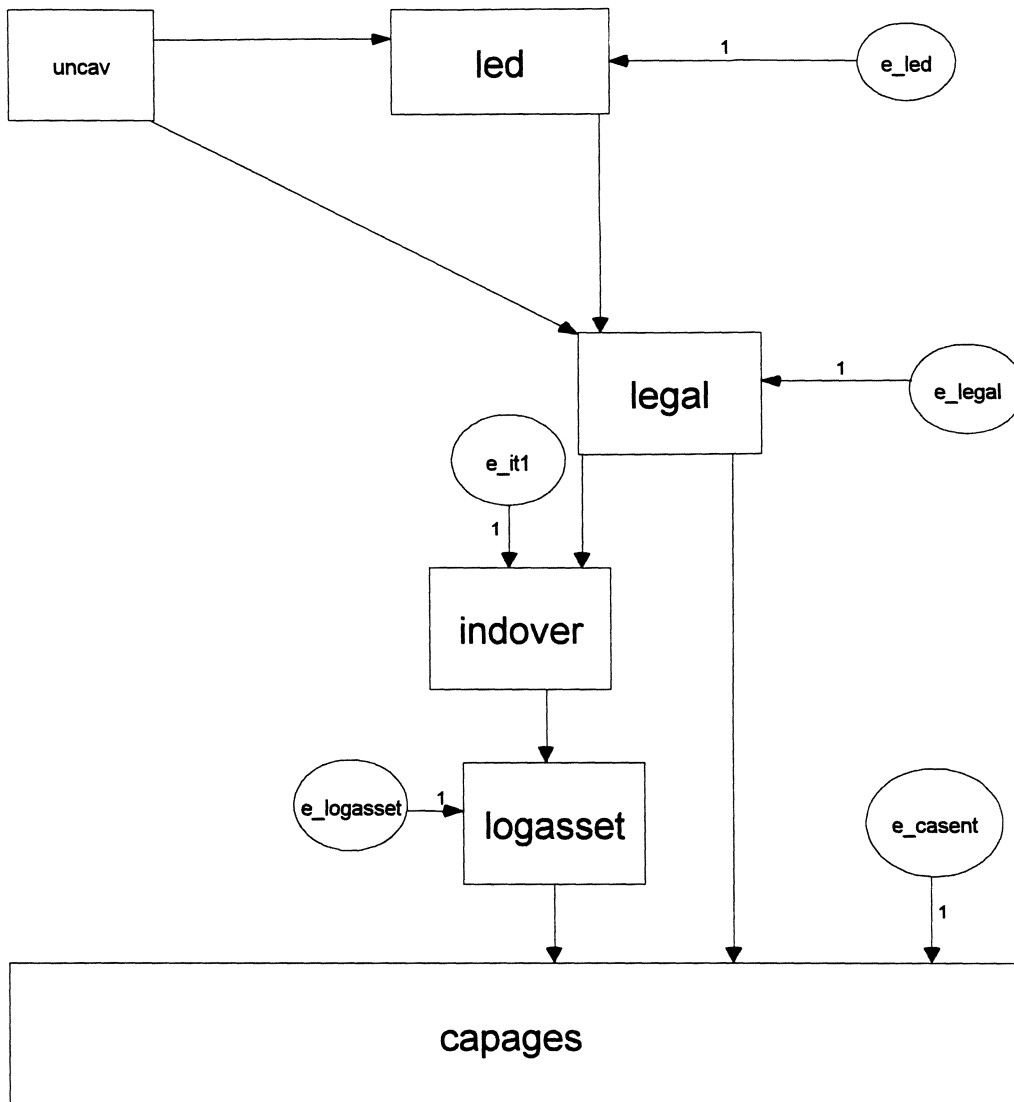
regression weights of representative diagrams shown in Appendix T. In addition, cultural factors had additional indirect impacts, as they were important determinants of the level of economic development which in turn affected the dependent variable.

11.2.2

LEGAL SYSTEM MODEL

Figure 11.2 exhibits the second simplified model based on modifications to Figure 11.1. As noted above, this latest figure is virtually identical to Figure 11.1 though with legal system included and political and civil system removed.

Figure 11. 2: Legal System Specific Model



Legend:

uncav = Uncertainty avoidance measured by Hofstede's (1980) cultural scores

led = Level of economic development measured by GDP per capita

legal = Legal system measured using dummy variable; 1 = Common Law 0 = Roman-Germanic

indover = Industry type measured using ISIC code

logasset = Organizational size measured by natural log of total assets

capages = Amount of VESAD information measured by pages, sentences, words and disclosure index

e- (variable name) = all items beginning with this prefix are the corresponding error term for the respective variables included in the model

values that were highly above the 0.90 acceptance level (all values were above 0.970).

Results related to parsimonious goodness of fit were also encouraging. AGFI figures for all models based on Figure 11.2 were above the minimal acceptance level of 0.90. Furthermore, seven of the twenty models (35%) summarized in Table 11.2 had Chi-square/df ratios within the critical bounds of 1-2. A further ten models had findings on this ratio below the less stringent upper limit of five. It is interesting to note that for three models involving masculinity, the ratio was below one. Hair et al (1995, p.687) noted that for ratios below one, this implied the model 'overfitted' and therefore, should be disregarded. The overall findings from the respective models give strong evidence to conclude that the model is parsimonious in nature.

Critical ratios and standardized regressions weights for tests on models summarized in Table 11.2, followed a very similar pattern to those based on Figure 11.1. Appendix U shows for illustrative purposes, five path diagrams based on Figure 11.2 indicating the regression weights for each path in the model. Compared to findings related to Figure 11.1 and Table 11.1, the figures shown in Appendix U based on Figure 11.2 indicate a significant positive direct relationship between the legal system and the amount of VESAD information shown in annual reports. This variable also had indirect effects through significant relationships with the industry type that in turn influenced organizational size. The other important feature of the diagrams shown in Appendix U and tests related to Figure 11.2 were that cultural values and the

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level of economic demand not only indirectly impacts on the dependent variable via political and civil systems but also via the legal system. This relationship is identified because the critical ratios and standardized regression weights linking cultural values to the legal system, and level of economic development to that factor were above the minimal level set for acceptance (see Appendices T and U for examples).

11.3.....Additional Insights from Path Analysis

Description of all path analysis tests conducted would be largely repetitive leading to confusion for the reader. Therefore, this section summarizes the major insights derived from the various path analysis tests conducted.

Multiple regression analysis in Chapter Ten indicated that a number of factors explained variations in VESAD practices across the Asia-Pacific region. Path analysis results supported these claims and the influence exhibited by certain factors. For instance, the coefficients from multiple regressions for organizational size was significant and positive. As indicated from Section 11.2 and Appendix T, the standardized regression weights for this factor was also significant and positive. Other consistencies between multiple regression and path analysis in regard to the significant of factors included industry type at the business environment level and for societal variables cultural values, political and civil, and legal systems and level of economic development.

The major implication of path analysis compared to multiple regression results however, was the implication that for some of the independent variables the strength of the relationship to the dependent variable is more indirect rather than direct. Industry type for example was found to have only a moderate level of support from multiple regression analysis under certain conditions. Section 10.3.1 indicated that this factor was an important determinant in relation to environmental issues, where it was not for community concerns (see Section 10.3.5). Conversely for path analysis, industry type was found to have a strong association with all the themes of VESAD (see Appendices T and U for examples). This relationship however, was indirect. Another factor, which was not overly prominent in multiple regression analysis, was the level of economic development (see for example Table 10.1 through 10.9). Path analysis indicated this societal variable had strong indirect associations via the political and civil, and legal systems (see Section 11.2.1 and 11.2.2 for further scrutiny of this point).

One of the implications from the path analysis was that suitability of the models based on Figure 11.1 and 11.3, and the variables included in these diagrams, varied across the different themes of VESAD. This finding is consistent with multiple regression results (see Sections 10.3.1 through 10.3.5 for further reference).

To illustrate the variations in aptitude of the models and variables to the different themes of VESAD mention is made of findings shown in Appendix V which were based on Figure 11.1. Tables V-1a and V-1b in Appendix V

show a relevant summary of the goodness of fit results related to human resource and safety and community issues respectively. Models in Table V-1a generally appear to show greater overall and parsimonious goodness of fit than compared to findings in Table V-1b. This is particularly evident in regard to probability level and Chi-square/df ratios. The lack of goodness of fit in models related to community issues may be due to the lack of direct association between the political and civil system and amount of disclosure on this theme. Figure V-1a in Appendix V shows the political and civil system had a significant negative relationship on the extent of human resources and safety information released.

The second diagram (Figure V-1b) included in Appendix V shows the standardized regression weight for the path line linking the political and civil system to amount of disclosure on community issues was insignificant, implying no direct relationship existed. The results in Appendix V are a mere representation of the magnitude of variations noted from path analysis. However, the analysis clearly illustrates and supports the results in Chapter Ten that for specific themes of VESAD, the explanatory influence of factors in this study vary.

Another significant feature highlighted from path analysis was the impact of the different measurement bases of the dependent variable. This is another point consistent with multiple regression analysis. Table 11.2 shows the variation observed in respect to the different measurement techniques. For example, with models that included the cultural value long-term orientation,

the goodness of fit was within acceptable limits for all statistical tests (that is probability level, GFI, AGFI and Chi-square/df ratio) for two models; measuring the dependent variable by pages and words. For the other two models, using sentences and a disclosure index as the measurement base, only the GFI and AGFI values were within acceptable levels. Based on the analysis described in this paragraph, it can be seen that the measurement base used to calculate the dependent variable may result in different results and interpretations (this point is reviewed in greater depth in Chapter 12).

One major advantage of using path analysis was the ability to investigate the impact of variables (individualism, power distance, long-term orientation and size of the equity market) that had been removed from multiple regression due to correlation difficulties. Path analysis indicated that in the case of the three cultural values there was considerable evidence to suggest these factors did indirectly affect VESAD practices and the respective themes. The degree of influence of these three factors did however, vary according to the particular theme in question and the measurement basis being applied.

For the size of the equity market, any direct or indirect influence by this factor was not observed. Based on the findings from the respective tests conducted in path analysis including the size of the equity market, it is concluded this variable has no direct or indirect relationship with VESAD practices and its five major themes.

11.4..... Summary

This chapter provides the final set of results from the statistical analysis. Major findings from the enormous amount of tests conducted support the conclusions reached based on multiple regression analysis. Path analysis did, however, provide valuable insights into the indirect relationships between explanatory variables and the dependent factor. Based on the results from the models scrutinized, two simple path diagrams (see Figures 11.1 and 11.2) were constructed illustrating the major interrelationships between variables included in this study that directly and indirectly explained variations in VESAD practices. Having concluded the statistical analysis, the next chapter reviews all the findings, distinguishing a number of significant and important implications.

CHAPTER TWELVE

DISCUSSION OF RESULTS

12.1.....Overview

This chapter analyses the statistical findings and draws conclusions in respect to the testable hypotheses and the research question and sub-questions of this study. Implications of the findings from this study are then highlighted.

Results in Chapter 9 indicate significant variations in VESAD practices across the national boundaries of the seven study countries. These findings imply that the country of origin is an important determinant of VESAD practices. A variety of statistical tests were then applied to examine a set of testable hypotheses. Each testable hypothesis, formulated in Chapter 6, was postulated to describe the association between the extent of VESAD information reported variables that may explain the underlying reasons for the significance of country of origin.

Factors at the organizational attribute, business environment and societal variable levels (as based on Thomas' (1991) classification schema) were found to be statistically significant. The main underlying variables that either directly or indirectly assist in explaining the importance of country of origin were organizational size, industry type, culture, political and civil, and legal systems.

12.2 Importance of the Country of Origin

This study has indicated quite clearly the importance of country of origin as a determinant of VESAD practices and its related themes across the Asia-Pacific region. Findings demonstrating the significance of the country of origin are consistent with the prior extant literature (see for example Gray et al, 1995a; Guthrie and Parker, 1990). Some important discerning points however, are worthy of highlighting.

Of the limited research of VESAD issues in the Asia-Pacific region (see for example Andrews et al, 1989; Teoh and Thong, 1984), the percentage of companies, other than those in Australia, reporting on VESAD issues was relatively small. Andrews et al (1989, p.373) found that only 26% of Singapore and Malaysian enterprises made any such disclosure. Earlier research by Teoh and Thong (1984, p.200) found a similar percentage for Malaysian entities (that is 29%).

This study indicated that the percentage of organizations in the Asia-Pacific region providing at least one piece of information on VESAD information was far higher. Table 9.5 indicated that the percentage ranged from a low of 49.35% for Singapore corporations to 95.00% for those based in the Philippines.

the community and the products and customers. The environment, human resources and safety, and finally energy followed these.

In establishing that the country of origin has an important influence on the amount of VESAD information and themes in the Asia-Pacific region, the first two research sub-questions²⁷ proposed by this study are answered. The next research objective of this study was to identify organizational attributes, business environment and societal variables that may explain variations in VESAD practices across the Asia-Pacific region. This is reviewed in the next section with reference to the testable hypotheses covered in this study.

12.3Results of Testable Hypotheses

This section discusses the findings from univariate, multiple regression and path analysis conducted to determine the effect of a number of independent variables on VESAD practices in the Asia-Pacific region. Table 12.1 provides a summary of the testable hypotheses formulated and examined in this study.

This table summarizes the rejection or acceptance of each hypothesis.

²⁷ The first two sub-questions were: (1) To what extent do listed companies in Australia, Singapore, Hong Kong, the Philippines, Thailand, Indonesia and Malaysia provide different levels of VESAD information in their annual reports? (2) To what extent do listed companies in Australia, Singapore, Hong Kong, the Philippines, Thailand, Indonesia and Malaysia provide different levels information in their annual reports pertaining to the different themes of VESAD?

Table 12. 1: Acceptance/Rejection of All Hypotheses

Variable	Hypothesis	Description	Accepted/ Rejected
Organizational Attributes			
Organizational Size	H ₁	There is a positive association between the size of the organization and the extent of VESAD information presented in annual reports of companies in the Asia-Pacific region.	Accepted
Economic Performance	H ₂	There is a positive association between the profitability of the organization and the extent of VESAD information presented in annual reports of companies in the Asia-Pacific region.	Rejected
Business Environment			
Industry Type	H ₃	There is a significant association between the industry type of a company and the extent of VESAD information presented in annual reports of companies in the Asia-Pacific region.	Accepted
Societal Variables			
Culture			
Uncertainty Avoidance	H ₄	There is a negative association between the level of uncertainty avoidance and extent of VESAD information presented in the annual reports of companies in the Asia-Pacific region.	Accepted
Individualism	H ₅	There is a positive association between the level of individualism and extent of VESAD information presented in the annual reports of companies in the Asia-Pacific region.	Accepted ²⁸
Power Distance	H ₆	There is negative association between the level of power distance and extent of VESAD information presented in the annual reports of companies in the Asia-Pacific region.	Accepted
Masculinity	H ₇	There is a positive association between the level of masculinity and extent of VESAD information presented in the annual reports of companies in the Asia-Pacific region.	Rejected
Long Term Orientation	H ₈	There is a negative association between the level of long-term orientation and extent of VESAD information presented in the annual reports of companies in the Asia-Pacific region.	Accepted
Political and Civil System	H ₉	There is a negative association between the level of political and civil repression and the extent of VESAD information presented in the annual reports of companies in the Asia-Pacific region.	Accepted
Legal System	H ₁₀	There is a significant association between the type of legal system and the extent of VESAD information presented in annual reports of companies in the Asia-Pacific region.	Accepted
Level of Economic Development	H ₁₁	There is a positive association between the level of economic development and the extent of VESAD information presented in annual reports of companies in the Asia-Pacific region.	Rejected
Equity Market Factors			
Size	H ₁₂	There is a positive association between the size of the equity market and the extent of VESAD information presented in annual reports of companies in the Asia-Pacific region.	Rejected
Turnover	H ₁₃	There is a positive association between the turnover of the equity market and the extent of VESAD information presented in annual reports of companies in the Asia-Pacific region.	Rejected

²⁸ It is important to note that decisions to accept or reject hypotheses related to individualism, power distance, long-term orientation and size of the equity market was based solely on results from path analysis.

Using Table 12.1 as the central point of reference, each hypothesis and its related independent variable is scrutinized in more depth below with respect to past literature.

12.3.1

ORGANIZATIONAL ATTRIBUTES

This study hypothesized two organizational attributes, organizational size and profitability would have a positive relationship with VESAD practices amongst firms in the Asia-Pacific region.

12.3.1.1

ORGANIZATIONAL SIZE

Irrespective of the multiple regression model tested using a range of dependent variables and the measurement technique applied, organizational size was found to be statistically significant at the 5% confidence level (see for example Tables 10.1, 10.2, 10.3 and 10.4). The directional sign for the coefficients of regressions related to this factor were also positive. Findings from structural equation modeling (in the form of path analysis) strongly supported the results from multiple regression analysis. Standardized regression weights were positive and above the minimal accepted levels (see for example Appendices T and U). There is strong statistical evidence to accept hypothesis H₁. That is, as the firm's size increases the amount of VESAD details in annual reports also becomes greater.

Findings from this study support prior theoretical and empirical research on VESAD practices which have noted the strong positive influence of organizational size (see for example AlNajjar, 1995, 1996; Hackston and Milne, 1995, Andrew et al, 1989). This prior work however, has focused mainly on industrialized nations primarily of Anglo-American heritage. This study has provided further evidence that the influence of this factor is global and consistent across nations of different levels of economic development. Furthermore, findings from this study suggest that organizational size influences the practices of companies on VESAD issues irrespective of the theme being discussed²⁹. Again this is consistent with findings in prior research (see for example Gray et al, 1995a; Patten, 1991, 1992).

12.3.1.2

ECONOMIC PERFORMANCE

The influence of economic performance on the overall VESAD practices of companies in the Asia-Pacific region was statistically insignificant for all measurement units of content analysis (see Table 10.1, 10.2 and 10.3). When measuring the dependent variable via the disclosure index however, this factor was found to be statistically significant at the 10% confidence level with a positive direction sign which was as predicted (see Table 10.4). Closer examination of the influence of economic performance on the themes of VESAD found this factor was only significant in relation to community disclosures (see Table 10.9). Again this independent variable was only significant when measured using a disclosure index. Findings from path

²⁹ The only exception was that organizational size was found not to influence reporting practices of companies on issues related to energy. However, given the small amount of energy disclosures provided by companies, it is felt this anomaly is unimportant.

analysis were largely consistent with results from multiple regression tests on the lack of statistical significance of any relationship between economic performance and the dependent variable. In fact economic performance was totally absent from the final models produced using structural equation modeling as a result of the lack of influence. Overall, the evidence leads to the conclusion that economic performance is not a strong determinant of VESAD practices amongst companies in the Asia-Pacific region. Consequently, hypothesis H₂ related to this independent variable is rejected.

Findings concerning economic performance provide an interesting analysis. Prior theoretical arguments have conflicted over this factor being an explanatory variable of variations in VESAD practices. Costly contracting and stakeholder theorists for example (see for example Belkaoui and Karpik, 1989; Roberts 1992) have suggested this was a factor of major importance, whereas it has been rejected by those proposing a legitimacy theory viewpoint (see for example Patten, 1991, 1992; Lindholm, 1994). Proponents of legitimacy theory argue that economic performance is of no significance as VESAD practices are the result of social rather than economic constructs (Patten, 1991, p.300).

Empirical research has also been divided. For example, Hackston and Milne (1995) in examining the VESAD practices of entities in New Zealand found no association between the dependent variable and economic performance. In contrast AlNajjar (1995) concluded there was a positive relationship between the independent variable and reporting of VESAD issues in his study of the

500 largest American firms. An interesting fact in contrasting the studies by Hackston and Milne (1995) and AlNajjar (1995) is that the former study used content analysis to measure VESAD practices, whilst the latter employed a disclosure index.

Findings from this study assist in providing an explanation for these different findings in that it is at least partially related to the measurement of the dependant variable. Tables 10.1 (pages), 10.2 (sentences) and 10.3 (words) show that economic performance does not significantly influence the extent of VESAD information produced as measured by content analysis. However, this factor was of significance when considering the number of disclosures made by firms in the Asia-Pacific region when the measurement basis was a disclosure index (see Table 10.4). Based on these results, researchers may need to provide greater clarity in defining their research questions and therefore, the technique used to measure the dependent variable.

12.3.2

BUSINESS ENVIRONMENT - INDUSTRY TYPE

Though not as strongly representative in its influence, the industry type of a firm was found to be statistically significant in a number of cases. In multiple regressions there was a significant difference in two of the four models (measurement by pages and disclosure index) between Industry 3 (Finance Sector) and Industry 4 (Services Sector)³⁰. Further evidence of the influence of this factor can be seen when reviewing the results pertaining to the

³⁰ The Services Sector was used as the base in all multiple regressions. Thus any significance noted in regard to IT1, IT2 and IT3 implied a significant difference in the amount of (Footnote continued on next page)

measurement of environmental, human resource and safety and product and customers issues. Under each of these three categories, industry type was found to be statistically significant in a number of cases involving different measurement bases for the dependent variable. With respect to environmental issues, enterprises in the Resource Sector (Industry 1) and partially in Manufacturing (Industry 2) provided significantly different amounts of disclosure (see Table 10.5). For matters related to human resources and safety and products and customers, there were statistically significant differences between entities in Industry 4 (Services Sector) and counterparts in the remaining three categories (see Tables 10.7 and 10.8). Based on the evidence from these findings hypothesis H₃ is accepted.

Further support for the acceptance of hypothesis H₃ can be found from path analysis. Models tested in Chapter Eleven consistently found a strong association between the industry type and the firm size (see for example Appendices T and U). The influence of industry type however, is not direct but rather acts via the size of the organization.

The results from this study support prior theoretical and empirical research (see for example Gray et al, 1995a; Patten, 1991; 1992; Cowan et al, 1987). It has been inferred from the prior literature that firms operating in more high profile³¹ industries were likely to provide greater detail on VESAD (Hackston

disclosure of VESAD between firms in the Services Sector and those in the other corresponding industry type (see for example Goran and Guise, 1984; Eddie, 1996a, 1996b).

³¹ High profile is implied to mean those firms in industries whose operations may directly or indirectly impede the well-being of relevant publics (see for example Roberts, 1992; Patten, 1992).

and Milne, 1995, p.17). This study addresses the debate for two reasons. First, it has demonstrated that the effect of this factor also exists across a geographical region that has limited past research. Therefore, it assists to illustrate the global nature of industry type and its affects on VESAD practices independent of a firm's location.

Second, industry type can be used to help explain national variations. For instance, Australia is predominantly a nation with a number of firms operating in the resources industry which is likely to be highly sensitive, particularly on environmental matters (see example Tilt, 1994; Deegan and Rankin, 1996, 1997). A review of stock exchange listings at the end of 1994³² showed that nearly a quarter of entities listed (283 of 1215 – 23.29%) could be categorized within the Resource Sector. By contrast less than 10% of the companies listed with the other six stock exchanges were within this category.³³ This dominance is witnessed further by the high number of companies surveyed in this study related to this industry grouping (29 out of 59 resource industry firms were from Australia). Multiple regression analysis firmly illustrated statistically significant differences between firms from the resource grouping compared to their counterparts in other industries in regard to environmental issues (see Table 10.5).

³² Figures for 31st December 1994 are used here as this study selected companies for inclusion in this project operating at that time.

³³ Figures for the remaining six nations were - Singapore (9/213 – 4.23%); Hong Kong (21/508 – 4.13%); Philippines (11/124 – 8.87%); Thailand (34/361 – 9.42%); Indonesia (17/198 – 8.59%); and Malaysia (26/431 – 6.03%).

Tables 10.8 and 10.9). The significance of this cultural value was irrespective of the measurement base used.

Masculinity as a significant explanatory variable of variations in specific themes of VESAD was not as evident as for uncertainty avoidance. Nonetheless, masculinity did assist to explain in part the differences in human resources and safety and products and customers. For the former theme (see Table 10.7) masculinity was significant for models measuring the dependent variable by a number of pages and a disclosure index. In the case of the latter theme (see Table 10.8), coefficients of this cultural value were significant for all measurement bases apart from words.

Directional signs of the coefficients for uncertainty avoidance and masculinity were predominantly negative. In the case of the former national culture value this sign was as predicted suggesting that the higher a nation's score for uncertainty avoidance then the less likely disclosures on VESAD information will be made. For masculinity the negative signs on the coefficients oppose that predicted by this study, Gray's (1988) theoretical framework and past empirical research (see for example Williams and Tower, 1997; Vint and Gray, 1995).

Path analysis further showed the significance of these two cultural values though this influence was indirect (see for example Appendix T and U). This latter form of statistical analysis also assisted to identify any association between the remaining three cultural values (individualism, power distance

and long-term orientation). For these latter three cultural values, path analysis showed that there was an indirect impact on the amount of VESAD information being produced (see for example Appendix U). This indirect influence was also apparent to the respective themes of VESAD examined in this thesis.

Based on the significance and directional signs of the coefficients involved from the results of multiple regressions and path analysis involving uncertainty avoidance, hypothesis H₄ is accepted. The reverse is applicable for hypotheses related to masculinity. That is, hypothesis H₇ is rejected. Hypotheses H₅ (individualism), H₆ (power distance) and H₈ (long-term orientation) are all accepted. It is noted however, that acceptance of these hypotheses is done with caution due to the limited statistical analysis conducted involving these factors.

Based on the evidence concerning cultural factors, this study has demonstrated that culture in part, both directly and indirectly affects the overall VESAD practices of entities, particularly in relation to human resource and safety, product and customers and community (see for example Tables 10.7, 10.8 and 10.9). Findings from this study however, support and extend previous research. Williams and Tower (forthcoming) found that the preferences of managers toward issues on the amount of disclosure small businesses should report was affected by culture. Uncertainty avoidance, individualism and power distance were the three cultural values found to be of significance. Eddie (1996a; 1996b) in relation to consolidated accounting disclosure, found

evidence that uncertainty avoidance, masculinity and long-term orientation influenced the extent of information reported.

12.3.3.2

POLITICAL AND CIVIL SYSTEM

Results for political and civil systems appear to be another consistent factor significantly influencing VESAD practices of companies in the Asia-Pacific region. Tables 10.1 to 10.4, summarized the multiple regressions results for different measures of VESAD as a whole, showed political and civil system to be a highly significant factor. This factor was also significant in models related to the specific themes of products and customers (see Table 10.8) and community disclosures (refer to Table 10.9). Signs for all the coefficients in these models were negative as predicted. Structural equation models further indicated the significance of the political and civil system. Path analysis indicated that not only did the political and civil system have a negative direct affect on the dependent variable, there were also strong indirect influences. Based on the evidence in Chapters Ten and Eleven, hypothesis H₉ is accepted.

The findings in this study related to the political and civil system support theoretical arguments concerning this factor (see for example Daley and Mueller, 1982; Arpan and Radebaugh, 1985; Iqbal et al, 1997). Belkaoui (1985, p.44) has hypothesized that there is a negative relationship between accounting freedom to disclose and political freedom. That is, as the level of repression increases then the extent of disclosure will decrease. Limited empirical research has been conducted on the influence of this factor.

Goodrich (1986, p.25) states however, that “political factors, like political system types and international organizational membership, are significantly linked to the accounting groups”. Findings from this study appear to provide some empirical support for the conclusions of Goodrich (1986), implying the political and civil system are linked to accounting patterns or groups.

12.3.3.3

LEGAL SYSTEM

Hypothesis H₁₀ in this study related to the possible influence of legal system on VESAD practices in the Asia-Pacific region. This hypothesis is accepted based on the results from the relevant statistical tests. It should be noted however, that the strength of this societal variable is not as overwhelming as other variables.

The legal system was found to significantly influence the practices of companies across the seven study nations when overall VESAD was measured by pages (see Table 10.1). The influence was most noticeable in regard to environmental and energy disclosures (see Tables 10.5 and 10.6). Path analysis results support the findings from multiple regression analysis. The influence of the legal system is both direct and indirect as depicted in Figure 11.1 and results shown in Appendix U.

Classification of nations by Salter and Doupnik (1992) established two families of law. Such writers as Mueller et al (1994, p.6) have argued that under Common Law, in contrast to the Roman-Germanic legal system, the

absence of restrictions and controls as stipulated by prescribed rules and regulations gives companies a greater incentive to disclose information. Empirical work (see for example Douppnik and Salter, 1995) has indicated the legal system does significantly influence accounting practices. This study has provided findings to support this view and widens the scope of the prior literature to include VESAD issues in the Asia-Pacific region.

12.3.3.4

LEVEL OF ECONOMIC DEVELOPMENT

Past accounting research has argued the view that as the level of economic development of a nation increases then the amount of disclosure becomes greater (see for example Douppnik and Salter, 1995; Ahmed, 1995; Adhikari and Tondkar, 1992). For instance, as a nation shifts from an agricultural to an industrialized state of development then firms will provide more disclosures. Douppnik and Salter (1995, p.205) found empirical support for the theoretical importance of the level of economic development in influencing accounting disclosure practices.

Generally, results of multiple regression analysis are largely inconsistent with this prior theoretical and empirical literature. The level of economic development was found to be only statistically significant and with a positive directional sign for coefficients in only three measurement models tested. These models (number of pages and sentences and disclosure index) were related to variations in the amount of human resource and safety issues reported (see Table 10.7). Coefficients were also significant in several other

models but the directional sign was negative indicating an inverse relationship (see Tables 10.8 and 10.9).

An important finding from path analysis however, is the implication that the level of economic development does have an indirect influence on the extent of VESAD information disclosed by companies in the Asia-Pacific region. Due to an association with the political and civil, and legal systems, which in turn affected the dependent variable, the level of economic development is observed to be of significance. The association between the level of economic development and the political and civil system was consistent with the prior literature (see for example Mueller, 1988, 1995).

Overall, based on the results from the multiple regression analysis, hypothesis H_{11} is rejected. It must be however, noted that this factor does have significant indirect influences on the dependent variable as found from path analysis.

12.3.3.5

EQUITY MARKET

The final societal variable, the equity market, examined in this study comprised two elements related to the equity market.

12.3.3.5.1 EQUITY MARKET SIZE

Due to problems with multicollinearity, the size of the equity market was excluded from multiple regression analysis. In the context of path analysis, an association between the size of the equity market and the dependent variable

could not be identified either directly or indirectly. Consequently this factor was removed entirely from Figures 11.1 and 11.2. Based on the findings from this study on effects of the size of the equity market on VESAD practices, hypothesis H₁₂ is rejected. These results were largely inconsistent with the past literature related to the effects of the size of the equity market on accounting disclosures (see for example Ndubiza, 1992; Ahmed, 1995; Doupnik and Salter, 1995) which reported a positive relationship.

12.3.3.5.2 EQUITY MARKET TURNOVER

The turnover of the equity market was employed in a large range of multiple regression models. Coefficients for this independent variable were found to be significant on only three occasions amongst the variety of models tested. The models in which this element was found to have a significant influence was related to human resource and safety (see Table 10.7) and products and customers issues (see Table 10.8). Directional signs on all coefficients however, were again negative and thus inconsistent with theoretical prediction of the prior literature and this study. Again these findings were consistent with prior literature. Doupnik and Salter (1995, p.205) reported no significant association between the turnover of the market and the amount of accounting disclosure. As with the size of the equity market, the turnover was also eliminated from the final accepted models (see Figures 11.2 and 11.3) for path analysis due to the lack of significance of this variable in previous models tested when it was included. The hypothesis H₁₃ is therefore, rejected based on the findings from multiple regression and path analysis.

The above analysis outlined the results from this study and the impact on the testable hypotheses formulated in Chapter Six. Table 12.2 provides a summary of the data in reference to four of the research sub-questions of this study.

These subquestions are summarized as follows: -

- (a) Are organizational attributes, business environment and societal variables, important factors in explaining differences in the extent of disclosure or non-disclosure of VESAD information by listed companies across national boundaries?
- (b) Which are the most prominent variables in explaining any differences or similarities in the amount of VESAD information provided?
- (c) Are organizational attributes, business environment and societal variables important factors in explaining the disclosure or non-disclosure by listed companies of information pertaining to specific themes of VESAD across national boundaries?; and
- (d) Which are the most prominent organizational attributes, business environment and societal variables in explaining any differences or similarities in the disclosure or non-disclosure of specific themes of VESAD?

Table 12. 2: Summary of Results to Research Question 3-6

	VESAD Overall	Environment	Energy	Human Resources and Safety	Products and Customers	Community
Organizational Attributes						
Organizational Size	Strong Direct Influence	Strong Direct Influence	No Direct Influence	Strong Direct Influence	Strong Direct Influence	Strong Direct Influence
Economic Performance	Weak Direct Influence	No Direct Influence	No Direct Influence	No Direct Influence	No Direct Influence	Weak Direct Influence
Business Environment						
Industry Type	Moderate Direct Influence/ Indirect Effects	Strong Direct Influence / Indirect Effects	No Direct Influence / No Indirect Effects	Moderate Direct Influence / Indirect Effects	Strong Direct Influence / Indirect Effects	No Direct Influence / Some Indirect Effects
Societal Variables						
Culture	Strong Direct Influence / Indirect Effects	No Direct Influence / Indirect Effects	No Direct Influence / Indirect Effects	Strong Direct Influence / Indirect Effects	Strong Direct Influence / Indirect Effects	Strong Direct Influence / Indirect Effects
Political and Civil System	Strong Direct Influence / Indirect Effects	No Direct Influence / Indirect Effects	No Direct Influence / Indirect Effects	No Direct Influence / Indirect Effects	Strong Direct Influence / Indirect Effects	Strong Direct Influence / Indirect Effects
Legal System	Moderate Direct Influence / Indirect Effects	Moderate Direct Influence / Indirect Effects	Moderate Direct Influence / Indirect Effects	No Direct Influence / Indirect Effects	No Direct Influence / Indirect Effects	No Direct Influence / Indirect Effects
Level of Economic Development	No Direct Influence / Indirect Effects	No Direct Influence / Indirect Effects	No Direct Influence / Indirect Effects	Moderate Direct Influence / Indirect Effects	No Direct Influence / Indirect Effects	No Direct Influence / Indirect Effects
Equity Market	No Direct or Indirect Influence	No Direct or Indirect Influence	No Direct or Indirect Influence	No Direct or Indirect Influence	No Direct or Indirect Influence	No Direct or Indirect Influence

Legend for Table 12.2:-

Strong Direct Influence - Factor was significant explanatory variable across all, or the majority (that is three out of four), multiple regression models tested for regardless of the measurement technique applied to the dependent variable.

Moderate Direct Influence - Factor was a significant explanatory variable in two of the four multiple regressions tested (one for each of the measurement bases) in respect to this category.

Weak Direct Influence - Factor was a significant explanatory variable in one of the four multiple regressions tested in respect to this category.

No Direct Influence - Factor was not a significant explanatory variable in any of the four multiple regressions tested (one for each of the measurement bases) in respect to this category.

Indirect Effects - Indicates from path analysis that the factor indirectly effected the dependent variable.

No Indirect Effects - Indicates from path analysis that the factor did not indirectly effect the dependent variable.

Table 12.2 indicates that variations in the overall amount of VESAD information supplied by companies in the Asia-Pacific region may be explained by certain factors at the organizational attribute, business environment and societal variable levels. Most prominent amongst these are organizational size, industry type, culture, political and civil systems and legal systems. These last four factors affected the overall amount of information provided both directly and indirectly. Whilst not demonstrating any significant direct influence, the level of economic development appeared to have an indirect bearing on the dependent variable.

12.4..... Implications of this Study

The findings from this study have provided a number of valuable insights into VESAD practices in the Asia-Pacific region. In addition results provide important inferences for the application of political economy and Thomas' (1991) contingency theory models in explaining variations in this phenomenon across national boundaries. These issues are reviewed in more detail below.

Bourgeois political economy theory suggests that entities will release VESAD information as the result of sociopolitical and economic demands and to minimize possible regulatory intervention that may interfere with the organizations' self interests. Variation in the amount of VESAD information supplied by companies across the seven study nations in the Asia-Pacific region indicate the different emphases placed on demonstrating a constructive response to public expectations and/or strategies that may delay, avoid or

indeed set the agenda for the imposition of regulated social disclosures. This study has empirically shown a number of social, political and economic variables that directly and indirectly explain these variations.

The results indicating both direct and indirect relationships are important findings as it demonstrates that the motivations for organizations to provide VESAD information is derived from a complex system of interrelated factors. Prior studies (see for example AlNajjar, 1995, 1996; Hackston and Milne, 1995; Patten, 1991, 1992) have generally limited the focus of their investigations on this phenomenon to organizational attributes and business environment factor. In limiting their investigations such research projects have failed to account for many potential insights from adopting a wider perspective. It is necessary to scrutinize the entire sociopolitical and economic system in which firms operate.

The size of corporations was the only organizational attribute that had coefficients that were consistently significant. Results from one-way ANOVAs indicated that the size of organizations did not vary significantly across the seven study nations. Therefore, despite this factor being significant, it cannot be utilized to explain cross-national differences. Nonetheless, from a political economy perspective, the size of the corporation is an important characteristic. That is, as the size of the enterprise increases political economy theory predicts these firms become more socially and politically visible and therefore, face greater pressure. As a consequence, larger entities will attempt to symbolically justify their position by releasing VESAD details to the

relevant public. Companies may further release VESAD information to negate potential effects of possible regulatory action.

Industry type was found to have a moderate impact on the extent of VESAD details provided. This factor can be used to some degree to explain variations across national boundaries, particularly with respect to differences in the reporting practices related to several of the themes of VESAD. For instance in Section 12.3.2 it was noted that resource sector firms provided greater information on environmental issues than other industry types. Firms within the resource sector (see for example Patten, 1991, 1992; Hackston and Milne, 1995; AlNajjar, 1995, 1996; Ness and Mirza, 1992) are regarded as high profile enterprises. Based on this observation it is likely such entities will face increased public and political scrutiny and in response will provide additional VESAD (in particular environmental) details. Australian companies recorded the highest average amount of details reported on environmental issues. This nation also had a far greater number of resource sector firms as well. Hence, in Australia there is likely to be a greater social, political and economic expectation for environmental information compared to other nations (particularly Singapore and Hong Kong) because of the dominance of such a high profile industry group.

The impact of societal variables on VESAD practices in the Asia-Pacific region presents an increased level of dimensional complexity to the analysis. For instance the findings suggested that there was a negative relationship between the amount of VESAD information shown in annual reports and the

level of uncertainty avoidance. To this extent this finding can be used to explain in part why Singapore and Filipino companies provided more disclosure than Australian entities. Thus, applying the doctrine of political economy theory, Singapore and Filipino enterprises would face greater social expectations to be more open about their operations by divulging more details in such documents as annual reports. Conversely Australian companies would decline from providing such information in greater quantity because they may perceive it to be against their self-interests. That is if they released such information they may fear the loss of a competitive advantage or intervention of governmental bodies³⁴.

Another possible explanatory variable to elucidate differences between Australian corporations and counterparts in Hong Kong, Indonesia and Malaysia is the political and civil system. Past literature (see for example Belkaoui, 1985) has suggested that the more open political and civil societies are the greater the expectations for more extensive presentations of accounting information. The increased demand is generated because in open societies there is a greater freedom for the development of a wider groups of stakeholders (for example interest groups such as unions, environmental bodies, consumer groups) seeking to have their different needs addressed. According to Gastil's political and civil index scores, Australia's system appears more open than Indonesia and Malaysia. Therefore, Australian enterprises are likely to face greater social pressure from interest groups that

³⁴ This study does not however, explain why Australian and Thai corporations supply more VESAD details than Hong Kong, Indonesian and Malaysian firms given the uncertainty (Footnote continued on next page)

have a far greater ability to influence companies' self interests by such actions as persuading the government to introduce regulations. To avoid any backlash from these groups to justify their position and avoid calls for regulatory impositions designed to bring perceived social equality, firms in the more open environment of Australia would symbolically release greater information. In the more repressed societies of Indonesia and Malaysia, companies would face less social expectations.

An explanation for the differences between Thai, Hong Kong and Malaysian companies are more difficult to identify. Differences in cultural values, political and civil system and level of economic development which were found to have direct and/or indirect influences do not give insights in this case. Institutional differences in the legal system however, do exist between Thailand (which is based on Roman-Germanic Law) and Hong Kong and Malaysia (uses the Common Law system). Statistical tests indicated that the legal system did have an impact of VESAD practices. This difference in legal system may in part explain why Thai companies on average provided more VESAD detail than their counterparts in Hong Kong and Malaysia.

Another reason that may explain the differences between Thai companies and their counterparts in Hong Kong, Malaysia and even Indonesia, is the presence of a key figure-head to the Thai people. Unlike in Indonesia, Hong Kong and

avoidance level is greater in the first two nations than the latter three. Findings from this study would suggest the opposite.

in part Malaysia³⁵, the King of Thailand is a very distinctive figure-head to the Thai people. Indeed in many annual reports from Thai companies, reference was made to the King of Thailand and his interests in such areas as the environment and education. Due to the significance of this esteemed figure-head and the fact that it was the fiftieth anniversary of the King's rule in 1995, companies in Thailand may have been faced with additional social pressure. To meet these expectations, Thai companies may have provided greater amounts of information on VESAD, particularly in the areas of interest to the King.

Presence of a dominant doctrine rather than a figure-head could also assist in part to explain why Filipino companies supplied more information in annual reports than their counterparts in Hong Kong, Indonesia and Malaysia. It was noted when reviewing reports for the Philippines at least 50% of the companies surveyed made reference to the church. Given the prominence of the Catholic faith in the Philippines³⁶ relative to the other three nations, principles in the doctrine of this religion may place pressure on companies. Hence to avoid any scrutiny based on religious beliefs, companies in the Philippines may feel compelled to make additional disclosures. The impact of the King and religion on VESAD practices are both areas of future research (see Section 13.3 for more details on this matter)

³⁵ In Malaysia there is a number of Sultans who hold high positions within society but lack the same esteem and devotion as shown by Thai citizens to the King who is seen to be a very revered figure.

³⁶ World Factbook figures for 1996 estimate that 85% of the population of the Philippines are of the Roman Catholic faith.

The analysis above indicates that political economy theory can be utilized quite extensively to explain the variations in the overall amount of disclosures across national boundaries in the Asia-Pacific region. It clearly demonstrates however, the complexity of a number of variables impacting on VESAD practices. Variations in these factors from nation to nation and the resulting mix in terms of interactions between the variables lead to different reactions on the part of companies.

Another theoretical implication of this study relates to Thomas' (1991) classification schema. He argued that variables from the four different levels of his model possibly influence factors from other categories. For example elements classified at the societal variable level would influence those factors in the user characteristic, organizational attribute and business environment categories. Path analysis in Chapter Eleven demonstrated a number of significant interrelationships between variables at the different levels. These findings therefore, provide some support for Thomas' (1991) model.

Further from a theoretical viewpoint, evidence from this study provides some support for the theoretical framework and hypothesis developed by Gray (1988) related to the cultural value of uncertainty avoidance. Gray (1988, p.10) hypothesized that there was a negative relationship toward the level of disclosure. Empirical findings from this study (see Tables 10.2, 10.3 and 10.4 for example) showed that the coefficients from multiple regression analysis was negative and significant in line with the prediction of Gray (1988, p.10).

Masculinity was another cultural variable found to be significant but with a directional sign opposite to that predicted (see for example Tables 10.1 through 10.4). The hypotheses developed by Gray (1988, p.11) argued that “more caring societies where more emphasis is given to the quality of life, people and the environment will tend to be more open especially as regards socially related information”. Findings from this study are more consistent with the latter work of Gray and Vint (1995). They (1995, p.36) argued societies which are more assertive, goal orientated and success orientated, all characteristics of a more masculine based community, would provide more publicity. The implication from findings related to masculinity in this study suggests that the original hypothesis of Gray (1988) may have to be altered.

Findings for the cultural values of individualism, power distance and long-term orientation were limited to path analysis. As such it is difficult to form any definite implications in respect to the theoretical framework of Gray (1988).

Another implication of this research study concerns the application to national and international accounting standards committees. AlNajjar (1996, p.1) noted the importance of research into VESAD issues to accounting standard setting boards (AlNajjar, 1996, p.1). Johnson (1993, p.123) stated that “the time is right for research that would help FASB and others address the financial reporting questions associated with environmental cost and obligations”. This study examined strictly voluntary issues in environmental and social accounting. As the IASC develops increased power and influence some items

currently considered as VESAD, may become mandatory. In the likelihood of this occurring, this research project demonstrated that international accounting standard setters would potentially have harmonization problems in constructing common accounting policies.

One final implication of this study relates to the measurement of the dependent variable. Scrutiny of the issues related to this point is discussed in the following section.

12.4.1 *MEASUREMENT IMPLICATIONS OF THE DEPENDENT VARIABLE*

The final two research sub-questions of this study related to the basis used to measure the extent of VESAD information reported in annual reports of the entities surveyed from the Asia-Pacific region. These subquestions were: -

- (a) Does the measurement technique applied in regard to the dependent variable, extent of VESAD information contained in annual reports, result in different findings ?; and
- (b) Does the measurement of the dependent variable when applying different units of analysis under content analysis result in different findings ?

Some debate in the literature (see for example Hackston and Milne, 1995; Gray et al, 1995b) question if the three units of measurement for content analysis (pages, sentences and words) and a disclosure index measure the same concept. Table 12.3 summarizes the correlation matrix for the dependent variable measured by pages, sentences, words and disclosure index.

Table 12. 3: Correlation Matrix of Dependent Variable

	Sentences	Words	Disclosure Index
Pages	0.845	0.923	0.713
Sentences	1.000	0.830	0.652
Words		1.000	0.706
Disclosure Index			1.000

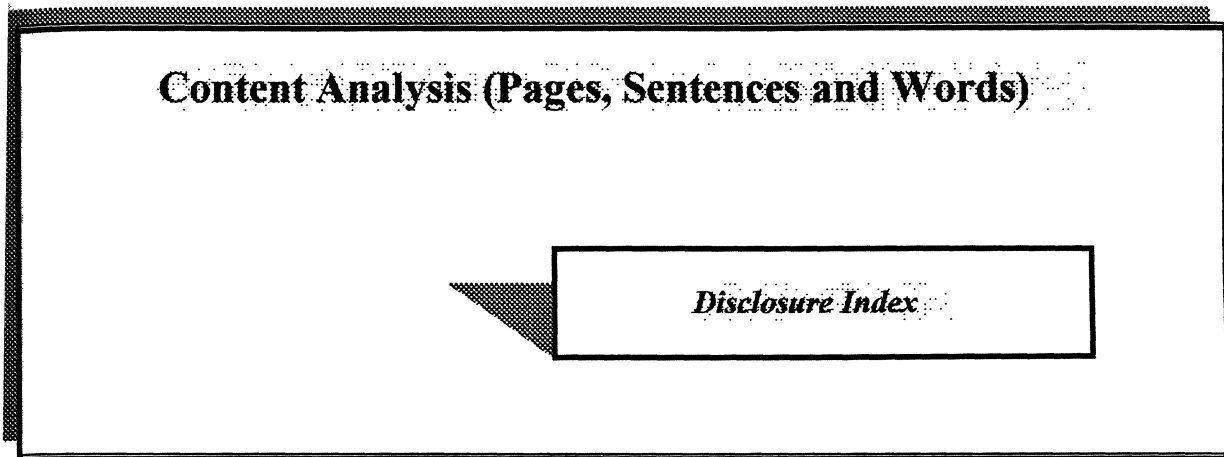
The correlation matrix presented in Table 12.3 shows that for all of the measurement techniques applied to the dependent variable there is a high level of correlation (above 0.650 in all cases). Correlation between the three units of analysis for content is more significant being greater than 0.800. Results from Table 12.3 imply that between the different measurement bases there is a high level of convergent validity, especially for content analysis.

In the case of content analysis measures, findings from multiple regression and path analysis, as shown in Chapters Ten and Eleven indicated minimal differences. It is concluded henceforth that irrespective of the unit of analysis applied (that is pages, sentences or words) when using content analysis, there are no significant differences between conclusions reached. All units of analysis therefore, are considered to measure the same concept. This is consistent with some prior analysis by McMurtie (1994) and Hackston and Milne (1995) and the contingency literature that recognizes little difference in results between these measures when the unit of analysis is consistently defined, coded and identified (see for example Krippendorff, 1980; Hosti, 1969).

Between the three measures of content analysis and a disclosure index, variations in findings were consistently observed from the various statistical tests performed (see Tables 10.5 to 10.9 for example). Based on the differences noted, it is suggested from this study that content analysis and a disclosure index do not measure the same concept. As such, findings and conclusions drawn using these two techniques should not be directly compared.

It is contended in this thesis, that content analysis is essentially a measure of the management's preferences shown toward VESAD issues and relevant themes. Content analysis does not predispose any prior requirement about which issue management must discuss and/or to what extent. By contrast, a disclosure index comprises a list of items viewed important by the researcher that automatically restricts organizations as having disclosed or not disclosed from this subset. Figure 12.1 illustrates the relationship between content analysis and a disclosure index being proposed in this thesis.

Figure 12. 1: Classification of Measurement Base



From Figure 12.1, it is argued that content analysis potentially measures a wider scope of VESAD issues than a disclosure index. Under the former measurement base management is being judged upon their preference toward the issue in regard to amount of information supplied either as a raw number or percentage of the total annual report. Pragmatically, the amount of space a company can give to VESAD issues range from zero pages, sentences or words to infinity.

The latter measure (that is a disclosure index) gauges the management emphasis on VESAD issues and themes as a subset of possible disclosures that are encompassed within content analysis. A disclosure index in simple terms is acting as a predetermined benchmark against which a firm is judged. If a firm scores highly on a disclosure index compared to another, then one would

conclude that the first organization reported on a wider number of issues than the latter based on a limiting factor of a preset number of items.

The implication of the differences between content analysis and disclosure index is that researchers need to be more explicit in defining their research questions and the methodology must be appropriately applied when measuring the dependent variable. Studies in the past have failed to provide sufficient clarity in their research concerning these matters. For instance AlNajjar (1995, p.15) used a disclosure index in an attempt to measure what he claimed to be “total corporate social responsibility”. It is contended here that he was in fact measuring the VESAD performance of companies to a predetermined benchmark that was a subset of this phenomenon.

12.5 Summary

This chapter analyzed the results of empirical evidence from this research project in regard to the research question and sub-questions, testable hypotheses and theoretical framework formed in earlier chapters. A number of variations in VESAD practices were found across the Asia-Pacific region in terms of the overall amount of information provided in annual reports and specific themes. These variations can in part be explained by a number of factors at the three levels of the theoretical framework applied in this study. The most notable were organizational size, industry type, culture, political and civil systems and legal systems. Economic factors were found to be of little significance. It was also determined that the measurement basis of the dependent variable lead to slightly different empirical results. This implies that

care must be taken, not only in this study but also amongst other research on VESAD, when making inferences about results.

CHAPTER THIRTEEN

VESAD : DETERMINANTS IN AN INTERNATIONAL CONTEXT

13.1Overview of the Research Study

The extant literature has tested a number of variables to establish their influence on VESAD practices. These variables have normally been at the organizational attribute and business environment levels. Country of origin has regularly been cited as an important determinant of VESAD practices (see for example Gray et al, 1996; Roberts, 1990, 1991, 1992; Andrew et al, 1989). However, very limited empirical research has been conducted to specifically explain which factors at the societal variable level assist to explain the importance of the country of origin. This study sought to rectify this gap in the literature.

Bourgeois political economy theory was selected as the underlying theoretical framework for this project. Political economy theory has existed in the social science literature for a considerable time. Employment of this theoretical framework to accounting research has only been recently undertaken (Gray et al, 1996, p.47). Nonetheless Guthrie and Parker (1990, p.171) argue that “a political economy theory of social disclosure is both viable and may contribute toward our understanding of observed developments in national reporting practices”. A Bourgeois perspective of political economy theory was applied as it offered a broader scope than that given by other variants of this theory (see for example Cook, 1991). This view draws extensively on the principles

of modern liberalism, suggesting that the social, political and economic environment in which a company operates influences VESAD practices.

Data from this research study was collected from 1995 annual reports obtained by companies listed on the stock markets of seven Asia-Pacific nations. These were: Australia; Singapore; Hong Kong; the Philippines; Thailand; Indonesia; and Malaysia. In total 356 annual reports were reviewed. The dependent variable in this study, the extent of VESAD information in annual reports, was measured using four measurement bases. These were the number of pages, sentences and words and a disclosure index. Prior literature has in the past relied upon these techniques to measure the dependent variable (see for example Gray et al, 1995a; Hackston and Milne, 1995; AlNajjar, 1995, 1996; Neu et al, 1996). The majority of studies have usually not drawn any distinction between each method implying they all measure the same concept. Some recent debate however, has question the validity of this assumption (see for example Gray et al, 1995a; Hackston and Milne, 1995). This study supplies added empirical evidence to this debate within an international context.

13.2 Contributions of Study, Major Results and Findings

This research study provided valuable contributions to the study of VESAD practices in a number of areas. Table 13.1 provides a summarized listed of these additions followed by some more in depth discussion of the respective points.

directional sign of the coefficients related to this factor were negative. Cultural values were found to be strong explanatory variables of variations in the amount of disclosure of the VESAD themes of human resources and safety, products and customers and the community.

The political and civil system was consistently observed to be a chief determinant of VESAD practices. This was particularly true in the case of product and customer and community disclosures. The legal system was not as prominent in explaining variations in VESAD practices as cultural values and the political and civil system. For environmental issues however, the legal system was found to be of significant statistical influence.

In the case of the level of economic development, this factor was found only to be significant in explaining variations in human resource and safety issues. Equity market factors were found to be always either insignificant or significant but of the opposite directional sign to that predicted.

In addition to multiple regression tests, path analysis that allows researchers to establish both direct and indirect relationships, was also applied to scrutinize the effect of the variables included in this study on the extent of VESAD information disclosed by corporations in the Asia-Pacific region. As with multiple regression tests, organizational size, industry-type, cultural values, political and civil and legal system were found to influence the amount of VESAD details provided. Path analysis demonstrated that the effect of industry type was through the size of the enterprise. Furthermore, the

influence of cultural values was largely indirect rather than direct. This indirect influence was via the societal variables of political and civil, and legal systems. These latter two societal variables appeared to be pivotal factors having a direct and indirect impact on the dependent variable but also provided the path for other elements to be of influence. Organizational size also acted as a pivotal factor.

One striking finding of path analysis was the detection of the effect of the level of economic development. By multiple regression analysis this societal variable showed virtually no influence. Findings from path analysis conversely indicated the level of economic development did indirectly impact on the amount of VESAD information shown by companies in the Asia-Pacific region. As for the influence of economic performance and equity market on the dependent variable, path analysis provided no evidence to suggest they were of significance.

Theoretically, this study has provided further support of the viability of political economy theory to explain national VESAD practices. Guthrie and Parker (1990) provided initial evidence of the suitability of this theory but this study has extended the scope of their study to include more in depth empirical research and findings. The results of path analysis demonstrated the validity of Thomas' (1991) classification scheme and the interrelationships he hypothesized between variables at the different levels of his schema. Also, the interrelationships between the variables in this study suggest that in the context of political economy theory, researchers need to carefully consider the

sociopolitical and economic system in which firms exist. This is necessary to truly identify the motivations behind why companies may release VESAD information. Further from a theoretical point of view, findings concerning the influence of culture on VESAD practices helps to support and extend the theoretical framework developed by Gray (1988). That framework stated that cultural factors influenced disclosure practices through the accounting subculture of secrecy. Results of this study tended to confirm these linkages.

Apart from theoretical aspects of this research project, a significant methodology contribution has been made. This study has provided extensive results concerning the differences and similarities between the use of content analysis and a disclosure index to measure the extent of VESAD published in the annual reports of companies. Correlations between the different measures of the dependent variable suggest the presence of convergent validity. This is particularly evident between the three units of analysis for content analysis. Multiple regression and path analysis results did not appear to diverge in an observable manner when considering the findings related to the dependent variable being measured by pages, sentences or words. Thus irrespective of which method was used (pages, sentences or words) similar conclusions could be derived. Therefore, in future studies, researchers need not be particularly concerned about which measurement base to use in content analysis as each method (pages, sentences and words) will provide very similar findings. Differences do however, exist between the use of a disclosure index and content analysis. It is suggested in this study that the former is actually measuring a subset of the latter. It is argued that researchers need to carefully

select the use of a disclosure index or content analysis based on the research question one is attempting to answer.

Finally, this study has indicated that international accounting standard setters face difficulties in developing a standard or policy on the disclosure on VESAD information in annual reports. Harmonization problems will arise because of differences across national boundaries in terms of such societal variables as culture, political and civil systems and legal systems (see for example Radebaugh and Gray, 1997). This study showed that these elements provided for different levels of VESAD reporting in annual reports across the seven nations. Thus to develop a harmonized accounting standard or policy, international accounting standard setters will have to be aware of these differences.

In outlining the results and important contributions made, one must note that as with any study, there are a number of limitations (refer back to Section 1.4). Significant amongst the limitations were: (1) only English language annual reports were utilized; (2) the research study was cross sectional not longitudinal; and (3) annual reports were the sole source for measuring the dependent variable. Despite these limitations, the research study has provided important evidence related to the influence of organizational attributes, business environment and most importantly societal variables on VESAD information communicated in annual reports of companies in the Asia-Pacific region.

theoretical framework, variables and models applied in this study were used in respect to the quality of disclosure as measured in a similar manner to Guthrie and Parker (1990) or some other approach.

Data for this research study utilized annual reports of corporations. As indicated by Zeghal and Ahmed (1990), firms may utilize other mediums for communication to indicate their position of VESAD issues. Thus an obvious extension of research beyond that conducted in this study would be to collect and analyze information released by companies using other mediums of communication to establish if the same differences are noted. These other mediums could include such things as half-year reports, summary statements and other documents presented to the respective stock exchanges.

This research has been conducted within the sphere of functionalist paradigm largely because of the exploratory nature of the study. It is therefore, suggested that further information could be gathered and analyzed using other methodologies from say an interpretive paradigm. For example a series of interviews conducted with managers of the companies analyzed in this study to gather their personal perceptions on VESAD issues could generate insights. Results could then be compared to information collected from this study in search of differences and/or tested for the influence of societal variables.

Longitudinal research could also be undertaken. Utilization of longitudinal research would be beneficial to assist in examining the influence of societal factors that may change over a period of time. For example this study suggests

that companies in political and civil repressed environments are reluctant to disclose VESAD information. A longitudinal study of companies in a nation in which the level of political and civil repression shifts up or down would be important to examine precisely what is the impact on disclosure practices. For example it may help determine if the changes in repression cause immediate or lagged effects.

Finally, research should be undertaken to include smaller business enterprises. This study's sole focus was on listed corporations. Analysis of data collected from small businesses that may not be subject to as much pressures from areas such as the equity market, could provide further insights on the influence of external variables. This additional research would be helpful in providing a global influence of societal variables on VESAD practices across all forms of business irrespective of type and size.

13.4Concluding Remarks

An analysis of data collected from publicly listed companies in seven Asia-Pacific nations provided a range of valuable insights into the influence of factors at three levels of analysis on the extent of VESAD information disclosed in annual reports. Organizational size was the organizational attribute found to be highly significant in explaining variations. This finding was consistent with past literature, as were the results for industry type (business environment level).

At the upper most level, societal variables, this study linked three factors to variations in VESAD practices. These were culture, political and civil systems and legal systems. Findings concerning these variables are important as they have not before been empirically tested in relation to VESAD practices. The level of economic development was found to also be of influence but indirectly. Equity market factors were found to have little or no influence on VESAD practices.

This study also indicated that measurement for the three units of analysis (pages, sentences and words) produced very few differences. Thus researchers need not be readily concerned about which unit to utilize when measuring the amount of disclosure with content analysis. Concern however, should be shown when comparing and contrasting results in which content analysis and a disclosure index are applied; differences between the two measurement bases might lead to variations in findings.

Finally, this study has important applied application for international accounting standard setting bodies. If attempts are made to develop an international accounting standard or policy, making current VESAD practices and disclosures mandatory, international accounting standards setters may face harmonization problems.

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Malaysia

Kuala Lumpur Stock Exchange (11th September, 1996)

<http://www.klse.com.my>

KLSE (10th September, 1996) <http://www.indo.net.id>

Amos 3.6 Information

Smallwater Inc. (21st October, 1997) <http://www.smallwaters.com>

APPENDICES

APPENDIX A

ALTERNATIVE THEORIES

This appendix provides a brief analysis on theories that have been applied in previous VESAD research but which were deemed inappropriate as the theoretical framework for this study.

A-1

COSTLY CONTRACTING THEORY

Espoused by Jensen and Meckling (1976), contracting cost (agency) theory forms an element of positivist group of theories which implements information economics literature (Walker, 1988, p.176). Firms under contracting cost theory are best conceptualised as a 'nexus of contracts', between the owners of economic resources (the principal) and the managers who operate the business (the agents), a relationship that is predicted to affect the management's choice of accounting and disclosure techniques (Jensen and Meckling, p.308).

Contracting cost theory has been applied to VESAD in an attempt to explain the effect of contingent variables including organizational size, industry type and corporate profitability. A variety of hypotheses have been put forward under the costly contracting banner, but for VESAD research the major emphasis has been upon Watts and Zimmerman's (1978) political cost hypothesis. Their (1986, p.235) basic tenant is that firms which are highly politically visible are more likely to employ income decreasing and image-enhancing techniques in order to avoid costly wealth transfers, for example higher taxes, and the imposition of regulation. One such method that can be implemented is to voluntarily disclose socially responsible information in the published annual reports and accounts (Belkaoui and Karpik, 1989, p.38). Government regulation is viewed as costly and restrictive on business decision making. Such restrictions adversely affect management's wealth by imposing the political costs of reduced flexibility in adoption of potential profit maximising policies (Watts and Zimmerman, 1978, p.116).

Conceptual Review

Being developed from the functionalist paradigm, costly contracting writers have inadvertently implied that proponents of contracting cost theory is believed to be free or relatively free of values. Tinker et al (1982, p.172) stated that positive theory upon which contracting cost (agency) theory is based in "...[r]ealism, operating in the clothes of positive theory, claims theoretical supremacy, because it is not born of fact, not values". They, as with other radical writers, argue all research (including contracting cost (agency) theory) is value-laden and not socially neutral (Tinker et al, 1982, p.167). Watts and Zimmerman (1990, p.146) concede that positive theory is not free from value judgement. They defend their position however, suggesting that since positive

accounting theory serves an information demand, any values will be constrained by competition among theories, from people wishing to choose amongst those available (Hodgson et al, 1992, p.404).

Costly contracting theory is criticized because of the extensive neoclassical sentiments upon which it is based (Hahn, 1984, pp.21-23). For example Whittington (1987, p.331) felt the ontological foundations of contracting cost (agency) theory was based on the fallacious assumptions of neoclassical economics:-

- (1) the existence of a perfectly competitive equilibrium;
- (2) on an efficient contracting market; and
- (3) the notion that private contracting costs are cheaper to the firm and to society, than the costs of complying with regulation.

Tinker et al (1982, p.191) further argued that contracting cost (agency) theory has failed to demonstrate the validity of the assumption of a perfectly competitive market suggesting it did not exist because of market imperfections. Gray et al (1995b, p.51) suggest "that a principal aim of corporate social reporting is motivated primarily by market failures (especially injustices, anti-democratic tendencies, information asymmetries and 'externalities')".

Methodological Review

A number of studies have taken the perception that the methodology of contracting cost (agency) theory is inappropriate for the purpose it purports to serve (see for example Tinker et al, 1991; Tinker et al, 1982; Christenson, 1983; Arrington and Francis, 1986). Such studies question if positive theory is a sociology of accounting or an accounting theory (Watts and Zimmerman, 1990, p.147). Christenson (1983, p.5) for example suggested that positive theorists, like those proponents of contracting cost (agency) theory, are "concerned with describing, predicting and explaining the behaviour of accountants and managers, not that of accounting entities". In the main radical writers consider costly contracting theory to be narrowly focused, ignorant of wider socio-political issues influencing accounting's role in society (Tinker and Okcabol, 1991, p.331).

A fundamental tenant underlying costly contracting theory is that in firms "...individuals act to maximise their utility" (Watts and Zimmerman, 1978, p.113). Some authors (see for example Williams 1989; Walker, 1989) argue that it is both difficult to conceptualize and measure the economic self-interest of respective parties utility. Use of questionable proxies has lead to accusations of misleading and invalid conclusions (Williams, 1989, p.462).

Amongst other major methodological questions facing costly contracting theory is the view that it may not accommodate non-economic factors (Sappington, 1991, p.63) and/or which might have a significant impact on accounting practices (Walker, 1989, p.489). A general conclusion of positive and thus contracting cost (agency) theory by many critics is that the empirical evidence relating to the explanation of accounting policy choice and the effect

on share prices and firm contracts, is that it is weak and inconclusive (Ogden, 1993, p.184).

Summary

Costly contracting theory has been applied to a wide variety of research areas, including VESAD practices. It is considered by some leading authors (see for example Tinker et al, 1991; Gray et al, 1995b) that several of the major underlying assumptions of costly contracting (agency) theory contradict the notion of corporate social disclosures. Gray et al (1995b, pp. 52-53) state for example :-

Apart from the intellectual doubts that one must have concerning the approach its principal tenet of,...(allegedly) avoiding any concern with what “should be”....runs entirely counter to principal concerns of CSR....[i]n addition, its central assumption that all actions are motivated by a morally degenerate form of short term interest seems not only empirically implausible but also highly offensive.

Concerns surrounding the conceptual and methodological underpinnings of costly contract theory cast further doubt on the application of this theory. Furthermore there is no relevant theoretical foundations to explain cross-national differences. In conclusion it is felt that costly contracting (agency) theory is not suitable as a means of theorizing the relationship between societal variables and corporate social disclosure practices in a transnational setting.

A-2

ACCOUNTABILITY THEORY

Accountability theory is based on the tenet that “...the corporation receives its permission to operate from the society (of which it is a part), and ultimately is accountable to the society for what it does and how it does it” (Ashen, 1980, p.6). Gray et al (1987, p.2) defined accountability as the “onus, requirement, or responsibility to provide an account (by no means necessarily a financial account) or reckoning of the actions for which one is held responsible”. This definition and others stipulates that there is a greater responsibility on controllers of resources to report.

The purpose of corporate reports under accountability theory is seen to be a holistic function. That is, financial reports should be designed to address the needs of a plurality of stakeholders, including society. This view was formed as an outgrowth of the stewardship function (Bird, 1973, p.143) that focused narrowly on the shareholder/manager relationship (Beaver, 1981, p.2). By reporting on the social behaviour of companies in annual reports, proponents of accountability theory (see for example Demer and Wayland, 1982a; 1982b; Mathews, 1984) suggest this will demonstrate their accountability to stakeholders.

Conceptual Review

Mathews (1984, p.205) stated that "...the reporting of social responsibility information must be viewed against the limited conceptual and operational framework available for guidance and evaluation". This means that accountability theory fails to provide a robust conceptual framework for the conduct of in-depth empirical study. Proponents of accountability theory (see for example Mathews, 1993) attempt to defend the lack of a cogent conceptual basis on the basis that accountability studies are at an early stage of evolutionary development.

Gray et al (1987, p.200) originally exhorted corporate social responsibility researchers to secure "the middle ground in which the status quo is accepted... [where] the ambition is neither to destroy nor refine, deregulate and/or liberate it". Radical theorists have vehemently criticised this middle-of-the-road approach. Tinker et al (1991, p.29) argued that the middle-of-the-road view does not take into account the interaction of forces in society that change over time. They argue that accountability theory fails to develop any substantive views due to a weak normative theoretical foundation (Tinker et al, 1991, p.29). Consequently they feel this theory fails to acknowledge the role of accounting in perpetuating market deficiencies and social classes conflicting. In adopting the middle ground, many social accounting studies therefore fail to examine alternative explanations for the phenomenon under study, thus inhibiting the advancement of knowledge.

Another criticism of accountability is that studies within this paradigm fail to explain wider societal issues, such as, why some companies are reluctant to disclose socially responsible information. Some social accounting studies (see for example Demers and Wayland, 1982a, p.58) note that managers might be reluctant to disclose social information because it could adversely affect the companies dealings with groups, such as, trade unions and the media. However, they do not provide a comprehensive explanation as to why companies should possess such a view (Demers and Wayland, 1982a, p.58).

Methodological Review

The weak research methods employed in accountability studies have been acknowledged by proponents. Matthews (1993, p.364), for example, suggested methods employed by many studies has rendered such research incapable of replication and findings lack generalisability. Benston (1982a, pp.99-100) argued that accountability studies are subject to difficulties in measuring social performance and relating this sufficiently to users of financial statements. In attempting to explain such deficiencies, Matthews (1993, p.364) viewed the imperfections of accountability theory to be due to the evolutionary nature of this research. Though also acknowledging the deficiencies in accountability research, such as its susceptible to subjectivity, Gray et al (1988, p.15) felt this did not distract from the ability of this methodology to "enhance our understanding of the practice of CSR (corporate social reporting) within the current environment....".

Summary

Despite counter-argument by proponents of accountability theory, it is felt that this theory is insufficiently developed in providing a cogent framework for studying corporate social disclosure practices. In particular, the failure of accountability research to adequately explain and to thoroughly test why corporate managers devote time and resources to disclosing aspects of an entity's social behaviour, is considered to be a major deficiency. In respect to the criticisms concerning the methodological problems facing accountability theory, it is felt that this theoretical framework does not provide a suitable means from empirically analysis cross national differences in corporate social disclosure practices.

The view held in this study toward accountability theory is in line with that of Gray et al (1995a). They (1995a, p.70) dismissed the importance of such research in stating that accountability theory "is essentially a rights-driven conception of organizational reporting with a high normative (or moral) dimension. While it is helpful in assessing the extent to which empirical and moral accountability differ from each other (and thus providing some guidance on some of the current failures of liberal democracy) it is not an especially helpful perspective for the interpretation of corporate social reporting practices".

A-3

CRITICAL THEORY

Comprising strong normative attributes with an emphasis on extensive theoretical argument and research, proponents of critical theory argue they can affect public policies leading to successful redistribution of wealth in society (Chua, 1986, p.621). Proponents of critical theory examining accounting behaviour apply this phenomenon within a wide context of social, political and economic forces that influence society over time. The Marxist philosophy is one of the leading views supported by critical theorists of accounting (see for example Tinker, 1985; Tinker et al, 1991; Chua, 1986a, 1986b). Laughlin (1987, p.485) however argues that the Habermanian strand of critical theory is more appropriate. He reasoned that the emphasis of communication in instigating evolutionary change in social processes followed the application of accounting and its major role.

Proponents of critical theory have drawn a number of distinguishing features that illustrate the perceived benefits of this methodology compared with positive accounting research. Cooper and Sherer (1984, p.219) noted three such features. First, they suggest critical theory encourages alternative views of accepted views of conventions within accounting. Second, due to its normative approach it provides a methodology with greater conceptual value to analysis of accounting dilemmas than positive accounting theory. Finally, they contend that critical theory "...attempt(s) to describe and interpret the behaviour of accounting and accountants in the context of institutions, social and political

structures and cultural values of the society in which they are historically located”(Cooper and Sherer, 1984, p.221).

Conceptual Review

Apart from considering this ideology to be overly dogmatic and emotive in nature, opponents of critical theorists, consider their view of accounting to be overstated. Matthews and Perera (1991, p.346) for example stated that though the critical theorists' "...case is interesting and provocative.... most accountants would not accept it as a true picture of the relationship of the discipline with society". Consequently critical theory will appeal to only a minority interest group (p.348).

A major tenet of critical theory is the perception that one's view of the environment gives rise to the questions asked (Tinker et al, 1982, p.188). Acceptance of this notion eludes to the inappropriate fallacy that accounting is value-free from subjectivity and objective reality (Tinker, 1985, p.12). Though this tenant has provided enormous insight, it is associated with a potential irony of critical theory. Highly critical of other research methodologies being subjectively based and therefore biased, critical theory is accused of the same point. The literature has tended to emphasise the extremely overt subjective nature of the critical paradigms (see for example Abdel-Khalik and Ajinkya, 1983, p.376).

From those supporting critical studies, Cooper and Hopper (1987, p.165) contended that these investigations have not always been constructive to prescribing solutions to problems. They remarked that "... a commitment to critical research perspectives and a concern to develop new social and accounting designs do not necessarily go hand in hand" (Cooper and Hopper, 1987, p.161).

Methodological Review

Though emancipating a normative approach, critical theory has been criticized on methodological grounds for not possessing the relevant rigour of its theory (Solomons, 1991b, p.290). Tower (1991) said that critical theorists consistently fail "... to elucidate clear solutions to the multitude of problems which they cite" (p.40).

The apparent overt subjective nature of critical theory (see for example Abdel-Khalik and Ajinkya, 1983, p.376) has been used to suggest bias within the research design (Ijiri, 1971, p.60) Such bias may be further intensified by the use of field and case study methods employed by critical researchers (see for example Tinker, 1980; Tinker and Neimark, 1987; Tinker et al, 1991). Such approaches raise questions of the lack of defensibility and generalisability of findings (Ijiri, 1971, p.60), a fact accepted by some supporters of critical theory (see for example Cooper, 1980). Ijiri (1971) also felt critical theory applied weak research design from non-scientific approaches.

Summary

Overall it is concluded that this critical perspective of thinking is based on strong conceptual grounds, well-developed from the application of appropriate use of theories from respectable domains, namely political-economy and sociology. The major drawback of this theory though is its methodological foundations which have not been sufficiently defined and developed. Furthermore, findings from limited empirical research has been attacked for being subjectively biased and lacking generalisability. Thus this theory is not appropriate for the analysis and evaluation of cross-nation findings about the affect of societal variables on VESAD practices.

The comparative survey of freedom conducted by Freedom House based on the original work of Gastil is an attempt to “judge all places by a single standard and to point out the importance of democracy and freedom” (Freedom House, 1997). Attempts are made to ensure that the survey is a measure of the real world events around the globe and not a rating of a governments’ performance. It a rating of the rights and freedoms of individuals in each nation.

In order to determine an index score (see Section 5.4 for full outline of the respect indices) for each nation in regard to political and civil rights a score is allocated to questions related to each area. Table B-1 summarized these questions.

Table B-1 : Questions Related to Indices

Question Number	Political Rights Index
1	Is the head of state and/or head of government or other chief authority elected through free and fair elections ?
2	Are the legislative representatives elected through free and fair elections ?
3	Are there fair electoral laws, equal campaigning opportunities, fair polling and honest tabulations of ballots ?
4	Are voters able to endow their freely elected representative with real power ?
5	Do the people have the right to organize in different political parties or other competitive political groupings of their choice, and is the system open to the rise and fall of these competing parties or groupings ?
6	Is there a significant opposition vote, de facto opposition power, a realistic possibility for the opposition to increase its support or gain power through elections ?
7	Are the people free from domination by the military, foreign powers, totalitarian parties, religious hierarchies, economic oligarchies or any other powerful group ?
8	Do cultural, ethnic, religious and mnority groups have reasonable self-determination, self-government, autonomy or participation through informal consensus in the decision-making process ?
Question Number	Civil Liberties Index
1	Are there free and independent media, literature and other cultural expressions ?
2	Is there open public discussion and free private discussion ?
3	Is there freedom of assembly and demonstration ?
4	Is there freedom of political and quasi-political organization ?
5	Are citizens under the law, with access to an independent, non-discriminatory judiciary, and are they respected by the security forces ?
6	Is there protection from political terror, and from unjustified imprisonment, exile or torture, whether by groups that support or oppose the system, and freedom from war or insurgency situations ?
7	Are there free trade unions and peasant organizations or equivalents, and is there effective collective bargaining ?
8	Are there free professional and other private organizations ?
9	Are there free businesses or cooperatives ?
10	Are there free religious institutions and free private and public religious expressions ?
11	Are there personal social freedoms, which include such aspects as gender

	equality, property rights, freedom of movement, choice of residence, and choice of marriage and size of family ?
12	Is there equality of opportunity, which includes freedom from exploitation by or dependency on landlords, employers, union leaders, bureaucrats, or any other type of denigrating obstacle to a share of legitimate economic gains ?
13	Is there freedom from extreme government indifference and corruption ?

Source : Freedom House (1997)

Each question is rated on a scale of 0 – 4 with 0 implying the lowest amount of rights related to that question and 4 the highest degree possible. After rating a nation on each question, the scores are added. For the political rights index the maximum score is 32 and 52 for the civil liberties index. These raw scores are then categorised into the respective levels of the relevant index. Table B-2 illustrates the respective groupings.

Table B-2 : Raw Scores Classification into Index Grouping

	INDEX RANKING LEVELS						
	1	2	3	4	5	6	7
POLITICAL RIGHTS INDEX RAW SCORE	28-32	23-27	19-22	14-18	10-13	5-9	0-4
CIVIL LIBERTIES INDEX RAW SCORES	45-52	38-44	30-37	23-29	15-22	8-14	0-7

Source : Freedom House (1997)

After initial classification of the respective nations into the index bracketing, adjustments are to account for such factors as extreme violence which may not be reflected in the scores for the respective questions. For further information related to the methodology applied refer to the World Wide Web listings for Freedom House (1997).

Reproduced in this appendix is the request letter distributed to selected companies in the Asia-Pacific region asking for annual reports for 1995.

<Title : Chief Financial Officer>

<Address of Organization>

Dear Sir/Madam

The objective of this letter is to request the assistance of your organization in completing a major element of my doctoral research in Commerce, majoring in accounting, at Murdoch University in Western Australia. Assistance is sought in the form of acquisition of the past financial year annual reports produced by your organization. My doctoral research is aimed at establishing the quantity, quality and form of corporate social disclosures provided by corporations in five Asia-Pacific nations. From the information gathered, I will attempt to establish the chief factors that differ across national boundaries and which influence the production of such corporate disclosures.

I am seeking to acquire the 1994 and 1995 fiscal year annual reports from your organization. Any information gathered from an analysis of annual reports will be aggregated into respect categories, from which statistical tests can be performed. As a result of this step your company will be anonymous in that specific identification of individual organizations to any one result would be impossible. Organizations responding to this request can therefore be assured that all information provided will remain confidential and will remain anonymous with respect to findings produced. All organizations responding to this request will receive, at the conclusion of the study, a summary of the major findings and implications.

I believe that the information provided from this study will have valuable basic and applied benefit for not only academics and educational institutions, but accounting regulatory bodies and business organizations alike. To obtain the best results however I need to acquire a large body of annual reports from a wide spectrum of corporations. As such I wish to request from your organization the annual reports from the past two financial years. If you can comply with my request can these documents be sent to me at the following address :-

S.Mitchell Williams
Commerce Programme
Murdoch University
South Street, Murdoch
Western Australia, 6150.

In closing I would like to thank you for your attention and any assistance you can provide me. I look forward to hearing from your organization in the near future.

Yours sincerely.

S.Mitchell Williams

Reproduced in this appendix is a copy of the disclosure index developed for this study from a number of relevant sources (see for example Meek et al, 1995; AlNajjar, 1995, 1996).

Category of VESAD	Disclosed = 1 Not Disclosed = 0 Not Applicable = N/A
Environment	
General environmental considerations	
Environmental Policy	
Environmental Audit	
Environmental - Product and Process-Related	
Environmental financially related data	
Sustainability	
Environmental Aesthetics	
Energy	
Conversation of energy in the conduct of business operations	
Using energy efficiently	
Utilizing waste materials	
Disclosing energy savings through recycling	
Discussing the company effort to reduce energy consumption	
Disclosing increased energy efficiency of products	
Research aimed at improving energy efficiency of products	
Receiving an award for an energy conservation programme	
Voicing company's concern about the energy shortage	
Disclosing the company's energy policies	

Human Resources	Disclosed = 1 Not Disclosed = 0 Not Applicable = N/A
Health and Safety	
Employees appreciation	
Equal employment policy	
University graduate recruitment information	
Breakdown of employees by line of business	
Breakdown of employees by geographic area	
Number of employees - full time and part time	
Categories of employees by gender	
Corporate policy on employee training	
Amount spent on training	
Employees by minority	
Number of employees trained	
Cost of safety measures	
No. of accidents	
Discussion of employee welfare	
General redundancy information	
Human Resources Training Initiatives	
Products and Customers	
Product development	
Product safety	
Product quality	
Consumer information	
Community Involvement	Disclosed = 1 Not Disclosed = 0 Not Applicable = N/A
Donations for community activities etc	
Summer or part time employment of students	
Sponsoring of public health, sporting or recreational projects	
Aiding medical research	
Sponsoring educational conferences, seminars or art exhibits	
Funding scholarship programmes or activities	
Supporting national pride/government sponsored campaigns	
Sponsoring community self-help activities	
Supporting the development of local industries or community programmes and activities.	

APPENDIX E**CONTENT ANALYSIS PROFORMA**

A copy of the proforma used to measure VESAD practices by the companies included in this study is reproduced below.

Category	No. Pages	No. Sentences	No. Words
Environment			
Energy			
Human Resources			
Products and Customers			
Community Involvement			
Total Amount of VESAD			

This appendix details in full the final checklist proforma used to decide if a piece of information found in an annual report fell within the defined bounds of a VESAD category.

Categories and Decision Rules for Environmental and Social Accounting Disclosure by Corporations

Category One Environment

- (a) *General Environmental Considerations*
 Statement of the of the corporation's business operations on environmental pollution pertaining to
- * noise
 - * air
 - * water
 - * visual quality
- Statement of the capital, operating and research and development expenditures and activities into the environmental pollution produced by the firm in respect to
- * noise
 - * air
 - * water
 - * visual quality
- (b) *Environmental Policy*
 Actual statement of policy
 Statements of formal intentions
 Statements indicating that company will undertake certain measure to curb environmental pollution and other such damage or what the company does
- (c) *Environmental Audit*
 Reference to environmental review, scoping, audit, assessment including independent attestation
- (d) *Environmental - Product and Process-Related*
 Waste(s)
 Packaging
 Recycling
 Products and product development
 Land contamination and mediation
- (e) *Environmental financially related data*
 Reference to financial/economic impact
 Investment and investment appraisal
 Discussion of areas with financial/economic impact
 Discussion of environmental-economic interaction

- (f) *Sustainability*
Any mention of sustainability
Any mention of sustainable development
- (g) *Environmental Aesthetics*
Designing facilities harmonious with the environment
Contributions in terms of cash or art/sculptures to beautify the environment
Restoring of historical buildings and structures
Landscaping
- (h) *Environmental Other*
Involvement in schemes
Undertaking environmental impact studies to monitor the company's impact on the environment
Receiving awards related to programmes or policies of company
Protection of the environment
Environmental education
(Note : All classifications are undertaken with care so as to ensure the disclosure is not a part of the business (for example waste disposal or environmental technology))

Category Two Energy

- Conservation of energy in the conduct of business operations
- Using energy more efficiently during the manufacturing process
- Utilizing waste materials for energy production
- Disclosing energy savings resulting from product recycling
- Discussing the company's efforts to reduce energy consumption
- Disclosing increased energy efficiency of products
- Research aimed at improving energy efficiency of products
- Receiving an award for an energy conservation programme
- Voicing the company's concern about the energy shortage
- Disclosing the company's energy policies
(Note : Care in classification is taken if it is part of the business (for example oil exploration companies))

Category Three Human Resources

- (a) *Health and Safety*
Reducing and/or elimination of pollutants, irritants or hazards in the work environment
Promotion of employee safety and physical or mental health
Disclosure of accident statistics
Compliance with health and safety standards and regulations
Receiving of a health and safety award
Establishment of a safety department/committee/policy
Conducting research to improve work safety
Information/education/training of employees on safety and health related matters
Reference to health and safety law and/or inspectorate

- (b) *Employment of Minorities or Women*
 Recruiting or employing of racial minorities and/or women
 Disclosing the percentage or number of minority and/or women employees in the workforce and/or in the various managerial levels
 Establishing of goals for minority representation in the workplace
 Programmes for the advancement of minorities in the workplace
 Employment of other special interest groups
 Disclosures about internal advancement statistics
 Proposals, plans or initiated actions for equal opportunity, racial equality and sexual equality
- (c) *Employee assistance/benefits*
 Provision for the assistance or guidance of employees who are in the process of retiring or redundancy
 Provision for low health care services
 Provision for staff accommodation/housing ownership schemes
 Provision for recreational activities/facilities
- (d) *Employee Profiles*
 Indication of the number of employees in the company and/or at each branch/subsidiary
 Relevant statistics on the staff such as length of service and age
 Providing the occupations/managerial levels involved
 Providing the geographical disposition of staff
 Information detailing the experience and qualifications of staff recruited
- (e) *Employee Morale and Relations*
 Detailing of information on the management's relationships with subordinates in an effort to improve job satisfaction and employee motivation
 Providing of information on the stability of workers' jobs and the company future
 Information on the availability of a separate employee report
 Details of awards for effective communication with employees
 Supply of information about the communication of details to employees on management styles and management programs which may directly affect the employees
- (f) *Industrial Relations*
 Reporting on the company's relationship with trade unions and/or workers
 Information on strikes, industrial actions/activities and the resultant losses in terms of time and productivity
 Information on how industrial action was reduced/negotiated
- (g) *Employee Other*
 General improvements in the working conditions
 Information on the restructuring of any element of the organization/branches which affect the staff in any way

Closure of any element of the organization with resultant redundancies and/or relocation/retraining schemes undertaken by the firm to retain staff

Information and statistics on staff turnover

Details about support for day-care, maternity and paternity leave

Category Four Products and Customers

(a) *Product development*

Information on developments related to the company's products including its packaging

Information on any research projects established by organization to improve its products in any way

(b) *Product safety*

Disclosing that products meet applicable safety standards

Details on schemes to make products safer

Conduction of research on safety of firms products

Disclosure of improvements or more sanitary procedures in the processing and preparation of products

Information related to the safety of firms products purchased

(c) *Product Other*

Information on the quality of the firm's product as reflected in prizes/awards received

Verifiable information that the quality of the firm's product has increased

(d) *Consumer Information*

Disclosing of customer safety practices

Customer complaints

Specific consumer relations (over and beyond "our duty to the consumer")

Provision for disabled, aged, etc. customers

Provision for difficult-to-reach customers

Category Five Community Involvement

Donations of cash, products or employee services to support established community activities, events, organizations, education and the arts

Summer or part-time employment of students or disabled

Sponsoring public health, sporting or recreational projects

Aiding medical research

Sponsoring educational conferences, seminars or art exhibits

Funding scholarship programmes or activities

Supporting national pride/government sponsored campaigns

Supporting the development of local industries or community programmes and activities.

Below is a reproduction of the computer print-out for collinearity diagnostic related to model tested with the dependent variable being measured by pages. Print-outs using the other measurement bases were identical or virtually identical to the print-out reproduced in this appendix.

Collinearity Diagnostics

Number	Eigenval	Cond Index	Variance Constant	Proportions				ROA
				LOGASSET	IT1	IT2	IT3	
1	7.70456	1.000	.00003	.00012	.00151	.00241	.00169	.00051
2	1.10056	2.646	.00000	.00000	.28478	.02842	.01529	.10576
3	1.01491	2.755	.00000	.00001	.01010	.05685	.31368	.12000
4	.96131	2.831	.00000	.00000	.04149	.05677	.02438	.65994
5	.56416	3.696	.00000	.00000	.13098	.00190	.00086	.03167
6	.30862	4.996	.00001	.00002	.00083	.04969	.09250	.00293
7	.18165	6.513	.00014	.00055	.49767	.74798	.47462	.04186
8	.10351	8.628	.00051	.00215	.01624	.04293	.02121	.00048
9	.03380	15.099	.00222	.01505	.00279	.00032	.00208	.00276
10	.01787	20.763	.00014	.00660	.00017	.00060	.00022	.00832
11	.00749	32.071	.00000	.67107	.00710	.01013	.04840	.02516
12	.00158	69.939	.99695	.30443	.00634	.00201	.00507	.00062

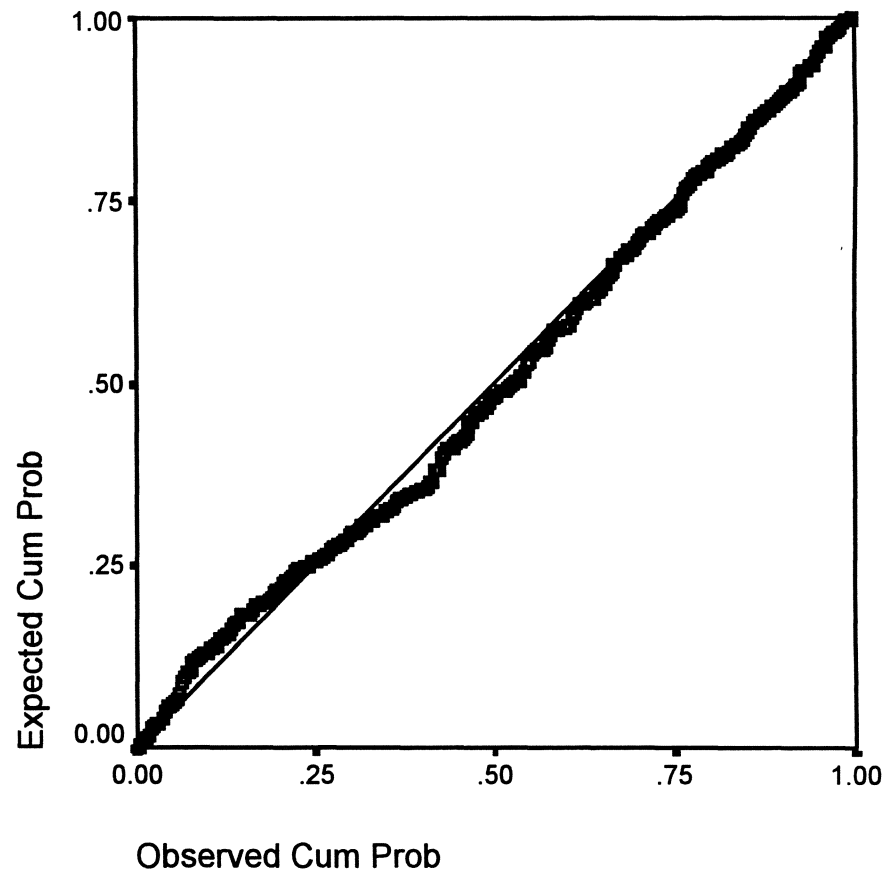
	UNCAV	MAS	PCS	LEGAL	LED	EMTURN
1	.00020	.00076	.00019	.00087	.00056	.00035
2	.00172	.00035	.00042	.00062	.00039	.00001
3	.00005	.00011	.00001	.00034	.00014	.00000
4	.00001	.00002	.00001	.00005	.00008	.00002
5	.01371	.00246	.00328	.01687	.00964	.00010
6	.00803	.02025	.00351	.06673	.03313	.00019
7	.00249	.00629	.00000	.05329	.00084	.00033
8	.00021	.25655	.02603	.02860	.00542	.03136
9	.06435	.06417	.05349	.25396	.21950	.19004
10	.00208	.36547	.07385	.42568	.62905	.44669
11	.27897	.14175	.24698	.00108	.08595	.11651
12	.62817	.14183	.59224	.15192	.01530	.21439

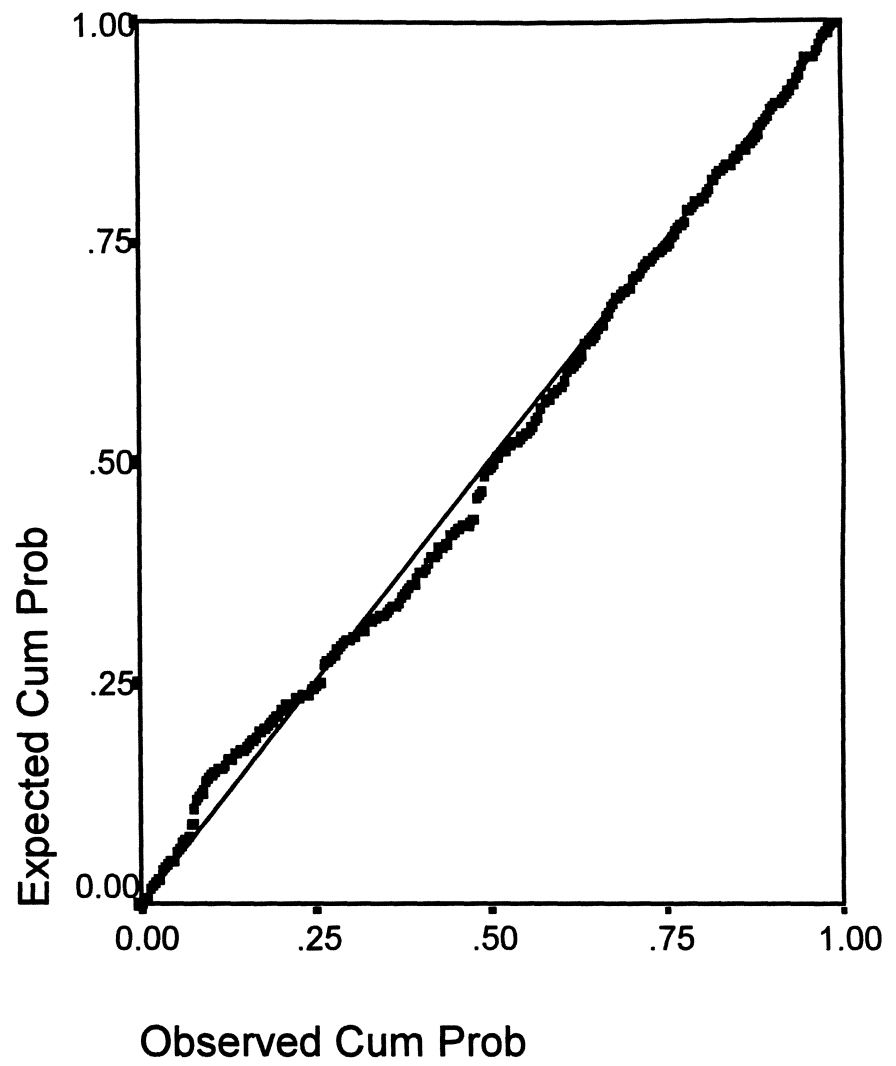
End Block Number 1 All requested variables entered.

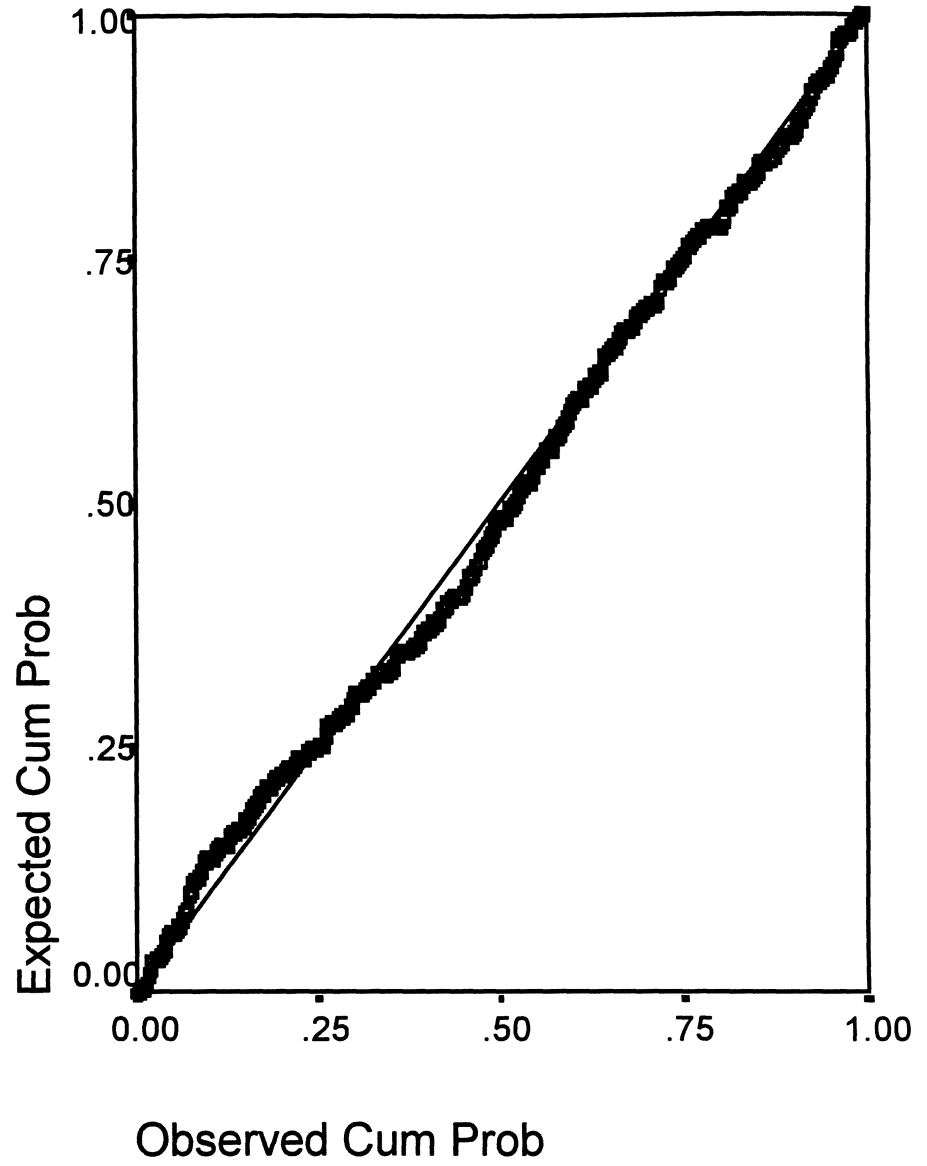
Following is three normal p-p plots that indicate the normality of the multiple regression models. This first plot refers to the measurement of the dependent variable by pages followed by similar plots for sentences, words and disclosure index.

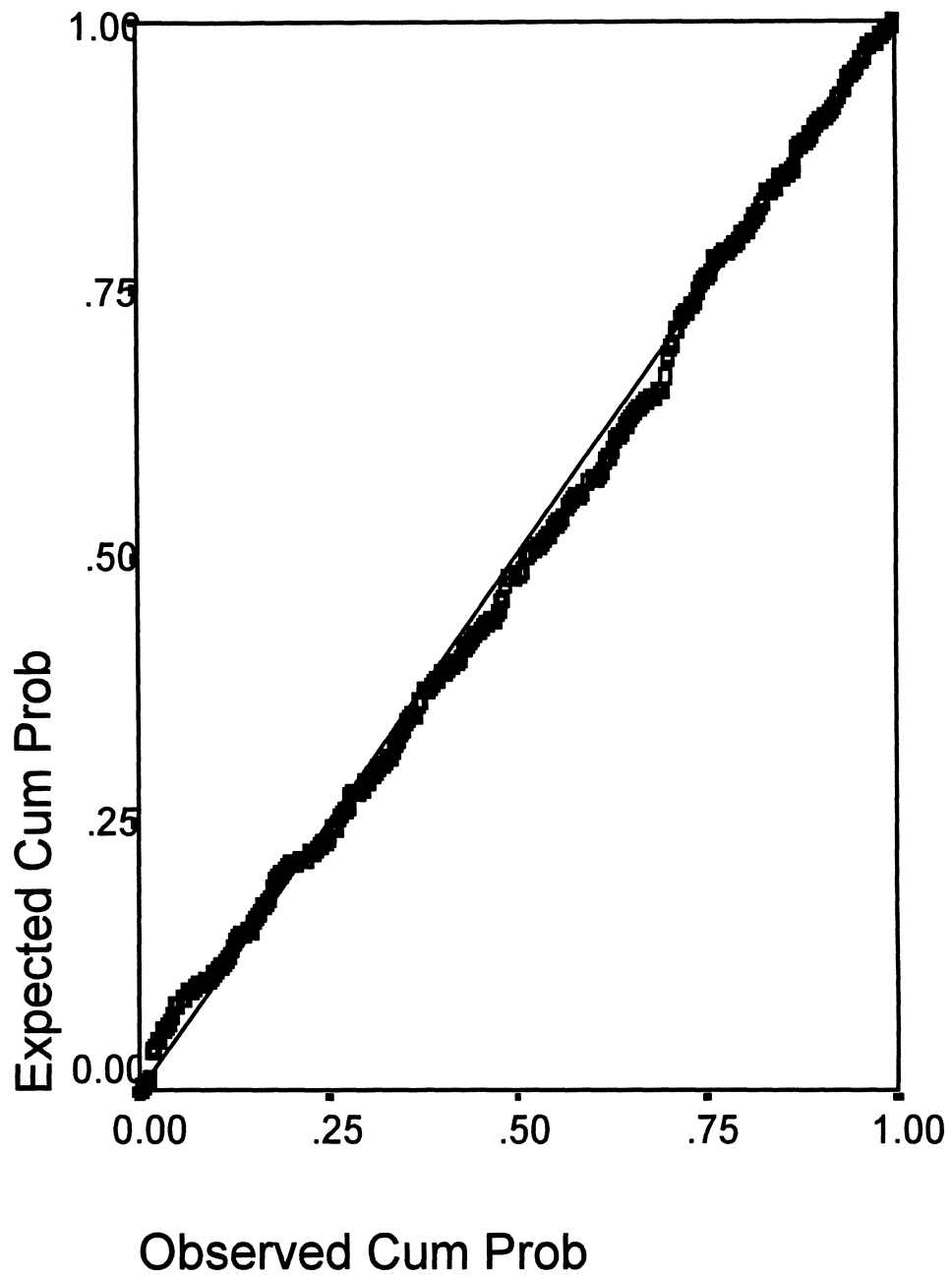
APPENDIX H-1

NORMAL P-P PLOT FOR PAGES





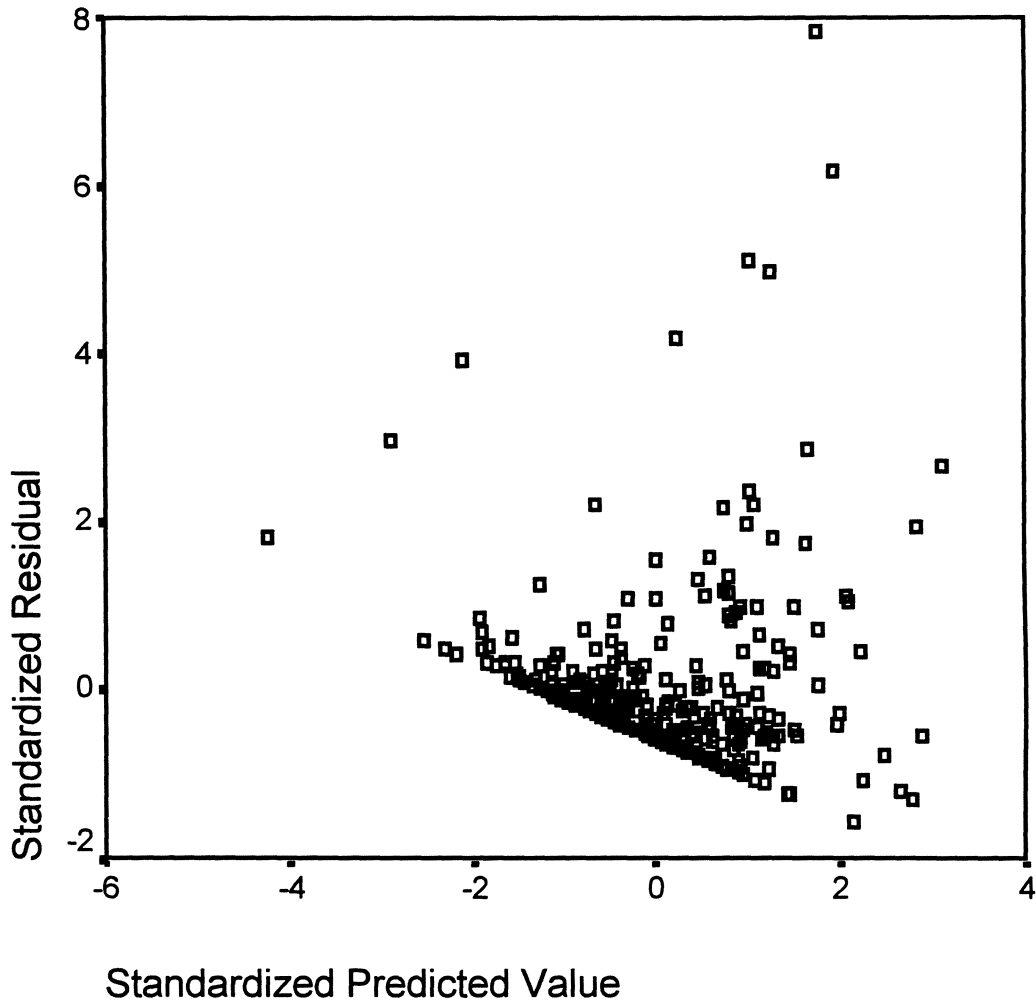


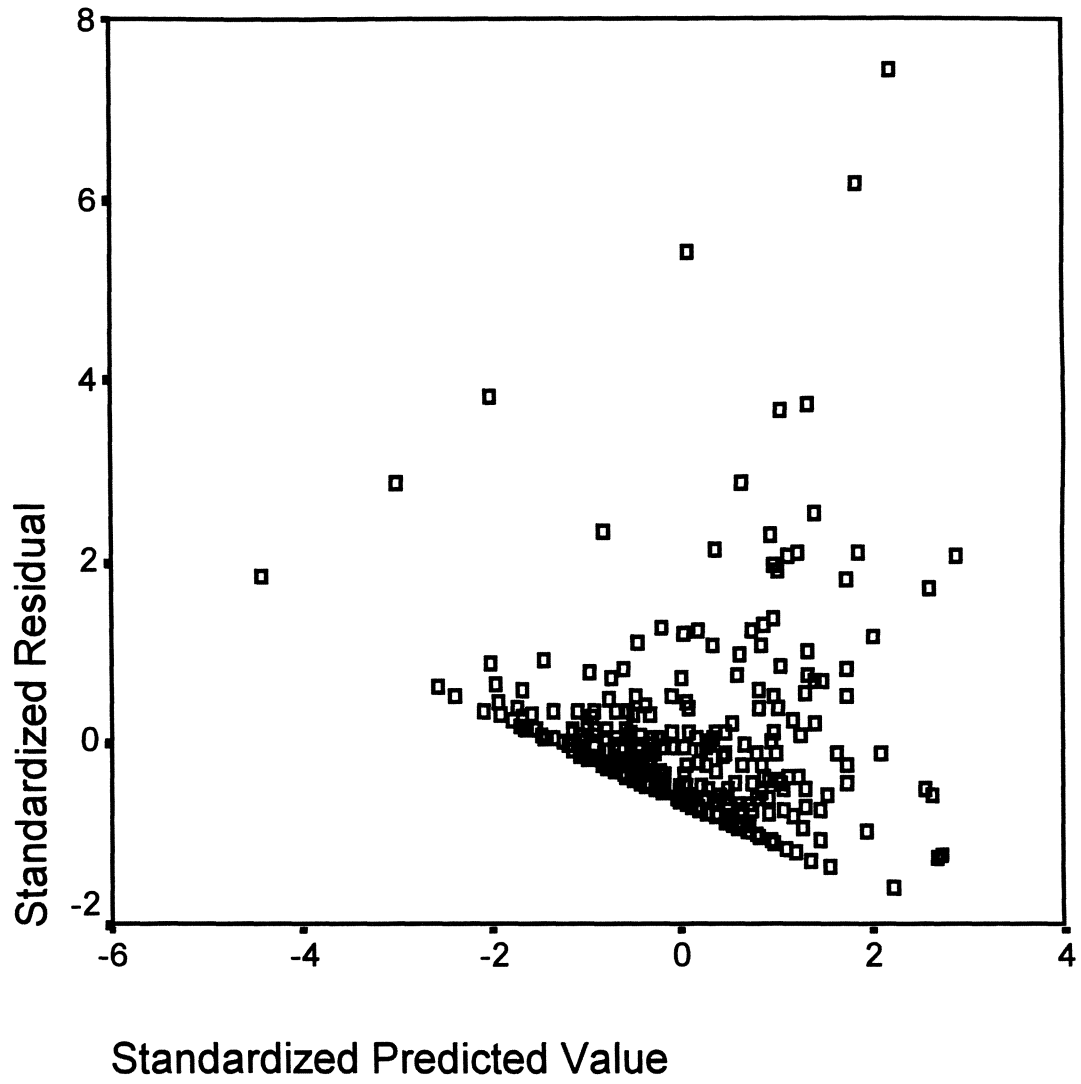


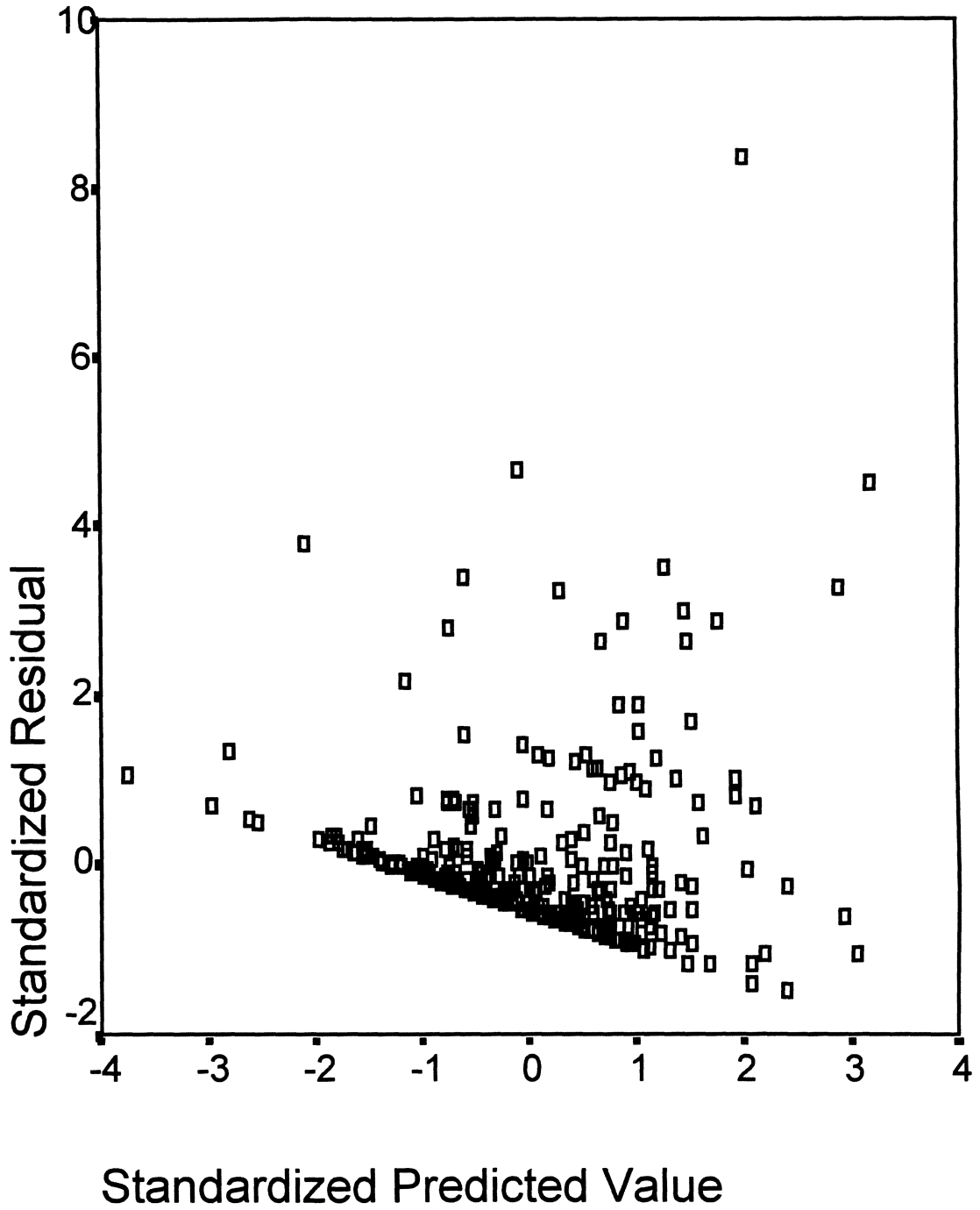
This appendix provides details on four scatterplots constructed for the standardized residuals versus the standardized predicted values under the four measurement bases. These scatterplots are used to identify any linearity or heteroscedasticity problems with the respective models.

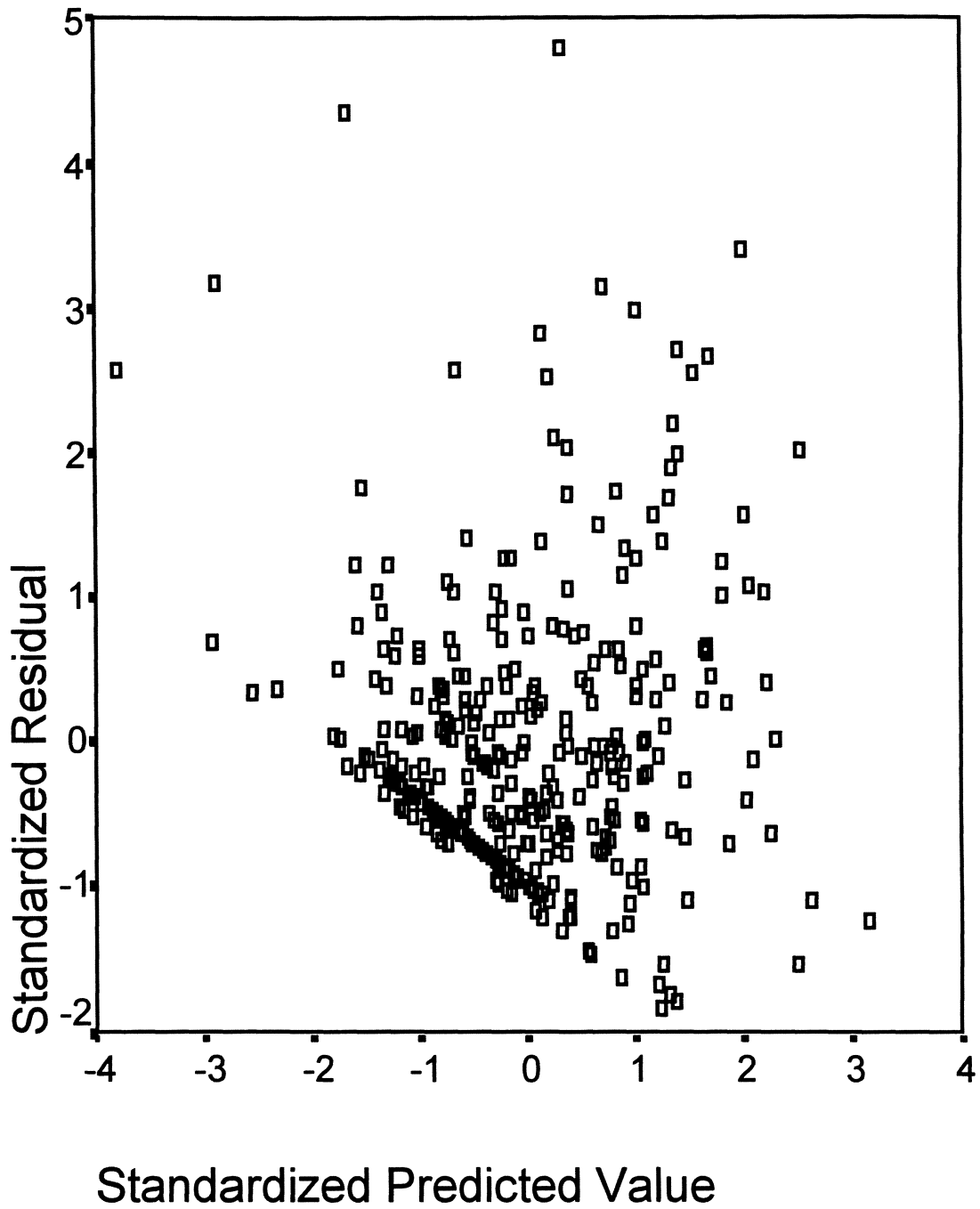
APPENDIX I-1

PAGES - SCATTERPLOT OF RESIDUALS









Copied below is a computer print-out of a randomly selected section of data for which Mahalanohis and Cooks' distances and leverage points had been calculated. As this sample indicates no outliers could be identified in the data apart from one which was duly examined and rectification steps taken. This sample is representative of the entire data set.

	mah_1	coo_1	lev_1
144	7.59755	.01755	.02140
145	5.14871	.00058	.01450
146	8.16994	.00033	.02301
147	7.32711	.00325	.02064
148	10.79932	.02081	.03042
149	5.79918	.00107	.01634
150	10.41802	.00121	.02935
151	8.22583	.00031	.02317
152	5.64206	.00009	.01589
153	5.11581	.00024	.01441
154	10.73149	.00190	.03023
155	7.56510	.00205	.02131
156	6.35796	.00634	.01791
157	7.59589	.00057	.02140
158	5.70178	.00094	.01606
159	9.05358	.00016	.02550
160	7.33352	.00107	.02066
161	13.36768	.00026	.03766
162	8.49068	.00025	.02392
163	9.09195	.00726	.02561
164	11.15524	.00333	.03142
165	5.06911	.00029	.01428
166	7.50174	.00072	.02113
167	8.39712	.00134	.02365
168	8.69234	.00021	.02449

APPENDIX K

KEY DEMOGRAPHIC BREAKDOWN BY NATION

Information in this appendix summarizes the key demographic details obtained in relations to the companies surveyed, broken in each nation studied.

Demographic Detail	Mean (US\$)	Standard Deviation (US\$)	Minimum (US\$)	Maximum (US\$)
Australia				
Total Annual Sales	1.56 billion	8.53 billion	66061.84	82.90 billion
Total Annual Profit	5.23 million	144.03million	-157.00 million	795.64 million
Total Annual Operating Profit	70.89 million	192.03 million	-109.00 million	1.28 billion
Annual Total Assets	1.71 billion	8.60 billion	1.30 million	83.48 billion
Annual Total Liabilities	1.60 billion	8.54 billion	-13989.32	82.90 billion
Shareholders Equity	39.20 million	682.62 million	-420.00 million	4.26 billion
Return on Assets	0.05	0.12	-0.54	0.72
Singapore				
Total Annual Sales	348.85 million	643.68 million	0.00	4.63 billion
Total Annual Profit	54.54 million	138.96 million	-11.59 million	806.14 million
Total Annual Operating Profit	63.69 million	154.82 million	-11.77 million	855.32 million
Annual Total Assets	2.52 billion	10.81 billion	31.99 million	85.00 billion
Annual Total Liabilities	365.62 million	679.99 million	0.00	4.63 billion
Shareholders Equity	525.95 million	1.01 billion	16.08 million	6.34 billion
Return on Assets	0.06	0.08	-0.04	0.53
Hong Kong				
Total Annual Sales	688.31 million	1.23 billion	6.59 million	6.88 billion
Total Annual Profit	142.83 million	309.34 million	-71.62 million	1.33 billion
Total Annual Operating Profit	142.58 million	-31.45 million	1.60 billion	1.60 billion
Annual Total Assets	2.15 billion	4.06 billion	34.63 million	17.39 billion
Annual Total Liabilities	689.37 million	1.23 billion	19.89 million	6.88 billion
Shareholders Equity	1.18 billion	2.56 billion	14.82 million	12.33 billion
Return on Assets	0.04	0.11	-0.49	0.27

Demographic Detail	Mean (US\$)	Standard Deviation (US\$)	Minimum (US\$)	Maximum (US\$)
Philippines				
Total Annual Sales	376.28 million	528.41 million	31.32 million	1.83 billion
Total Annual Profit	61.35 million	69.17 million	1.56 million	213.23 million
Total Annual Operating Profit	55.93 million	62.34 million	2.84 million	189.55 million
Annual Total Assets	1.49 billion	2.15 billion	43.01 million	6.83 billion
Annual Total Liabilities	381.77 million	531.67 million	31.32 million	1.83 billion
Shareholders Equity	381.78 million	651500	651500	1.76 billion
Return on Assets	0.08	0.07	0.01	0.26
Thailand				
Total Annual Sales	10,530 billion	5.57 billion	4.73 million	29,470 billion
Total Annual Profit	62.34 million	165.35 million	310164	785.75 million
Total Annual Operating Profit	112.95 million	267.92 million	-8.47 million	1.08 billion
Annual Total Assets	3.63 billion	9.74 billion	17.27 million	41.30 billion
Annual Total Liabilities	330.40 million	562.77 million	10.14 million	2.53 billion
Shareholders Equity	228.83 million	494.24 million	2.31 million	2.10 billion
Return on Assets	0.06	0.06	0.00	0.30
Indonesia				
Total Annual Sales	405.74 million	907.27 million	105787	5.19 billion
Total Annual Profit	34.86 million	48.34 million	2542	211.65 million
Total Annual Operating Profit	61.53 million	111.28 million	2738	495.80 million
Annual Total Assets	2.76 billion	10.51 billion	94403	61.52 billion
Annual Total Liabilities	440.13 million	987.44 million	106908	5.61 billion
Shareholders Equity	235.37 million	320.99 million	56019	1.16 billion
Return on Assets	0.37	1.65	0.00	9.71

Demographic Detail	Mean (US\$)	Standard Deviation (US\$)	Minimum (US\$)	Maximum (US\$)
Malaysia				
Total Annual Sales	447.93 million	553.83 million	506444	2.44 billion
Total Annual Profit	53.66 million	97.19 million	-2.50 million	628.29 million
Total Annual Operating Profit	69.05 million	125.45 million	-7.40 million	779.15 million
Annual Total Assets	775.72 million	1.28 billion	1.63 million	7.20 billion
Annual Total Liabilities	450.16 million	506444	2.44 billion	2.44 billion
Shareholders Equity	349.43 million	4.36 billion	1.56 million	4.36 billion
Return on Assets	0.09	0.07	-0.01	0.38

Below is a series of five tables that summarize independent t-tests that were conducted on the average amount of disclosure made by companies in the seven study nationals with respect to each theme.

Table L-1 : Environment

	Singapore	Hong Kong	Philippines	Thailand	Indonesia	Malaysia
EnvPages						
Australia	0.012*	0.043*	0.993	0.876	0.755	0.030*
Singapore		0.981	0.028*	0.003*	0.039*	0.929
Hong Kong			0.064**	0.012*	0.095**	0.936
Philippines				0.901	0.847	0.045*
Thailand					0.903	0.007*
Indonesia						0.074**
EnvSent						
Australia	0.004*	0.015*	0.310	0.913	0.217	0.011*
Singapore		0.907	0.149	0.005*	0.106	0.969
Hong Kong			0.058**	0.011*	0.089**	0.903
Philippines				0.312	0.945	0.045*
Thailand					0.258	0.007*
Indonesia						0.077**
EnvWords						
Australia	0.009*	0.028*	0.425	0.885	0.334	0.017*
Singapore		0.973	0.205	0.009*	0.157	0.895
Hong Kong			0.066**	0.011*	0.120	0.876
Philippines				0.332	0.971	0.035*
Thailand					0.285	0.006*
Indonesia						0.081**
EnvIndex						
Australia	0.000*	0.005*	0.688	0.668	0.238	0.004*
Singapore		0.428	0.001*	0.001*	0.009*	0.226
Hong Kong			0.029*	0.018*	0.101	0.790
Philippines				0.975	0.558	0.024*
Thailand					0.497	0.015*
Indonesia						0.106

* Significant at 5% confidence level

** Significant at 10% confidence level

Below is a series of five tables that summarize independent t-tests that were conducted on the average amount of disclosure made by companies in the seven study nationals with respect to each theme.

Table L-1 : Environment

	Singapore	Hong Kong	Philippines	Thailand	Indonesia	Malaysia
EnvPages						
Australia	0.012*	0.043*	0.993	0.876	0.755	0.030*
Singapore		0.981	0.028*	0.003*	0.039*	0.929
Hong Kong			0.064**	0.012*	0.095**	0.936
Philippines				0.901	0.847	0.045*
Thailand					0.903	0.007*
Indonesia						0.074**
EnvSent						
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Indonesia						0.077**
EnvWords						
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Indonesia						0.081**
EnvIndex						
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Singapore		0.428	0.001*	0.001*	0.009*	0.226
Hong Kong			0.029*	0.018*	0.101	0.790
Philippines				0.975	0.558	0.024*
Thailand					0.497	0.015*
Indonesia						0.106

* Significant at 5% confidence level

** Significant at 10% confidence level

Table L-3 : Human Resources and Safety

	Singapore	Hong Kong	Philippines	Thailand	Indonesia	Malaysia
HRSPages						
Australia	0.857	0.257	0.584	0.333	0.311	0.136
Singapore		0.387	0.703	0.456	0.440	0.235
Hong Kong			0.723	0.950	0.999	0.714
Philippines				0.650	0.665	0.541*
Thailand					0.944	0.793
Indonesia						0.722
HRSSent						
Australia	0.373	0.085**	0.585	0.167	0.221	0.028*
Singapore		0.321	0.984	0.411	0.573	0.140
Hong Kong			0.219	0.945	0.607	0.502
Philippines				0.210	0.390	0.046*
Thailand					0.577	0.593
Indonesia						0.205
HRSWords						
Australia	0.279	0.107	0.887	0.224	0.328	0.049*
Singapore		0.572	0.559	0.692	0.948	0.390
Hong Kong			0.112	0.934	0.501	0.703
Philippines				0.153	0.293	0.038*
Thailand					0.592	0.666
Indonesia						0.265
HRSIndex						
Australia	0.138	0.192	0.982	0.449	0.369	0.199
Singapore		0.939	0.263	0.782	0.019*	0.922
Hong Kong			0.273	0.758	0.030*	0.867
Philippines				0.488	0.463	0.238
Thailand					0.125	0.826
Indonesia						0.018*

* Significant at 5% confidence level

** Significant at 10% confidence level

Table L-4 : Products and Customers

	Singapore	Hong Kong	Philippines	Thailand	Indonesia	Malaysia
PCPages						
Australia	0.121	0.651	0.000*	0.009*	0.385	0.372
Singapore		0.338	0.518	0.911	0.262	0.168
Hong Kong			0.004*	0.114	0.384	0.334
Philippines				0.421	0.000*	0.000*
Thailand					0.037*	0.011*
Indonesia						0.865
PCSent						
Australia	0.186	0.917	0.000*	0.104	0.410	0.615
Singapore		0.365	0.358	0.942	0.273	0.228
Hong Kong			0.005*	0.246	0.467	0.645
Philippines				0.421	0.000*	0.000*
Thailand					0.067*	0.114
Indonesia						0.791
PCWords						
Australia	0.377	0.626	0.000*	0.058**	0.451	0.734
Singapore		0.653	0.240	0.842	0.461	0.438
Hong Kong			0.006*	0.308	0.402	0.562
Philippines				0.153	0.000*	0.000*
Thailand					0.081**	0.123
Indonesia						0.784
PCIndex						
Australia	0.152	0.632	0.006*	0.984	0.598	0.381
Singapore		0.475	0.000*	0.292	0.544	0.626
Hong Kong			0.005*	0.724	0.943	0.770
Philippines				0.009*	0.002*	0.000*
Thailand					0.652	0.470
Indonesia						0.831

* Significant at 5% confidence level

** Significant at 10% confidence level

Table L-5 : Community

	Singapore	Hong Kong	Philippines	Thailand	Indonesia	Malaysia
ComPages						
Australia	0.029*	0.692	0.000*	0.000*	0.801	0.125
Singapore		0.158	0.068**	0.060**	0.142	0.452
Hong Kong			0.001*	0.015*	0.598	0.363
Philippines				0.847	0.001*	0.008*
Thailand					0.028*	0.029*
Indonesia						0.226
ComSent						
Australia	0.244	0.540	0.006*	0.002*	0.984	0.295
Singapore		0.212	0.285	0.113	0.448	0.907
Hong Kong			0.001*	0.005*	0.499	0.291
Philippines				0.695	0.023*	0.463
Thailand					0.033*	0.248
Indonesia						0.503
ComWords						
Australia	0.257	0.816	0.000*	0.000*	0.828	0.195
Singapore		0.350	0.244	0.114	0.532	0.941
Hong Kong			0.001*	0.005*	0.656	0.276
Philippines				0.773	0.012*	0.250
Thailand					0.027*	0.137
Indonesia						0.459
ComIndex						
Australia	0.456	0.977	0.014*	0.033*	0.331	0.659
Singapore		0.473	0.069**	0.137	0.734	0.796
Hong Kong			0.005*	0.027*	0.259	0.614
Philippines				0.733	0.152	0.034*
Thailand					0.298	0.087**
Indonesia						0.553

* Significant at 5% confidence level

** Significant at 10% confidence level

Below is a series of six tables that summarize Mann-Whitney U tests that were conducted on the average amount of disclosure made by companies in the seven study nationals with respect VESAD overall and each theme.

Table M-1 : VESAD Overall

	Singapore	Hong Kong	Philippines	Thailand	Indonesia	Malaysia
CAPages						
Australia	0.0647**	0.0104*	0.0068*	0.0261*	0.8747	0.0710
Singapore		0.0051*	0.5706	0.6355	0.1136	0.0044*
Hong Kong			0.0002*	0.0027*	0.0302*	0.4492
Philippines				0.8792	0.0216*	0.0007*
Thailand					0.0644**	0.0042*
Indonesia						0.1477
CASent						
Australia	0.0579**	0.0193*	0.0339*	0.0159*	0.3239	0.1144
Singapore		0.0015*	0.7221	0.4143	0.0161*	0.0053*
Hong Kong			0.0005*	0.0006*	0.1856	0.5015
Philippines				0.5841	0.0046*	0.0020*
Thailand					0.0062*	0.0018*
Indonesia						0.6086
CAWords						
Australia	0.7263	0.0122*	0.0084*	0.0270*	0.3771	0.1206
Singapore		0.0328*	0.0536	0.1203	0.3266	0.1627
Hong Kong			0.0003*	0.0025*	0.1351	0.4932
Philippines				0.7962	0.0027*	0.0013*
Thailand					0.0176*	0.0076*
Indonesia						0.5271
VESADInd						
Australia	0.0007*	0.0382*	0.0045*	0.4075	0.7104	0.0545**
Singapore		0.1604	0.0000*	0.0084*	0.0064*	0.1521
Hong Kong			0.0000*	0.0713**	0.0444*	0.8470
Philippines				0.2750	0.0141*	0.0001
Thailand					0.4880	0.0535**
Indonesia						0.0843**

* Significant at 5% confidence level

** Significant at 10% confidence level

Table M-2 : Environment

	Singapore	Hong Kong	Philippines	Thailand	Indonesia	Malaysia
EnvPages						
Australia	0.012*	0.043*	0.993	0.876	0.755	0.030*
Singapore		0.981	0.028*	0.003*	0.039*	0.929
Hong Kong			0.064**	0.012*	0.095**	0.936
Philippines				0.901	0.847	0.045*
Thailand					0.903	0.007*
Indonesia						0.074**
EnvSent						
Australia	0.004*	0.015*	0.310	0.913	0.217	0.011*
Singapore		0.907	0.149	0.005*	0.106	0.969
Hong Kong			0.058**	0.011*	0.089**	0.903
Philippines				0.312	0.945	0.045*
Thailand					0.258	0.007*
Indonesia						0.077**
EnvWords						
Australia	0.009*	0.028*	0.425	0.885	0.334	0.017*
Singapore		0.973	0.205	0.009*	0.157	0.895
Hong Kong			0.066**	0.011*	0.120	0.876
Philippines				0.332	0.971	0.035*
Thailand					0.285	0.006*
Indonesia						0.081**
EnvIndex						
Australia	0.000*	0.005*	0.688	0.668	0.238	0.004*
Singapore		0.428	0.001*	0.001*	0.009*	0.226
Hong Kong			0.029*	0.018*	0.101	0.790
Philippines				0.975	0.558	0.024*
Thailand					0.497	0.015*
Indonesia						0.106

* Significant at 5% confidence level

** Significant at 10% confidence level

Table M-3 : Energy

	Singapore	Hong Kong	Philippines	Thailand	Indonesia	Malaysia
EnPages						
Australia	0.390	0.198	0.508	0.033*	0.859	0.172
Singapore		0.423	0.147	0.026*	0.331	0.395
Hong Kong			0.034*	0.056**	0.101	0.999
Philippines				0.390	0.644	0.024*
Thailand					0.197	0.082**
Indonesia						
EnSent						
Australia	0.833	0.139	0.423	0.067**	0.394	0.117
Singapore		0.373	0.469	0.107	0.416	0.345
Hong Kong			0.029*	0.026*	0.142	0.999
Philippines				0.546	0.962	0.021*
Thailand					0.558	0.018*
Indonesia						0.119
EnWords						
Australia	0.802	0.134	0.393	0.035*	0.238	0.112
Singapore		0.384	0.751	0.190	0.501	0.356
Hong Kong			0.039*	0.030*	0.139	0.999
Philippines				0.465	0.806	0.029*
Thailand					0.613	0.021*
Indonesia						0.116
EnIndex						
Australia	0.882	0.251	0.746	0.051**	0.822	0.074**
Singapore		0.528	0.764	0.104	0.799	0.311
Hong Kong			0.273	0.048*	0.264	0.291
Philippines				0.399	0.918	0.101
Thailand					0.248	0.021*
Indonesia						0.089*

* Significant at 5% confidence level

** Significant at 10% confidence level

Table M-4 : Human Resources and Safety

	Singapore	Hong Kong	Philippines	Thailand	Indonesia	Malaysia
HRSPages						
Australia	0.857	0.257	0.584	0.333	0.311	0.136
Singapore		0.387	0.703	0.456	0.440	0.235
Hong Kong			0.723	0.950	0.999	0.714
Philippines				0.650	0.665	0.541*
Thailand					0.944	0.793
Indonesia						0.722
HRSSent						
Australia	0.373	0.085**	0.585	0.167	0.221	0.028*
Singapore		0.321	0.984	0.411	0.573	0.140
Hong Kong			0.219	0.945	0.607	0.502
Philippines				0.210	0.390	0.046*
Thailand					0.577	0.593
Indonesia						0.205
HRSWords						
Australia	0.279	0.107	0.887	0.224	0.328	0.049*
Singapore		0.572	0.559	0.692	0.948	0.390
Hong Kong			0.112	0.934	0.501	0.703
Philippines				0.153	0.293	0.038*
Thailand					0.592	0.666
Indonesia						0.265
HRSIndex						
Australia	0.138	0.192	0.982	0.449	0.369	0.199
Singapore		0.939	0.263	0.782	0.019*	0.922
Hong Kong			0.273	0.758	0.030*	0.867
Philippines				0.488	0.463	0.238
Thailand					0.125	0.826
Indonesia						0.018*

* Significant at 5% confidence level

** Significant at 10% confidence level

Table M-5 : Products and Customers

	Singapore	Hong Kong	Philippines	Thailand	Indonesia	Malaysia
PCPages						
Australia	0.121	0.651	0.000*	0.009*	0.385	0.372
Singapore		0.338	0.518	0.911	0.262	0.168
Hong Kong			0.004*	0.114	0.384	0.334
Philippines				0.421	0.000*	0.000*
Thailand					0.037*	0.011*
Indonesia						0.865
PCSent						
Australia	0.186	0.917	0.000*	0.104	0.410	0.615
Singapore		0.365	0.358	0.942	0.273	0.228
Hong Kong			0.005*	0.246	0.467	0.645
Philippines				0.421	0.000*	0.000*
Thailand					0.067*	0.114
Indonesia						0.791
PCWords						
Australia	0.377	0.626	0.000*	0.058**	0.451	0.734
Singapore		0.653	0.240	0.842	0.461	0.438
Hong Kong			0.006*	0.308	0.402	0.562
Philippines				0.153	0.000*	0.000*
Thailand					0.081**	0.123
Indonesia						0.784
PCIndex						
Australia	0.152	0.632	0.006*	0.984	0.598	0.381
Singapore		0.475	0.000*	0.292	0.544	0.626
Hong Kong			0.005*	0.724	0.943	0.770
Philippines				0.009*	0.002*	0.000*
Thailand					0.652	0.470
Indonesia						0.831

* Significant at 5% confidence level

** Significant at 10% confidence level

Table M-6 : Community

	Singapore	Hong Kong	Philippines	Thailand	Indonesia	Malaysia
ComPages						
Australia	0.029*	0.692	0.000*	0.000*	0.801	0.125
Singapore		0.158	0.068**	0.060**	0.142	0.452
Hong Kong			0.001*	0.015*	0.598	0.363
Philippines				0.847	0.001*	0.008*
Thailand					0.028*	0.029*
Indonesia						0.226
ComSent						
Australia	0.244	0.540	0.006*	0.002*	0.984	0.295
Singapore		0.212	0.285	0.113	0.448	0.907
Hong Kong			0.001*	0.005*	0.499	0.291
Philippines				0.695	0.023*	0.463
Thailand					0.033*	0.248
Indonesia						0.503
ComWords						
Australia	0.257	0.816	0.000*	0.000*	0.828	0.195
Singapore		0.350	0.244	0.114	0.532	0.941
Hong Kong			0.001*	0.005*	0.656	0.276
Philippines				0.773	0.012*	0.250
Thailand					0.027*	0.137
Indonesia						0.459
ComIndex						
Australia	0.456	0.977	0.014*	0.033*	0.331	0.659
Singapore		0.473	0.069**	0.137	0.734	0.796
Hong Kong			0.005*	0.027*	0.259	0.614
Philippines				0.733	0.152	0.034*
Thailand					0.298	0.087**
Indonesia						0.553

* Significant at 5% confidence level

** Significant at 10% confidence level

APPENDIX N MODELS TESTING ENVIRONMENTAL DISCLOSURES
 Proceeding is a series of computer print-outs covering multiple regression models tested incorporating just the amount of environmental disclosures made by firms from the seven study nations.

APPENDIX N-1

ENVIRONMENTAL ISSUES – PAGES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.250 ^a	.062	.032	.3113

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.215	11	.201	2.077	.021 ^a
	Residual	33.341	344	9.692E-02		
	Total	35.556	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

b. Dependent Variable: ENVPAGES

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.356	.370		-.962	.337
	LOGASSET	1.599E-02	.010	.094	1.642	.102
	ROA	-5.19E-03	.033	-.009	-.158	.875
	IT1	.116	.055	.137	2.112	.035
	IT2	7.204E-02	.045	.113	1.611	.108
	IT3	-6.69E-03	.054	-.008	-.123	.902
	UNCAV	1.203E-03	.002	.115	.514	.608
	MAS	-3.55E-04	.001	-.024	-.263	.793
	PCS	-1.67E-03	.019	-.016	-.086	.932
	LEGAL	7.524E-02	.040	.183	1.888	.060
	LED	1.422E-06	.000	.039	.332	.740
	EMTURN	-.261	.390	-.045	-.669	.504

a. Dependent Variable: ENVPAGES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.367 ^a	.134	.107	5.1721

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1427.996	11	129.818	4.853	.000 ^a
	Residual	9202.251	344	26.751		
	Total	0630.247	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, M IT2, LED, UNCAV

b. Dependent Variable: ENVSENT

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-13.122	6.153		-2.132	.034
	LOGASSET	.558	.162	.190	3.447	.001
	ROA	.249	.546	.024	.456	.649
	IT1	3.792	.915	.258	4.145	.000
	IT2	1.038	.743	.094	1.397	.163
	IT3	-.327	.903	-.023	-.362	.718
	UNCAV	.006E-02	.039	.111	.515	.607
	MAS	-1.35E-02	.022	-.052	-.600	.549
	PCS	-.132	.324	-.073	-.407	.685
	LEGAL	1.354	.662	.190	2.046	.042
	LED	.442E-05	.000	.086	.765	.445
	EMTURN	2.905	6.480	.029	.448	.654

a. Dependent Variable: ENVSENT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.336 ^a	.113	.085	120.3549

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-256.538	143.191		-1.792	.074
	LOGASSET	11.204	3.764	.166	2.977	.003
	ROA	4.560	12.712	.019	.359	.720
	IT1	84.038	21.292	.249	3.947	.000
	IT2	24.680	17.286	.097	1.428	.154
	IT3	-.346	21.015	-.001	-.016	.987
	UNCAV	.286	.906	.069	.316	.752
	MAS	-.276	.522	-.047	-.529	.597
	PCS	-3.771	7.531	-.092	-.501	.617
	LEGAL	30.586	15.402	.187	1.986	.048
	LED	1.153E-03	.002	.079	.697	.486
	EMTURN	58.689	150.780	.025	.389	.697

a. Dependent Variable: ENWORDS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.430 ^a	.185	.159	.1595

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, IT2, LED, UNCAV, MAS

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.989	11	.181	7.111	.000 ^a
	Residual	8.747	344	.543E-02		
	Total	10.735	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, IT2, LED, UNCAV, MAS

b. Dependent Variable: ENVDI

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.517E-02	.540		.028	.978
	LOGASSET	2.502E-02	.005	.268	5.018	.000
	ROA	5.530E-03	.017	.017	.328	.743
	IT1	.113	.028	.243	4.024	.000
	IT2	2.455E-02	.023	.070	1.072	.284
	IT3	-4.85E-02	.028	-.109	-1.741	.083
	UNCAV	1.932E-03	.002	.197	.821	.412
	MAS	-5.03E-03	.006	-.235	-.774	.439
	PCS	-1.04E-02	.008	-.183	-1.356	.176
	LEGAL	-2.49E-02	.066	-.110	-.377	.706
	LED	2.695E-02	.044	.075	.612	.541
	EMTURN	-.593	.693	-.184	-.856	.393

a. Dependent Variable: ENVDI

Proceeding is a series of computer print-outs covering multiple regression models tested incorporating just the amount of energy disclosures made by firms in the seven study nations.

APPENDIX O-1

ENERGY ISSUES – PAGES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.230 ^a	.053	.023	3.902E-02

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.929E-02	11	.662E-03	1.748	.062 ^a
	Residual	.524	344	.523E-03		
	Total	.553	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, IT2, LED, UNCAV

b. Dependent Variable: ENEPAGES

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.530E-02	.046		.760	.448
	LOGASSET	-2.56E-04	.001	-.012	-.209	.834
	ROA	-5.58E-04	.004	-.007	-.135	.892
	IT1	-6.49E-04	.007	-.006	-.094	.925
	IT2	3.729E-03	.006	.047	.665	.506
	IT3	-2.72E-03	.007	-.027	-.399	.690
	UNCAV	-4.36E-04	.000	-.334	-1.484	.139
	MAS	-9.48E-05	.000	-.051	-.560	.576
	PCS	-4.72E-03	.002	-.366	-1.935	.054
	LEGAL	7.380E-03	.005	.144	1.478	.140
	LED	1.434E-07	.000	.031	.267	.789
	EMTURN	5.379E-02	.049	.074	1.100	.272

a. Dependent Variable: ENEPAGES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.178 ^a	.032	.001	.7593

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.486	11	.590	1.023	.425 ^a
	Residual	198.309	344	.576		
	Total	204.795	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, M IT2, LED, UNCAV

b. Dependent Variable: ENESENT

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.737	.903		.816	.415
	LOGASSET	-1.31E-02	.024	-.032	-.552	.582
	ROA	-2.20E-02	.080	-.015	-.274	.784
	IT1	.111	.134	.054	.824	.411
	IT2	.289E-02	.109	.034	.485	.628
	IT3	.491E-02	.133	.033	.490	.625
	UNCAV	-5.63E-03	.006	-.224	-.985	.325
	MAS	-3.17E-03	.003	-.089	-.961	.337
	PCS	-5.03E-02	.048	-.202	-1.058	.291
	LEGAL	.170	.097	.172	1.747	.082
	LED	.224E-06	.000	.094	.788	.431
	EMTURN	-.220	.951	-.016	-.231	.818

a. Dependent Variable: ENESENT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.173 ^a	.030	-.001	20.1839

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4318.467	11	392.588	.964	.479 ^a
	Residual	140141.6	344	407.388		
	Total	144460.0	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MA IT2, LED, UNCAV

b. Dependent Variable: ENEWORDS

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15.997	24.014		.666	.506
	LOGASSET	-.371	.631	-.034	-.587	.558
	ROA	-.618	2.132	-.016	-.290	.772
	IT1	3.370	3.571	.062	.944	.346
	IT2	1.266	2.899	.031	.437	.663
	IT3	2.515	3.524	.049	.714	.476
	UNCAV	-.138	.152	-.206	-.906	.366
	MAS	-.930E-02	.088	-.098	-1.062	.289
	PCS	-1.011	1.263	-.153	-.801	.424
	LEGAL	4.802	2.583	.183	1.859	.064
	LED	.666E-04	.000	.114	.961	.337
	EMTURN	-5.127	25.286	-.014	-.203	.839

a. Dependent Variable: ENEWORDS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.197 ^a	.039	.008	4.029E-02

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, IT2, LED, UNCAV, MAS

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.261E-02	11	.055E-03	1.266	.243 ^a
	Residual	.558	344	.623E-03		
	Total	.581	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, IT LED, UNCAV, MAS

b. Dependent Variable: ENEDI

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-5.40E-02	.136		-.396	.692
	LOGASSET	.699E-03	.001	.078	1.348	.179
	ROA	-2.62E-05	.004	.000	-.006	.995
	IT1	-1.80E-03	.007	-.017	-.252	.801
	IT2	.843E-03	.006	.059	.837	.403
	IT3	.963E-03	.007	.019	.279	.780
	UNCAV	-4.95E-04	.001	-.217	-.833	.406
	MAS	.198E-04	.002	.064	.195	.846
	PCS	-3.11E-03	.002	-.235	-1.605	.109
	LEGAL	.606E-02	.017	.305	.964	.336
	LED	-4.99E-03	.011	-.060	-.449	.654
	EMTURN	.101	.175	.135	.578	.564

a. Dependent Variable: ENEDI

APPENDIX P MODELS TESTING HUMAN RESOURCES AND SAFETY DISCLOSURES

Proceeding is a series of computer print-outs covering multiple regression models tested incorporating just the amount of human resources and safety disclosures made by firms in the seven study nations.

APPENDIX P-1 HUMAN RESOURCES AND SAFETY ISSUES – PAGES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.310 ^a	.096	.067	.4115

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.170	11	.561	3.313	.000 ^a
	Residual	58.238	344	.169		
	Total	64.408	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, M IT2, LED, UNCAV

b. Dependent Variable: HRMPAGES

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.015	.490		-2.074	.039
	LOGASSET	.871E-02	.013	.300	5.340	.000
	ROA	.007E-02	.043	.037	.692	.490
	IT1	.850E-02	.073	.060	.941	.347
	IT2	-4.74E-02	.059	-.055	-.803	.423
	IT3	-.119	.072	-.110	-1.660	.098
	UNCAV	-9.88E-04	.003	-.070	-.319	.750
	MAS	-2.81E-03	.002	-.141	-1.573	.117
	PCS	-4.54E-03	.026	-.033	-.176	.860
	LEGAL	.911E-02	.053	.107	1.123	.262
	LED	.022E-05	.000	.207	1.807	.072
	EMTURN	-.538	.515	-.068	-1.044	.297

a. Dependent Variable: HRMPAGES

APPENDIX P-2 HUMAN RESOURCES AND SAFETY ISSUES – SENTENCES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.365 ^a	.133	.106	8.7141

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4016.458	11	365.133	4.809	.000 ^a
	Residual	6121.528	344	75.935		
	Total	0137.986	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, M IT2, LED, UNCAV

b. Dependent Variable: HRMSENT

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-24.509	10.367		-2.364	.019
	LOGASSET	1.631	.273	.329	5.985	.000
	ROA	.823	.920	.047	.895	.372
	IT1	3.672	1.542	.148	2.382	.018
	IT2	.556E-02	1.252	.001	.012	.990
	IT3	-1.581	1.522	-.067	-1.039	.299
	UNCAV	-1.09E-02	.066	-.036	-.167	.868
	MAS	-6.70E-02	.038	-.155	-1.772	.077
	PCS	-.137	.545	-.046	-.252	.801
	LEGAL	1.468	1.115	.122	1.317	.189
	LED	.435E-04	.000	.228	2.032	.043
	EMTURN	-17.193	10.917	-.101	-1.575	.116

a. Dependent Variable: HRMSENT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.361 ^a	.130	.103	194.6993

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1956106	11	177827.8	4.691	.000 ^a
	Residual	1.3E+07	344	7907.835		
	Total	1.5E+07	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, IT2, LED, UNCAV

b. Dependent Variable: HRMWORDS

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-562.288	231.642		-2.427	.016
	LOGASSET	36.943	6.089	.334	6.067	.000
	ROA	15.410	20.565	.039	.749	.454
	IT1	66.380	34.444	.120	1.927	.055
	IT2	-11.173	27.964	-.027	-.400	.690
	IT3	-26.691	33.997	-.051	-.785	.433
	UNCAV	.630E-02	1.466	.004	.018	.986
	MAS	-1.043	.845	-.108	-1.234	.218
	PCS	-2.816	12.183	-.042	-.231	.817
	LEGAL	27.808	24.917	.104	1.116	.265
	LED	.458E-03	.003	.145	1.292	.197
	EMTURN	-337.995	243.919	-.089	-1.386	.167

a. Dependent Variable: HRMWORDS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.399 ^a	.159	.132	.1123

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, IT2, LED, UNCAV, MAS

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.822	11	.471E-02	5.922	.000 ^a
	Residual	4.339	344	.261E-02		
	Total	5.161	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, LED, UNCAV, MAS

b. Dependent Variable: HRMDI

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.384	.380		1.009	.314
	LOGASSET	.480E-02	.004	.383	7.060	.000
	ROA	.116E-02	.012	.048	.941	.348
	IT1	-1.82E-02	.020	-.056	-.915	.361
	IT2	-2.66E-02	.016	-.109	-1.651	.100
	IT3	-5.20E-02	.020	-.169	-2.649	.008
	UNCAV	.344E-03	.002	.493	2.016	.045
	MAS	-8.76E-03	.005	-.590	-1.916	.056
	PCS	.696E-03	.005	.043	.314	.753
	LEGAL	-7.50E-02	.046	-.478	-1.615	.107
	LED	.423E-02	.031	.219	1.749	.081
	EMTURN	-1.113	.488	-.499	-2.281	.023

a. Dependent Variable: HRMDI

APPENDIX Q MODELS TESTING PRODUCTS AND CUSTOMERS DISCLOSURES

Proceeding is a series of computer print-outs covering multiple regression models tested incorporating just the amount of human resources and safety disclosures made by firms in the seven study nations.

APPENDIX Q-1

PRODUCTS AND CUSTOMERS ISSUES – PAGES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.313 ^a	.098	.069	.3941

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.781	11	.526	3.385	.000 ^a
	Residual	53.415	344	.155		
	Total	59.196	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, M IT2, LED, UNCAV

b. Dependent Variable: PRCPAGES

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.323	.469		.690	.491
	LOGASSET	.059E-02	.012	.231	4.105	.000
	ROA	.737E-03	.042	.005	.090	.929
	IT1	-.134	.070	-.122	-1.924	.055
	IT2	-.103	.057	-.125	-1.816	.070
	IT3	-.133	.069	-.128	-1.940	.053
	UNCAV	-9.57E-03	.003	-.709	-3.225	.001
	MAS	-3.69E-03	.002	-.193	-2.158	.032
	PCS	-7.22E-02	.025	-.540	-2.926	.004
	LEGAL	.325E-02	.050	.025	.263	.793
	LED	.561E-06	.000	.181	1.580	.115
	EMTURN	-.818	.494	-.108	-1.657	.098

a. Dependent Variable: PRCPAGES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.331 ^a	.109	.081	6.4169

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1741.461	11	158.315	3.845	.000 ^a
	Residual	4164.727	344	41.177		
	Total	5906.188	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MA IT2, LED, UNCAV

b. Dependent Variable: PRCSSENT

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.317	7.634		.565	.572
	LOGASSET	.950	.201	.264	4.733	.000
	ROA	.182E-02	.678	.002	.032	.974
	IT1	-2.407	1.135	-.134	-2.121	.035
	IT2	-1.672	.922	-.124	-1.815	.070
	IT3	-2.670	1.120	-.156	-2.383	.018
	UNCAV	-.146	.048	-.660	-3.024	.003
	MAS	-5.48E-02	.028	-.174	-1.967	.050
	PCS	-1.137	.402	-.519	-2.833	.005
	LEGAL	-8.47E-02	.821	-.010	-.103	.918
	LED	.108E-04	.000	.143	1.256	.210
	EMTURN	-15.596	8.039	-.126	-1.940	.053

a. Dependent Variable: PRCSSENT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.306 ^a	.094	.065	172.3271

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1054234	11	5839.490	3.227	.000 ^a
	Residual	1.0E+07	344	9696.614		
	Total	1.1E+07	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, M IT2, LED, UNCAV

b. Dependent Variable: PRCWORDS

Coefficients^c

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	115.999	205.025		.566	.572
	LOGASSET	22.418	5.389	.234	4.160	.000
	ROA	.266	18.202	.001	.015	.988
	IT1	-61.984	30.486	-.130	-2.033	.043
	IT2	-49.637	24.750	-.138	-2.005	.046
	IT3	-65.437	30.090	-.144	-2.175	.030
	UNCAV	-3.417	1.297	-.580	-2.634	.009
	MAS	-.906	.748	-.108	-1.211	.227
	PCS	-28.700	10.783	-.492	-2.662	.008
	LEGAL	-6.839	22.054	-.030	-.310	.757
	LED	.344E-03	.002	.065	.567	.571
	EMTURN	-335.086	215.891	-.102	-1.552	.122

a. Dependent Variable: PRCWORDS

APPENDIX Q-4 PRODUCTS AND CUSTOMERS ISSUES – DISCLOSURE INDEX

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.363 ^a	.132	.104	.1755

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, IT2, LED, UNCAV, MAS

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.610	11	.146	4.753	.000 ^a
	Residual	10.593	344	.079E-02		
	Total	12.203	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, IT LED, UNCAV, MAS

b. Dependent Variable: PRCDI

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.061	.594		-1.785	.075
	LOGASSET	.838E-02	.005	.285	5.172	.000
	ROA	-2.69E-03	.019	-.008	-.145	.885
	IT1	-4.41E-02	.031	-.089	-1.421	.156
	IT2	.777E-02	.025	.074	1.102	.271
	IT3	-5.43E-02	.031	-.115	-1.773	.077
	UNCAV	-4.85E-03	.003	-.465	-1.872	.062
	MAS	.167E-02	.007	.511	1.633	.103
	PCS	-1.88E-02	.008	-.310	-2.233	.026
	LEGAL	.124	.073	.513	1.705	.089
	LED	-.109	.048	-.287	-2.256	.025
	EMTURN	.842	.762	.246	1.104	.270

a. Dependent Variable: PRCDI

Proceeding is a series of computer print-outs covering multiple regression models tested incorporating just the amount of community disclosures made by firms from the seven study nations.

APPENDIX R-1

COMMUNITY ISSUES – PAGES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.448 ^a	.201	.175	.4247

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.586	11	1.417	7.854	.000 ^a
	Residual	62.056	344	.180		
	Total	77.641	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, IT2, LED, UNCAV

b. Dependent Variable: COMPAGES

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-7.07E-02	.505		-.140	.889
	LOGASSET	.592E-02	.013	.342	6.469	.000
	ROA	.978E-02	.045	.067	1.333	.184
	IT1	-5.88E-02	.075	-.047	-.783	.434
	IT2	-9.84E-02	.061	-.104	-1.613	.108
	IT3	-7.45E-02	.074	-.062	-1.005	.316
	UNCAV	-1.32E-02	.003	-.855	-4.133	.000
	MAS	-3.66E-03	.002	-.167	-1.988	.048
	PCS	-.111	.027	-.728	-4.192	.000
	LEGAL	.273E-02	.054	.021	.234	.815
	LED	.791E-06	.000	.033	.307	.759
	EMTURN	.690E-02	.532	.004	.069	.945

a. Dependent Variable: COMPAGES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.376 ^a	.141	.114	9.9533

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5613.012	11	510.274	5.151	.000 ^a
	Residual	4079.460	344	99.068		
	Total	9692.472	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MA IT2, LED, UNCAV

b. Dependent Variable: COMSENT

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-14.158	11.842		-1.196	.233
	LOGASSET	1.755	.311	.309	5.637	.000
	ROA	1.098	1.051	.054	1.045	.297
	IT1	-.223	1.761	-.008	-.126	.899
	IT2	-1.525	1.430	-.071	-1.067	.287
	IT3	.219	1.738	.008	.126	.900
	UNCAV	-.153	.075	-.438	-2.041	.042
	MAS	-6.04E-02	.043	-.122	-1.398	.163
	PCS	-1.277	.623	-.369	-2.051	.041
	LEGAL	.218	1.274	.016	.171	.864
	LED	-3.43E-05	.000	-.028	-.251	.802
	EMTURN	6.472	12.469	.033	.519	.604

a. Dependent Variable: COMSENT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.385 ^a	.148	.121	247.7214

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, MAS, IT2, LED, UNCAV

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3668384	11	333489.4	5.434	.000 ^a
	Residual	2.1E+07	344	1365.905		
	Total	2.5E+07	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, IT2, LED, UNCAV

b. Dependent Variable: COMWORDS

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-278.290	294.725		-.944	.346
	LOGASSET	43.328	7.747	.305	5.593	.000
	ROA	22.363	26.165	.044	.855	.393
	IT1	-18.284	43.824	-.026	-.417	.677
	IT2	-50.083	35.579	-.094	-1.408	.160
	IT3	-5.740	43.255	-.009	-.133	.894
	UNCAV	-4.382	1.865	-.502	-2.350	.019
	MAS	-1.412	1.075	-.114	-1.313	.190
	PCS	-37.193	15.500	-.430	-2.400	.017
	LEGAL	5.393	31.702	.016	.170	.865
	LED	-1.05E-03	.003	-.034	-.309	.758
	EMTURN	146.879	310.345	.030	.473	.636

a. Dependent Variable: COMWORDS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.498 ^a	.248	.224	.1611

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, IT2, LED, UNCAV, MAS

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.948	11	.268	10.322	.000 ^a
	Residual	8.930	344	.596E-02		
	Total	11.878	355			

a. Predictors: (Constant), EMTURN, IT3, ROA, PCS, IT1, LEGAL, LOGASSET, LED, UNCAV, MAS

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.863	.546		-1.582	.115
	LOGASSET	.328E-02	.005	.440	8.589	.000
	ROA	.187E-02	.017	.176	3.635	.000
	IT1	-7.85E-03	.029	-.016	-.276	.783
	IT2	-3.58E-02	.023	-.097	-1.547	.123
	IT3	-1.45E-02	.028	-.031	-.515	.607
	UNCAV	-3.93E-03	.002	-.381	-1.650	.100
	MAS	.472E-03	.007	.154	.529	.597
	PCS	-1.82E-02	.008	-.304	-2.350	.019
	LEGAL	.852E-02	.067	.372	1.329	.185
	LED	-8.39E-02	.044	-.223	-1.887	.060
	EMTURN	.505	.700	.149	.721	.471

a. Dependent Variable: COMDI

As indicated in Chapter 11, the original model as depicted in Figure 11.1 was found to be inappropriate as it failed to meet a number of goodness of fit tests and critical ratios and standardized regression weights were above acceptable levels. Figure S-1 depicts a modified model of Figure 11.1 that eliminated some of the ineffective paths. Table S-1 summarizes the goodness of fit results for each of the models tested based on the path diagram shown in Figure S-1. Findings in Table S-1 indicate that the absolute and parsimonious goodness of fit for the models tested were above the recommended limits.

Figure S -1: Simplified Model of Figure 11.1

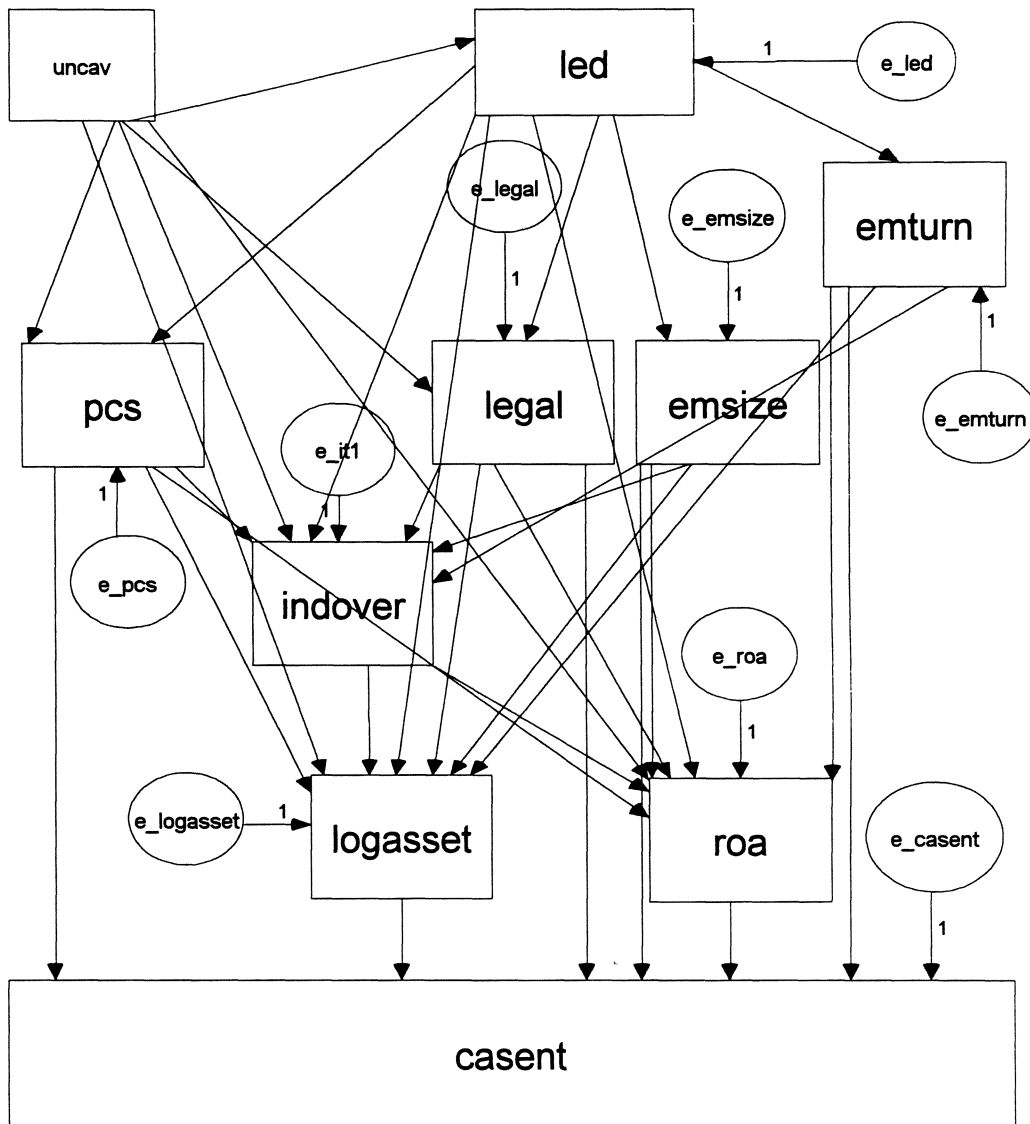


Table S-1 : Goodness of Fits Results for Models Based on Figure S-1

Cultural Value	Measurement Method Dependent Variable	Chi-square	Degrees of Freedom	Probability Level ^a	GFI ^b	AGFI ^c	Chi-square/df Ratio ^d
Uncertainty Avoidance	CAPages	1106.169	12	0.000	0.805	0.107	92.181
Uncertainty Avoidance	CASent	1105.769	12	0.000	0.805	0.106	92.147
Uncertainty Avoidance	CAWords	1103.710	12	0.000	0.805	0.109	91.976
Uncertainty Avoidance	VESADInd	1205.481	12	0.000	0.786	0.018	100.457
Individualism	CAPages	1829.690	12	0.000	0.780	-0.010	152.474
Individualism	CASent	1829.290	12	0.000	0.779	-0.170	152.441
Individualism	CAWords	1827.231	12	0.000	0.779	-0.011	152.269
Individualism	VESADInd	1892.152	12	0.000	0.761	-0.095	157.679
Power Distance	CAPages	3548.124	12	0.000	0.739	-0.196	295.644
Power Distance	CASent	3547.724	12	0.000	0.739	-0.198	295.644
Power Distance	CAWords	3545.665	12	0.000	0.739	-0.198	295.472
Power Distance	VESADInd	1863.549	12	0.000	0.742	-0.182	155.296
Masculinity	CAPages	1686.084	12	0.000	0.701	-0.369	140.507
Masculinity	CASent	1685.685	12	0.000	0.701	-0.370	140.474
Masculinity	CAWords	1683.626	12	0.000	0.701	-0.369	140.302
Masculinity	VESADInd	1800.421	12	0.000	0.688	-0.428	150.035
Long-term Orientation	CAPages	1395.379	12	0.000	0.776	-0.029	116.282
Long-term Orientation	CASent	1394.980	12	0.000	0.775	-0.030	116.248
Long-term Orientation	CAWords	1392.921	12	0.000	0.776	-0.029	116.077
Long-term Orientation	VESADInd	1393.008	12	0.000	0.773	-0.041	116.084

* All values above recommended significant levels are shown in bold. Following is a legend of values considered to be minimal level for acceptance

a :- Probability Level = recommended minimal level of 0.05;

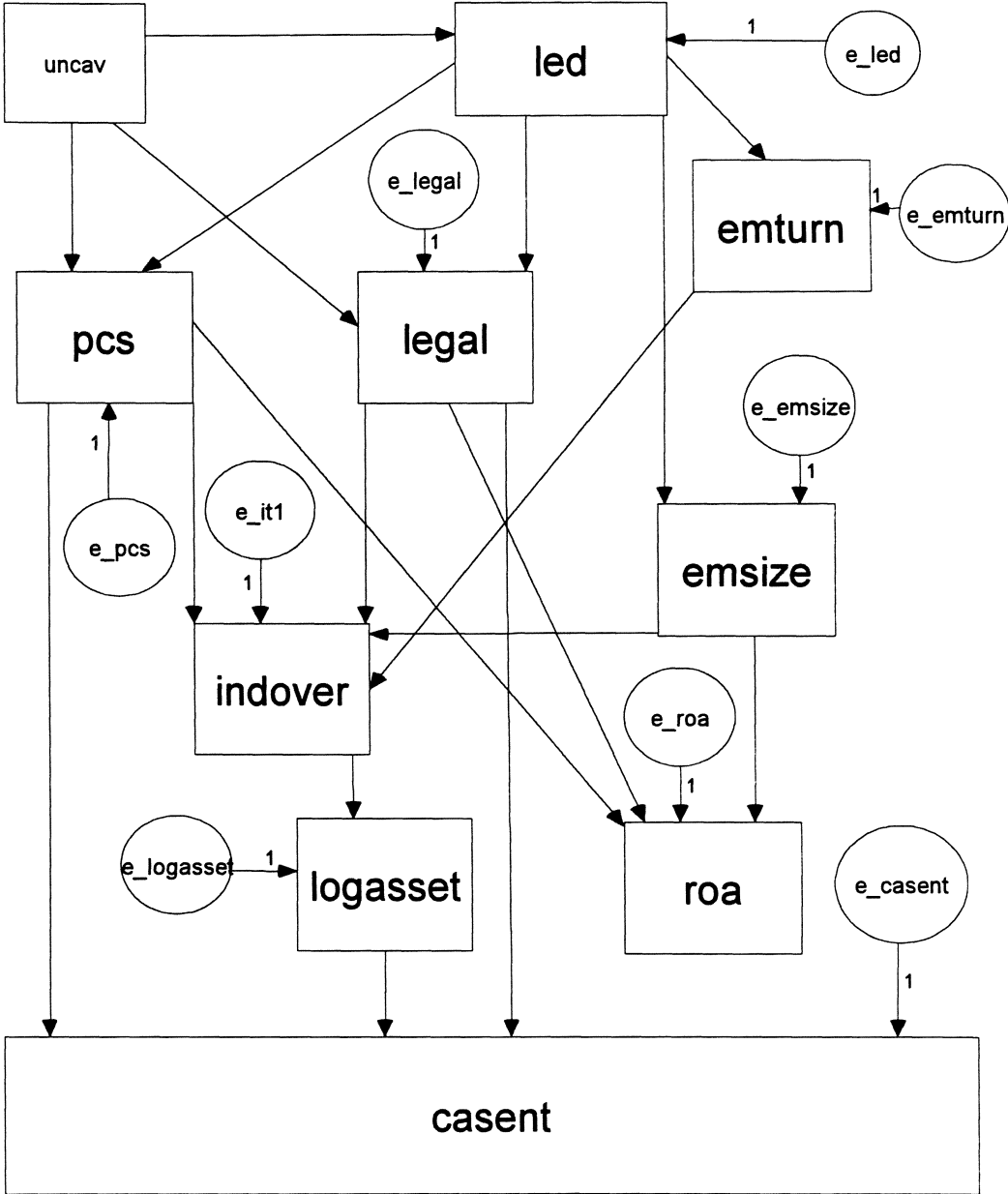
b :- GFI = recommended acceptance above 0.90;

c :- AGFI = recommended minimal level of 0.90; and

d :- Chi-square/df Ratio = upper bound of 2.00 and lower limit of 1.00.

Additional modifications were made to Figure S-1 to eliminate all paths that had critical ratios and standardized regression weights deemed not to be acceptable. The revamped path diagram is illustrated in Figure S-2.

Figure S-2 : Simplified Model After Elimination of Nonsignificant Paths



Upon revision of Figure S-1, more path analysis was conducted on Figure S-2. Scrutiny of the results as summarized in Table S-2 were again disappointing with all models not have acceptable absolute and parsimonious goodness of fit.

Table S-2 : Goodness of Fits Results for Models Based on Figure S-2

Cultural Value	Measurement Method Dependent Variable	Chi-square	Degrees of Freedom	Probability Level ^a	GFI ^b	AGFI ^c	Chi-square/df Ratio ^d
Uncertainty Avoidance	CAPages	1116.481	27	0.000	0.802	0.597	41.351
Uncertainty Avoidance	CASent	1116.481	27	0.000	0.802	0.596	41.351
Uncertainty Avoidance	CAWords	1114.085	27	0.000	0.802	0.597	41.262
Uncertainty Avoidance	VESADInd	1220.123	27	0.000	0.781	0.554	45.189
Individualism	CAPages	1840.002	27	0.000	0.776	0.543	68.148
Individualism	CASent	1839.785	27	0.000	0.776	0.543	68.140
Individualism	CAWords	1837.606	27	0.000	0.776	0.543	68.059
Individualism	VESADInd	1906.794	27	0.000	0.757	0.504	70.622
Power Distance	CAPages	3558.436	27	0.000	0.736	0.462	131.794
Power Distance	CASent	3558.219	27	0.000	0.735	0.461	131.786
Power Distance	CAWords	3556.040	27	0.000	0.735	0.461	131.705
Power Distance	VESADInd	1878.190	27	0.000	0.738	0.466	69.566
Masculinity	CAPages	1696.397	27	0.000	0.699	0.387	62.830
Masculinity	CASent	1696.180	27	0.000	0.699	0.386	62.821
Masculinity	CAWords	1694.001	27	0.000	0.699	0.387	62.741
Masculinity	VESADInd	1815.063	27	0.000	0.685	0.358	67.225
Long-term Orientation	CAPages	1405.691	27	0.000	0.772	0.537	52.063
Long-term Orientation	CASent	1405.474	27	0.000	0.772	0.535	52.055
Long-term Orientation	CAWords	1403.295	27	0.000	0.772	0.536	51.974
Long-term Orientation	VESADInd	1407.649	27	0.000	0.768	0.528	52.135

* All values above recommended significant levels are shown in bold. Following is a legend of values considered to be minimal level for acceptance

a :- Probability Level = recommended minimal level of 0.05;

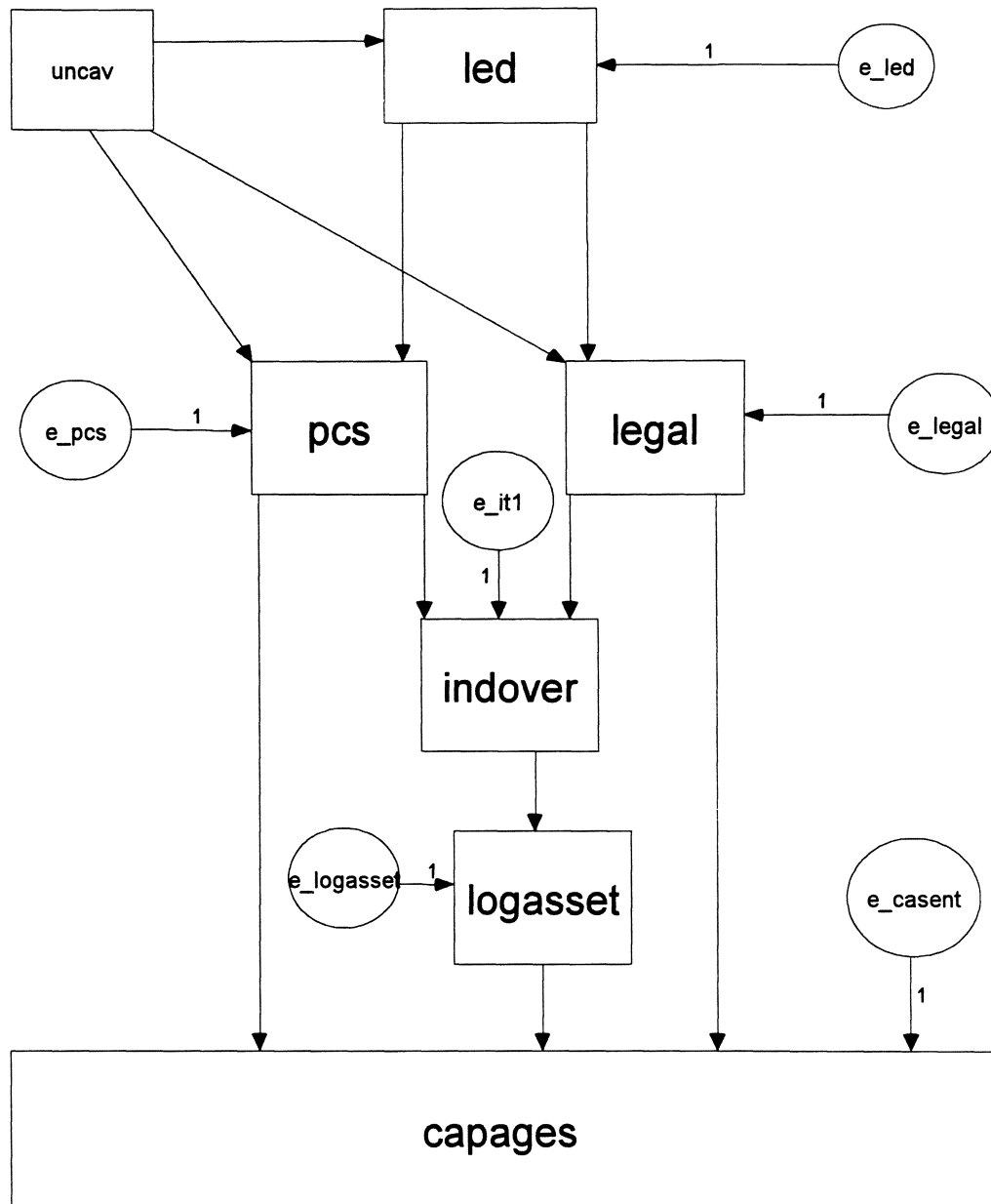
b :- GFI = recommended acceptance above 0.90;

c :- AGFI = recommended minimal level of 0.90; and

d :- Chi-square/df Ratio = upper bound of 2.00 and lower limit of 1.00.

A review of findings based on Figure S-2 lead to additional modifications that entailed the removal of variables that were deemed to be ineffective in the model. The factors removed were economic performance and size and turnover of the equity market. A modified path diagram indicating the elimination of these factors are shown in Figure S-3.

Figure S-3 : Simplified Model After Removal of Ineffective Variables



Results summarized in Table S-3 indicate improvement in the model based on Figure S-3 with some acceptance based on absolute goodness of fit and overall development in parsimonious goodness of fit. It was from the results of Table S-3 that Figure S-3 was further adjusted resulting in the production of Figures 11.2 and 11.3.

Table S-3: Goodness of Fits Results for Models Based on Figure S-3

Cultural Value	Measurement Method Dependent Variable	Chi-square	Degrees of Freedom	Probability Level ^a	GFI ^b	AGFI ^c	Chi-square/df Ratio ^d
Uncertainty Avoidance	CAPages	82.748	10	0.000	0.944	0.844	8.275
Uncertainty Avoidance	CASent	82.056	10	0.000	0.944	0.844	8.206
Uncertainty Avoidance	CAWords	80.608	10	0.000	0.945	0.846	8.061
Uncertainty Avoidance	VESADInd	110.373	10	0.000	0.927	0.797	11.037
Individualism	CAPages	91.295	10	0.000	0.938	0.827	9.130
Individualism	CASent	90.540	10	0.000	0.938	0.828	9.054
Individualism	CAWords	91.102	10	0.000	0.938	0.828	9.110
Individualism	VESADInd	100.960	10	0.000	0.932	0.809	10.096
Power Distance	CAPages	372.728	10	0.000	0.842	0.559	37.273
Power Distance	CASent	373.313	10	0.000	0.842	0.557	37.331
Power Distance	CAWords	373.210	10	0.000	0.842	0.557	37.321
Power Distance	VESADInd	315.902	10	0.000	0.853	0.588	31.590
Masculinity	CAPages	44.327	10	0.000	0.967	0.909	4.433
Masculinity	CASent	45.249	10	0.000	0.967	0.907	4.525
Masculinity	CAWords	44.394	10	0.000	0.967	0.909	4.439
Masculinity	VESADInd	59.965	10	0.000	0.956	0.878	5.997
Long-term Orientation	CAPages	32.045	10	0.000	0.975	0.931	3.205
Long-term Orientation	CASent	33.718	10	0.000	0.974	0.927	3.372
Long-term Orientation	CAWords	31.869	10	0.000	0.975	0.931	3.187
Long-term Orientation	VESADInd	30.163	10	0.000	0.976	0.934	3.016

* All values above recommended significant levels are shown in bold. Following is a legend of values considered to be minimal level for acceptance

a :- Probability Level = recommended minimal level of 0.05;

b :- GFI = recommended acceptance above 0.90;

c :- AGFI = recommended minimal level of 0.90; and

d :- Chi-square/df Ratio = upper bound of 2.00 and lower limit of 1.00.

This appendix also provides a set of five examples of tests conducted on models based on Figure S-3. Each diagram shows the standardized regression weights for each path.

Figure S-4 : Standardized Regression Weights - Uncertainty Avoidance

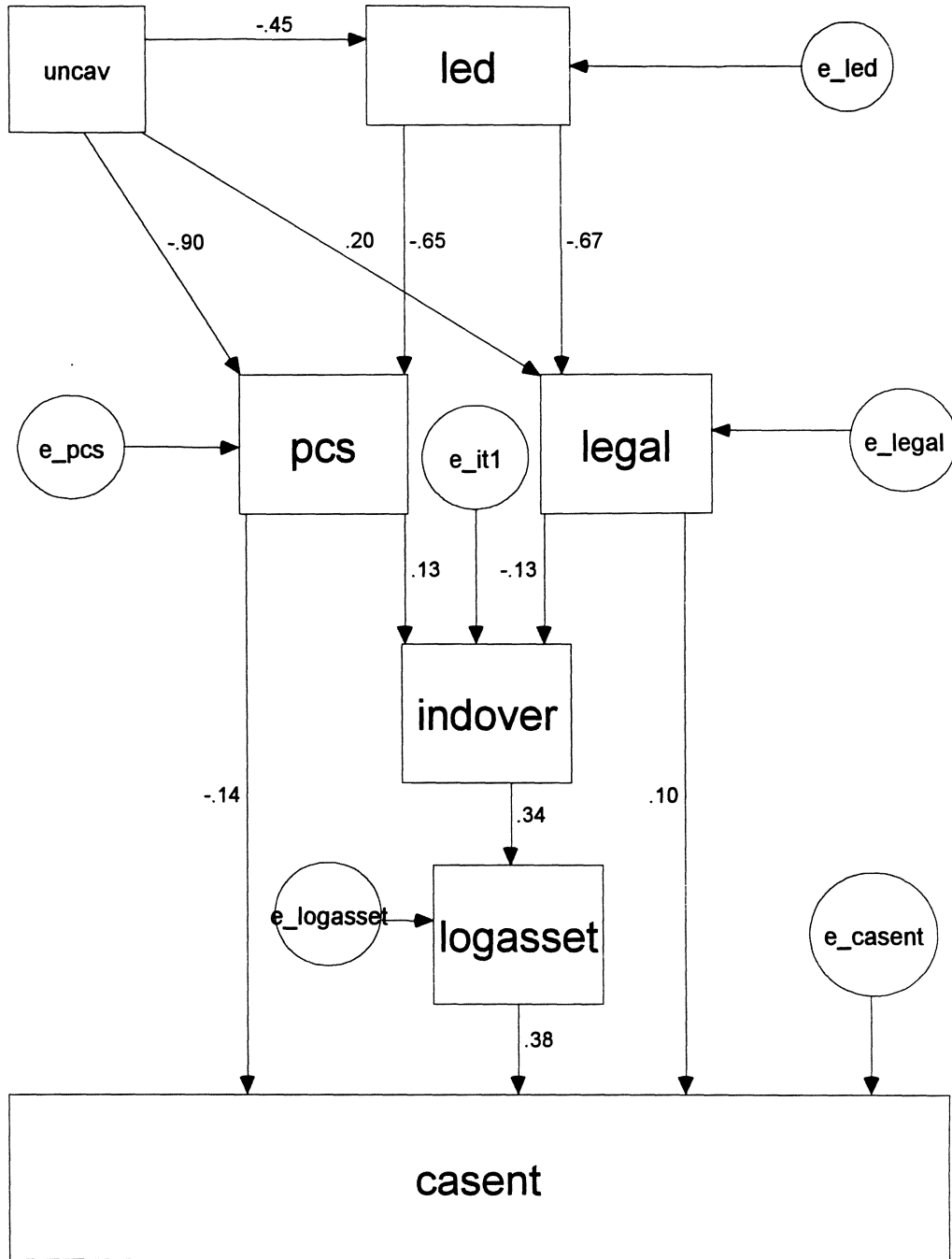


Figure S-5 : Standardized Regression Weights - Individualism

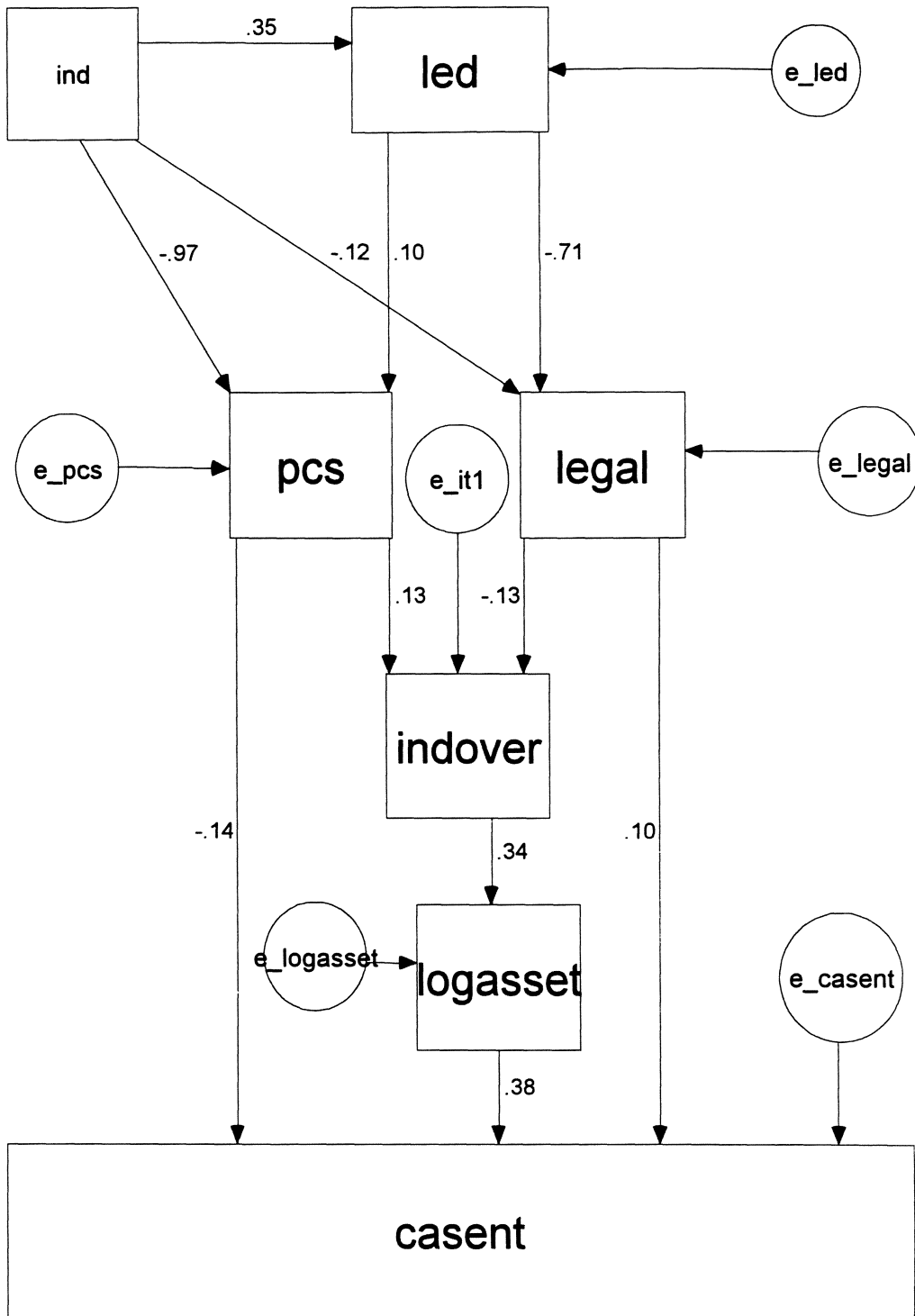


Figure S-6 : Standardized Regression Weights - Power Distance

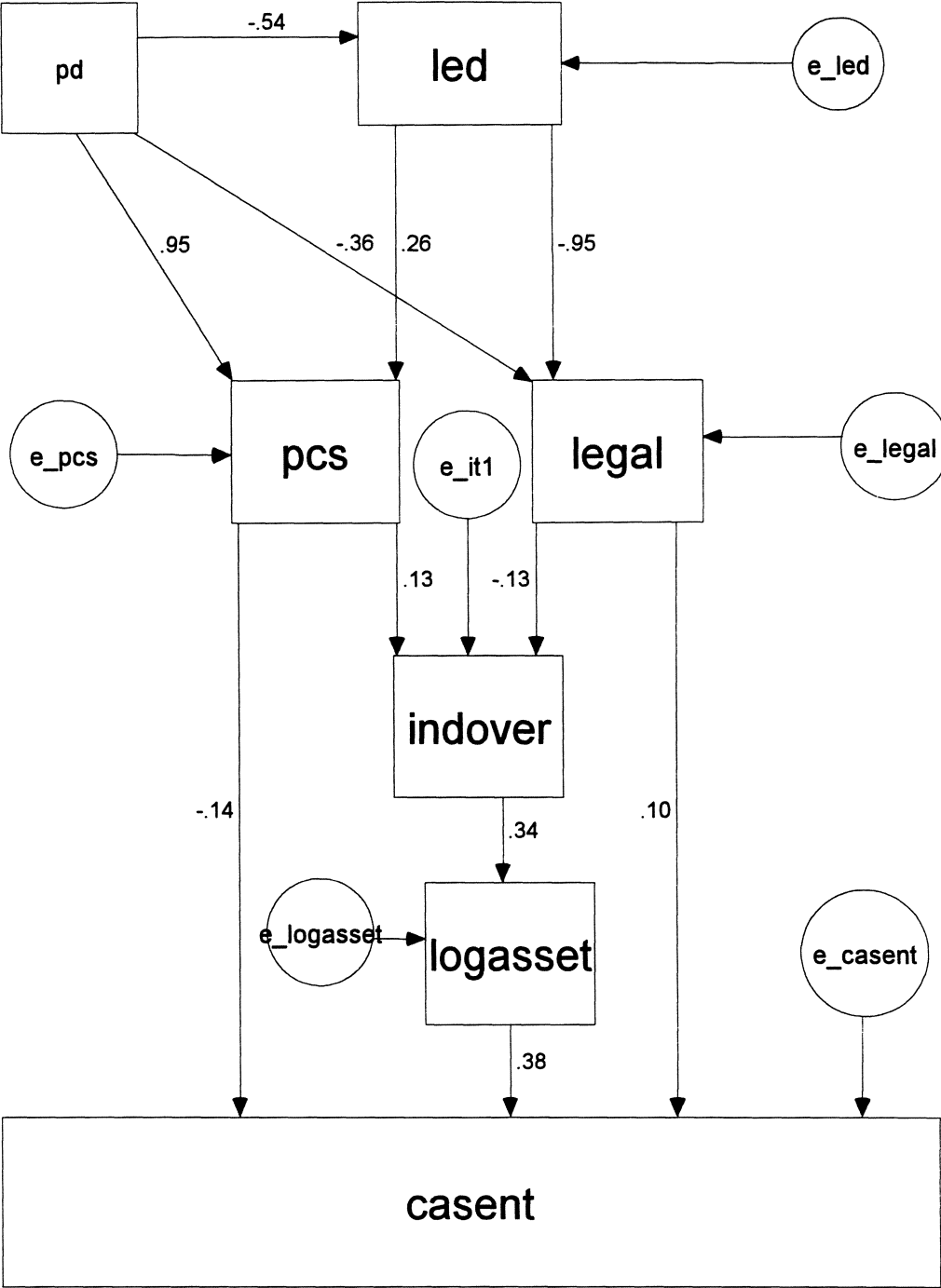


Figure S-7 : Standardized Regression Weights - Masculinity

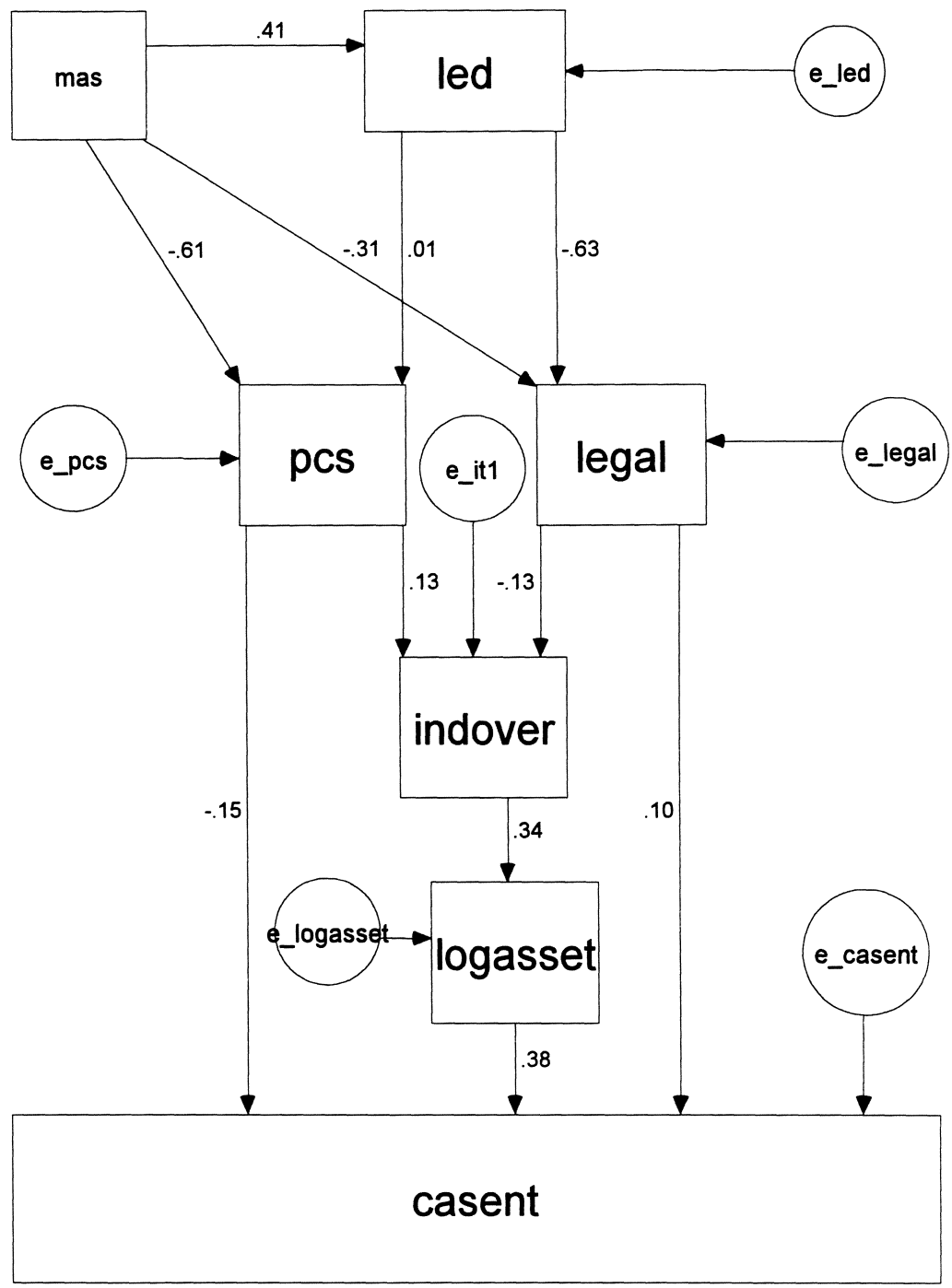
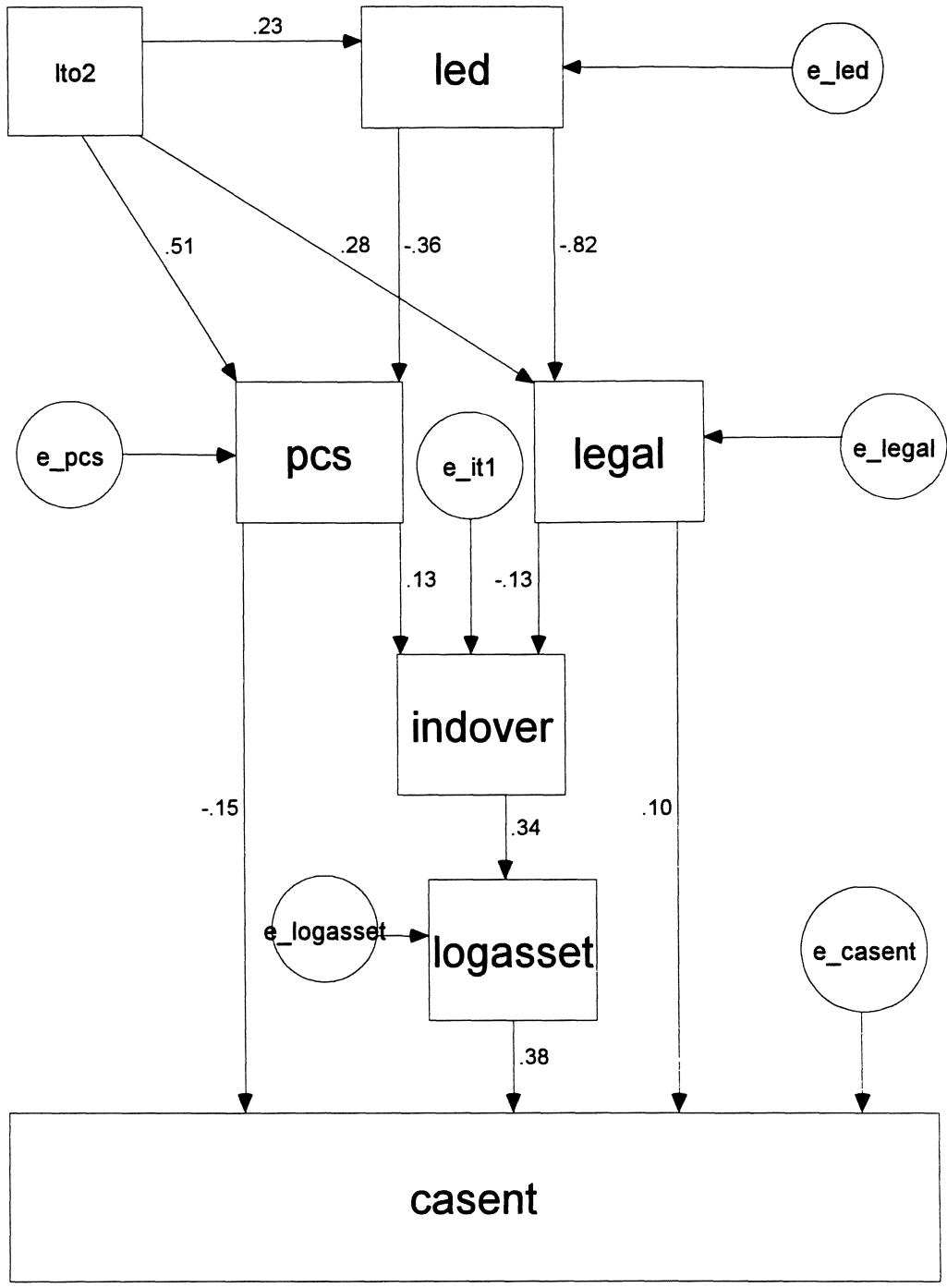


Figure S-8 : Standardized Regression Weights - Long-term Orientation



This appendix provides a set of five examples of tests conducted on models based on Figure 11.2. Each diagram shows the standardized regression weights for each path.

Figure T-1 : Political and Civil System Models - Uncertainty Avoidance

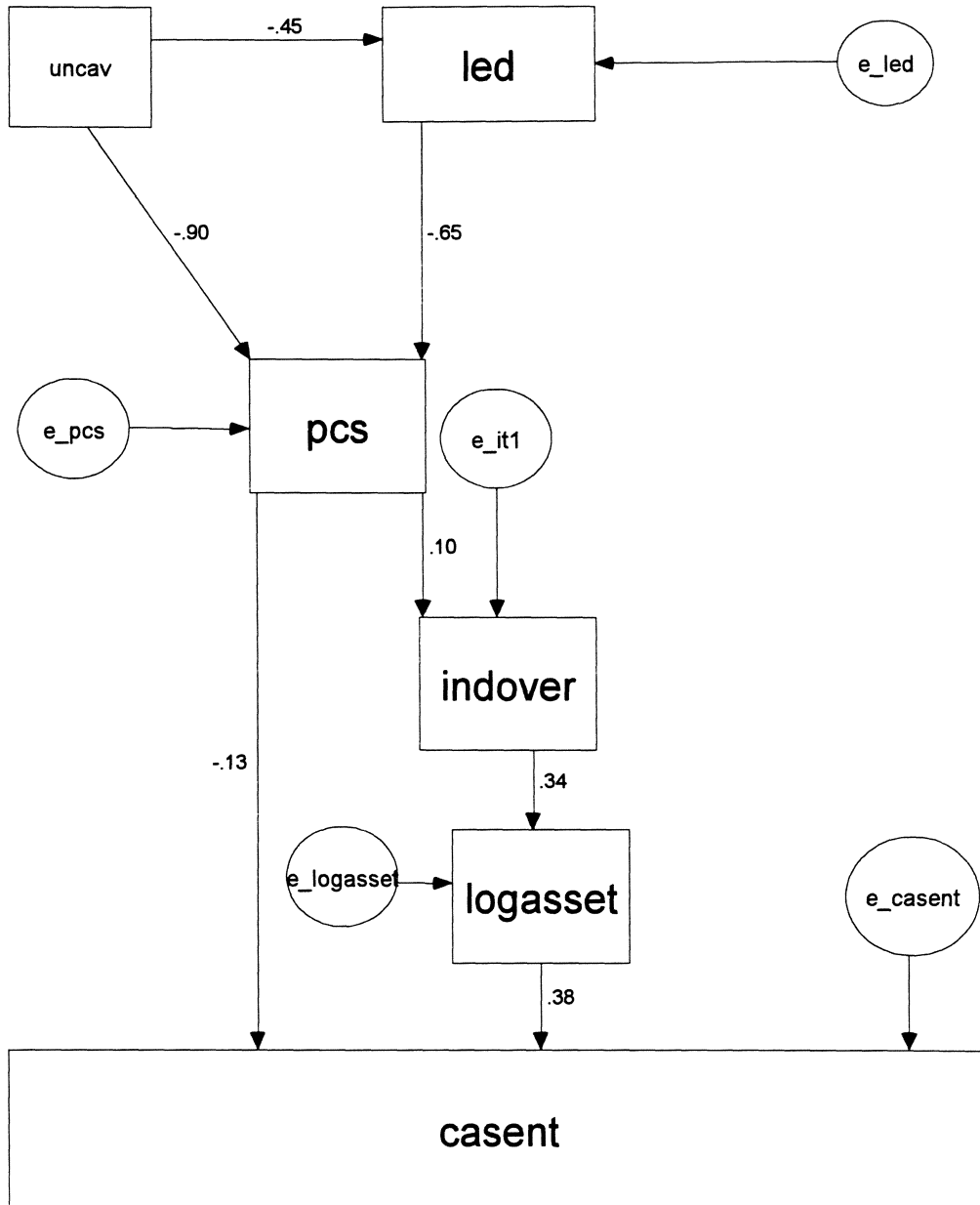


Figure T-2 : Political and Civil System Models - Individualism

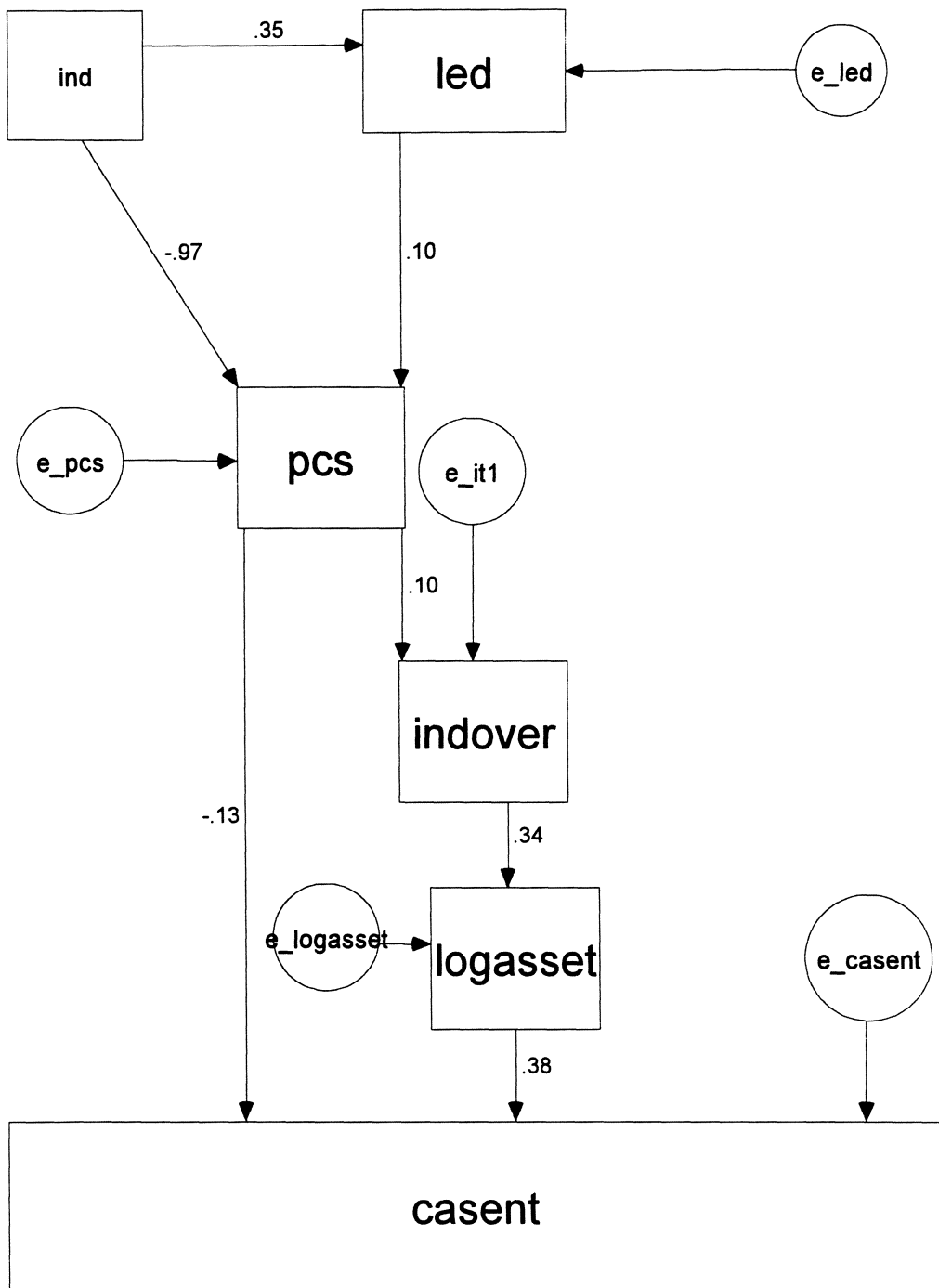


Figure T-3 : Political and Civil System Models - Power Distance

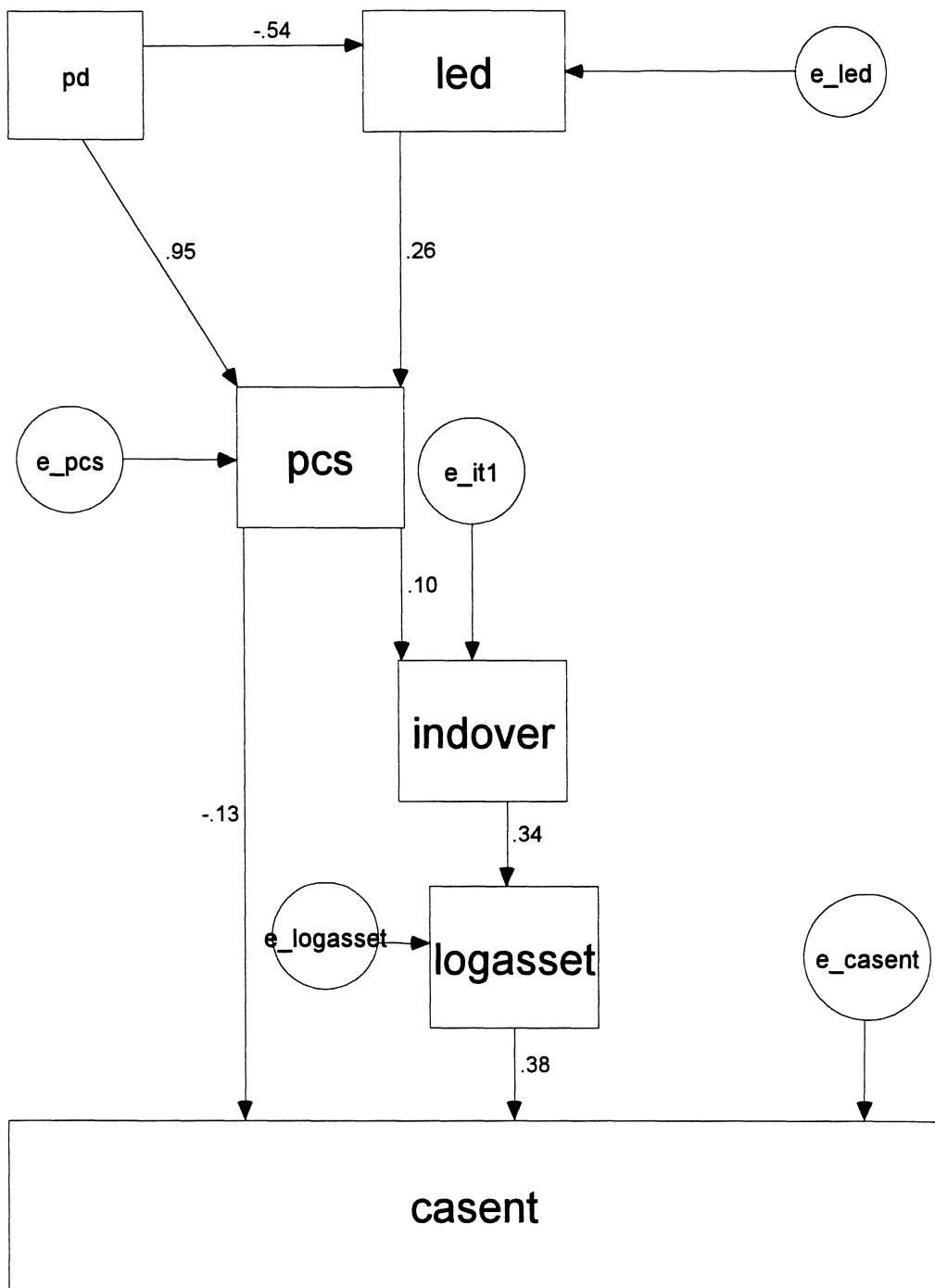


Figure T-4 : Political and Civil System Models - Masculinity

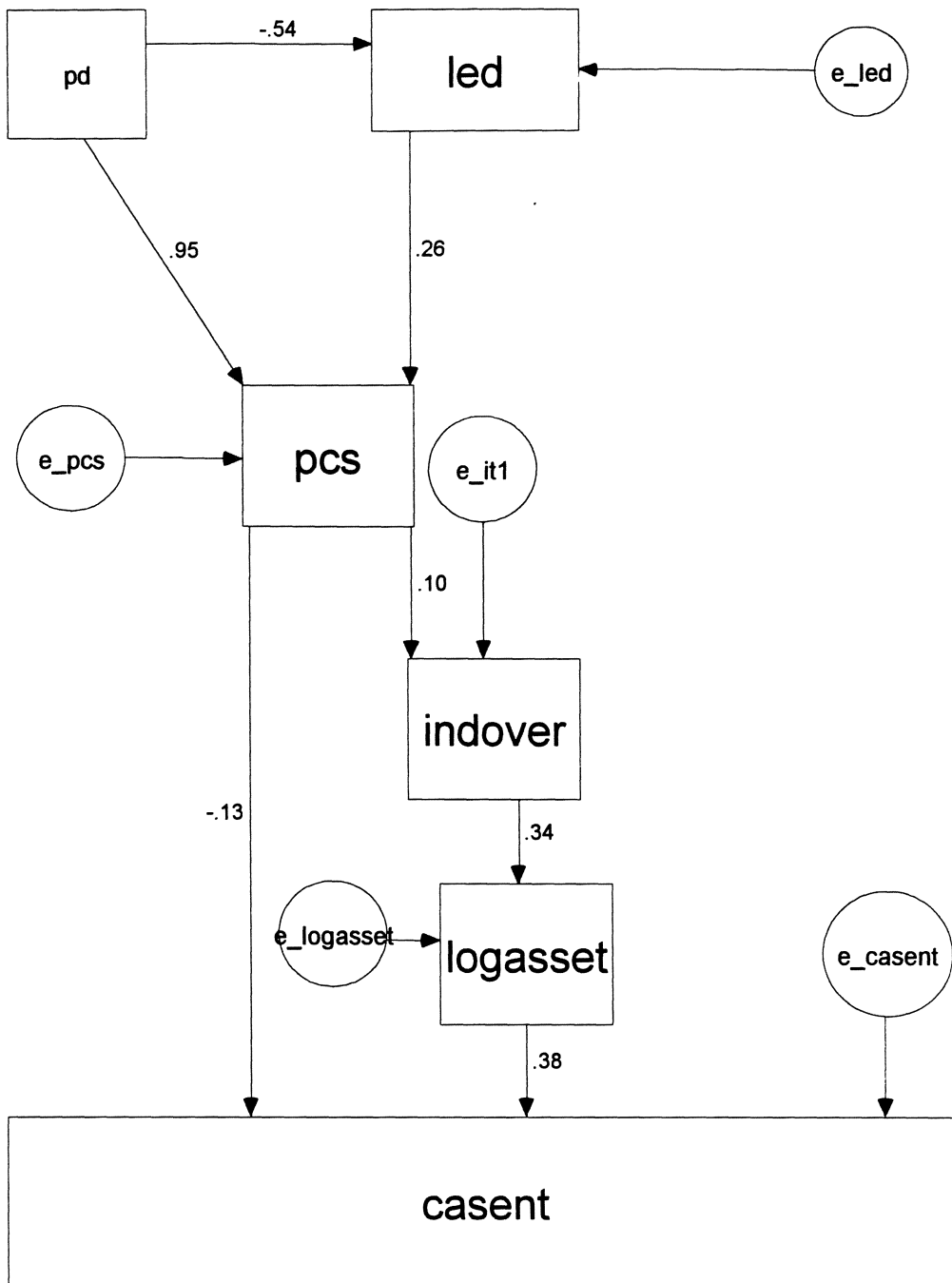
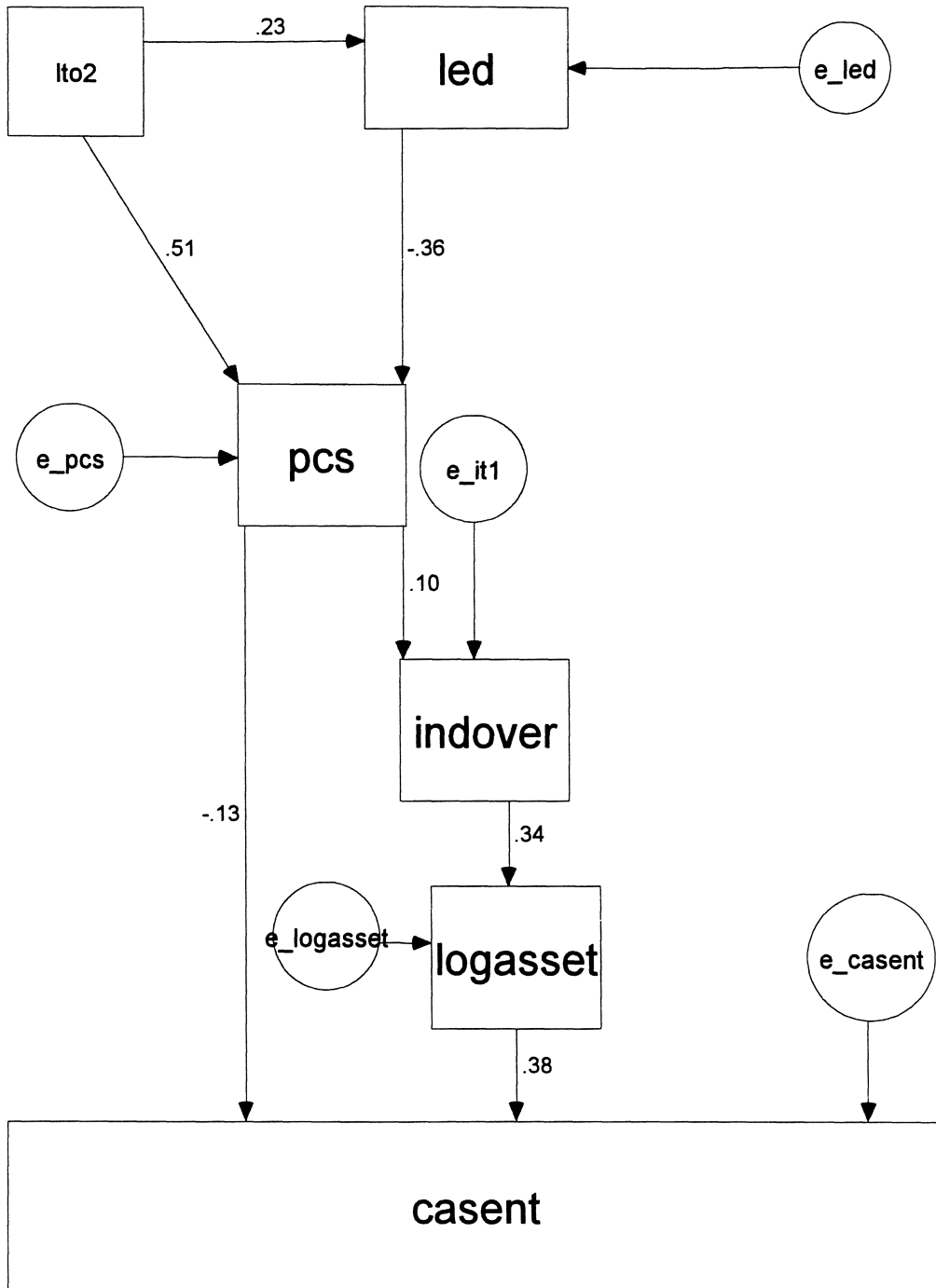


Figure T-5 : Political and Civil System Models - Long-term Orientation



This appendix provides a set of five examples of tests conducted on models based on Figure 11.3. Each diagram shows the standardized regression weights for each path.

Figure U-1 : Legal System Models - Uncertainty Avoidance

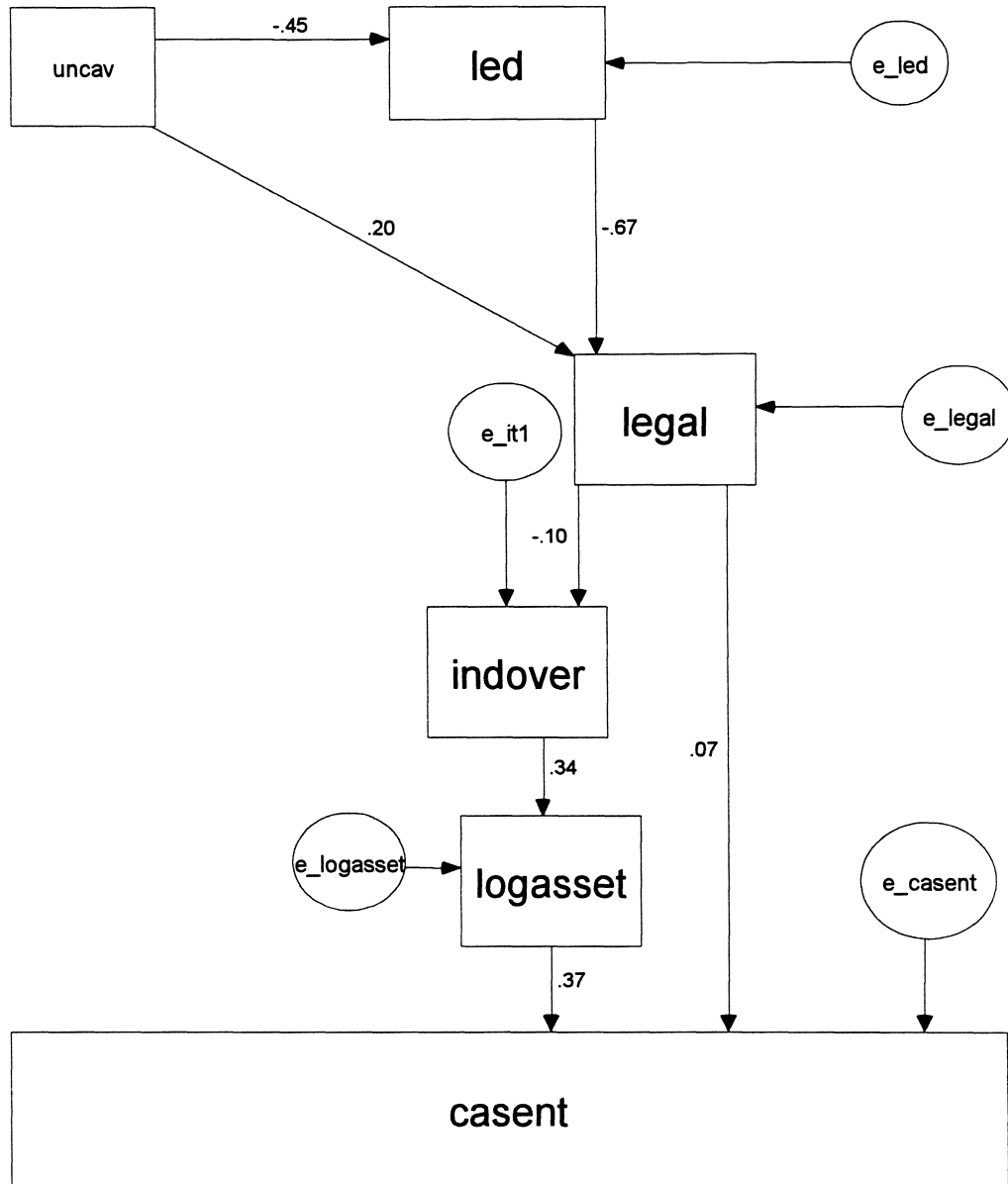


Figure U-2 : Legal System Models - Individualism

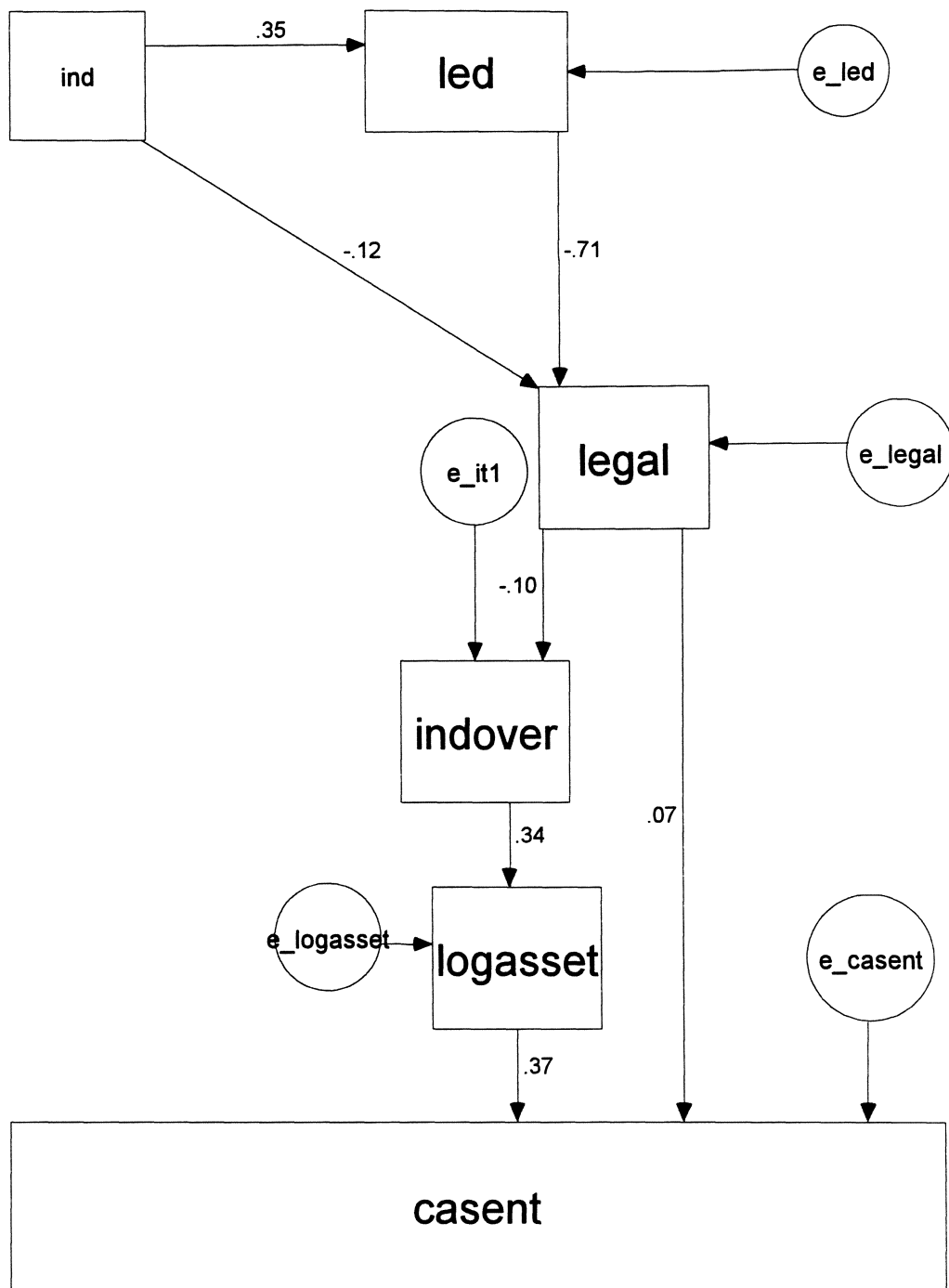


Figure U-3 : Legal System Models - Power Distance

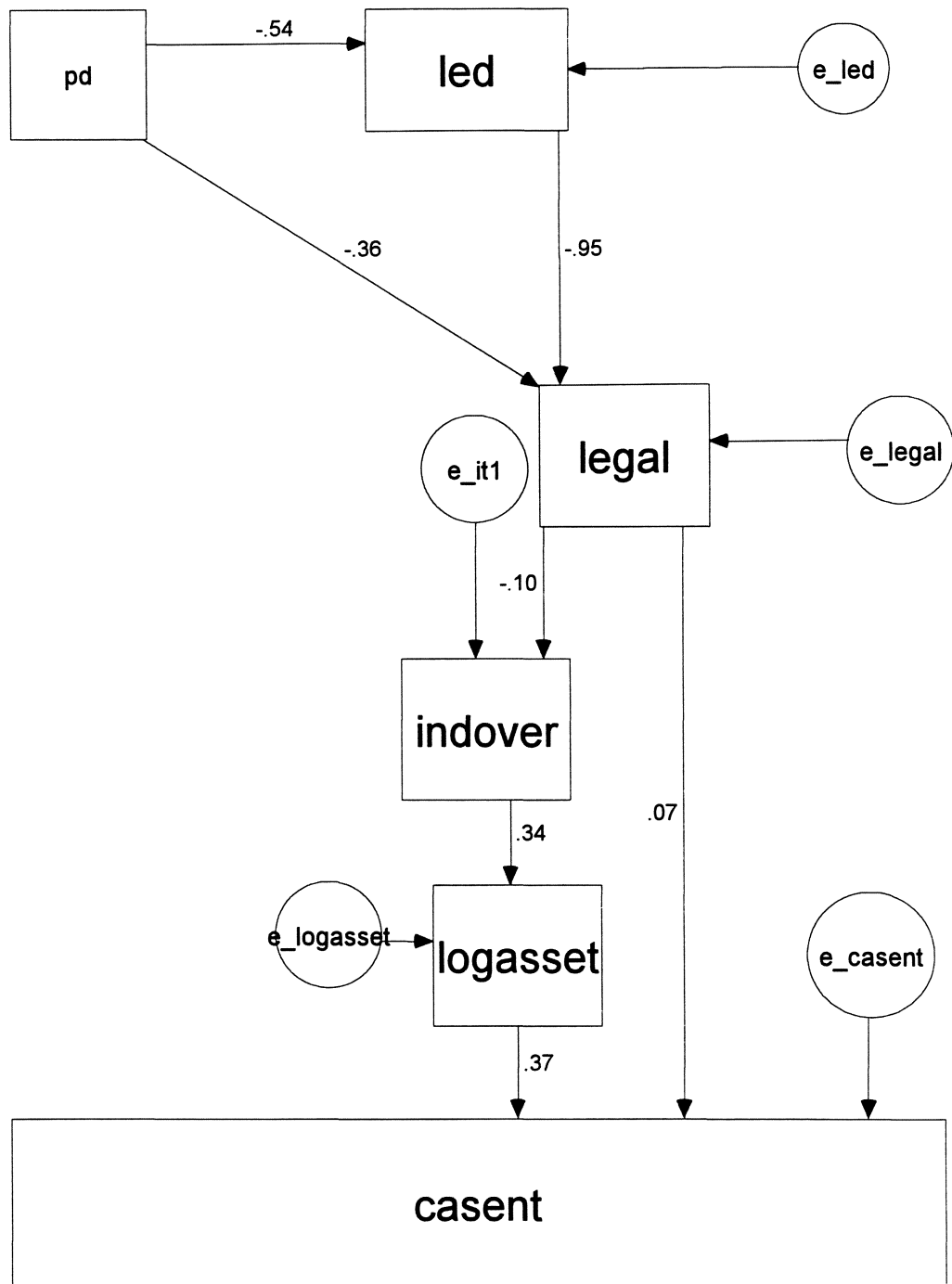


Figure U-4 : Legal System Models - Masculinity

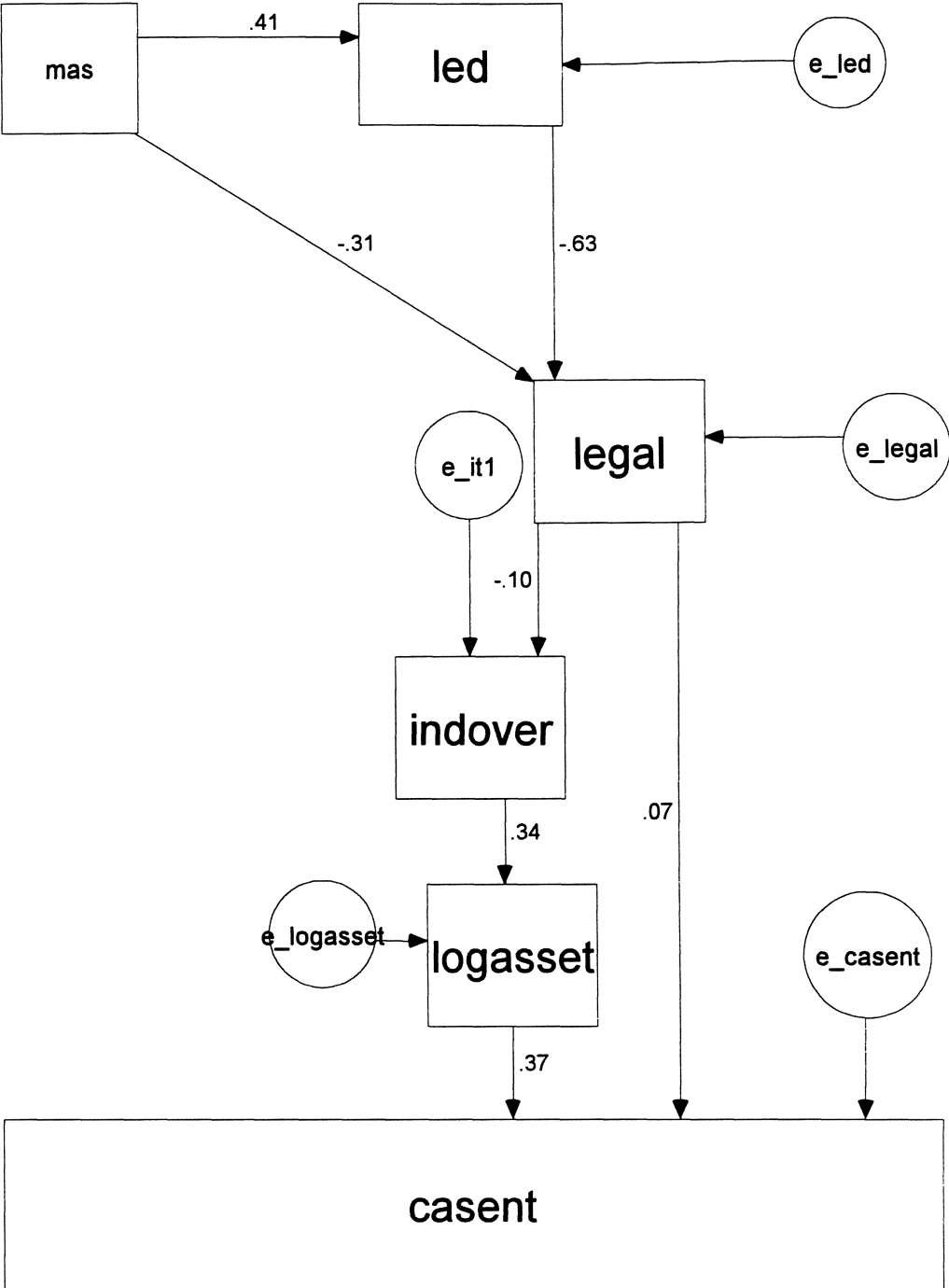
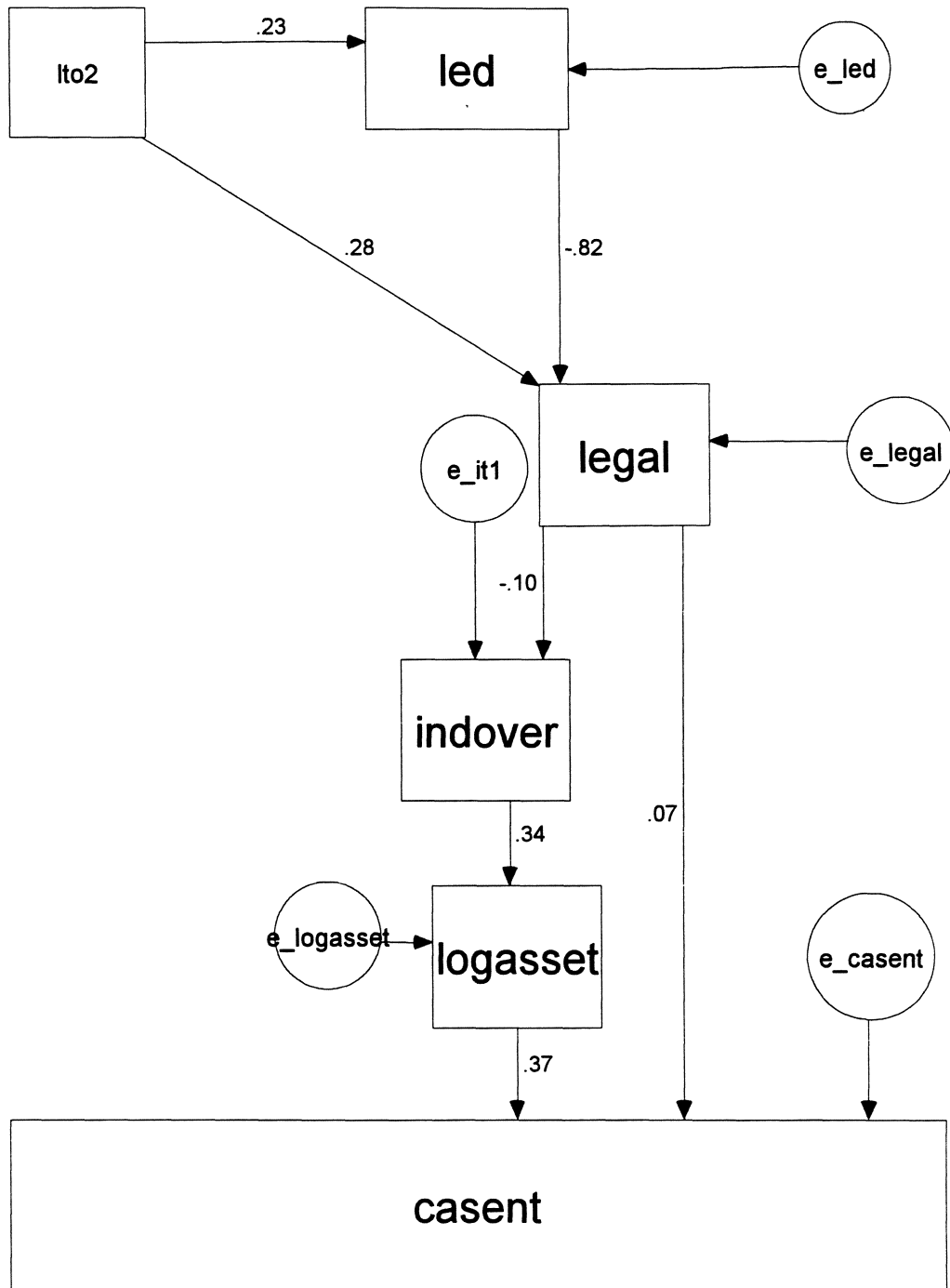


Figure U-5 : Legal System Models - Long-term Orientation



This appendix provides an example of the suitability of models defined in Figures 11.2 and 11.3 to the respective themes of VESAD. In this appendix results related to human resources and safety and community issues are shown.

Table V-1a : Human Resources and Safety - Political and Civil System Models

Cultural Value	Measurement Method Dependent Variable	Chi-square	Degrees of Freedom	Probability Level ^a	GFI ^b	AGFI ^c	Chi-square/df Ratio ^d
Uncertainty Avoidance	HrsPages	11.403	8	0.180	0.990	0.973	1.425
Uncertainty Avoidance	HrsSent	13.180	8	0.106	0.988	0.969	1.648
Uncertainty Avoidance	HrsWords	11.320	8	0.184	0.990	0.973	1.415
Uncertainty Avoidance	HrsDind	13.778	8	0.088	0.987	0.966	1.722
Individualism	HrsPages	11.929	8	0.154	0.989	0.971	1.491
Individualism	HrsSent	13.722	8	0.089	0.987	0.967	1.715
Individualism	HrsWords	12.291	8	0.139	0.989	0.970	1.536
Individualism	HrsDind	14.352	8	0.073	0.987	0.965	1.794
Power Distance	HrsPages	13.842	8	0.086	0.987	0.967	1.730
Power Distance	HrsSent	15.562	8	0.049	0.986	0.963	1.945
Power Distance	HrsWords	13.969	8	0.083	0.987	0.966	1.746
Power Distance	HrsDind	19.755	8	0.011	0.982	0.952	2.469
Masculinity	HrsPages	10.008	8	0.264	0.991	0.976	1.251
Masculinity	HrsSent	11.192	8	0.191	0.990	0.973	1.399
Masculinity	HrsWords	10.048	8	0.262	0.991	0.976	1.256
Masculinity	HrsDind	11.387	8	0.181	0.989	0.972	1.423
Long-term Orientation	HrsPages	10.832	8	0.211	0.990	0.974	1.354
Long-term Orientation	HrsSent	12.187	8	0.143	0.989	0.971	1.523
Long-term Orientation	HrsWords	10.184	8	0.252	0.991	0.975	1.273
Long-term Orientation	HrsDind	11.597	8	0.170	0.989	0.972	1.450

* All values above recommended significant levels are shown in bold. Following is a legend of values considered to be minimal level for acceptance

a :- Probability Level = recommended minimal level of 0.05;

b :- GFI = recommended acceptance above 0.90;

c :- AGFI = recommended minimal level of 0.90; and

d :- Chi-square/df Ratio = upper bound of 2.00 and lower limit of 1.00.

Table V-1b : Community - Political and Civil System Models

Cultural Value	Measurement Method Dependent Variable	Chi-square	Degrees of Freedom	Probability Level ^a	GFI ^b	AGFI ^c	Chi-square/df Ratio ^d
Uncertainty Avoidance	ComPages	21.643	8	0.006	0.981	0.950	2.705
Uncertainty Avoidance	ComSent	17.582	8	0.025	0.984	0.959	2.198
Uncertainty Avoidance	ComWords	19.009	8	0.015	0.983	0.956	2.376
Uncertainty Avoidance	ComDInd	19.068	8	0.014	0.983	0.956	2.384
Individualism	ComPages	37.414	8	0.000	0.967	0.914	4.677
Individualism	ComSent	21.298	8	0.006	0.981	0.950	2.662
Individualism	ComWords	24.679	8	0.002	0.978	0.943	3.085
Individualism	ComDInd	22.942	8	0.003	0.980	0.947	2.868
Power Distance	ComPages	22.713	8	0.004	0.980	0.948	2.839
Power Distance	ComSent	19.508	8	0.012	0.983	0.955	2.439
Power Distance	ComWords	20.978	8	0.007	0.982	0.952	2.622
Power Distance	ComDInd	23.096	8	0.003	0.980	0.947	2.887
Masculinity	ComPages	27.311	8	0.001	0.977	0.938	3.414
Masculinity	ComSent	20.401	8	0.009	0.982	0.953	2.550
Masculinity	ComWords	22.084	8	0.005	0.981	0.950	2.761
Masculinity	ComDInd	19.884	8	0.011	0.983	0.955	2.486
Long-term Orientation	ComPages	19.583	8	0.012	0.983	0.955	2.448
Long-term Orientation	ComSent	16.684	8	0.034	0.985	0.961	2.086
Long-term Orientation	ComWords	17.837	8	0.022	0.984	0.959	2.230
Long-term Orientation	ComDInd	18.269	8	0.019	0.984	0.958	2.284

* All values above recommended significant levels are shown in bold. Following is a legend of values considered to be minimal level for acceptance

a :- Probability Level = recommended minimal level of 0.05;

b :- GFI = recommended acceptance above 0.90;

c :- AGFI = recommended minimal level of 0.90; and

d :- Chi-square/df Ratio = upper bound of 2.00 and lower limit of 1.00.